

ACTIVITY REPORT





Max Planck Institute for Innovation and Competition

Activity Report 2021 – 2023

Preface

This Activity Report summarizes the research results and achievements of the Max Planck Institute for Innovation and Competition from 2021 to 2023.

The reporting period was marked by unforeseen global developments, which are mirrored in both our research and life at the Institute. Our research projects explored, amongst other things, how innovation and competition can address major challenges such as climate change, global health (including the continuing impact of the COVID-19 pandemic), and the issue of feeding the world's population.

The aggressive war against Ukraine and the terrorist attacks on Israel have profoundly shaken our worldview and long-held certainties, while affecting our research and international collaborations. In response to the outbreak of the war in Ukraine, the Institute swiftly pledged its support to Ukrainian scholars. Both the legal and economics departments extended invitations to Ukrainian researchers, leading to an intense and enriching period of integration of Ukrainian colleagues (see Special "Ukraine", p. 32). We would like to thank our researchers as well as the International Office and the Scholarship Office for making this possible.

In 2022, the Institute's Max Planck Partner Group at the Université virtuelle du Sénégal in Dakar, now Université numérique Cheikh Hamidou KANE, was inaugurated. It is headed by Mor Bakhoum, a former postdoctoral researcher at the Institute. With financing from the Max Planck Society for five years, the Partner Group will explore the opportunities and challenges of digital transition for developing countries from a legal perspective (see p. 91).

In 2023, the economics department celebrated its tenth anniversary at the Institute. A celebratory event provided an opportunity to reflect on its development and achievements. A panel discussion featured notable Alumnae and Alumni, presentations

by Junior Research Fellows, and a video greeting from the Federal Minister of Education and Research, recognizing Dietmar Harhoff for his contributions to innovation research and policies (see also C IV Events, p. 356).

Also in 2023, the Munich Intellectual Property Law Center (MIPLC) Cooperation Project celebrated its twentieth anniversary. The MIPLC curriculum underwent a significant update for the 2023/24 academic year, modernizing course offerings. After a recent reform, graduates now receive a joint degree from the Technical University of Munich and the University of Augsburg. The updated curriculum in particular reflects the impact of digitalization on innovation and competition, with new basic modules on innovation and competition law as well as data law, and expands elective modules to cover cutting-edge topics such as blockchain and AI (see also part D, p. 367).

During the reporting period, we celebrated the 85th birthday of Joseph Straus, Emeritus Director of the Institute and founding Chair of the Project Board of the Munich Intellectual Property Law Center Cooperation Project. The Institute's members extended their heartfelt congratulations and expressed their delight at his continued active involvement in lecturing and publishing.

In recognition of Hanns Ullrich's significant contributions, a *Festschrift* was recently published, celebrating his influential work in European law, competition law, intellectual property law, technology regulation, and global markets. This publication underscores his pioneering insights and enduring impact on legal scholarship.

We also remember those we have lost, among them Gerhard Schricker, Director of the Institute from 1971 to 2003, and William R. Cornish, External Scientific Member of our Institute and Professor Emeritus at the University of Cambridge.

Gerhard Schricker passed away in 2021 at the age of 85. He significantly enhanced the Institute's scientific reputation, particularly through his research in unfair competition and copyright law as well as his contributions to European harmonization. He was especially renowned for his leading commentary on German copyright law.

William R. Cornish passed away in 2022 at the age of 84. Describing the Institute as an "Intellectual Mecca" in the field of IP, from 1978 onwards, he visited the Institute many times and had a significant influence on the development of the Institute's journal IIC – the International Review of Intellectual Property and Competition Law – as a member of its Editorial Board.

In the year 2023, both the Max Planck Society and the Institute made important institutional steps for the future. In January 2023, President-elect Patrick Cramer, who assumed the presidency of the Max Planck Society in June 2023, visited the Institute as part of his effort to familiarize himself with all Max Planck Institutes before taking office. He underscored the importance of excellence, communication with the public, and a sense of unity within the Max Planck Society. We seized this opportunity to showcase some of our research highlights in life sciences and AI (see Special "The President's Visit", p. 16).

In our previous report, setting the course for the transition period following the upcoming retirement \rightarrow



Prof. Dr. Dr. h.c. Reto M. Hilty, Prof. Dr. Josef Drexl, Prof. Dietmar Harhoff, Ph.D.

of the current directors was addressed for the first time. Based on a concept for the future orientation of the Institute's research departments, which was approved by the Human Sciences Section of the Max Planck Society, the Institute undertook a screening of the field of potential candidates for the succession of Reto M. Hilty. As part of this endeavor, we held a symposium in June 2022, where eight researchers presented their ideas on "The Role of Intellectual Property in Times of Radical Change". Several months later, the appointment committee, comprising directors from other Max Planck Institutes and external scientists, proposed one candidate as the successor. The Human Sciences Section and the Senate of the Max Planck Society followed the proposal in their respective decisions in June 2023.

Meanwhile, the Human Sciences Section has established an appointment committee for an early succession to Dietmar Harhoff. In an open process, the Institute sent a call for nominations and self-nominations to nearly 300 researchers via direct email and published this on its website, LinkedIn, and Twitter, where the Institute has several thousand followers. With the approval of the appointment committee, the Institute invited eight potential candidates to participate in a series of online lectures entitled "Perspectives on Innovation – Towards New Roadmaps for Research" held in May 2023. The work of the search committee is ongoing.

At the core of our Institute's mission is the promotion of young scientists. Our support extends not only to those whose dissertations or habilitations are supervised by the directors but also to many other exceptional young researchers in our field. In line with the recommendations from our Scientific Advisory Board's last evaluation, the Institute implemented measures to enhance the promotion of young researchers. The Institute has now completed the transition from offering scholarships to providing work contracts with an initial three-year term, thereby ensuring improved planning security for our young researchers.

The Institute is committed to promoting diversity and gender equality. It has signed the Diversity Charter (*Charta der Vielfalt*), emphasizing its commitment to diversity and equal opportunities. This charter is part of a larger German initiative promoting a prejudice-free work environment where all employees are valued. The Commission "Quality Management of the Max Planck Gender Equality Plans" recognized the Institute's commitment to these values for the years 2021–2023 awarding the Silver Medal to the Gender Equality Plan.

Alongside the Gender Equality Officers who also offer personal consultations for all employees, key figures fostering trust-based collaboration at the Institute include the Ombudsperson, Ph.D. Student Representative, Representative to the Human Sciences Section of the Max Planck Society, the Institute Committee, and Works Council. The independent Ombudsperson and Deputy provide confidential advice on suspected breaches of scientific integrity. The Ph.D. Representative focuses on enhancing students' working doctoral conditions. Representative to the Human Sciences Section serves as a liaison between the Institute's scientific staff and the Human Sciences Section of the Max Planck Society. The Institute Committee is always ready to listen to all employees and significantly contributes to the enrichment of social interactions and activities at the Institute. Our Works Council addresses various employee concerns such as personnel matters and workplace conditions in a trusting and cooperative manner. We extend our gratitude to those volunteering for these essential roles, vital for excellent, successful, and reliable cooperation.

In the wake of the COVID-19 pandemic, the Institute has adapted to a new normal in its daily work routine. A Works Agreement on remote work has been implemented to provide employees greater flexibility. This is a critical tool in a competitive labor market to attract and retain staff. The colleagues in the research and service departments have resumed office work to a degree that ensures valuable personal exchange. Research seminars now blend the benefits of on-site

interaction and digital conveniences. While these events are held in person again, the opportunity to participate via videoconferencing continues to be extended to international participants who joined for the first time during the pandemic.

In the current social climate, it is imperative to communicate scientific endeavors and results to the public in a transparent, accessible, and understandable manner. The Institute's external and internal communication have been consistently advanced. The established press and public relations work has been further developed into up-to-date science communication. The Institute's website remains the primary medium of communication and requires continuous attention and intensive support. The Institute's social media presence, especially on LinkedIn, has also garnered significant engagement. Our newsletter, now in its fifth year, enjoys a loyal readership. For internal communication, a redesign of the intranet is in progress. These efforts deserve special recognition.

This triennial report is an important source of information. Myriam Rion, Science Communication, and Alexander Suyer, the Institute's Research Coordinator since November 2021, have expertly overseen and coordinated its creation. Special thanks are due to Sabine Schmotz of the library, who has once again compiled the essential presentation of all publications by members of the Institute. In particular, we are grateful to the Institute's researchers for their many contributions. We hope that this report provides the reader with an insightful and stimulating glimpse into the Institute's research.

This activity report is the last to be presented at the Marstallplatz site. We anticipate relocating to a new building at the corner of Herzog-Max-Straße and Neuhauser Straße in the first quarter of 2025 (see Special "Relocation of the Institute and New Building Site", p. 400). This move entails a significant planning effort on the part of all our service departments. Furthermore, our Institute, together with our sister Institute for Tax Law and Public Finance and the

recently relocated Max Planck Institute for Social Law and Social Policy, is currently piloting an innovative collaboration experiment among the service departments. We owe a debt of gratitude to the heads and staff of our service departments, notably Thomas Dzionsko, who joined us as the new Head of Administration in 2021, for their tireless efforts. We are looking forward with great enthusiasm to the opportunities the new location will present to both our researchers and colleagues in other functions.

Munich, May 2024

Josef Drexl

Managing Director



The Max Planck Institute for Innovation and **Competition** is committed to fundamental legal and economic research on processes of innovation and competition and their regulation. Our research focuses on the incentives, determinants and implications of innovation. With an outstanding international team of scholars and excellent scientific and administrative infrastructure including our renowned library, we host academics from all over the world and actively promote young researchers. We inform and quide legal and economic discourse on an impartial basis. As an independent research institution, we provide evidence-based research results to academia, policymakers, the private sector as well as the general public.

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SPECIAL

The President's Visit

n 24 January 2023, Patrick Cramer, then President-elect of the Max Planck Society, visited the Max Planck Institute for Innovation and Competition. This encounter was part of his goal to get to know all 84 Max Planck Institutes personally before taking over the Presidency. He was impressed by the societal relevance of the research conducted at the Institute.

On 23 June 2022, the Senate of the Max Planck Society appointed Patrick Cramer as the new President for the term of office from 2023 to 2029. The 54-year-old chemist and molecular biologist has been Director of the Max Planck Institute for Multidisciplinary Sciences in Göttingen; before that, he was a Professor of Biochemistry at LMU Munich and Director of the Munich Gene Centre.

In June 2023, at the 75th anniversary of the Max Planck Society in Göttingen, where the Max Planck Society was founded, he took over the office from Martin Stratmann who had been at the helm of the Max Planck Society for nine years.

During his visit at the Institute, Patrick Cramer was accompanied by Dr. Katja Ketterle, Head of the Max Planck Society's Institutes Department and Dr. Sabine Gieszinger, Institute Support. After a group photo session, the entire Institute gathered for a brief address by Cramer, followed by a question-and-answer session.

Cramer spoke of a triad of core values of the Max Planck Society. He first mentioned excellence, but in a sense encompassing more than purely scientific excellence. It also includes the personalities and people

around whom the Institutes of the Max Planck Society are built. This so-called "Harnack principle" is an essential part of the Max Planck Society's strategy and a crucial component for attracting other outstanding minds. Secondly, and of equal importance, is communicating and explaining the work of top researchers to the public. Finally, the third core value he mentioned was the sense of unity among all employees of the Max Planck Society.

"We all are Max Planck," Cramer emphasized in an open exchange with the Institute's staff. He underscored that it was the task of all employees to contribute to the goals of the Max Planck Society. Cramer stressed that it was equally important that the ideas of all members of the "Max Planck Family" be heard. He demonstrated his openness to everyone's interests, questions, and suggestions.



Katja Ketterle, Head of the MPG Institutes Department, with Patrick Cramer.

Cramer also answered personal questions. He mentioned that just three years ago, he could not have imagined putting his own research on hold in favor of these new responsibilities. Cramer has made significant contributions to the development of the life sciences, both through his own research and by mentoring and promoting young scientists. He was able to visualize the three-dimensional structure of one of the largest enzymes in the cell nucleus, the RNA polymerase. This work enabled his team to unravel the mechanisms of gene transcription, the process by which living cells make copies of their genes, which then serve as blueprints for the production of proteins. Shortly after the outbreak of the COVID-19 pandemic, Cramer and his group visualized how the coronavirus copies its genetic material. The team also showed how the COVID-19 drugs Remdesivir and Molnupiravir interfere with this copying process.

Now, Cramer said, he embraced the challenge of his new office, being convinced that it is important to help shape the future of science and bring new knowledge into the world for the benefit of all people.

In addition to discussions with the directors, his visit included an exchange with representatives of the researchers, IT, science communication, and the gender equality officers. Finally, a poster presentation of the Institute's research highlights took place in a smaller group.

Cramer was impressed by the societal relevance of the research conducted at our Institute, highlighting in particular research on the transition to a sustainable economy, support for emerging economies, and AI and the protection of private data. Katja Ketterle, Head of the MPG Institutes Department, emphasized how inspiring the insights into our research were and that the Institute also had a great team in other areas, making it one of the particularly fine small Institutes within the large Max Planck Society.



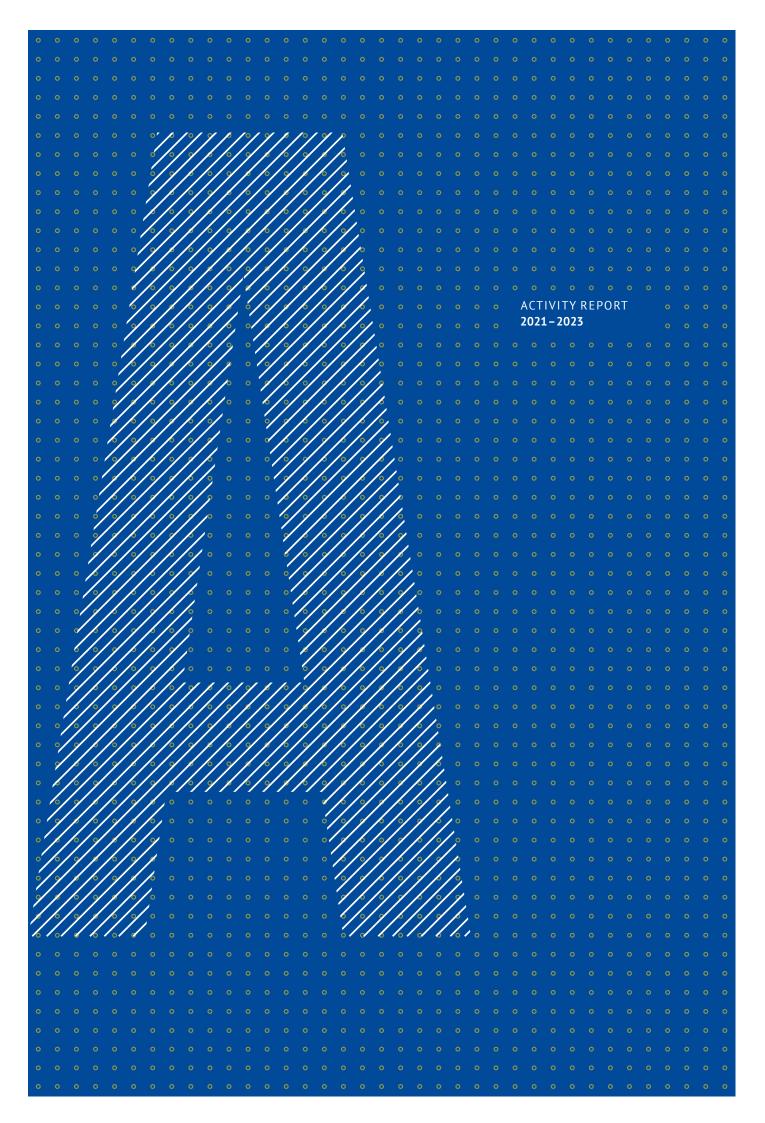
Representatives of the researchers, IT, gender equality officers, and science communication, ready for group discussion.



Patrick Cramer addresses the General Assembly of the Institute.







The Institute's Research in Context

As with previous Activity Reports, this report begins by describing the complex and dynamic context of the Institute's research from both a legal and economics perspective.

Innovation in Times of Radical Change

In times of radical change, the Institute must have a clear vision of its role.

Three years ago, the report addressed the COVID-19 pandemic and climate change as major challenges to the innovation system. Indeed, technological innovation is critical to overcoming pandemics and to finding effective remedies against climate change and mitigating their effects. To accomplish this, innovation must be realized under considerable time pressure. But while the COVID-19 pandemic appears to be resolved, largely due to breakthrough innovations in vaccines, climate change is far from being under control. Moreover, the world is facing new geopolitical and national political crises, adding to the sense that modern societies are living in times of radical change. Geopolitical crises, exemplified by the war against Ukraine and the tensions involving Taiwan, have caused economic disruptions. The energy crisis due to the war in Ukraine has delayed the implementation of decarbonization policies. Fears of a war in Taiwan have prompted nations to reduce their economic and technological dependence on imports from both mainland China and Taiwan, especially with the goal of "bringing back" key industries, including

pharmaceutical and chip production. Governments, among those of the U.S., the EU and EU Member States, have even returned to subsidies to compete for foreign direct investment. Conversely, anti-dumping measures are being reinstated in response to China's subsidies to domestic firms. The Global North aims to catch-up with technologically more advanced countries such as Taiwan in the chip sector. Similar to pandemics, warfare constitutes a major threat to global supply chains, as evidenced by Huthi attacks on maritime transports through the Red Sea as part of the violent conflicts in the Middle East following the Hamas attack on Israel.

Internal political crises affect the economy and create new challenges for the innovation system. The success of populist movements has the potential of undermining democracy. Even in countries with longstanding democratic traditions, elections may be disruptive in many ways exemplified by concerns surrounding the upcoming European and U.S. elections. The crises of democracies are closely linked with other crises. Populist movements were fueled by the restrictions made necessary by the COVID-19 pandemic. The political decision to act on climate

change has created a large reservoir for parties and movements that question the need for climate action or even deny climate change. Thus, these movements also undermine societies' capability to find adequate technology-based responses. Ironically, their success greatly builds on digitalization, which has already fundamentally transformed the marketplace of ideas. In particular, the advent of social platforms offers new fora for free speech and ignites democratic movements around the globe. Yet, it also enables the rapid spread of conspiracy theories and thereby contributes to disunity in modern societies. The challenge of how to guarantee functioning democracies is closely linked to the regulation of digital business models, especially in the Internet platform economy.

In these times of radical change, the Institute must clearly articulate its role in informing and guiding the legal and economic discourse. With respect to its research on the incentives, determinants, and implications of innovation, several key aspects of the described changes can be discerned: (1) uncertainty, (2) responsibility, (3) fairness, (4) societal acceptability, (5) sustainability, and (6) long-lasting consequences.

Uncertainty

Uncertainty refers to a central aspect of innovation processes. In addressing climate change, governments should prioritize technology openness in their policies, as it is uncertain which technologies will be most effective for decarbonization. However, market dynamics alone may not guarantee optimal technology choices either, and centralized decisions may be necessary especially for infrastructure-dependent investments. New policy frameworks such as the European Green Deal emphasize mission orientation. Yet, mission orientation may conflict with the open design of intellectual property and competition law that incentivize innovation through dynamic competition in the market economy. Uncertainty may also lead to the application of the precautionary principle and ex ante regulation of potentially harmful technologies as seen in the EU Artificial Intelligence Act. This regulation may reduce innovation incentives for developers but also increase trust of consumers and society at large in the benefits of Al-based products and services.

Responsibility

The AI Act also illustrates the concept of responsibility in innovation. Many technologies, especially **general-purpose technologies (GPTs)** like artificial intelligence, may be neutral in themselves, and their impact depends on how they are utilized. There is a growing focus on "responsible AI" and "trustworthy AI" in policy discussions, emphasizing the need for regulation to ensure beneficial outcomes for society. Legal frameworks must go beyond balancing regulatory intervention and innovation incentives; they can also enable positive uses of technology, such as facilitating data sharing for AI development.

For instance, the Institute collaborates within the Global Partnership on Artificial Intelligence (GPAI) on a project to explore the possibility for internationally applicable contract terms on the sharing of AI data and models to enhance voluntary sharing as a means to promote the development of AI systems.

→ See B II 1.7, p. 84

Fairness

Fairness, despite its legal complexities, has become increasingly vital in both domestic and international contexts. This significance arises from the shifting economic landscape, particularly due to digital transformation and novel business models. At the EU level, robust data protection stands out as a pivotal legislative step towards fostering a fair digital economy. Furthermore, recognizing the influence of Internet gatekeepers, the EU legislature enacted the Digital Markets Act as ex ante regulation, which not only ensures market competition but also prioritizes fairness. The recently adopted **EU Data Act** also hinges on the fairness principle, particularly in allocating rights related to data access and use for connected (IoT -Internet of Things) products. The decision to grant users control over machine-generated data stems from the realization that data generation is intrinsically linked to product usage.

The dissertation "Fairness als Rechtsprinzip" examined the concept of fairness as a legal principle.

→ See B II 2.18, p. 142

In its comprehensive position statement on the Commission's Proposal for the Data Act, the Institute criticized reliance on the concept of the "generation of data" as the legal criterion from an economics-based perspective.

→ See B II 1.5, p. 72

However, fairness must also be considered globally, especially as emerging economies such as China rise as technological rivals to the U.S. and Europe. This shift challenges traditional power dynamics and impacts international law, particularly as multilateral organizations like the World Trade Organization (WTO) face challenges. Free-trade agreements are becoming increasingly significant, not only for market access but also for building new economic and political alliances, signaling a shift away from economic globalization. Discussions on neo-colonialism, particularly in the form of data colonialism, highlight concerns about exploitation of resources in the Global South by the Global North. This has prompted calls for benefitsharing mechanisms, reminiscent of past debates on access and benefit sharing systems for genetic resources.

As part of its research on data governance in emerging economies, the Institute, in cooperation with partners from Senegal, India, and Brazil, has to position itself vis-à-vis the data colonialism debate. It does so by preferring an alternative approach according to which data governance systems ought to serve the achievement of the Sustainable Development Goals.

→ See B II 1.8, p. 88

A doctoral thesis concerning the protection of genetic resources proposes appropriate measures to provide a fair and equitable benefit sharing without unjustifiably harming innovation.

→ See B II 2.3, p. 112

Societal Acceptability

Voters' ability to adapt to change is limited. Constant exposure to radical change may lead to **decreased acceptance** of state measures and new technologies meant to address societal challenges. Populist parties often exploit this resistance. Their success in elections may hinder necessary action. However, governments should not abandon essential measures but instead prioritize individual benefits in innovation policies aligned with human-centered principles and sustainable development goals.

- → See C II 1.5, p. 264
- → See C I 1 V., p. 239

Sustainability

Sustainability is key in innovation policy, extending beyond ecological concerns and encompassing economic and social stability. Aligning with the UN's **Sustainable Development Goals** (SDGs) offers a comprehensive framework, though implementing the goals requires balancing various objectives, including **financial stability** and **intergenerational fairness**. Innovation policies must consider these factors, as different approaches impact sustainability in very different ways.

Long-Lasting Consequences

Radical change is transformative and has long-lasting consequences. Climate change, stemming from industrialization two centuries ago, requires ongoing technological advancements to mitigate its effects and enhance resilience. Geopolitical shifts towards a multipolar world are irreversible, challenging previous visions of a peaceful international order. Digitalization further complicates societal dynamics, necessitating innovation policies to harness its benefits while averting potential harms. The COVID-19 pandemic underscores the need for better preparedness in a globally interconnected world, requiring policymakers to prioritize proactive measures against future pandemics.

Interaction between Science and Technology, Society and Markets, and Government

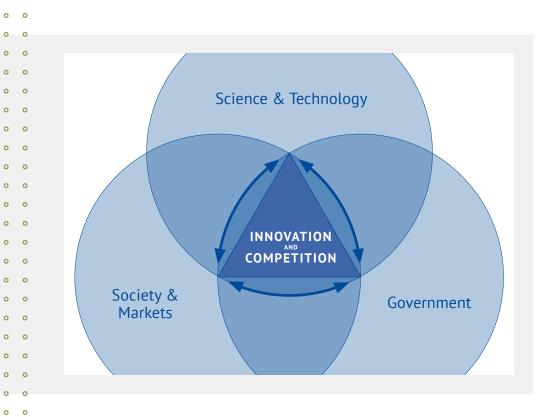
Given the profound changes outlined above, it is crucial for societal wellbeing to delve into the incentives, determinants, and implications of innovation, aligning with the Institute's mission. Research opportunities abound, emphasizing the need for a comprehensive understanding of the intersections between science and technology, society and markets, and government.

Technological advancements directly impact society, prompting governments to balance innovation incentives with the protection of citizens' rights and values, such as data privacy. Regulation not only responds to innovations but also shapes innovation incentives, impacting societal development.

Markets play a key role in coordinating the highly dynamic interactions between technologies, society, and government. Consumer preferences are the primary driver of change, innovation efforts, and the development of new business models. Conversely, product innovations can create new market preferences.

Government interventions can take many forms. Subsidies for eco-friendly products and behavior can affect the most divers sectors, including housing and mobility. Regulations such as the EU's AI Act and Data Act, influence innovation incentives and market demand.

Intellectual property can play an important role in securing investments in sustainable innovations. However, patents in particular can also make access to urgently needed technologies difficult or even impossible. In the context of the COVID-19 pandemic, the question of how licensing can be facilitated by regulation and, in practice, even enforced if necessary, has become increasingly topical. As regards mobile telecommunications technologies, innovation requires the collaboration of industry in form of standard setting by standard developing organizations (SDOs). Here, patent law alone cannot shape optimal innovation processes. Balancing the interest of technology providers in securing adequate returns on their investment with the public interest



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in disseminating technology and thereby enabling follow-on innovation requires legal adjustments to facilitate licensing negotiations in particular.

The Institute has been researching compensation mechanisms for the use of patents intensively for over ten years. This includes the Position Statement "Revisiting the Framework for Compulsory Licensing of Patents in the European Union", available at https://papers.ssrn.com/sol3/papers.cfm?abstract id=4381959.

In addition, the Institute published a Position Statement on the EU Commission's Proposal for a Regulation on Standard Essential Patents (SEPs) at the beginning of 2024.

→ See B II 1.9, p. 97

For the Institute's legal and economic research, the multiple interactions between science and technology, society and markets, and government constitute important starting points for **identifying and prioritizing research projects.** The Institute's research in **economics** primarily focuses on the actors in innovation processes and the determinants of innovation. A critical question is how various factors affect innovation – positively or negatively – in competitive markets. The Institute's **legal researchers** primarily concentrate on the design of the legal framework and the related case law, while maintaining a perspective on private ordering through contract law.

Science and Technology

In the realm of digital technology, the emergence of **generative AI**, exemplified by ChatGPT, has stirred widespread debate, initially focusing on ethical concerns in education and research, but shifting to questions of copyright and personality rights.

In life sciences, **CRISPR/Cas**, a genomic editing technique, has matured and holds promise for advancements in disease treatment and food security amid climate change.

The application for and grant of large numbers of patents for genome editing techniques provided the Institute with the opportunity to explore the impact of such patents on the development of new plant varieties and to submit recommendations for additional measures to promote access to such technologies.

 \rightarrow See B II 1.2, p. 58

Decarbonization policies now prioritize innovations in **green hydrogen** production. Various **carbon capture techniques** are being developed and provide new potential for a cleaner world. New **battery technology,** including the use of hydrogen for energy storage, aim to bolster green electricity usage and reduce reliance on imported raw materials.

In the area of computing, innovations extend beyond informatics, such as **low-earth orbit satellites** enabling IoT applications, and **quantum computing** showing promise for various applications, including data analysis and scientific research. Interdisciplinary collaboration is a key feature of these advancements, with fields like neuroscience contributing to **biological computing** and **artificial intelligence** accelerating progress in life sciences.

The Institute emphasizes the importance of science as a knowledge-creating social system in driving innovation and underscores the symbiotic relationship between fundamental research and applied innovation. All this makes the interactions between scientific research and private sector innovation a most interesting and important field for exploration. Additionally, the implementation of AI-based research methods highlights the legislature's role in regulating data access for research purposes.

→ See C I 1 II., p. 237

Society and Markets

New – and particularly digital – technologies profoundly shape markets and society. Social platforms, driven by profit, have swiftly altered the marketplace of ideas and citizen engagement in politics. Big data analytics and artificial intelligence facilitate automated decision-making across public, commercial, and private domains, with AI poised to revolutionize labor conditions, potentially replacing humans in creative tasks. This rapid digital transformation presents both positive and negative effects, testing society's adaptability while aiding in addressing challenges such as climate change.

Digital technologies are equally **transformative for markets**, creating entrenched **digital ecosystems** controlled by a few platform operators due to strong network effects. Recognizing the need for new

regulatory tools, the EU enacted the Digital Markets Act to oversee **gatekeepers** outside traditional competition law. Concerns have arisen over the concentration of control in data analytics and AI, as gatekeepers of Internet platforms dominate **data processing**, hindering efforts to foster a competitive European AI industry. Moreover, major players such as Amazon, Google, and Meta dominate emerging edge computing markets, potentially stifling innovation for IoT applications.

Automation is likely to influence productivity positively. However, it may have undesired consequences for political participation as a recent study by researchers of the Institute's economics department shows. Chugunova, Keller, and Samila (2021) show that a region's exposure to the deployment of industrial robots is negatively associated with voter turnout. The strongest reduction in voter turnout emerges for those groups that are most likely to lose their jobs to automation.

→ See C II 1.5, p. 264

Initially, artificial intelligence appeared immune to growing market power in the digital realm, thanks to a widespread belief among developers in the benefits of mutual learning. This fostered a culture of sharing AI models, even among major platform operators such as Google and Microsoft. However, the dynamics of generative AI now threaten this culture. OpenAI's collaboration with Microsoft to commercialize ChatGPT and DALL-E sparked internal conflicts over openness versus proprietary approaches. Collaborations of Microsoft with companies such as Mistral and Bosch raise concerns that platform giants may integrate critical AI applications within their digital ecosystems.

While digital markets tend toward integration and globalization, the pandemic and geopolitical crises have spurred **deglobalization**, accompanied by **fierce subsidy-driven competition** among trading nations such as the U.S. and the EU. These subsidy wars risk wasting taxpayers' money, distorting competition, and hindering innovation. Subsidies aimed solely at relocating production are less effective than those targeting innovation. Legislation such as the **U.S. Inflation Reduction Act** aims not only to curb inflation but also to drive green industry transition, fostering innovations to address climate change. Governments must balance economic goals beyond innovation, evident in initiatives like the **U.S. Chips and Science Act** and the **EU Chips Act**, which respond to supply chain

vulnerabilities and recognize the strategic importance of computer chips for domestic weapon production.

Government

Government plays a vital role in the innovation system, both as a facilitator and regulator. Intellectual property and competition law are key tools used by governments to incentivize innovation, but also other regulatory frameworks significantly influence the willingness of companies to invest in innovation and thereby interact with IP and competition law. For instance, data protection legislation, while initially seen as potentially stifling innovation, can also spur the development of privacy-enhancing technologies. Similarly, product regulations such as the EU AI Act balance innovation enhancement with societal protection, fostering trustworthy markets that encourage firms to innovate.

These legal factors are also subjects of research for the Institute's **economics department**, which has analyzed various innovation determinants, including environmental laws and government policies influencing factors such as gender and migration of researchers.

Governments are increasingly shifting from a broad approach to innovation towards a more focused, mission-oriented innovation policy. This change reflects a move towards prioritizing certain technologies to address pressing issues such as climate change. Whereas in the past, market forces largely determined innovation directions, States are now taking the lead in selected decision-making processes. This shift is particularly evident in sectors such as green energy, where private investment often hinges on governmental support for infrastructure. However, such decisions must be made amidst uncertainty, with the potential of future technologies and their advantages still remaining unclear.

Albert Roger studies the impact of the Kigali Amendment to the Montreal Protocol, which targets the phasing down and out of hydrofluorocarbons (HFCs) – greenhouse gases with a very high global warming potential.

→ See C II 1.10, p. 278

Cristina Rujan evaluates shifts in green patenting post the 2015 Paris Agreement. The study underscores the contradiction between the growing emphasis on climate change mitigation technologies and the actual decrease in green patent filings by major R&D performing firms.

→ See C II 2.14, p. 300

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In times of radical change, governments, especially within the EU, are playing a more active role. This is evident in areas like competition law and recent data legislation, which show a trend towards **centralization** and increased regulation. The EU's preference for directly applicable regulations (Digital Markets Act, Data Governance Act, Digital Services Act, Data Act, AI Act, Proposal for the SEP Act) over directives highlights this shift. Despite previous decentralization efforts, for example Regulation 1/2003, the EU is now consolidating enforcement powers under the Commission, as seen in the Digital Markets Act.

In its position statement on the Proposal for the Data Act, the Institute criticized the Commission for neglecting the private law implications of the new rules.

→ See B II 1.5, p. 72

Additionally, the Institute took particular issue with the rules on international data transfers. They faulted the Commission for inviting third states to adopt similar rules, which could trigger a global proliferation of data localization rules.

→ See B II 1.6, p. 80

The **EU's centralization trend** extends **globally** through what is termed the "Brussels effect". Recognizing its limitations in creating leading platform operators like those in the U.S., the EU has focused on becoming a dominant regulator in the digital economy. This involves making EU data rules applicable beyond its borders, starting with the General Data Protection Regulation's requirements concerning international data transfers. While this approach seems reasonable for data protection, given the lack of global standards, similar provisions in the Data Governance Act and the Data Act expand this extraterritorial reach. Concerns over intellectual property and trade secrets are driving such measures, despite existing global harmonization efforts such as the Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS), which traditionally leaves IP law enforcement to private entities.

The shift to a **multipolar world** significantly impacts innovation policy. While the establishment of the WTO and the TRIPS Agreement in the 1990s aimed for a harmonized multilateral system, the current landscape is marked by a return to **diverse approaches**,



Annual Strategy Meeting of the Institute in Grassau at Lake Chiemsee in September 2022.

particularly in regulating the data economy. Despite shared goals and conclusions, such as the need for competition law reform, responses vary widely. For instance, while the EU has set AI compliance standards under its AI Act, Japan has opted for "agile regulation", emphasizing multi-stakeholder processes over legal obligations. Furthermore, international innovation policy goals differ. China's innovation policy, for example, aligns with long-term geopolitical objectives, which in turn requires consideration from other states.

Additionally, addressing major global challenges such as climate change requires support from the **Global South,** which has gained increased geopolitical and economic significance. This underscores the need for greater attention to this region's interests and concerns.

The Institute engages in research on optimizing the intellectual property systems in Latin America and data governance systems that serve the needs of emerging economies to achieve the Sustainable Development Goals.

- → See B II 3, p. 160
- → See B II 1.8, p. 88

Impact on the Institute's Current and Future Research

As the subsequent sections of this report illustrate, the interactions described above serve as a rich source of inspiration for the Institute's research on the incentives and determinants of innovation and set the path for the future research agenda, both of the Institute as a whole and the individual departments.

The Institute's **interdisciplinary character** constitutes the foundation for its future research. Bringing together legal scholars and economists, who in many cases are interested in similar topics, creates an organic research environment, enabling fruitful and daily exchange on the relevance of research questions and how they should be answered. Both disciplines rely on their own respective methods, thereby furthering understanding of the potentials of the respective other discipline. To submit reliable recommendations for legal reform, legal scholars need to acquaint themselves with the economic insights on the mechanisms and foundations of innovation. Economists acquire from legal scholarship the indispensable normative understanding about the legal frameworks at the center of their own research. Knowledge of the legal ramifications can help economists identify new research questions and interpret the results of empirical research. Hence,

interdisciplinarity at the Institute is foremost a means to improve the quality of research within the two disciplines, even where the concrete research interests may differ. Interdisciplinarity also helps assess the relevance of research questions. The connection remains the pursuit of knowledge about innovation. Based on this, the researchers at the Institute also identify projects that legal scholars and economists can conduct in close cooperation. As seen above, the spectrum of innovation-related areas and interests is continuously widening.

From the legal perspective, effective application and enforcement of **competition law** form the foundation for the market to provide incentives for innovation, while **intellectual property** is one of the most decisive means for safeguarding the necessary investments. Research into these areas of law is the primary focus of the Institute's work. However, in the context of emerging **data law**, the Institute also has to take into account other fields of the law. These include, in particular, **data protection law** and **contract law**.

The **European Green Deal** prioritizes integrating environmental concerns into competition law, as supported by Article 11 of the Treaty on the Functioning

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of the European Union (TFEU), which provides a legal basis for developing "green competition law". However, mission-oriented competition law extends beyond ecological sustainability. It plays a key role in safeguarding democracy. Competition law, with its flexible framework, focuses on protecting competition processes and can indirectly serve various public interest goals, including innovation promotion and technological standardization. Similarly, it can facilitate data sharing to advance numerous public interests.

The Institute explores issues of green competition law. An Alumni Conference in 2022 concluded that integration of ecological sustainability in competition law is largely possible without changing the traditional analytical framework of competition law. The role of competition law for democracy is explored in a postdoc book project.

→ See B II 1.11, p. 106

In the past three years, the department for legal research has put a major focus on researching the implications of IP as a tool to respond to today's grand challenges.

→ See B II 1.1, p. 52

In contrast, developing mission-oriented intellectual property law poses more challenges. IP law is intricate and less adaptable, raising doubts about its capacity to guide innovation towards addressing major challenges such as climate change and pandemics.

However, exploring this question is important for future research collaborations between legal scholars and economists. Assessing the current IP systems' impact on these challenges is imperative, potentially leading to legal reforms and broader considerations, such as enhancing access to relevant technologies. Moreover, focusing IP research on specific technologies and sectors may be necessary to align with mission-oriented goals.

Digital technologies and AI prompt questions about maintaining a human-centered innovation system, a subject of interest for both economic and legal scholars at the Institute. Discussions often revolve around whether Al systems can be considered "inventors" and if the law should protect outputs generated by AI lacking human creativity. However, a more critical inquiry concerns how Al's enhanced performance affects the necessity and legitimacy of the current patent system. Similarly, before considering the extension of copyright protection to "machine-generated works" or introducing new neighboring rights, research should thoroughly assess the potential changes in the market dynamics and their impact on incentives for human creativity. In the context of markets for ideas, such legal changes could potentially undermine democracy, which is reliant on the work of independent journalists and citizens' creative contributions. In addition, beyond firm behavior, economic innovation research traditionally analyzes the incentives to innovate on the part



Intense group discussions on the direction of future research at the Annual Strategy Meeting of the Institute in Munich in September 2021.

of individual inventors. Whether the advent of Algenerated inventions will change this, and to which extent, remains an open question.

In a position statement on the global development of the case law, the Institute has argued against the recognition of AI as an inventor.

 \rightarrow See B II 1.4, p. 68

In the realm of digital technologies, the shift toward market concentration - where a handful of major platform operators seamlessly integrate datarelated applications within their closed ecosystems - raises critical questions about the optimal, open or closed (proprietary) innovation model. This topic predominantly seems to fall within the purview of economic research, which can empirically assess the current trends towards closed models and recommend policy measures. However, legal scholars also grapple with the role of intellectual property, competition law, and mandatory contract law in maintaining an open innovation model. Amidst the surge of cooperation agreements between AI companies and large gatekeeper firms, competition agencies are closely monitoring these developments. The debate over whether openness should prevail over closed models permeates various levels and contexts of the innovation system. Notably, competition law recognizes openness as a goal, particularly in technology standardization, where SDOs must include all stakeholders in the process. Additionally, the FRAND (fair, reasonable and non-discriminatory) commitment system for standard-essential patents ensures open access to standardized technology. The, in the meanwhile, contested principle of net neutrality, regulating Internet infrastructure access, also aligns with the spirit of openness by preventing content prioritization by telecommunication service providers.

Another crucial area of research is the **role of science in the innovation system and in society at large.** Scientific breakthroughs are often the precursor of industrial R&D investments, technology development, and subsequent economic growth. Understanding the integration of the science system within society at large and its interactions is essential for a number of disciplines. Measuring the relationship between

technology and science has been a major challenge. The Institute is contributing a new open access system ("Logic Mill") in this field.

Logic Mill is a scalable and openly accessible software system that identifies semantically similar documents within either one domain-specific corpus or multi-domain corpora. The system focuses on scientific publications and patents and contains more than 200 million documents. It is easily accessible via a simple Application Programming Interface (API) or via a web interface.

→ See Erhardt, Sebastian; Ghosh, Mainak; Buunk, Erik; Rose, Michael; Harhoff, Dietmar (2022). Logic Mill – A Knowledge Navigation System, arXiv preprint 2301.00200, available at https://arxiv.org/ pdf/2301.00200.

The importance of data access and open data for scientific research has also become a key topic in current legal debates on data law. This is evident in initiatives like the European Health Data Space (EHDS) and proposed laws such as Germany's Research Data Act (Forschungsdatengesetz). These efforts aim to balance data protection with the need of researchers for access to data. Additionally, research could explore the role of inclusivity in advancing scientific knowledge generation. The Institute's research has generated evidence pointing to strong gender effects in communication processes in science and innovation.

Employees often need knowledge from colleagues to complete tasks successfully.

In digital settings, female knowledge seekers are more sensitive to their identity being known than males and thus benefit more from anonymity.

- See Mickeler, Maren; Khashabi, Pooyan; Kleine, Marco; Kretschmer, Tobias (2023). Knowledge Seeking and Anonymity in Digital Work Settings, Strategic Management Journal, 44 (10), 2413–2442.
- → See C II 2.8, p. 297

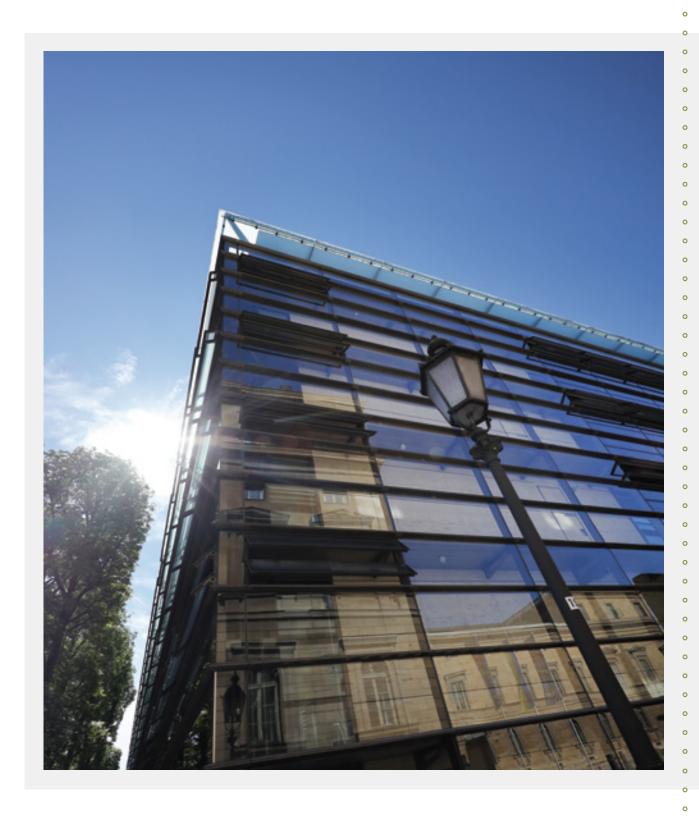
How scientists and researchers utilize communication platforms is the topic of another study, focusing on the Human Brain Project, one of the largest EU-financed research programs ever undertaken.

→ See C II 2.12, p. 299

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Research can also consider how modern technologies can enhance scientific discovery processes. This is particularly relevant in the context of AI tools where science itself – possibly for the first time in the history of technical progress – becomes a focus of automation.

This overview illustrates the Institute's vision of its role in times of radical change. In the subsequent sections of this report, we delve deeper in the respective research agendas of the legal and economics departments.



SPECIAL

Ukraine

mmediately after the Russian invasion of Ukraine, the Max Planck Institute for Innovation and Competition offered support to Ukrainian researchers seeking refuge from the war. The legal and economics departments also granted assistance to those whose fellowships or employment abroad had recently ended and who were seeking opportunities to continue their research outside Ukraine. The Institute provided office space, library access, stipends, and assistance in finding accommodation. Scholars

specializing in competition law, intellectual property law, innovation economics, or entrepreneurship research were encouraged to apply. The offer was open to both doctoral students and senior researchers.

Following the announcement of this offer, the Institute received numerous applica-

tions. Nine researchers have since joined the Institute, while two have returned to Ukraine to continue their work. In addition to the integration into the Institute, team members have helped with interpreting, securing kindergarten places, organizing school enrolment, and finding accommodation for the researchers and their families. Seven family members, including five children, accompanied the refugees. Excursions have been organized and private invitations extended to foster contacts between colleagues. While these efforts cannot erase the harsh realities of the war in Ukraine, everyone has tried to ease the new arrivals' transition into their unfamiliar environment.

There is now a lively scientific exchange with our Ukrainian colleagues. One form of collaboration has been a series of roundtables jointly organized by the Institute and Ukrainian institutions. The roundtable in December 2022 focused on access to medicines in times of war. International legal scholars discussed intellectual property solutions with Ukrainian colleagues. Questions included, for example, how existing TRIPS flexibilities can be applied in the context of Ukraine today to protect public health,

and what factors can enable or contribute to their effective use. The second roundtable in March 2023 addressed the rebuilding of the Ukrainian health sector after the devastation of the war. Discussions covered the history of the pharmaceutical industry, the economic impact of clinical trials, a regulatory outlook for the Ukrainian

pharmaceutical sector, and intellectual property perspectives. Suggestions included tax incentives, infrastructure development, and EU cooperation for technology transfer. Calls were made to facilitate the export of Ukrainian medicines to the EU. The event aimed to lay the foundations for Ukraine's recovery. The series will continue in 2024.

Researchers from the Max Planck Institute for Innovation and Competition initiated a series of online courses on innovation law for master's students at Kyiv National Economic University, the home university of one of our guests.



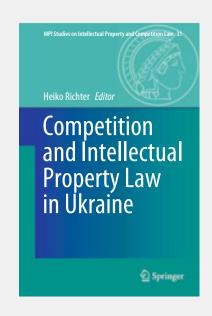
Richter, Heiko (ed.), Competition and Intellectual Property Law in Ukraine (MPI Studies on Intellectual Property and Competition Law, 31), Springer, Berlin; Heidelberg 2023, XXI + 605 pages.

A special highlight was the publication of the book "Competition and Intellectual Property Law in Ukraine", edited by Heiko Richter. It is the result of a two-year project that began before the war. When the authors convened in Kyiv in the autumn of 2021 to discuss their draft chapters, they could not have anticipated the profound changes that would unfold during the following winter. Suddenly, the very existence of many of the authors was at stake, and their dedication and perseverance in completing the book under such difficult circumstances became paramount. The book represents the most comprehensive contemporary academic writing on Ukrainian competition and intellectual property law in English. Particularly in recent years, these areas have been in considerable flux, with the EU-Ukraine Association Agreement

being a key driver. The book covers a wide range of topics and offers a forward-looking perspective. It provides an essential context for understanding the Ukrainian legal system.



While we all hope for an end to the war against Ukraine and a prosperous future for its people, we also greatly value working with our Ukrainian colleagues.





Our Ukrainian colleagues gathered for a poster presentation at the meeting of the Board of Trustees on 4 July 2022.

Ukrainian Researchers at the Max Planck Institute for Innovation and Competition



Assoc. Prof. Dr. Hanna Doroshuk, Ph.D. (since 02/2023)

Associate Professor
Department of Management
Odesa National Polytechnic University, Odesa



Dr. of Legal Sciences, D.J.S. Yuriy Kapitsa (until 03/2023)

Director
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Assoc. Prof. Dr. Valentyna Kryzhna

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Anastasiia Lutsenko

Scientific Coordinator & Project Lead Academ.City Innovation Park **Kyiv Academic University of NAS of Ukraine**, Kyiv



Assist. Prof. Dr. Liubov Maidanyk (until 09/2022)

Assistant Professor Law School **Taras Shevchenko National University of Kyiv**, Kyiv



Prof. Dr. Nataliia Mazaraki

Head of the Academic Department International, Civil and Commercial Law **State Trade and Economics University**, Kyiv

Kateryna Militsyna

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Dr. of Economics Iryna Novikova

Leading Researcher
Faculty of Economics
Taras Shevchenko National University of Kyiv, Kyiv



Prof. Dr. Liudmyla Petrenko

Professor
Department of Business Economics and Entrepreneurship **Kyiv National Economic University named after Vadym Hetman**, Kyiv



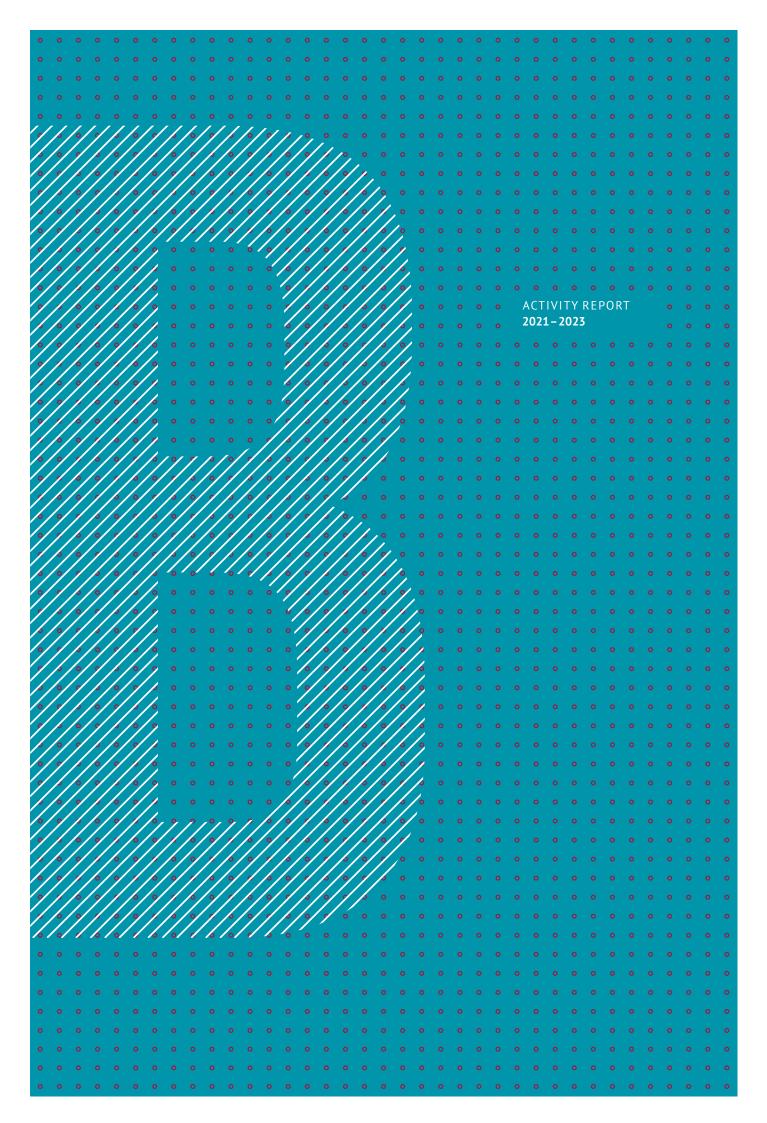


Guest speakers from Ukraine at the second roundtable on the rebuilding of the Ukrainian health sector in March 2023.

f.l.t.r. Prof. Oksana Kashyntseva, Ph.D. Law (Head of the Department of IP Rights and Human Rights in Healthcare of the SR Institute of Intellectual Property of the National Academy of Law Sciences of Ukraine, Head of the NGO "Center of Harmonization of Human Rights")

Prof. Vitalii Pashkov (Head of the Laboratory for the Study of National Security Problems in the Field of Public Health of the Academician Stashis Scientific Research Institute for the Study of Crime Problems, National Academy of Law Sciences of Ukraine)

Prof. Dr. Nataliya Gutorova (Yaroslav Mudryi National Law University)



Intellectual Property and Competition Law

I The Legal Departments of Intellectual Property and Competition Law

1 Collaboration between the Departments and Strategic Planning

To organize fundamental research, strategic considerations are crucial, especially at an Institute that is home to different disciplines. On the interdisciplinary level, the Institute continuously develops its research strategy in the framework of annual Strategy Meetings and, more frequently, at the regular Institute Meetings, in which the researchers of all departments participate. These two kinds of meetings also serve the purpose of enabling the two legal departments to coordinate their strategy.

Strategic planning has to occur on all levels of the Institute, and it is certainly most intense on the level of the individual departments. Legal research has to be particularly responsive to the development of legislation and the case law. Therefore, the two law departments quite often have to readjust their prioritization of projects. Much of the coordination between them therefore occurs in an ad hoc fashion. Hence the strategic planning of both departments is characterized by both long-term perspectives and a high degree of adaptability.

The Interaction of the Two Departments

Under the leadership of Reto Hilty and Josef Drexl, collaboration among the researchers of the two departments has always been very intense. Collabo-

ration of postdocs and doctoral students across the departments under the project leadership of either one or both directors is almost the rule, rather than the exception.

There are several reasons for this: first, the two directors have always shared the vision that intellectual property law should be considered an integral part of the law designed to promote competition. Both departments have supported the modern understanding that both intellectual property and competition law are needed to promote dynamic competition for innovation. Intellectual property law sets incentives for investing in innovation activities by excluding free-riding. Competition law guarantees that right holders are exposed to competitive pressure and therefore continue to innovate. Secondly, the research teams in the individual departments have always represented expertise in both fields of the law. In the department of Josef Drexl in particular, there have always been researchers who exclusively or primarily have worked in the field of intellectual property. Interaction across the two departments has become even more intense in the context of rapid digital transformation. Especially as regards the Internet of Things (IoT) and artificial intelligence (AI), the two departments have jointly engaged in research on the legal implications of the new technologies both from an intellectual property and a marketregulatory competition-based perspective. It was, of course, at the interface of IP and competition law, and in the Institute's drafting of position statements on legislative proposals, that collaboration was always most fruitful. In some instances, the drafting teams also included economists.

Members of all three departments, including Josef Drexl and Dietmar Harhoff, joined the team of authors for the Institute's Position Statement on the Commission's Proposal for a Regulation on standard-essential patents published at the beginning of 2024.

→ See B II 1.9, p. 97

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A research strategy is needed in general because the themes arising in the context of regulation of innovation and competition are too diverse to allow the Institute, with its limited resources, to cover them all. There is however one particular context in which collaboration and joint strategic planning requires an institutional framing and structured decision-making procedures. This regards decisions on applications for funding and admission of external legal scholars. This includes many doctoral students enrolled at universities the world over, who depend on access to the Institute's library to conduct their research. For this purpose, the Institute has developed two digital workflows, one for researchers who are in need of funding from the Institute and another for self-financed quest researchers. In these workflow environments, experienced postdocs evaluate the applications and forward them to the directors of the legal departments, who make a joint decision. In this context, the Institute had to define the criteria for prioritizing certain applications over others. These criteria are not limited to the scientific qualification of the applicant and the quality of the research project,



The Institute's researchers discuss future research directions during a plenary session at the 2023 Strategy Meeting.

but also include the proximity of the proposed topic to the Institute's research priorities.

The Institute employs a descriptive tool to map out the research priorities of the legal departments; it is accessible on the Internet and also serves the purpose of informing both the public and applicants for access to the Institute about the departments' research (https://www.ip.mpg.de/en/research/intellectualproperty-and-competition-law.html). This tool, which was described in more detail in the Activity Report 2015-2017, consists of a matrix with three research axes. These axes denote (1) the principles and functions of intellectual property and competition law; (2) the configuration of the legal rules of these fields; and (3) their international dimension. Developed over many years, this matrix has proven to be quite stable and appropriate: it allows any topic that could potentially be researched at the Institute to be positioned within the dimensions defined by the three axes. Over the years, all the research projects conducted at the Institute have been registered in this space. Thus, the matrix reflects the dimensions of the Institute's entire past and present legal research. Simultaneously, the matrix also provides flexibility for identifying and positioning the department's research priorities at any given time. Once Reto Hilty's successor has taken office, the two departments will discuss the future research priorities and possibly also reconsider the underlying approach to the research strategy.

Key Considerations for Future Legal Research at the Institute

For the above reasons, at this moment it is not possible to provide reliable information about the future direction of the departments' research. The following only mentions some challenges that could inspire the future strategy planning from a legal perspective.

Over a very long time, intellectual property and competition law have proven to be very stable despite huge technological changes. However, whether this can remain the case is not clear. Competition law has already been considerably challenged by the fact that the market conditions in the Internet platform economy are different from those for which competition law was once framed. This is most clearly reflected in the adoption of the Digital Markets Act, which includes a regulatory regime to control unilateral conduct of the

gatekeepers outside of Article 102 TFEU and, hence, does not rely on the concept of market dominance. New general-purpose technologies - such as AI, CRISPR/ Cas and quantum computing – facilitate and speed up innovation processes to such a degree that one may wonder whether and to what extent the existing intellectual property framework is still needed and fit for the purpose of creating incentives for innovation. While both patent and copyright law have proven to be extremely adaptable to new technologies, this may change with the advent of Al. For patent law, there is not only the question of how to protect AI-implemented inventions. Al also fundamentally revolutionizes inventive activities. In the copyright realm, AI differs from previous technologies that only changed the way human-created works are used on the demand side. Generative AI also creates competition between machine-generated productions and human-created works on the supply side.

Both the development of the digital sector and the increasing mission orientation of innovation policies require legal researchers to broaden their perspective in the analysis, taking into account additional fields of the law. Within a handful of years, data protection has quickly moved to the center of legal research at the Institute. Data protection law strongly interacts with competition law, and in the context of data access rules and data-sharing contracts, one has to take into account that data could be protected by data protection law as well as intellectual property and trade secrets rules. The new Al Act has huge implications for innovation in the digital sector. As a form of product safety regulation, it closely interacts with product liability rules from a private law perspective. In the context of innovation processes relating to clean technology, interactions between intellectual property and competition law with environmental law are foreseeable. Legislation concerning the circular economy, such as the new EU rules on the right to repair, equally affects innovation incentives and could further increase the relevance of consumer protection law for the Institute's research. In general, it is increasingly important to take note of legal developments in neighboring fields, both for making project choices and in order to guarantee the quality of research. This creates challenges for individual researchers and for the legal departments as regards the recruiting of new research staff. Competences need to be broader than they used to be. Yet the broadening of the spectrum of relevant

laws must not lead to a loss of focus. For prioritizing research topics, it will remain key to emphasize the innovation-related aspects of the various laws.

Most recently, the EU legislature has put a particular emphasis on regulating the digital economy. In doing so, it has applied an approach that differs considerably from other fields of law and past internal market legislation. It prefers directly applicable regulations with a high degree of detail to directives. It provides for public enforcement, in part centralizing enforcement power at the Commission's level, and otherwise requiring Member States to designate competent national regulatory agencies, while neglecting private enforcement, even where the new Acts provide for rights and obligations between private parties. Overlaps between the growing number of legal instruments abound, not to mention the intense interaction of the new data law instruments with intellectual property, competition and data protection law. The overlapping enforcement power of regulatory authorities on different levels with the jurisdiction of private law courts will not remain without frictions. This is not a new phenomenon. The CJEU's case law on the interpretation of copyright directives, in particular, provides many examples of conflicting norms. These resulted from the lack of consolidation and coordination of different legal instruments, and they could only be resolved by striking a balance between the fundamental rights of the persons concerned. In a democratic EU, however, this cannot continue forever. Hence, in addition to commenting on proposals for new legislation, the Institute could also concentrate more on the task of monitoring the application of the most recently adopted laws and work for future consolidation and better coordination of both substantive law and enforcement powers. Such a monitoring function should ideally include the European patent system, which is now equipped with the Unified Patent Court and may therefore have better chances to resolve pan-European patent disputes in a central venue. However, the system continues to be extremely fractured, both geographically and as regards the type of patents (national patents, regular European patents and European patents with unitary effect).

In the future, the legal departments will also be confronted with new challenges in international law. The trend toward a multipolar world exposed to major geopolitical crises and economic wars over subsidies has the potential of distorting international competition, with negative effects on innovation. This occurs at a time when the WTO continues to be paralyzed. In addition, the WTO legal framework appears outdated, failing to provide an adequate international trade law regime for the digital economy and the trade-related aspects of sustainability. Both aspects have already entered the current generation of free trade agreements (FTAs) negotiated by the EU in particular. Still, the new data law is a long way from reaching a state of maturity that would allow for negotiating a multilateral framework. For the time being, there is thus a considerable risk of unilateralism, where the more powerful trading nations impose their visions on others. Globally active businesses may simply take the most interventionist law as the reference point of their conduct, although this law, from an innovation perspective, may not be the best one. These considerations provide sufficient reason for the Institute to place an emphasis on the international dimensions of the data law. This could include the following aspects: fundamental research on a future international law regime for the data economy; work on the private international law principles applicable to the emerging data law; identifying cases of unjustified extraterritorial application of domestic rules as well as unjustified data localization requirements; and comparative research on the adequacy of the fundamental approach to, and design of, data law in different parts of the world.

If new digital technologies indeed require a more fundamental reform of intellectual property laws, the high level of international harmonization under the TRIPS Agreement and numerous FTAs with intellectual property chapters could turn out to be an obstacle. Thus, the reform debate would immediately have to be leveraged to the international level. Similarly, the Institute has to monitor the debate on the reform of digital competition law from an international perspective, and not only because the gatekeepers are internationally cooperating companies. More importantly, while there seems to be a consensus for the need of reform, the approaches are not necessarily the same everywhere. Since some jurisdictions have already adopted new rules, monitoring of their application will be important so as to evaluate their effects to later move to an internationally more coordinated standard of digital competition law.

Key Considerations for Competition Law in Particular (Department of Josef Drexl)

Research on the interface of innovation and competition, including IP-related cases, has always been at the center of the research of the department led by Josef Drexl. In particular, the Institute has explored the role of dynamic competition in competition law analysis and the application of competition law in the innovation and IP-intensive pharmaceutical industry and ICT sector.

As concerns the digital economy, the Institute prioritizes those aspects that are specifically innovation-related. It has focused particularly on the standardization of mobile telecommunications technology as the key technology needed for enabling follow-on innovations, and on the regulation of the emerging IoT sector, where access to data is key to maintain competitive markets and innovation. Furthermore, the Institute is also engaged in research on the Internet platform economy,

where it notes that the lack of contestability of the market position of digital ecosystems has the potential of considerably decreasing dynamic competition. More recently, the Institute has also begun researching the conditions and dynamics in the infrastructure-related telecommunications markets, where the particular segment of cloud computing services is very much dominated by gatekeeper companies.

For the future, the Institute plans to consider in particular the effect of the control over general-purpose technologies – including AI foundation models and new genomic techniques such as CRISPR/Cas – on competition and the application of competition law in the relevant sectors. The innovation implications are huge given the fact that downstream implementers depend on access to these technologies for engaging in their innovation activities. In this context, it will also be important to take into account the landscape of relevant intellectual property rights and the availability of trade secrets protection.

2 Team and Areas of Interest

Senior Research Fellows

Dr. Francisco Beneke Ávila

Currently, I work on how antitrust law enforcement can capture the mutual feed-back that exists between the political and economic aspects of market

power. The political aspects addressed in my research are the investments made by firms with substantial market power in political activism, such as lobbying expenses, campaign donations and the hiring of former politicians. Such conduct can influence policies that affect the intensity of competition in markets. Therefore, I am inquiring into whether competition law enforcement can be used as a tool to prevent competitive harm arising from political activism. To answer this question I also look into other forms of regulating political

activism – such as limits to campaign donations and minimum waiting periods for hiring politicians after they exit the public sector – and how antitrust enforcement could clash with or complement the contribution of these regulatory options.

The political activism of dominant firms may have effects beyond the markets in which they operate, and this has motivated me to investigate how harm to other societal goals such as environmental protection should inform law enforcement policy at every stage, from the priority-setting of markets that will be investigated to the selection of the optimal legal remedies.

Dr. Beatriz Conde Gallego

I work in the field of competition law.

An important part of my research concentrates on how innovation considerations can be integrated into

the design and application of European and national competition rules. I explore this fundamental question across different industry sectors such as the pharmaceutical, telecommunication and digital sectors. Thereby, issues arising at the intersection between intellectual property rights (IPRs) and competition law are a major focus of my work. In this regard, my research

builds on and contributes to the research by other Institute members on understanding the innovation-promoting role of IPRs and their use in market strategies. A particular area attracting much of my interest concerns technical standardization and the questions surrounding the licensing and enforcement of standard-essential patents.

In my work, I largely apply a normative research methodology, combining the analysis of legal and policy issues and integrating insights from innovation economics.

Dr. Ezgi Ediboğlu Sakowsky

My primary research focuses on international environmental law and the influence of multilateral environmental agreements, particularly

their impact on various climate change sectors. Currently, my research spans the sectors of agriculture, energy and waste management. Additionally, I explore the dynamics of technology transfer among nations in these sectors and analyze the influence of the international trading regime.

Furthermore, I am actively engaged in policy-making aspects within the realm of climate change. I am currently crafting a proposal for Türkiye regarding its technology transfer strategies to combat climate change, stemming from my role as

a Mercator-IPC Fellow at the Istanbul Policy Center. Moreover, I work with local NGOs in Türkiye, where I publish informative materials about climate change for the general public. During the Conference of Parties to the UN climate change regime in 2023, I provided my daily observations on-site through the website of the association Gidanin Durumu, of which I am co-founder.

Finally, my research interest extends to public international law, particularly international institutional law. In my Ph.D. thesis, I investigated the question of whether international institutions could assume a more prominent role in the governance of climate change.

Dr. Tobias Endrich-Laimböck

My interests lie in intellectual property and competition law, with a focus on their international and crossborder dimensions. While national leg-

islation follows national economic and social needs, intellectual property law is embedded in a legal framework of bilateral and multilateral agreements on intellectual property, trade or human rights. This framework informs and limits the options for national regulatory decisions. I am interested in exploring these limits to answer questions such as under what circumstances states can, and under what circumstances are they

obliged to, exclude certain subject matter from intellectual property protection.

I am a member of a group that is applying this approach to a different regulatory regime: we are examining national regulation of new genomic techniques for food and feed as potential barriers to trade under the WTO Agreement and outlining issues for their justification.

My contribution to legal scholarship is primarily doctrinal.

Dr. Begoña González Otero

As a jurist with expertise in interdisciplinary research at the crossroads of law, technology and society, my work explores the dynamic relationship

between disruptive technologies and legal frameworks. I follow a modern functional approach to the law, investigating how legal reforms and regulation can specifically contribute to solving major challenges of humankind. I focus on the crucial role of intellectual property rights and competition law in driving innovation and on the role that market regulation plays in creating incentives to develop more inclusive, ecologically sustainable and socially responsible business

models. My research aims to contribute to the creation of a thriving, environmentally respectful society for the future. Enhancing the well-being of humanity is my main driving force.

In my work, I incorporate diverse fields such as social sciences, technology and economics, emphasizing collaboration across various stakeholders to ensure the robustness of my outcomes. Currently, I am involved in several projects that explore the regulation of the digital economy. My main focus lies on the impacts of artificial intelligence, data interoperability, standards and data governance in emerging economies.

Dr. Daria Kim

In my research, I explore normative issues posed by technological developments and innovation phenomena that may require policy and legislative

responses. In the past few years, my work has centered on topics related to drug innovation, genome editing and artificial intelligence. While intellectual property law and policy are my "native" fields, legal frameworks have expanded – and with them my areas of research – to encompass regulations of the pharmaceutical industry, legal and ethical aspects of medical research involving

humans, regulation of technological risks and marketing authorization, public interest-based transparency regulation, and access to data in the context of the data economy. In my work, I attempt to integrate insights gained from literature and exchanges with researchers from different disciplines, particularly the technologies of interest and economic research on innovation. I am also keen on exploring the relevance of conceptual frameworks from society and technology studies for normative analysis.

Dr. Matthias Lamping

The focus of my research is on the interaction between property rights, competition and innovation processes. For the most part, I deal with

the regulation of emerging technologies. This requires not only a differentiated look at the effects of intellectual property protection on the market, but also a broad research approach in both intra- and interdisciplinary terms. At the same time, it requires a market- and sector-specific approach to problems and solutions. The incentives, determinants and implications of innovation in the field of computer games may differ fundamentally from those in medicine or agriculture, since the effects of regulatory measures on entrepreneurial processes are highly contextual.

One of the evergreens on my research agenda is the European patent system. With the Unified Patent Court (UPC) opening its doors and the European patent with unitary effect ("unitary patent") entering into force, new questions of a legal and institutional nature have emerged.

Another transversal topic is the relation between intellectual property and international trade, including the interaction of international law with national legal systems. This is underpinned by the objective to promote international trade without unreasonably impinging on the sovereignty of states.

My experience in interdisciplinary research extends to economics, sociology and political science.

Izv. Prof. Dr. Silke von Lewinski

My field of research is copyright law, with a focus on international law (treaties, including trade treaties, covering copyright); European harmonization; and foreign and comparative law.

As I am the co-editor and co-author of the leading reference work on EU copyright law, I am currently working on the latest update of the previous edition, also adding new chapters and including reports on national implementation. An analysis of the individual provisions of harmonizing legislation shows that quite many open questions of interpretation remain, including those that have been triggered by case law of the CJEU. With new horizontal legislation (such as the most recent AI

Act), harmonized copyright law is subject to growing complexity, which necessitates analysis.

While all questions of copyright are part of my research, a major focus is currently AI and copyright. An enormous amount of questions arise in this respect, starting with the use of protected works for generative AI through reproduction in particular in training databases; questions of applicable law; the possible infringement of works by AI products that are identical or similar to pre-existing works; and questions of possible protection of AI outputs. Also, questions of proof, transparency obligations and practical challenges for right owners or collective management organizations need to be addressed.

Dr. Tian Lu

My postdoctoral research, an extension of my doctoral studies, concentrates on state interventions in the intellectual property (IP) domain and aims to refine IP frameworks through

a multifaceted approach. A primary focus is evaluating the impact of state actions — such as legislation, regulations and judicial decisions — on innovation, analyzing whether these interventions foster or inhibit creativity and technological progress under various conditions. Additionally, this project seeks to balance the interests of IP rights holders and the public, fostering a fair and functional IP ecosystem. Through a comparative analysis of IP laws across different jurisdictions, including Asia, the EU, and the U.S., I identify best

practices and suggest improvements, providing policy recommendations based on empirical data. These recommendations help policymakers adapt IP laws to keep pace with technological and economic shifts.

As the Executive Co-Editor of GRUR International, I am devoted to upholding the journal's legacy, and I partially integrate my editorship with my role as a researcher. I stay closely connected with legislation and court judgments concerning IP and competition law and related areas. In line with the international orientation of the journal, I approach these aspects with a global perspective — from south to north, east to west — and ensure they are brought to our readers on time.

Dr. Valentina Moscon

My research interests are in intellectual property and information technology/digital law. I deal with legal and policy issues at the intersector of law and technology mostly applying

tion of law and technology, mostly applying a comparative perspective.

My focus has been on the legal and policy issues of digital markets, particularly the scope and enforcement of copyright law in these markets and the coordination of copyright and other IP rights with new digital regulation. I have also dealt with research questions on the governance of science.

I am currently focusing on two main lines of research. The first one deals with the interplay between data access rules and IP law, especially as it relates to the regulation of AI platforms with regard to their inputs (data collection, scraping, storage, mining). In particular, I address the problem of AI training and how copyright law and technical protection measures hamper access to and use of data.

The second line of research concerns the remuneration of creators and performers in the platform economy. In copyright law, I am carrying out a comparative study of existing direct remuneration systems worldwide. The study investigates in which countries direct remuneration systems exist, how they are regulated, and for which copyright industries (music, film etc.) and type of exploitation direct remuneration systems are applied.

Dr. Nada Ina Pauer

My research at the Institute is dedicated to the future of EU competition law and the new digital regulation in the DMA, DSA and Data Act,

particularly their underlying parameters and enforcement. As my habilitation focuses on the question of the digital regulatory framework's private enforcement, a strong nexus exists to integrating the new duties on platform markets into national civil law.

As private law plays an increasingly important role in granting the effective enforcement of European and national competition law, its role for effectively enforcing the new rights and obligations stipulated by the digital regulatory acts is a central

focus of my habilitation. This involves analyzing the interplay of public and private enforcement on digital markets and the role that each system plays for effectively achieving the aims of reviewing conduct in the digital sphere.

Methodologically, this involves a dogmatic assessment of the new access and performance obligations on digital markets and an economic-institutional analysis of public and private legal tools, as well as a legal comparative assessment of approaches for ascertaining (digital) market imbalances in different jurisdictions. Also pertinent is the evaluation of how well CJEU case law fosters private enforcement and the role of the principle of effectiveness.

Dr. Heiko Richter

As far as "areas of law" are concerned, my research is mainly devoted to private law (German and EU), competition law and intellectual

property law. One focus is the emergence of a rather new area: data regulation, including its interfaces with competition, contract and intellectual property law. At the same time, analyzing the legal framework for public sector data and the right to freedom of information and re-use has led to basic research as well as to advising lawmakers in areas which may classically be associated with public law and information regulation.

In general, I am fascinated by the public-private interface, or in other words the recurring issue

of the interplay between the state, the market and society. Looking at how the law explicitly and implicitly reflects on this interplay coincides with my interest in legal theory, particularly in the field of private law and law-making, and its development against the backdrop of the digital transformation. In this regard, I feel challenged by the ambition to integrate economic theory with other social sciences in law.

In addition, I have entered the research area of transforming economies and the legal approximation of EU laws, focusing on Eastern European jurisdictions. While this research inevitably touches on different notions of the state, market and society as well, it also accommodates development theory and comparative methods.

Dr. Klaus Wiedemann

My research focuses on the legal implications of the digital economy, in particular new digital business models. For instance, I am interested

in the relationship between competition law and data protection law, given that many of today's business models entail major implications for both legal regimes. Market power and data protection rights can easily come into conflict, such as when a market-dominant company is able to violate data protection rights in order to gain (anti-)competitive advantages. In a similar vein, the question what role antidiscrimination law has within the regulation of the data-driven economy provides fruitful research opportunities.

At a more abstract level, I am interested in the broader picture of how to design a human-centered approach to the regulation of the digital economy. I am convinced that one should apply data protection, antidiscrimination, consumer and competition law in a coherent manner. Only such an approach seems suitable to take into account the legitimate interests of all parties concerned. In this context, my research looks at the rapidly evolving framework of EU data law. So far, this new legal regime has – arguably – not succeeded in creating sustainable framework conditions for the data economy that promote innovation and competition and protect the users' fundamental rights.

Junior Research Fellows



Carolina Banda



Michał Barycki



Pedro Henrique D. Batista



Yiqiong Chen



Anna Chiettini



Gil Dagan



Artha Dermawan



Chuqi Feng



Rebeca Ferrero Guillén



Liza Herrmann



Jörg Hoffmann



Marc Huckschlag



Germán Oscar Johannsen



Lukas Kestler



Shraddha Kulhari



Isaac Kundakogo Kunko



Charlotte Masselot



Giulio Matarazzi



Kateryna Militsyna



Zeinab Mustafa



Peter R. Slowinski



Miriam Steinhart



1 Selected Research Projects

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Grand Challenges

After the advent of what was presumed would be an era of global peace, prosperity and globalization for the benefit of humanity in the 1990s and early 2000s, the world now seems to be facing an increasing number of challenges. The COVID-19 pandemic seemed to be a disruptive episode that occurred without forewarning. The risks that humanity is facing due to climate change, on the other hand, have been predicted for a longer period but now require relatively fast responses and solutions. The crises are exacerbated by regional and geo-strategic conflicts with effects on international cooperation and supply chains. Innovation cannot be the only response to the grand challenges that humanity has to deal with, but at the same time they cannot be met without technological progress. The challenges and their potential solutions require responses on a regulatory level including patent and competition law but certainly going beyond these traditional legal fields. The Institute is responding to these developments by increasingly shifting the focus of its traditional research areas to such aspects and by attempting to incorporate the necessary expertise.

From Life Sciences to Grand Challenges

The previous activity report (2018–2020) already described a shift in the Institute's research approach. Based on the understanding that the study of innovation and competition in industries and markets can no longer be limited to specific areas of law, but requires a broader perspective, the traditional focus on patent and competition law increasingly was expanded. Over time, and starting with a conference in 2018, the focus shifted towards "life sciences", understood as disciplines that address the survival of the human species. The continued work in this area then led to the conclusion that climate change, health and world nutrition are of particular interest since the core question in these areas is whether existing

regulatory frameworks are equipped to allow timely and adequate responses to these global challenges. In other words, the subject matter of the Institute's research stayed the same but the perspective changed and developed to adapt to the required responses in times of crises. This is also reflected in the research approach. This approach is based on joint conferences and workshops that invite external experts from the relevant fields of law and technology, as well as those with insights into specific industries and markets. Research in preparation for these events and resulting from their outcomes may result in research and position statements by the research group and is further supplemented by the work of individual members of the group that addresses specific topics within the larger agenda.

From a structural perspective research on crises can be described by a three-dimensional matrix that includes on one axis the crises with their various sub-issues, on the second axis the regulatory instruments that can be used by legislators and governments but also bodies of self-regulation to respond to the challenges, and on the third axis the technologies that can be used to mitigate the negative consequences of the crises. Thus, on the first axis are located climate change, including the sub-categories of energy, mobility and construction; nutrition, including food production; and health, including pandemics, the antimicrobial crisis, personalized medicines and rare diseases. On the second axis we find exclusivity in the form of IP rights; competition law; standardization; state incentives; and various forms in which technology dissemination can be organized such as patent pools, compulsory licensing or data sharing. On the third axis, finally, we have technological means to face the challenges of humanity: biotechnology, including new genomic techniques (NGTs); the use of artificial intelligence; or digitalization in general.

Combining the three axes of the matrix can show us how NGTs can provide solutions to issues of food production based on climate change and the necessity to adapt plants to changing weather conditions. The development and dissemination of the required technologies challenge patent law and the complicated patent landscape may require regulatory intervention in the form of patent pools, scrutiny by competition authorities or, as a last resort, compulsory licenses. Applying the best regulatory responses to challenges and technologies requires a thorough analysis and deep understanding of issues, technologies and markets. For this, the Institute has intensified the exchange with external experts, but also begun to include expertise within the institute including international environmental law.

Climate Change

The necessity and the advantages of this approach are particularly visible with respect to climate change. The Paris Agreement of 2015 set the goal to hold "the increase in the global average temperature to well below 2°C above pre-industrial levels" and pursue efforts "to limit the temperature increase to 1.5°C above pre-industrial levels." The goal of 1.5°C cannot be reached without a significant reduction of carbon emissions. It is clear that this cannot be achieved without substantial changes on industrial and societal levels. In light of higher energy consumption on a global scale and increased industrialization in



Facing the reality of climate change: Institute members discuss green innovation at Schloss Ringberg, with Tegernsee's unseasonably green landscape at the foot of the castle in January 2023 as a stark reminder.

previously less developed countries, technological solutions, and therefore innovation, are required. This results in the obvious question what role, if any, traditional regulatory instruments of innovation such as competition law and patent law play.

To determine the potential of competition and patent law in addressing climate change, the institute organized a workshop in February 2022 to discuss these questions with European legal scholars. It became clear that the answers are very dependent on technologies and industry sectors. Various subsequent publications from members of the research group have highlighted on the one hand the fact that traditional instruments such as patent law have only limited potential to solve the global problem by themselves and that industry sectors such as hydrogen production and use, e-mobility, solar power or the potential of 3D-printing for sustainability require individual considerations and a holistic approach on the policy level including international trade law. Supplementing the work of the legal research group on grand challenges, a joint seminar of the Institute's three departments took place in 2023 to exchange research perspectives on this topic. The potential for joint research became clear, and the next task is to work out what the best approaches for concrete research projects might be.

Additional work on the topic of climate change, intellectual property and competition law has been conducted in the course of the Smart IP for Latin America (SIPLA) project (B II 3, p. 160). Here the topic is of increased importance, since the countries of the global south will be affected by climate change to a higher degree while their economies may be less capable of providing solutions for adaptation to the consequences and means for their mitigation. At the same time, Latin America in particular has a number of resources that are crucial for overcoming the grand challenges, namely in terms of energy production and storage, and above all in terms of feeding the world's population. In order to realize this potential on a collaborative basis with other economic areas of the world, it is crucial to adequately shape intellectual property and competition law, in particular to support the necessary innovations without disregarding regional needs.

Publications

- → Ferrero Guillén, Rebeca, From Enemies to Allies: 3D Printing, IP and Sustainability, Journal of Intellectual Property Law & Practice 18, 5 (2023), 375–381.
- → Hilty, Reto M.; Pedro Henrique D. Batista, Potential and Limits of Patent Law to Address Climate Change, GRUR International 72, 9 (2023), 821–839.
- → Hoffmann, Jörg, Setting the Right Innovation Incentives for Europe's Green Transition (Max Planck Institute for Innovation & Competition Research Paper, No. 23-13), 2023, 31 pages, http://dx.doi.org/10.2139/ssrn.4493903, 12.07.2023.
- → González Otero, Begoña, IP in Times of Climate Crisis A Problem or a Solution?, IIC 53, 4 (2022), 501–505.
- → González Otero, Begoña; Helmut Esteban, Is the Transition to E-mobility the Silver Bullet to Achieve Climate-neutral Transport? An Interdisciplinary Review in the Search for Consistency and Collateral Effects, European Business Law Review 34, 1 (2023), 81–98.
- → Ullrich, Hanns, Klimawandel im EU-Kartellrecht, in: Thomas Jaeger, Rainer Palmstorfer (eds.), Kartellrecht im Wandel – Braucht es neue Ansätze für Klima, COVID und Datenkraken?, Jan Sramek Verlag, Wien 2022, 13–80.

Limitations of IP Rights in Times of Crisis

Where IP rights tend to become obstacles to responding to the various types of grand challenges, it may be necessary to restrict them in order to overcome blocking effects that prevent timely and adequate solutions. The discussion about appropriate limitations received new momentum during the COVID-19 pandemic.

Once new mRNA-based vaccines became available on the market, their limited supply led to a call to waive the respective patents covering these technologies within the legal framework of the Agreement on Trade Related Aspects of Intellectual Property Rights (TRIPS). The proponents of such a waiver argued that existing patents prevented the production of the vaccines on a global scale and caused the scarcity of vaccines, the obvious solution to the crisis. This argument was linked with the frustration of the countries of the global south over the fact that countries of the global north had initially secured most of the available supplies of vaccines for their populations, resulting in a delayed global distribution.

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The Smart IP for Latin America initiative inaugurates its second observatory at the Universidad Externado de Colombia in Bogotá.

Nevertheless, the call for an IP rights waiver oversimplified the situation and risked reducing incentives for required future investments in innovation. The reality was, and is, that this new generation of vaccines requires highly sophisticated technologies and know-how that is not readily available around the globe. The need for development, clinical testing, manufacture and distribution of the vaccines made it necessary for small and highlyinnovative companies that before the pandemic were still struggling to be profitable or even to survive to join forces with multi-national pharmaceutical giants to achieve the availability of the vaccines on a sufficiently large scale. The IP rights, which were often in the hands of the newcomers, provided a compelling basis for these collaboration agreements, allowed the recoupment of R&D investments, some of which had already been made decades before the pandemic. and created the financial backbone for the future development of this game-changing technology.

For this reason, the Institute published a position statement in which it cautioned against the consequences of a blanket waiver of IP rights during the pandemic. The position statement received widespread public support from almost one hundred IP experts with a majority of signatories coming from academia, and received significant attention at the political level. The position statement also points out that international law

already provides for sufficient flexibilities and measures to respond to a crisis, but that these possibilities are hardly ever actively used by countries, in particular those of the global south. These measures include compulsory licenses in cases of medicine shortages.

Publication

→ Hilty, Reto M.; Pedro Henrique D. Batista; Suelen Carls; Daria Kim; Matthias Lamping; Peter R. Slowinski, COVID-19 and the Role of Intellectual Property: Position Statement of the Max Planck Institute for Innovation and Competition of 7 May 2021 (Max Planck Institute for Innovation & Competition Research Paper, No. 21-13), 2021, 15 pages, http://dx.doi.org/10.2139/ssrn.3841549, 20.05.2021.

Compulsory Licenses in the EU

As a consequence of the pandemic and the shortages not only of vaccines but also other medical supplies, the European Commission, as part of its patent package, addressed the question of compulsory licenses on the EU level. Even now, however, the question of granting compulsory licenses on patents is subject to the respective national laws of the 27 EU Member States. From the perspective of the common single market this may create obstacles to swift

responses in times of crisis. The establishment of the Unitary Patent and the Unified Patent Court in 2023 did not change this situation. On the contrary, while the new patent litigation system allows for unitary enforcement of patents throughout the territory of its signatories, potential users of patented technologies must request a compulsory license for each country separately. The only compulsory license rooted in EU primary law that is currently available is based on the abuse of a dominant market position (Art. 102 TFEU) and has been applied by the CJEU with respect to standard-essential patents (SEPs), where licensing on fair, reasonable and non-discriminatory terms is required. But even here, the compulsory license does not seem to work and reforms are currently being discussed. The Institute's response to this specific SEP initiative is discussed in another chapter of this report (B II 1.9, p. 97).

Having the fragmented situation of compulsory licenses in the EU in mind, the European Commission, within its initiative "Compulsory Licensing in the EU", launched a call for evidence and a public consultation in 2022 to obtain the perspectives of stakeholders on this issue. From the Commission's perspective the framework for compulsory licenses in the EU should become more "adequately prepared and coordinated to tackle future crises". The Institute's research group responded to this regulatory initiative with a position statement. While the statement generally welcomed the initiative, it highlighted a number of shortcomings, made recommendations for improvement and generally recommended thinking outside of the narrow perspective of a specific crisis.

Compulsory licenses are not only means to respond to shortages of patent-encumbered technologies during a pandemic. Moreover, they can also serve other purposes. This includes patent dependencies. Complex technologies in the areas of gene editing and mRNA-vaccines, but also technologies linked to renewable energies, may sometimes appear to be sudden and disruptive in hindsight. Quite often, the opposite is the case. Such complex solutions to seemingly overwhelming problems usually develop sequentially and by multiple actors working on the issues simultaneously. This can create complex interdependencies between patents that may lead to blocking effects if the different patent holders cannot reach a voluntary agreement. Compulsory licenses in cases of dependencies may provide an ultima ratio way to counter such blocking effects and should therefore also be taken into consideration on the EU level.

Publications

- → Lamping, Matthias; Pedro Henrique D. Batista; Juan I. Correa; Reto M. Hilty; Daria Kim; Peter R. Slowinski; Miriam Steinhart, Revisiting the Framework for Compulsory Licensing of Patents in the European Union (Max Planck Institute for Innovation & Competition Research Paper, No. 23-07), 2023, 27 pages, https://dx.doi.org/10.2139/ssrn.4381959, 02.03.2023.
- → Ullrich, Hanns, Patent Dependency Under European and European Union Patent Law A Regulatory Gap (Max Planck Institute for Innovation & Competition Research Paper, No. 23-04), 2023, 57 pages, https://dx.doi.org/10.2139/ssrn.4339426, 27.01.2023.

Whether or not such blocking effects indeed exist and need to be solved by the application of existing laws, their adaptation requires in-depth and careful analysis and an understanding of the technologies, the markets and the applicable law. The Institute, after intense collaboration with external experts, has undertaken this for NGTs and published the results in, to date, two research papers. This project is described in a separate chapter of this report (B II 1.2, p. 58).

Continuing Challenges to Health

The Covid pandemic brought public life in most countries and the global supply chains to a grinding halt. The effects of global climate change will keep challenging humanity for the next decades to come. But while these "big" crises have been or still are dominating news coverage, there are still other issues in the area of life sciences that are waiting for novel technological solutions. In general, the question arises whether the respective regulatory framework really promotes the required innovations or rather makes them unnecessarily cumbersome. While the research on these topics has not yet reached a condensation point that would have justified specific position statements by the overall research group, they are the subject of individual projects. These projects supplement the Institute's collective work in addressing the grand challenges. Depending on their respective progress they are introduced in other chapters of this activity report.

At the forefront of the health-related challenges remains the crisis of antimicrobial resistance. Due to the widespread use of antibiotics not only for humans but also in animal-based food production, bacteria are developing resistances which limit the use of existing

antibiotics. This requires continuous development of alternatives. However, the research pipeline for new antibiotics is insufficient and showing a clear case of market failure. This situation may be overcome by creating alternative market incentives for the manufacture of new antibiotics or research into new biotechnological methods to treat microbial infections. Both approaches will quite certainly require changes in the regulatory framework to overcome the current market failure and find adequate solutions to the problem (Miriam Steinhart is studying this in her current dissertation).

Potential market failures, either due to markets that are not large enough or not sufficiently remunerative or due to other incentive failures, have been examined for areas such as personalized medicines, orphan medicines, sub-population medicines or repurposed medicines. The widespread claim that the markets for personalized medicine, such as genetic testing and targeted medicines, are too small to be remunerative has largely been refuted. Personalized medicine is not specifically targeted by de lege lata patent law or general pharmaceutical legislation incentives. Both patent and regulatory exclusivity systems are not suited to personalized medicine, and some significant shortcomings have been identified that may affect the development of innovative personalized medicines, but also generic markets. A holistic assessment rethinking the shortcomings of exclusivity rights in the context of personalized medicine has led to recommendations de lege ferenda (B II 2.21, p. 148).

Solutions to challenges impacting not only health but also nutrition or adaptation to climate change may already be in existence in the rich genetic resources and traditional knowledge of indigenous and local communities around the globe. Such resources and knowledge may provide the basis for new, patentable, technologies and applications. Here the question of access and benefit sharing between the global

north and the global south arises (see Hilty, Reto M.; Pedro Henrique D. Batista; Suelen Carls, Traditional Knowledge, Databases and Prior Art: Options for an Effective Defensive Use of TK against undue Patent Granting in: Irini Stamatoudi (ed.), Research Handbook on Intellectual Property and Cultural Heritage (Research Handbooks in Intellectual Property), Edward Elgar Publishing, Northampton, MA, USA; Cheltenham, UK 2022, 132–153 and other publications).

Solutions to medical issues can be found not only in chemistry, biology and genetics. Modern technologies such as artificial intelligence and the use of data from mobile health devices (mHealth) connected to the Internet of Things (IoT) may provide crucial insights into illnesses and help to find adequate responses. However, while the use of such valuable data holds significant potential for medical research and innovation, it faces challenges regarding accessibility of data. These challenges are partially based on the current data protection regime within the EU. Here a more integrated and holistic approach to regulation and data governance may be required (B II 2.1, p. 108).

Outlook

Humanity will continue to face grand challenges that may seem overwhelming but will definitely require innovative technological responses based on the life sciences in a wider sense. Existing technologies and those under constant development such as CRISPR/Cas or mRNA can only be put to good use in areas such as health, nutrition or climate change mitigation if the regulatory framework, including competition and intellectual property law, is suitably designed and, above all, flexible enough to provide an adaptable framework for the development of technologies and markets. This in turn, provides ample room for further legal research in the area of life sciences and grand challenges.

Research Area Leader

Reto M. Hilty

Research Area Collaborators

Carolina Banda, Michał Barycki, Pedro Henrique D. Batista, Francisco Beneke Ávila, Ezgi Ediboğlu Sakowsky, Tobias Endrich-Laimböck, Rebeca Ferrero Guillén, Begoña González Otero, Jörg Hoffmann, Elisabeth Hofmeister, Daria Kim, Matthias Lamping, Peter R. Slowinski, Miriam Steinhart, Hanns Ullrich, Laura Valtere

1.2

CRISPR/Cas Technology, Innovation and Regulation

In the field of precision genome editing, CRISPR/Cas technology stands out for its specificity and efficiency in modifying DNA sequences. Given its characteristics as a general-purpose technology, CRISPR/Cas applications hold the potential to bring about significant social benefits across sectors. Building on earlier exploratory work, the Institute has deepened its study of interactions between CRISPR/Cas technology and the intellectual property (IP) framework, focusing on the agricultural sector in view of the potential of CRISPR/Cas technology to enhance global food security and address the impacts of climate change. Furthermore, it has taken a close look at the field of marketing authorization regulation for CRISPR/Cas and its implications for innovation and technology diffusion. The overarching research question is how the existing regulatory framework can be improved to facilitate the realization of the social benefits of precision genome editing.

The Socio-Economic Significance of CRISPR/Cas Technology in the Agricultural Sector

New genomic techniques (NGTs) refer to genome-editing methods that can induce targeted and precise modification of DNA without introducing foreign genes into the organism's genome (transgenesis). Among NGTs, CRISPR/Cas technology is currently a leading genome-editing method characterized by superior specificity and efficiency compared to other precision genome-editing techniques. As an enabling technology, this genome-editing tool enables follow-on and complementary innovations across a broad spectrum of applications.

NGT-based breeding holds promise for enhancing global food security and addressing climate change by developing improved plant varieties. NGTs enable the creation of plant varieties with enhanced agronomic traits, contributing to increased yield, resource efficiency, stress resistance, and improved output quality, including heightened nutritional value and extended shelf-life. This can also contribute to environmental sustainability by reducing water and fertilizer usage. In the case of CRISPR/Cas applications, cost-effectiveness and user-friendliness can shorten plant breeding cycles, fostering competition in the green biotechnology sector. This levelling of the playing field benefits smaller companies, breeders, farmers with limited resources, consumers with specific needs and society at large, provided that marketing authorization requirements for NGT products are not overly burdensome for new entrants.

Awareness of the Problem, Research Question and Approach

The Institute's ongoing research at the intersection of CRISPR/Cas technology, CRISPR/Cas-enabled innovation and law builds on interdisciplinary exchanges held during the conference "Invention and Innovation Incentives in Life Science" organized by the Institute in Berlin in 2018. Already at that time, it was evident that a thorough examination of the legal determinants of innovation in the field of CRISPR/Cas technology was required, given the social and economic significance of this technology.

IP rights, particularly patents and plant breeder's rights (PBR), are available for both NGTs (that is, methods comprising molecular systems applied to modify DNA sequences) and NGT products (that is, products containing biological material modified through an NGT). The nature of CRISPR/Cas technology as an enabling technology - a research tool and a breeding method - has raised concerns about the potentially impeding effects of patents on its diffusion through downstream applications, as well as on subsequent research and innovation. The emergence of a "patent thicket", wherein overlapping patent rights create intricate technology dependencies, has been a significant worry. The highly complex, dense, and everexpanding patent landscape surrounding CRISPR/ Cas technology poses challenges related to the high transaction costs of freedom-to-operate searches and rights clearance. The costs associated with developing commercializing downstream applications and final products are further compounded by the

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stacking of upstream patent licenses. Moreover, in the field of plant breeding, where new varieties stem from existing ones, access to plant genetic material is essential. Inefficient allocation of IP rights and an unbalanced scope of protection can result in upstream bottlenecks, impeding technology diffusion through downstream applications and hindering cumulative research and innovation. The overall concern is that the current situation does not allow for the social benefits of NGTs to be realized.

The overarching research question addresses how the legal and regulatory framework can be enhanced to unlock the transformative potential of CRISPR/Cas technology to reap social benefits. The study employs two types of legal analysis – analysis de lege lata and de lege ferenda – based on extensive literature research and interdisciplinary exchanges with experts. The former examines the scope of IP protection for CRISPR/Cas and its products, with a primary focus on patents and PBRs. The latter explores the need for potential changes in the legal framework that could strike a better balance of the interests at stake.

In terms of sectoral applications, the project primarily concentrates on the use of CRISPR/Cas in plant breeding, recognizing its potential to enhance global food security and address the impacts of climate change.

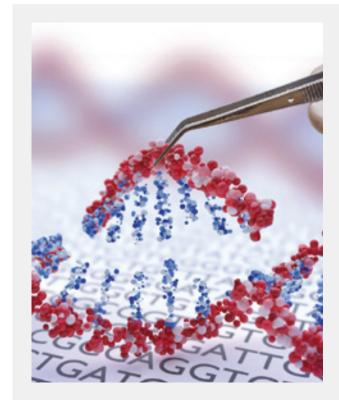
Research Activities and Outcomes

Expert Workshops

Two expert workshops were organized during the reporting period: on 14 October 2021 and 10-11 October 2022 (both in Munich). The goal was to gain a multidisciplinary perspective on matters arising at the intersection of IP law and CRISPR/Cas innovation, with a view on how the legal framework could be improved. This included the protectability of CRISPR/Cas basic and follow-on technologies under patent law and PBRs, the scope of protection, the exercise of respective rights, and the diffusion of basic CRISPR/Cas9 technology through downstream applications, collaborative R&D, and licensing practices. These exchanges were indispensable due to the interdisciplinary nature of research subject matter. Workshop participants included natural scientists biologists and geneticists - working in the field of

CRISPR/Cas, legal scholars specializing in patent law in life sciences, patent law practitioners, and industry representatives.

The workshops reinforced the perspective that securing freedom to operate through licensing, given the intricacies of the CRISPR/Cas patent landscape, is challenging, and there is a clear need for solutions to navigate these legal complexities. These interdisciplinary exchanges were instrumental in providing insights and identifying specific IP issues and questions that require more comprehensive legal analysis.



Symbolic image of genome editing.

Image: vchalup/Adobe Stock.

Publications

The paper "CRISPR/Cas Technology and Innovation: Mapping Patent Law Issues" analyzes the interface between patent law and CRISPR/Cas technology, focusing on issues related to patentability, scope of protection, and access. It shows that CRISPR/Cas

technology involves longstanding controversies rather than unique challenges to patent law, with debates on the disclosure of foundational CRISPR/ Cas9 technology. The discussion extends to issues of access and usage rights amid the expanding CRISPR/Cas patent landscape, highlighting challenges to voluntary licensing and the potential underutilization of technology. The need for access solutions is emphasized, recognizing CRISPR/Cas as a "foundational" or "platform" technology shaping innovation across applications. Overall, the analysis shows that CRISPR/Cas technology is prototypical of the policy dilemma in patent law: how to balance economic incentives in a cumulative innovation setting against the welfare effects of patents, especially in the case of enabling technologies.

Building on this mapping exercise and drawing insights from expert workshops, the Institute issued a position statement in 2023, "New Genomic Techniques and Intellectual Property Law: Challenges and Solutions for the Plant Breeding Sector", which elaborates a comprehensive set of policy recommendations to enhance access to IP-protected NGTs and NGTderived products, focusing on the breeding sector. It proposes ways to address issues such as uncertainty about the scope of derivative product protection, the complexity resulting from overlapping patents and the insufficiency of private-ordering mechanisms and statutory access instruments. In the case of PBRs and NGT-derived plant varieties, the recommendations underscore the need to balance the incentives of initial plant variety developers and subsequent breeders and address the policy dilemma that arises when regulation defines "essentially derived variety".

These recommendations are highly timely amid ongoing regulatory advancements concerning the safety regulation and marketing authorization of products derived from NGTs (see details below). The European Commission's recent proposal (COM(2023) 411 final) to adjust marketing approval requirements for food and feed products derived through certain NGTs is poised to enhance the attractiveness of innovation and economic activities in this sector and to foster competition within the green biotechnology sector, which is dominated by a handful of multinational corporations.

The Interface Between Marketing Authorization and NGTs

IP rights are not the sole determinants of innovation, as sector-specific regulations, particularly safety and marketing authorization rules, also significantly influence technology diffusion and competition dynamics. The maturation of various genome-editing applications, especially in NGTs, prompts jurisdictions to reconsider safety regulations and marketing authorization for genome-edited products in agriculture. The challenge is how to balance potential benefits and risks given the limits of our knowledge about long-term effects. Safety assessments for CRISPR/Cas technology or any NGT cannot be abstract; they must be specific to products derived through genome editing applications.

In the EU, the European Commission's recent proposal (COM(2023) 411 final) to adjust marketing approval requirements for food and feed products derived through certain NGTs intends to relax the requirements for marketing authorization for such products, which are currently subject to genetically modified organism (GMO) legislation. This is expected to facilitate innovation and economic activities and promote competition within the green biotechnology sector.

Against this background, the Institute has initiated a new research line to examine the interface between marketing authorization regulation of NGT products and its impact on innovation, competition and international trade.

In the first phase, the research group surveyed policy approaches and regulatory measures in jurisdictions that have recently re-evaluated or designed new regulations for NGT products, including several African countries, Argentina, Canada, China, India, the United Kingdom and the EU. The analysis focuses on regulatory models and substantive arguments in political debates, emphasizing the balance of potential risks and benefits. It reveals that, despite the same risks and scientific evidence throughout the globe, countries vary significantly in their regulatory approaches and stringency levels for marketing authorization of NGT products.

While all regulators aim to minimize the risks and maximize the benefits of NGTs, approaches differ in testing requirements, evidence submission, government notification, labelling, and safety and transparency conditions. The review underscores the fact that, despite the consistency of discourse on potential risks and benefits, regulatory divergence is attributed to variations in how these factors are weighed in policy decision-making. Economic, food security and global competitiveness arguments are increasingly influential, alongside socio-cultural factors shaping public perception of NGTs. This indicates that technology diffusion is influenced by a spectrum of factors beyond solely legal or regulatory considerations.

From an international trade perspective, coherence in national policy measures is crucial for compliance with international law. A preliminary assessment indicates that the regulation of NGT products can constitute trade barriers under international trade law. This necessitates justification under the applicable trade

regime. Regulatory measures and policy justifications vary significantly among jurisdictions, potentially leading to trade disputes. Further analysis should address how to avoid disruptive effects on global food security.

Outlook

CRISPR/Cas technology and other NGTs can yield substantial social benefits, such as enhancing global food security and mitigating the impacts of climate change. The shift towards a more lenient regulatory environment for marketing authorization presages that the commercialization of NGTs and their products will progressively expand. This underscores the need for solutions that address access and freedom-to-operate challenges related to IP protection for NGTs and their products. Moreover, it shows that it is now essential to explore solutions that address the regulatory barriers arising from divergent marketing authorization regulations in order to facilitate international trade.

The Institute strives to identify ways to improve the legal and regulatory framework to facilitate the realization of the social benefits of CRISPR/Cas technology.

Project Leader

Reto M. Hilty

Project Participants

Pedro Henrique D. Batista, Ezgi Ediboğlu Sakowsky, Tobias Endrich-Laimböck, Elisabeth Hofmeister, Daria Kim, Matthias Lamping, Peter R. Slowinski, Miriam Steinhart

Project Duration

Since 2018

Publications

Kim, Daria; Reto M. Hilty; Elisabeth Hofmeister; Peter R. Slowinski; Miriam Steinhart, CRISPR/Cas Technology and Innovation: Mapping Patent Law Issues (Max Planck Institute for Innovation & Competition Research Paper, No. 22-06), 2022, 49 pages, https://dx.doi.org/10.2139/ssrn.4106075, 01.04.2022.

Kim, Daria; Michael A. Kock; Matthias Lamping; Pedro Henrique D. Batista; Reto M. Hilty; Peter R. Slowinski; Miriam Steinhart, New Genomic Techniques and Intellectual Property Law: Challenges and Solutions for the Plant Breeding Sector (Max Planck Institute for Innovation & Competition Research Paper, No. 23-16), 2023, 40 pages, https://dx.doi.org/10.2139/ssrn.4537299, 09.08.2023.

1.3

Copyright Law and Design Law

Copyright traditionally occupies a central position among the Institute's research interests. In recent years, it has assumed a cross-cutting scope in the Institute's research agenda, especially in relation to the data economy and the challenges posed by the explosion of AI and large language models. In this context, copyright law has been dealt with as a regulatory tool that operates alongside other rules that foster, for example, data access and innovation through AI technologies. Therefore, substantial research related to copyright law is reported in other chapters of this report (B II 1.4, p. 68, B II 1.5, p. 72, and EIPIN Conference 2023, see B IV 1.1, p. 216). This also includes doctoral research projects studying, for example, the impact of blockchain-based smart contracts (micro licensing) and NFTs, as well as AI technologies on collective copyright. With the focus on the regulation of copyright, research at the Institute has taken into account different perspectives, including the problem of remuneration of creators and performers in online marketplaces and the role of copyright in regulating the online press publishing market. This research pays particular attention to the functions of copyright law and its flexibility, as well as the definition of its subject and scope of protection, including in relation to other forms of protection, such as design law.

Direct Remuneration to Creators and Performers

Background

In the cultural industry, the imbalance between the turnover from the exploitation of works and the revenues of creators and performers is an old problem that however has become more pronounced in the era of online streaming. One important factor behind this phenomenon is the weaker bargaining position of creators and performers when licensing or transferring their rights for exploitation in return for remuneration. Furthermore, as copyright contracts are usually of long duration, the inadequacy of negotiated terms can be exacerbated over time by changes in the works' reputation and value. This problem has been tackled in different ways. A preliminary comparative study on this subject revealed that a line of action frequently adopted in developed countries aims at strengthening the position of creators and performers via mandatory contractual rules - transparency obligations, revocation rights or other similar limitations - as well as standards aimed at securing fair remuneration of creators. This approach was applied in Germany, for instance, as early as 2002. However, even in countries like Germany, where copyright contractual rules have been in place for decades, revenue sharing remains an open issue, especially in digital markets.

Since one of the main obstacles to ensuring that creators and performers receive an adequate share

of revenues is the unbalanced relationship between them, on the one hand, and producers or other derivative right holders, on the other hand, another approach aims to provide creators and performers with an independent right to remuneration for the use of their works or productions within the framework of certain business models (e.g. by online platforms). This is achieved through the application of direct remuneration systems, which have the advantage of changing the market structure, providing creators and performers with a direct and unwaivable remuneration right vis-à-vis the economic players who make content available to end users. The concept of direct remuneration has already been the subject of research interest at the Institute in past years, especially in relation to the EU's Rental Rights Directive.

In the implementation of the Directive on Copyright and Related Rights in the Digital Single Market (2019/790, CDSM Directive), some Member States, such as Belgium, have turned to direct remuneration schemes in certain specific cultural industries. Other European countries already had similar systems in place before the implementation of the CDSM Directive (e.g. Italy and Spain). A number of non-European countries have also adopted direct remuneration systems in particular sectors. The Swiss legislature, for instance, turned to a direct remuneration system for the online exploitation of audiovisual works and performances in 2019.

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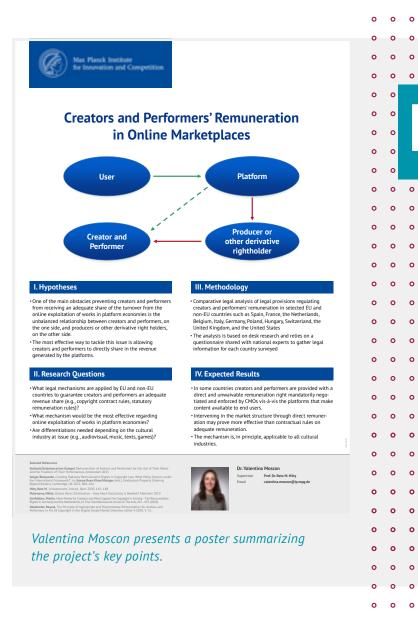
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Content of the Project

The project aims to produce a comparative study of existing direct remuneration systems. In our study we review a large number of countries at global level and compare those who have implemented such systems. The study is methodologically based on comparative legal analysis of legal provisions and case law and, where possible, of practices regulating the direct remuneration of creators and performers in EU and non-EU countries. Due to the complexity of remuneration systems and the difficulty of finding information on the relevant rules and how they work in practice, the study relies upon a survey of domestic academic experts. In order to answer the questions concerning the existence of direct remuneration systems and the definition of their characteristics in each country, a questionnaire was distributed to about forty national rapporteurs. Following exchanges with the national rapporteurs, notes of clarification were sent out to further circumscribe the scope of the survey. In addition, the national rapporteurs are given ongoing guidance to ensure that their reports are in line with the objective and scope of the survey as much as possible. This will facilitate the comparison of all responses, which is planned by the end of 2024. The research results will first be published in Open Access in the Institute's research paper series and then submitted to a scientific journal.



The project aims to produce a comparative study of existing direct remuneration systems at a global level.

Project Leaders

Valentina Moscon, Reto M. Hilty

External Project Participants

National Rapporteurs

Project Duration

Since 2023

Publication

Moscon, Valentina, Fair Remuneration of Authors and Artists, in Andrea Biondi, Oana Stefan (eds.), Encyclopedia of European Law (2024), Edward Elgar Publishing, Northampton, MA, USA; Cheltenham, UK 2024, forthcoming.

The Role of Copyright and Copyright-Related Rights in Online Press Publishing Regulation

Background

The online media industry is going through a very tense time, largely related to complaints by publishers, and press publishers in particular, that their content is being used by third parties without the possibility of proper remuneration. In response to this, the European legislature has already introduced a new copyright-related right for press publishers in Article 15 of the CDSM Directive of 2019, with the aim of strengthening the position of publishers vis-à-vis big tech giants and other operators of the digital industry, thus enabling publishers to recoup their investments in news production. A further intervention in this area is the setting of two exceptions for text and data mining (TDM) in Articles 3 and 4 of the CDSM Directive. These exceptions clarify previous disputes about whether - as publishers claimed - TDM activities were covered by copyright law and therefore illegal without the authorization of copyright holders. Since these exceptions have been framed by the European legislature in a very narrow way, in practice the new rules give the right holders a say on TDM activities in most cases. Moreover, the scope of these

exceptions is further limited by the fact that they have been implemented differently at the national level in EU countries, thus making it more complicated to perform TDM activities.

Despite the new rules, the challenges affecting online publishing have not diminished; rather they have been exacerbated by the explosion of AI systems, whose training is largely based on online content. In fact, press publishing now faces new issues brought about by generative AI systems, including large language models (LLMs) and related applications (such as chatbot interfaces), which are ideally trained on quality content included in works or other protected subject matter. Also, AI applications may act as competitors to press publishers, providing informational and cultural content to the public, and therefore may take readers and advertisers away from publishers' websites.

Content of the Project

In light of the above and given the high public interest surrounding press publishing, the Institute has been doing research in this area for a few years.

Selected Previous Publications and a Presentation

On press publishers' copyright-related rights:

- Hilty, Reto M.; Kaya Köklü; Valentina Moscon, Position Statement of the Max Planck Institute for Innovation and Competition on the "Public consultation on the role of publishers in the copyright value chain" 2016, 9 pages.
- → Hilty, Reto M.; Valentina Moscon, Part E Protection of Press Publications Concerning Digital Uses (Article 11 COM(2016) 593 final) in: Reto M. Hilty, Valentina Moscon (eds.), Modernisation of the EU Copyright Rules Position Statement of the Max Planck Institute for Innovation and Competition (Max Planck Institute for Innovation and Competition Research Paper, No. 17-12), 2017, https://ssrn.com/abstract=3036787, 18.09.2017, 79-88.
- → Moscon, Valentina, Use and Abuse of Neighbouring Rights and the Growing Need for a Sound Understanding: The Case of Online News Protection in Europe in: Susy Frankel (ed.), The Object and Purpose of Intellectual Property (ATRIP Intellectual Property Series), Edward Elgar Publishing, Northampton, MA, USA; Cheltenham, UK 2019, 308–332.

On text and data mining:

- Moscon, Valentina, Wissensschaftsschranken. Europäische Vorschläge: Text and Data Mining, ALAI Seminar on Wissenschaftsschranke Neue Vorschläge aus Berlin und Brüssel, Faculty of Law, Freie Universität Berlin, 30.11.2016.
- → Hilty, Reto M.; Heiko Richter, Part B Copyright Exceptions and Limitations, Chapter 1: Text and Data Mining (Article 3 COM(2016) 593 final) in: Reto M. Hilty, Valentina Moscon (eds.), Modernisation of the EU Copyright Rules Position Statement of the Max Planck Institute for Innovation and Competition (Max Planck Institute for Innovation and Competition Research Paper, No. 17-12), 2017, https://ssrn.com/abstract=3036787, 18.09.2017, 25-33.

In light of the most recent developments, the Institute is expanding its research. In the online press publishing market and, more generally, in the digital media market, the recourse to copyright law as a regulatory tool is increasing. However, this tendency deserves attention as it raises fundamental questions about the function of copyright law and its scope of application, including vis-à-vis other regulatory instruments such as competition law. The Institute deals with the regulatory role of copyright law in digital media markets from different research perspectives, with a focus on European Union law but also taking a global perspective, as the debate clearly has reached a global scope.

Press Publishers vis-à-vis Digital Platforms

A first line of research focuses on the new copyright-related right for press publishers, on the impact of this new exclusive right at European level and, especially with those countries in mind that are considering following the path of the European legislature, on the comparison of the European solution with others adopted overseas, e.g. by Australia and Canada. The position of press publishers vis-à-vis digital platforms is indeed a topic of concern outside of the European Union. Despite the fact that content such as news texts, photos and videos are already protected by copyright, publishers everywhere claim additional protection against online exploitation. This research therefore aims to be a baseline for a global challenge.

In 2023, for instance, the Institute contributed to the international debate with a study on the implementation of Article 15 CDSM Directive and the comparison of the new EU press publishers' right with other existing legislative models in this field. A summary of this study is forthcoming in IIC. Four years after the adoption of the CDSM Directive, almost all Member States have implemented Article 15 on the protection of press publications concerning online uses. Although it is still rather early to assess the overall impact of Article 15 CDSM Directive on the online press market, some effects, particularly on the actual success or failure of press publishers in licensing their rights, can already be observed.

In this context, the Institute discusses whether Article 15 of the CDSM Directive has achieved its intended purpose or not. More in detail, the implementation of the right by Member States has exposed the inadequacies of the provisions. The problem of negotiation imbalances between the press publishers

and large operators such as digital platforms still exists. Despite the new exclusive right for press publishers, negotiations between Internet service providers and news producers are moving forward with difficultly. Member States need to deal with these issues taking action at national level. In France, for instance, a duty to negotiate a license has been imposed by the French Competition Authority on Google for abusing its dominant position. Similar proceedings have also been initiated by the German Competition Authority.

Against this background, the study makes a comparative analysis of national implementations and the different approaches to the press publishers' right in other jurisdictions, particularly Australia and Canada. The comparison shows the characteristics of the regulated negotiation system set out in those countries and the role the competition authorities are playing in the field. The study also analyzes the use of arbitration as a dispute resolution mechanism and the role of special institutions responsible for the negotiation process. The study also looks into the Italian model, which can be described as a hybrid model that leverages both the introduction of the new exclusive right for press publishers and a mechanism that imposes rules of conduct and regulates negotiations. Finally, the research summarizes and compares five possible regimes to tackle the issues of online press publishing: i) new copyright-related rights; ii) unfair competition rules on pre-existing intellectual property rights; iii) antitrust (competition) law; iv) contract law (which protects weaker parties); v) "competition-oriented approaches", which impose rules of conduct and regulate negotiations (thus favoring competition).

The Challenges of Text and Data Mining in the Era of Large Language Models

TDM is a key technology whose use is restricted by copyright law. Insofar as this results in a barrier to innovation, the question must be asked whether the current copyright law framework promotes the general interest, or, in other words, whether to promote innovation there is a need to allow copyright as much flexibility as possible.

Also, TDM is no longer just about establishing correlations, in the sense that it allows the best use of existing (published) knowledge. TDM is ultimately also the underlying technology for generative AI. This can still be viewed positively when it comes to training

Al tools. However, even in this context questions may be raised on how far this is in the public interest, namely to what extent the interests of rights holders in the use of their works by third parties should take second place. If these (trained) Al tools are then used to manufacture products that replace classic human-made products, this can lead to questions of principle, depending on the case. The best example is probably that of quality printing, which thrives on being able to market (copyrighted) content produced at considerable cost, especially through subscriptions or individual sales (e.g. individual items online).

Furthermore, if independent actors offer AI-generated summaries, such as in the sense of an overview similar to a press review, this might be sufficient for most readers interested in a topic, who might then forgo consulting the original press articles and paying for them. This could cause a (double) market failure in the sense that quality media no longer generate enough revenue to survive – but without the content of these quality media, even Al-generated summaries can no longer be produced. This raises the question of how far flexibility - in the sense of permissions to do TDM - can be pursued if such collateral damage is to be avoided. At the same time, this is very much related to the protection of press publishers - not in the currently often discussed sense of protecting snippets, but in the form of a much more complex remuneration system for those who use TDM to produce Algenerated content. A first result of this research will be published as part of an external project on the future of copyright law set to be published by Edward Elgar in an edited book during 2024.

The Institute studies the function of copyright law and its scope of application in digital media markets.

Project Leaders

Reto M. Hilty, Valentina Moscon

Project Duration

Since 2022

Publications

Moscon, Valentina, Data Access Rules, Copyright and Protection of Technological Protection Measures in the EU. A Wave of Propertisation of Information (Max Planck Institute for Innovation & Competition Research Paper, No. 23-14), 2023, 24 pages, https://dx.doi.org/10.2139/ssrn.4515815, 20.07.2023.

Moscon, Valentina, Online Press Publishing Market: Regulatory Approaches Beyond Copyright-Related Rights, IIC – International Review of Intellectual Property and Competition Law 2024, forthcoming.

Hilty, Reto M.; Valentina Moscon, Al-generated content in Online Press Publishing in: Caterina Sganga, Enrico Bonadio (eds.), A Research Agenda for EU Copyright Law, Edward Elgar Publishing, Northampton, MA, USA; Cheltenham, UK 2024, forthcoming.

European Design Law Reform

Background

In November 2022, the EU Commission published proposals to amend the Community Design Regulation and to recast the Design Directive. The aim of both proposals is to streamline and simplify the proceedings, enhance harmonization and improve the functioning of design legislation inter alia with regard to novel forms of designs and reproduction technologies, providing a more robust catalogue of limitations and

a liberalization of the spare parts market and finally clarifying the relationship with copyright. The proposal thus touches on fundamental issues that have been the subject of research at the Institute for quite some time. The CJEU's *Cofemel* decision (C-683/17) has once again attracted attention to the interplay of design and copyright protection (see Kur, Annette, Unité de l'art is here to stay – Cofemel and its consequences, Journal of Intellectual Property Law & Practice 15,4 (2020), 290–300; Endrich-Laimböck, Tobias, Little Guidance for the

Application of Copyright Law to Designs in Cofemel, GRUR International 69, 3 (2020), 264–269), which, like the role of reproduction technologies, is also the focus of Marc Huckschlag's and Rebeca Ferrero Guillén's ongoing dissertation projects funded by the Institute.

Goals and Content of the Project

Building on previous research of the Institute, the project aimed to critically comment on the specific reform proposals and thus contribute to the scientific debate surrounding the future of European design law. The focus of the project lies on substantive law. The Institute welcomes the overall aim of the proposals. However, some points deserved further comment and clarification. Inter alia, this includes potential clashes with international obligations, the relationship with copyright protection after Cofemel and the catalogue of limitations. From the perspective of international law, the deletion of a

provision according to which protection as a non-registered design only arises upon publication within the territory of the EU was particularly welcome. The current draft of the regulation retains that deletion, in line with the Institute's position statement. Regarding the relationship with copyright, the proposal accepts the principle of cumulation as laid out in Cofemel, but does not improve legal certainty. Likewise, the expansion of the limitations catalogue is appreciated in principle, while it leaves a number of open questions and ambiguities.

Dissemination

Aposition statement on the original proposals has been published on SSRN, as well as in GRUR International, and has been taken up by commentators. In addition, the authors of the position statement have presented their findings to both stakeholders and academic audiences in Germany and abroad.

The project critically monitors the European design law reform proposals.

Proiect Leader

Annette Kur

Project Participants

Tobias Endrich-Laimböck, Marc Huckschlag

Project Duration

2022-2023

Publications

Kur, Annette; Tobias Endrich-Laimböck; Marc Huckschlag, Substantive Law Aspects of the 'Design Package', GRUR International 72, 6 (2023), 557–565.

Kur, Annette, Finally Back to Trips-Compliance? EU Design Law and the Criterion of Publication 'Within EU Territory', Journal of Intellectual Property Law & Practice 18, 1 (2023), 11–17.

Kur, Annette, Conference Report: 11th GRUR meets Brussels Workshop – Recent Developments in European Trademark and Design Law, GRUR 125, 20 (2023), 1435–1437.

Endrich-Laimböck, Tobias; Marc Huckschlag, Copyright/Design-Cumulation under the EU 'Design Package', Kluwer Copyright Blog 2023.

Presentations

Kur, Annette, EU Design: Reformvorschläge – materielles Recht, BDI Berlin, VPP Ulm.

Endrich-Laimböck, Tobias, Copyright Issues in the EU Design Law Reform Proposals, Masaryk University, Czech Republic.

1.4

Interactions between Artificial Intelligence and Intellectual Property Law

Advancements in artificial intelligence (AI) continue to capture our attention. New achievements in the field of generative AI (GenAI) have intensified discussions on the meaning of creativity and ingenuity and the repercussions for intellectual property (IP) law. The overarching research question is whether the current IP framework should be redesigned in light of AI developments and their social implications, and if so, how.

The Technological and Policy Context

In recent years, a surge in generative AI (GenAI) techniques has sparked thought-provoking discussions within legal and policy circles regarding the interplay between AI technology and IP law. While often viewed as cutting-edge, GenAI is not an entirely novel technological phenomenon. For instance, generative adversarial networks (GANs), which triggered debates in copyright law in the highly publicized case of the painting Portrait of Edmond de Belamy, were introduced within the field of machine learning (ML) in 2014.

GenAl techniques generate output by leveraging deep learning architectures like generative pre-trained transformers and variational autoencoders, with common examples including diffusion models and large language models (LLMs). Compared to earlier generative models based on one particular type of data, current GenAl techniques employ multimodal approaches that transcend data types and can produce content involving different modalities, such as text, images, audio and video (for instance, a text-to-image system combines natural language processing and visual content generation). The emergence of advanced GenAl systems, particularly models like GPT-3, has prompted calls for a re-evaluation of existing IP frameworks.

These systems are often credited with the capability to autonomously generate output resembling works or inventions, raising questions about authorship, inventorship, the allocation of rights and protectability. Debates have centered on whether Al-generated content can or should qualify for IP protection and which actors within the Al value chain can or should be deemed lawful right holders. Furthermore, issues related to exceptions and limitations when IP-protected subject matter is used for training ML models, and the balance between protecting IP in existing creations and fostering

future innovation, have been the focus of these discussions.

Currently, there are no pending legislative proposals to amend the EU or international IP framework with the aim of regulating the interactions between AI technology and IP law (except for a recent attempt to include a provision related to copyright law in the EU AI Act). Policy discussions are underway at the national level, and several judgments have been handed down by national courts addressing the peculiar questions posed by AI in IP law, with more cases yet to be decided. Several public consultations and studies have been commissioned or carried out by EU policymakers, national IP offices, and the World Intellectual Property Organization (WIPO).

The Institute's Approach and Research Focus

The Institute's early work on the interactions between Al and IP was undertaken within the research project "Regulation of the Data-Driven Economy". From the outset, the focus has been on the capacity of ML techniques to generate content that might qualify for patent or copyright protection if it were created by humans without the use of ML. While the broader discourse on AI and IP has centered around Al-generated output, it has become apparent that proposals suggesting new forms of IP protection for output produced without sufficient human input lack credibility in the absence of innovation-based – let alone deontological – justification. Instead, the group has prioritized the input aspect, particularly the crucial role of access to critical inputs, such as input data, for the development of AI systems and applications. Enhanced access and use of data are prerequisites for both innovation within the AI field and innovation enabled through AI across various economic sectors. However, significant asymmetries persist in the supply and demand for training data, necessitating solutions that can effectively address these disparities.

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Research Activity

Building on earlier work and exchange with IP scholars (as mentioned in the Institute's Activity Report for 2018 – 2020), the position statement "Artificial Intelligence and Intellectual Property Law" of 9 April 2021 provides a systematic overview of AI and IP law issues arising throughout the AI innovation cycle. Focusing on substantive European IP law, the paper examines how existing categories of IP protection – copyright, patents, designs, databases and trade secrets - apply to input data, different components of the ML process, and outputs generated by ML models. The assessment maps out specific Al-related issues around the core questions of IP law, namely, the eligibility for protection under the respective IP regimes, the allocation of IP rights and the scope of protection. While the analysis mainly takes a de lege lata approach, it also identifies a research agenda that requires an in-depth investigation de lege ferenda, supported by interdisciplinary research. The position statement presents several propositions, among them: that introducing a new protection regime (such as a related right or sui generis form of protection) for Algenerated output would be unwarranted in the absence of a robust justification; that trade secrets protection might play a dubious role, potentially impeding access to data for AI system development; that the focus of the patent law debate should shift from inventorship to the concept of a skilled person and an inventive step; and that the system of copyright exceptions and limitations under EU copyright law should be re-evaluated, given the role of input data - often comprising IP-protected content - in developing ML applications.

Following this stocktaking exercise, key research questions have been identified at the intersection of AI technology and IP law that warrant in-depth exploration. Some of these questions continue to be explored in the dissertation and postdoc research projects supported by the Institute. For instance, the dissertation project "Legal Framework for Al-Based Work-Like Output" (Militsyna) seeks to develop an analytical approach that would make it possible to distinguish copyrightable from noncopyrightable output produced using Al applications. The dissertation project "Unlocking the Full Potential of AI - Towards Mandatory Data Access Rules for the Purpose of AI Development" (Chen) inquires into how the access-to-data regime should be designed to be more conducive to AI-enabled innovation. Allocation of value through the licensing of both IP-protected data and IP-unprotected Al-generated output is the focus of the dissertation "Shaping Europe's Digital Future: Rethinking EU Copyright and Related Rights Remuneration Mechanisms for Outputs Generated by Artificial Intelligence Systems" (Dermawan, B II 2.4, p. 114).

A notable development in patent law has emerged from the DABUS cases. Over the past few years, an international group of patent attorneys, operating within the framework of the "Artificial Inventor Project", has filed patent applications worldwide for inventions purportedly created by the artificial neural network "Device for the Autonomous Bootstrapping of Unified Sentience" (DABUS). This project aims to demonstrate that the current patent system needs



Professor Meeyoung Cha and members of the Institute at the lecture "Generative AI and the Challenge of Copyright Protection" in September 2023.

a profound update, in view of the Al's alleged ability to invent autonomously. While the courts in most countries have established that only natural persons can be recognized as inventors, one court, namely, the Federal Court of Australia, ruled in the affirmative that DABUS can be recognized as an inventor in its own right (though this ruling was subsequently reversed on appeal). In its Position Statement on "Artificial Intelligence Systems as Inventors?" of 7 September 2021, the Institute criticized the decision for disregarding the lack of justification for attributing inventorship to an entity (a "technological artefact") without legal capacity and failing to consider the legal consequences thereof. The statement emphasizes the need for a comprehensive analysis before such legal capacity can be acknowledged and highlights the broader relevance of these concerns to jurisdictions across the globe. The DABUS chronicle continues worldwide, so far with a clear tendency to uphold the principle that only a natural person can be acknowledged as an inventor. The article "The Paradox of the DABUS Judgment of the German Federal Patent Court" (Kim) further provides a detailed analysis of the decision of the German Federal Patent Court.

Recognizing the need to clarify factual and technical assumptions about the inventive capacity of generative AI techniques, Kim also collaborated with a group of ML researchers specializing in artificial neural networks and genetic algorithms, along with data scientists. The paper "Clarifying Assumptions About Artificial Intelligence Before Revolutionising Patent Law" provides a detailed analysis of instances frequently discussed in the literature on AI and patent law as examples of Al-generated inventions. It scrutinizes assumptions about ML systems inventing autonomously and identifies aspects within the application of ML techniques in technical problemsolving where human decision-making is decisive and directly influences the output. Overall, it contends that to address challenges in patent law the focus should be on defining the skilled person and assessing the inventive step requirement, rather than finding that there is no human inventor.

In the realm of copyright law, matters related to exceptions and limitations for text and data mining, particularly within the context of AI, have been the focus of Moscon's work, as explored in "Data Access Rules, Copyright and Protection of Technological Protection Measures in the EU: AWave of Propertisation of Information". On the output side, Militsyna has proposed a test for assessing the sufficiency of

human input in cases in which GenAl applications are employed ("Human Creative Contribution to Al-Based Output – One Just Can('t) Get Enough").

Furthermore, the edited collection titled "Artificial Intelligence and Intellectual Property" (Lee; Hilty; Liu (eds.), OUP 2021), based on the eponymous 2019 conference in Singapore, has been published, featuring contributions from Hilty, Hoffmann, Scheuerer, and Slowinski (see the Institute's 2018–2020 Activity Report).

Events

While plans for a conference with AI specialists in early 2021 had to be postponed due to the pandemic, Al-related topics were eventually included among the focal themes of other conferences organized by the Institute. In particular, the EIPIN conference on "Coordination of Intellectual Property Law with the New European Data Law" in June 2023 (see also B II 1.6, p. 80) and the "Global Data Law Conference Series: Comparative Data Law" in December 2023 featured presentations exploring implications of emerging data regulations for Al innovation. The topics covered included the role of IP rights and trade secrets protection as potential impediments to AI development; challenges at the interface of IP, competition and data law; and the intersection between copyright provisions on TDM and technological protection measures in the context of access to data for AI development.

The Institute's research fellows have engaged in and contributed to externally organized events. In particular, von Lewinski was a member of the scientific committee for the international ALAI Conference in Paris on AI and Copyright held in June 2023. She also delivered numerous presentations organized by universities and by WIPO, including within the framework of the WIPO Summer School on IP and the WIPO Conversation on IP and Frontier Technologies. Kim has been involved in the Elkana Forum organized by the Max Planck Institute for the History of Science, which seeks to explore the implications of emerging AI techniques for scientific research and publication practices.

The Institute also hosted a number of lectures by external researchers and guest researchers, including Professor Meeyoung Cha (Korea Advanced Institute of Science and Technology, South Korea) who spoke on generative AI and its challenges for copyright law.

Outlook

Recent years have seen the challenge of predicting advancements in AI, including GenAI. Many technical aspects of the output production by GenAI, such as the propensity of artificial neural networks to "memorize" the input, require clarification before their implications for IP law can be scrutinized. While AI capabilities are often contrasted with those of humans, particularly in terms of the capacity to create or invent, it appears more pertinent to view GenAI applications as a complex interaction between humans and technologies. The challenge lies in defining just how much human involvement is required to warrant entitlement to authorship or inventorship.

While ongoing discussions about new forms of IP protection face challenges due to a lack of robust justification, a more pressing matter is addressing the disparities in the supply and demand for input data. It is also clear that AI innovation cuts across all legal domains and that, apart from IP law, liability and safety frameworks (in the EU, the draft AI Liability Directive for fault-based liability, the revised product liability framework and the new AI Act targeting AI safety challenges) are gaining particular prominence in shaping research and innovation activity in the field of AI. To examine the innovation implications of the interactions between IP and these frameworks would be very timely.

The project's objective is to analyze whether the current IP framework should be redesigned in light of AI developments, and if so, how.

Project Leaders

Josef Drexl, Reto M. Hilty

Project Participants

Yiqiong Chen, Artha Dermawan, Begoña González Otero, Jörg Hoffmann, Daria Kim, Shraddha Kulhari, Silke von Lewinski, Kateryna Militsyna, Valentina Moscon, Heiko Richter, Peter R. Slowinski, Klaus Wiedemann

Project Duration

Since 2019

Publications

Drexl, Josef; Luc Desaunettes-Barbero; Jure Globocnik; Begoña González Otero; Reto M. Hilty; Jörg Hoffmann; Daria Kim; Shraddha Kulhari; Heiko Richter; Stefan Scheuerer; Peter R. Slowinski; Klaus Wiedemann, Artificial Intelligence and Intellectual Property Law – Position Statement of the Max Planck Institute for Innovation and Competition of 9 April 2021 on the Current Debate 2021 (Max Planck Institute for Innovation & Competition Research Paper, No. 21-10), 2021, 26 pages, http://dx.doi.org/10.2139/ssrn.3822924, 14.04.2021.

Drexl, Josef; Reto M. Hilty; Daria Kim; Peter R. Slowinski, Artificial Intelligence Systems as Inventors? A Position Statement of 7 September 2021 in View of the Evolving Case-Law Worldwide (Max Planck Institute for Innovation & Competition Research Paper, No. 21-20), 2021, 11 pages, http://dx.doi.org/10.2139/ssrn.3919588, 10.09.2021.

Kim, Daria, The Paradox of the DABUS Judgment of the German Federal Patent Court, GRUR International – Journal of European and International IP Law 71, 12 (2022), 1162–1166.

Kim, Daria; Maximilian Alber; Man Wai Kwok; Jelena Mitrović; Cristian Ramirez-Atencia; Jesús Alberto Rodríguez Pérez; Heiner Zille, Clarifying Assumptions About Artificial Intelligence Before Revolutionising Patent Law, GRUR International – Journal of European and International IP Law 71, 4 (2022), 295–321.

Moscon, Valentina, Data Access Rules, Copyright and Protection of Technological Protection Measures in the EU. A Wave of Propertisation of Information (Max Planck Institute for Innovation & Competition Research Paper, No. 23-14), 2023, 24 pages, http://dx.doi.org/10.2139/ssrn.4515815, 25.07.2023.

Militsyna, Kateryna, Human Creative Contribution to Al-Based Output – One Just Can('t) Get Enough, GRUR International – Journal of European and International IP Law 72, 10 (2023), 939–949.

Lee, Jyh-An; Reto M. Hilty; Kung-Chung Liu (eds.), Artificial Intelligence and Intellectual Property, Oxford University Press, Oxford 2021, XII + 449 pages.

1.5

Data Access Rights and the EU Data Act

Over the course of several years, the Institute accompanied the Commission's work on the future legal framework for machine-generated IoT data. After having successfully opposed the Commission's idea of introducing a data producer's right for the users of connected devices, the Institute concentrated its research on data access rights, including a right entitling the user of such devices to access and use of IoT data. The fact that the Commission included legislation for such a right as the major element of its Data Act Proposal of February 2022 and the final adoption of the Data Act in December 2023 could therefore be considered the fruit of the Institute's endeavors. Yet the new "IoT data access and use right" is part of a much more comprehensive piece of legislation that the Institute decided to comment upon in one of the longest position statements it has ever published. The reason for its length is not only the great variety and complexity of the issues addressed, but also the Institute's objective to provide as much informed guidance as possible to the legislature to bring about improvements of the text. In sum, the general evaluation of the Data Act remains rather mixed. In particular, the Institute is concerned that the Data Act will not bring about the benefits that it promises. Moreover, the Data Act does not sufficiently target what is by now the most important challenge in the data access debate, namely access to data needed for the development of artificial intelligence (AI). Thus, it has been clear since the day of its adoption that the Data Act will only mark an episode in a longer legal development, rather than the endpoint of EU legislation on data access rights.

While most commentators focused on the IoT data access and use right in Chapter II of the Proposal, in its Position Statement of 25 May 2022, the Institute covered all parts of the Data Act Proposal. In addition, it included two special sections on the coordination with intellectual property, trade secrets and data protection law, as well as the Act's cross-border application, including the private international law aspects. Nevertheless, the IoT data access and use right is also the center of gravity in the Institute's Position Statement.

The identified need to coordinate rules of the Data Act with IP and trade secrets law inspired the Institute to dedicate the EIPIN Conference of June 2023 to exploring more broadly the need for "Coordination of Intellectual Property Law with the New European Data Law".

→ See B II 1.6, p. 80

The New IoT Data Access and Use Right

Prior to the publication of the Commission's Data Act Proposal, the Institute had already considerably contributed to the debate on an IoT data access and use right (see the previous Activity Report 2018–2020, B II 1.8). Its work here includes the study mandated by the European Consumer Organisation BEUC titled "Data Access and Control in the Era of Connected Devices" of 2019 (Drexl) and the 2021 open access publication of

the conference volume titled "Data Access, Consumer Interests and Public Welfare" (nomos-elibrary.de) of the Consumer Law Conference 2019 of the German Federal Ministry of Justice and Consumer Protection. The latter publication includes a chapter on an unfair competition law approach to the design of an IoT data access regime (Drexl). The Ministry's Consumer Law Conference, for which the Institute collaborated as the Ministry's chosen scientific partner, had the purpose of influencing the European debate on data access regulation on the eve of Germany's presidency of the European Council in the second half of 2020. This work laid the foundation for the Institute, in early 2022, to discuss in every detail the legal framing of the new IoT data access and use regime as proposed by the Commission for the Data Act.

To start with, the legal framing of the regime depends on the objectives it ought to pursue. In this regard, the Institute has always supported the competition-policy goal of using the data access and use right to overcome data lock-ins of the users of "connected products", as the Data Act now formulates it, and thereby open up secondary markets, such as the repair market, to competition. With its Data Act Proposal, the Commission also sought to enhance innovation in secondary data-based markets. However, the Commission went a step further, adding the objective of fairness as regards the relationship between the user and the manufacturer of the connected product. This latter consideration had a considerable impact on the legal design of the regime in two regards: first,

the Data Act leaves it to the user of the product to decide for which purposes it will use the data and to claim a transfer of the data to third parties. Thus, beyond opening up secondary data-related markets to competition, Chapter II also provides the basis for the user to commercialize the data for whatever purpose. The Data Act thereby seeks to attribute the economic value of the data to the user. Secondly, the Data Act provides that the data holder (in most cases the manufacturer) may only use non-personal IoT data on the basis of a contract with the user.

In the Proposal, these fairness considerations also affect the definition of additional legal concepts for framing the new regime. This applies to the concept of the user and - very importantly - to the kind of data that the access right covers. In this latter regard, the Institute criticized the Commission's Proposal for running the risk of not achieving its competitionrelated goal to enable secondary uses, and thus endangering the effectiveness of the access right. While the Institute in its proposals prior to 2022 had already paved the ground for a purpose-bound approach covering all the data that is needed for enabling secondary uses, the Commission preferred an acts-based approach focusing on the concept of data generation. According to the text of the Proposal, the IoT data access right was only meant to cover data directly generated through the use of the connected product, thereby excluding any further derived or inferred data. The limitations of this approach became clear in the following legislative process, ultimately resulting in a cautious extension to also include data that are "pre-processed for the purpose of making them understandable and usable prior to subsequent processing and analysis" (Recital 15 Data Act). In addition, Article 4(1) Data Act now also includes "metadata necessary to interpret and use those data". Yet the Data Act maintains the definition of "product data" in Article 2(15) as "data generated by the use of data", which is further explained as the data that represent the users' actions and are generated by the use of the product" (Recital 15 Data Act).

The Institute also understood that a narrow delimitation of the data is advocated if the Data Act, as it in fact does in its final version, vests power in the user to commercialize the data for any purpose. This latter design element makes it difficult to go beyond directly generated data, in light of the legitimate interests of the manufacturers. Indeed, a

purpose-bound definition of the data requires a clear definition of the limits of the purposes for which the data can be used. Ultimately, by rejecting the purpose-bound definition of data and leaving the purposes of the use fully at the discretion of the user, the Data Act reaches an unsound compromise and runs the risk of undermining the effectiveness of the new IoT right for creating effective competition in secondary markets. Thus, one can conclude, the fairness objective trumped the competition-related objective.

Thus, the Institute argued in favor of also applying the purpose-bound approach to the definition of the permitted uses. In contrast to the Data Act's design, this would allow for defining the data covered more broadly and result in a more narrow scope of uses. Of course, this raises the question whether the Institute's proposal would not unduly prevent the generation of the benefits that can be expected from allocating the commercialization of the data to the user. In this regard, the Institute emphasized the very limited positive effects, in economic terms, that the Data Act will produce. Users can only make available "their" personal-level data to third persons, which is of very little value for uses that go beyond delivering a service to the user. What third parties will typically prefer in such cases is access to the aggregated data held by the manufacturers. However, since the Data Act even makes the manufacturer's use of non-personal data dependent on a contract with the user, access to the aggregated data sets of the manufacturers may now become more difficult. Comparing the two design options, the Institute also warned that the choice of the EU legislature to favor personal-level licensing by users over aggregate data licensing by manufacturers will generate prohibitive transaction costs.

The Data Act's fairness approach is driven, among other things, by concern about the strong market position of the manufacturer. When the Commission presented its Data Act Proposal, it even admitted that manufacturers would remain in the driver's seat. The fact is that manufacturers are de facto data holders, which, from an economic perspective, comes close to the position of an intellectual property right. In practice, manufacturers can design their connected products in such a way that they continue to control access to the data and thereby become "data holders" in terms of the Data Act. However, the means the Data Act implements to remedy the problem will be fruitless. Recital 25 Data Act explicitly states that the

Data Act does not "confer any new right on the data holder to use product data or related service data". This seems to be key for the legislature's decision in Article 4(13) Data Act to make the use of the data by the manufacturer dependent on a contract with the user. However, from an economic perspective, the way the rights between two parties are distributed by contract does not result from the initial assignment of the rights but the distribution of bargaining power. In most cases, manufacturers, who frequently - though not necessarily - hold superior bargaining power, will impose a contract clause according to which they are authorized to use the data. Nor does Article 4(14) Data Act impose a major restriction on the freedom to share the data with third parties. This provision, which was not part of the Commission's initial Proposal, prohibits the data holder from making available nonpersonal product data to third parties other than in fulfillment of the contract with the user. Given the narrow definition of "product data" in Article 2(15) Data Act, the prohibition is limited to the individuallevel data generated by the concrete user and will hence not prevent the manufacturer from sharing aggregated data.

In addition, Article 4(13) and (14) Data Act gives rise to doctrinal issues. Reading Article 4(13), 1st sentence, Data Act in isolation, the rule would seem to arque for an exclusive right of data use allocated to the user. However, Recital 6 Data Act explicitly states that the Regulation only seeks to implement a "general approach to assigning rights regarding access", which is "preferable to awarding exclusive rights of access and use". In the light of excluding exclusive rights it should be fair to argue that in case the data holder shares data with a third person in contravention of Article 4(13) and (14) Data Act, this Act will not give rise to any statutory claims of the user against the third person. As regards Article 4(13), the Institute's Position Statement highlighted a fundamental legal misunderstanding of the Commission. While it is true that the data holder always depends on a "legal basis" to use personal data pursuant to the GDPR, it is incorrect to assume that there is also a need for a legal basis to use non-personal data. However, such assumption can be found in Recital 25, 2nd sentence, Data Act, identifying the contract with user as the "basis" for the data holder to use the data. The characterization of data as non-personal only signals the absence of privacy interests. This only indicates that the GDPR does not apply. If other protection

systems, in the form of IP and trade secrets protection, also do not apply, non-personal data must hence be considered to fall within the public domain, and can be used by anybody, including the data holder.

To sum up, the Data Act does not have the effect of weakening the strong de facto position of the manufacturers. Quite to the contrary, by relying on a use-based approach to defining "product data", in contrast to the purpose-bound approach proposed by the Institute, the EU legislature fails to provide users with a right to access all – including derived and inferred – data they need for an optimal secondary use. This explains the Institute's major concern about the ineffectiveness of the new data access regime.

From a doctrinal perspective, the Data Act puts particular weight on designing the triangular relationship between the data holder (manufacturer), the user of the connected product and the third person. It is indeed key for enabling competition in secondary data-related service markets, as Article 5 Data Act does, to provide for a right of the user to make the data available to third parties. However, also in this regard, the EU legislature did not take up the Institute's suggested improvements. The major flaw is to be found in the obligation of the data holder and the third party to enter into a contract that makes the data available on FRAND terms pursuant to Article 8(1) Data Act, which pursuant to Article 9 Data Act may include an obligation of the third party to pay compensation to the data holder. In contrast, under Article 4(1) Data Act, the data holder is under an obligation to make the data available free of charge to the user. The Institute criticized this design for disregarding the fact that the duty of the third party to pay for access to the data will in most cases increase the payment that the third party will charge for the service it provides to the user. Thus, the Data Act discriminates against users, including consumers in particular, who have to rely on a third-party service, while – typically larger and industrial – users may be able to organize the secondary data-based use, such as predictive maintenance, in-house.

In addition, the legislature underestimated problems arising from FRAND disputes, which the Institute equally highlighted in its Position Statement. On the one hand, Article 5(1) provides for a right of the user to provide the data without undue delay to the third party. However, nothing in Articles 8 to 10 Data Act explains

how this formula is to be applied where the data holder and the third party cannot swiftly agree on the amount of compensation. Whatever solution can be considered, it will remain suboptimal. On the one hand, if Article 5(1) were applied strictly, with the consequence that the third party can provide the service immediately although the FRAND dispute is still pending, this would create a hold-out situation in which the third party would no longer have any incentive to agree to FRAND terms. If, on the other hand, the third party were only allowed to provide the service after having entered into a FRAND agreement, the effectiveness of the data access right of the user would be severely undermined. The Institute therefore recommended giving up the application of Chapter III, including Articles 8 and 9 Data Act, in the context of Chapter II, with the result that the third party would not have to pay anything for receiving access to the data.

A last important concern relates to the personal scope of application of Chapter II. Here, the Data Act distinguishes between four different groups of companies: (1) microenterprises and small enterprises; (2) medium-sized enterprises; (3) gatekeepers in the sense of the Digital Markets Act (DMA); and (4) other enterprises. The Institute criticized such distinctions. Microenterprises and small enterprises are generally exempted from the obligations arising from Chapter II. For medium-sized companies, the same applies for a period of one year after the date they placed the connected product on the market. The Institute warned that, given the difficulties in discerning the specific categorization of the data holder, this could easily give users false expectations regarding the availability of data. Still, one would hope that competitive pressure would convince enterprises belonging to any of the first two categories to make their products technically compliant with the requirements concerning data accessibility contained in Article 3. According to Article 5(2) Data Act, gatekeepers in the sense of the Digital Market Act do not qualify as third parties. Despite concerns that gatekeepers could also offer services in secondary, IoT data-related markets, the Institute criticized the Data Act in this regard for not taking into account the curtailing of the users' data access and use right, nor the negative impact on competition in secondary service markets. In addition, the Institute argued that the EU legislature should concentrate the regulation of the gatekeepers in the DMA, noting that the Data Act allocates public enforcement powers to national authorities, while the DMA is only enforced

by the Commission. Thus, the now adopted Data Act may be a first step towards a proliferation of rules providing for a special regime for gatekeepers in any future piece of EU market regulation and a multiplication of authorities that will have to regulate gatekeepers in the future.

In sum, one must state that the Institute's Position Statement, although it was broadly noted in the discussion accompanying the legislative process, did not have the impact on the legislation the Institute had hoped for. It is foreseeable that the abovementioned weaknesses of the Regulation's legal design will lead to frictions in the course of the implementation and application of the Data Act. Thus, the Institute's Position Statement may still prove useful for any future reform of the Act.

Other Parts of the Data Act

Chapter III provides for rules that, in addition to Article 5 Data Act concerning the making available of IoT data to third parties, will generally apply to any data access and use regime established under other applicable EU law and national legislation adopted in accordance with EU law. This Chapter therefore extends the relevance of the Data Act far beyond the IoT data access and use regime. The Institute expressed its concerns on basically three aspects: (1) the appropriateness of the FRAND regime; (2) the rules on dispute settlement in Article 10 Data Act; and (3) the interplay of the use of technical protection measures under Article 11 Data Act with copyright law (as regards this latter aspect see B II 1.6, p. 80).

As regards the first two aspects, the Institute is concerned that the EU legislature did not fully understand the complexities and surrounding FRAND disputes, as have arisen in the context of the licensing of standard-essential patents (SEPs), even more so as the assessment of the value of data may turn out to be much more complex. The Institute stressed that the situations of SEP licensing and data sharing are fundamentally different. In contrast to data sharing, cases of SEP licensing are characterized by a certain balance of arms. The technological standard is accessible for implementers, enabling them to commence production immediately. In turn, SEP holders can rely on the exclusivity of the patent to claim injunctions against infringement of their rights. It is between the two threats of holdout (implementation without paying) and hold-up (injunctive relief against infringement) that licensing negotiations occur. In data access cases, in contrast, the data is not available to the petitioner for data access. This provides the data holder with superior bargaining power, which will often require the other party to go to court to enforce data sharing on FRAND conditions. This also means that process-based solutions as devised by the CJEU in the *Huawei* judgment for SEP licensing are not transferrable to data access cases.

The Institute agrees that dispute settlement bodies may be better equipped than state courts to solve FRAND disputes. However, as regards Article 10 Data Act on the establishment of such bodies in the Member States, the Institute criticized the lack of rules of jurisdiction in cross-border cases, which invites parties to engage in forum shopping. Instead, the Institute recommended applying the principles of the Brussels Regulation to delineate the jurisdiction between national bodies. However, this also encounters problems since Article 10 Data Act does not require the Member States to have such a body. In addition, Article 10 does not guarantee the enforceability of the adjudications of the dispute settlement bodies by state courts. Without enforceability, the dispute settlement mechanism may fail to be attractive enough for private parties.

In contrast, Chapter IV (Article 13 Data Act) on the control of contract terms in B2B relations provides for a considerable improvement of the legal framework for data sharing. In addition, extending the fairness control of contract terms to B2B contracts marks a true innovation in European contract law. Article 13 plays a dual role in applying both to mandated contracts for the implementation of data access and use rights in the sense of Chapter II and III and to voluntary datasharing contracts.

The Institute is collaborating on voluntary data sharing in the framework of the Global Partnership on AI (GPAI) project on internationally applicable standard contract terms for AI data and model sharing. In this context, also Article 13 Data Act is taken account of.

→ See B II 1.7, p. 84

In its Position Statement, the Institute expressed concern about two key features of the proposed regime that considerably restrict the applicability of the rules. The first concerns the enterprises bound by the rules. The Commission initially proposed that the rules be only applicable to protect micro, small and medium-sized enterprises. The Institute criticized this, stressing that in practice larger companies can also depend on access to data held by smaller companies. Here it was able to cite the more recent reform of the German rules on relative market power in Section 20(1) Act against Restraints of Competition, where the above insight regarding data dependence ultimately convinced the legislature to give up the limitation of the application of the provision to small and medium-sized enterprises. Here, the EU legislature changed Article 13 in conformity with the Institute's recommendation. However, the EU legislature did not improve the text as regards the second issue: that the Data Act only applies to terms that are unilaterally imposed by one of the parties. According to Article 13(6) Data Act, this requires that other contracting party "has not been able to influence its content despite an attempt to negotiate it". This marks a higher benchmark of intervention than that provided for in the Unfair Contract Terms Directive applicable to B2C contracts, which only requires that the terms "have not been individually negotiated". While this higher threshold may have been influenced by the distinction between B2B and B2C contracts, the Institute still considered this benchmark as inappropriate, taking into account that data-sharing contracts are also offered on the Internet. In such cases, the attempt to negotiate would typically not promise any success and would amount to a formality, requiring the other party to seek negotiations by writing an e-mail, if possible at all. Thus, in Internet cases, the higher benchmark may only have the effect of privileging enterprises that are legally better informed. In the catalog of unfair clauses, only Article 13(5)(c) and (e) Data Act addresses data access-related cases. For the benchmarks of fairness control, it will therefore be important to develop default contract rules as an additional control standard. Article 41 Data Act goes in a similar direction by obliging the Commission to develop and recommend non-binding model contract terms on data access and use. The Institute also pointed out that, regrettably, the unfair contract terms especially relating to data access and use in Article 13 Data Act are not yet reflected in the Unfair Contract Terms Directive applicable to B2C contracts.

With Chapter V on business-to-government (B2G) data sharing, the Data Act addresses a rather novel sub-topic of the data access debate. Still, the Institute

was well prepared to comment on the rules based on previous research and publications (Richter). As supported by the Institute, the Data Act maintains the proposed limitation to cases of exceptional need, of which the public emergency constitutes the most important sub-category. As regards this case, the EU legislature followed the advice of the Institute to extend the scope of application to also cover data held by microenterprises and small enterprises, while accounting for their potentially affected innovation incentives in the provisions on compensation. The Institute was especially critical on the Proposal's text concerning other (non-emergency) exceptional need cases. In these cases, and in contrast to the initial Proposal, a public sector body (PSB) can now only claim access to non-personal data. The EU legislature also sharpened the "subsidiarity rule". Instead of only requiring the public sector body to have been "unable to obtain such data by alternative means", as worded in the Proposal, Article 15(b)(ii) Data Act now requires that the PSB "has exhausted all other means at its disposal to obtain such data". Most importantly, the EU legislature followed the recommendation to delete the additional non-emergency case addressed in Article 15(c)(2) Data Act Proposal in which obtaining the data following the procedures of Chapter V would "substantially reduce the administrative burden for data holders and other enterprises". Unfortunately, the legislature did not respond to the Institute's concern regarding the potential pre-emptive effect of Chapter V on national rules on B2G data sharing. The text of Article 16(1), though addressing the relationship with national law, remains unclear as to whether Chapter V only applies to ad hoc requests, as the Institute recommended, or also to regular B2G data sharing. Equally, the EU legislature maintained the exclusion of the application of the OD PSI Directive to the requested data in Article 17(3) despite the argument that the interests of the data provider against re-use of their data by third parties are already sufficiently safeguarded by this Directive.

In Chapter VI, the Data Act provides for a regulatory framework applying to the providers of data processing services, addressing competition-related concerns relating to cloud and edge services, the market for which is dominated by gatekeepers in the sense of the DMA (Amazon, Microsoft, Google). To overcome lock-in situations and, hence, to keep these markets competitive, the Data Act imposes switching obligations on the service providers. Similar to the DMA, these obligations seek to guarantee the contestability

of the relevant markets. Still, as the Institute pointed out, the intervention in the contractual freedom of the parties is far-reaching. In its Position Statement, the Institute warned that the inclusion of a "technical feasibility" reservation as regards the duty of the service provider to enable the completion of the switching could undermine the effectiveness of the switching. The final text of Article 25(2)(i) now avoids any reference to technical feasibility. However, the effectiveness of switching depends on the guarantee of interoperability. And it is this context, the rules on interoperability of data processing services (Article 35(1)(a) Data Act), to which the technical feasibility reservation has now been shifted.

In Chapter VII the Data Act provides for additional obligations for data processing service providers as regards international data transfers and third-state governmental access as concerns non-personal data. Here, the Institute especially expressed criticism on the first paragraph, which required service providers to take all adequate measures to prevent such transfer or government access wherever it would create a conflict with EU law or the law of the relevant Member State. This criticism now applies to the text ultimately adopted in Article 32(1) Data Act. As part of the research project on the "Coordination of Intellectual Property Law with the new European Data Law", the Institute further deepened its criticism as regards the application of the rule to intellectual property and trade secrets (see B II 1.6, p. 80).

Data sharing requires interoperability. Therefore, the Institute especially welcomed the adoption of interoperability requirements in Chapter VIII of the Data Act. However, these provisions only enact rules on three specific cases, namely (1) common European data spaces; (2) data processing services; and (3) smart contracts. Thus, the Act fails to provide any rules for promoting interoperability for machine-generated IoT data in the sense of Chapter II. At least the EU legislature followed the Institute's recommendation to require the data holder to make the data available "in a comprehensive, structured, commonly used and machine-readable format" (Article 4(1) Data Act), implementing the criteria applied in Article 20(1) GDPR for the portability right concerning personal data. The rules of Chapter VIII provide for performancebased requirements, and hence leave open how they can technically be implemented. In the latter regard, the Data Act explicitly states that the Commission can request European standardization organizations to

develop technical interoperability standards or, based on delegated acts, the Commission itself can adopt harmonized requirements.

As in the case of other legal instruments on data law, Chapter IX adopts a public law approach to enforcement. For the Data Act, this is much less convincing than for the Digital Markets Act (DMA) or the Digital Services Act (DSA), since the Data Act contains rules on contractual relations and devises private rights among market players. Even more, the Act does not provide any guidance as to the relationship between public and private enforcement. In contrast, the Institute argued that some parts should not fall within public enforcement for which private law courts are better placed to adjudicate cases, such as is the case for the control of B2B contract terms under Chapter IV.

The Institute supported the paring down of the sui generis database right in Chapter X (Article 43). However, the Institute considered this approach to be too narrow. On the one hand, other IP rights could equally have a negative impact on the exercise of the IoT right of Chapter II. Moreover, the Institute proposed reducing the scope of the sui generis right where it may conflict with any data access regime. To overcome the primacy of EU law, it suggested that a rule be included in Chapter III excluding sui generis protection also in relation to any later data access regime adopted under national law. Since the legislature has not followed this advice, the adoption of the Data Act is not likely to end the debate on the reform of the sui generis database regime.

Among the many commentaries on the Data Act Proposal, the Position Statement certainly stands out by addressing the cross-border aspects, including the private international law aspects. Article 1(3) Data Act contains unilaterally applicable rules on the geographical scope of application of the Data Act. These rules were obviously drafted from the perspective of public enforcement. However, the Data Act remains silent on private international law. Article 1(3) Data Act cannot be considered to provide rules on the applicable private law. This is particularly so because, in the context of private litigation, the rules of the Data Act need to be applied with due regard to their embeddedness in the private laws systems. Especially, where claims are based on contracts, the Rome I Regulation already provides for EU choiceof-law rules that cannot be assumed to be set aside by the Data Act. The situation is more complex for the data access and use rights covered by the Data Act. Such rights are novel statutory rights for which current legislation on private international law does not provide for any explicit rules. In part in order to fill this gap, in earlier publications the Institute (Drexl) has argued in favor of following an unfair competition law approach, which would allow for applying the choiceof-law rule of Article 6(1) Rome II Regulation. Against this backdrop, the Position Statement undertakes a private international law characterization of the provisions of the Data Act to identify the applicable choice-of-law rules and principles. The result of this analysis is that both Article 1(3) Data Act and the applicable choice-of-law rules and principles will essentially lead to the same applicable law.

Data Act-Related Policy Advocacy and Publications

Several members of the research group (Drexl, Hoffmann, Richter) commented on the Data Act in various academic, government and stakeholders' fora. Two members (Hoffmann, Richter) also accompanied the legislative process more closely advising a shadow rapporteur and another Member of the EU Parliament, respectively.

Following the publication of the Position Statement, individual research group members also published on individual aspects of the Data Act. This includes the aspect of B2G data sharing. Another publication takes the debate on the appropriate design of the IoT data access right as a stepping-stone for developing a doctrinal approach to the design of data access rights, requiring additional conceptualization of data as an object of rights between real property and intellectual property (Drexl).

Publications

- → Richter, Heiko, Access to Private Sector Data for the Common Good: A Critical Review of Chapter V of the Proposed Data Act – Report for the Centre on Regulation in Europe (CERRE), in: Jörg Krämer (ed.), Data Act: Towards a Balanced EU Data Regulation, Centre on Regulation in Europe (CERRE), Brussels 2023, 59–76.
- Drexl, Josef, Lessons from Intellectual Property Law for Designing Modern EU Data Law in: Kreation Innovation Märkte – Creation Innovation Markets – Festschrift Reto M. Hilty, Springer, Berlin; Heidelberg 2024, 981–996.

Beyond the Data Act and Outlook

The adoption of the Data Act was preceded by the Digital Governance Act, which provided the basis for additional research, several publications and policy advice by a scholar at the Institute (Richter).

Data access is also considered for legislative action on the national policy level, not least in the context of competition policy. In this regard, a representative of the Institute (Richter) acted as a member of an expert group to draft a study on behalf of the German Ministry of Economic Affairs and Climate Action in 2022–23. The study takes stock of existing and emerging EU and national legal rules on data access to assess whether and what additional measures need to be taken to promote data access for the purpose of enhancing competition.

Publications

- → Richter, Heiko; Knut Blind; Frederik Gutmann; Axel Metzger; Crispin Niebel; Heike Schweitzer, Data Access and Sharing in Germany and in the EU: Towards a Coherent Legal Framework for the Emerging Data Economy: A Legal, Economic and Competition Policy Angle Final Report (Expertenstudie im Auftrag des Bundesministeriums für Wirtschaft und Klimaschutz) 2022, 308 pages.
- → Richter, Heiko, Datennutzungsgesetz: DNG Kommentar (Gelbe Erläuterungsbücher), 2nd ed., C.H. Beck, Munich 2023, XXX + 502 pages.

The law on open data and public sector information continued to be strongly represented in the Institute's publications (Richter). In particular, the present second edition of a commentary on the German Data Use Act, the German Act implementing the European OD PSI Directive, now also specifically analyzes the legal framework for research data.

Indeed, access to research data is an emerging new sub-topic within the data access debate. The German Government is currently considering the introduction of a new law on the sharing of research data ("Forschungsdatengesetz"). At the Institute, a doctoral project on the legal framework for data generated by connected medicinal devices (eHealth), which constitute a sub-category of potential data for medicinal research, is nearing completion. This thesis also dives into the analysis of the proposed EU Regulation for a

European Health Data Space (EHDS) (B II 2.1, p. 108). Another doctoral project (Masselot: "Pseudonymization and Anonymization as Elements of the EU Data Governance Framework"), which has just commenced, is highly relevant for designing functioning data governance systems for health data as research data. Mostly from a data protection perspective, it looks at the legal regime for pseudonymization and anonymization as a means for making data more broadly available.

A doctoral thesis now in its final stages focuses on the EU legal regime for digital payment services under the Second Payment Services Directive (PSD2) and the proposed Third Payment Services Regulation as an example to develop a broader legal theory on data governance (B II 2.8, p. 122).

The Institute's Position Statement on the Data Act ends with very critical remarks on the legislation's potential to enhance innovation in general and Aldriven innovation in particular. From this conclusion, the Institute has moved to more focused research on regimes to promote access to data needed for the development of AI. A doctoral project is underway that assesses the need for and the design of a legal framework for the sharing of data for AI development (Chen: "Unlocking the Full Potential of AI – Towards Mandatory Data Access Rules for the Purpose of AI Development"). The Institute explores the possibilities of enhancing voluntary data sharing in the framework of the Global Partnership on AI (GPAI) on potential future standard contracts on AI model and data sharing (B II 1.7, p. 84). Especially for the development of generative AI, Internet scraping is a highly effective method to collect data. These data may often include personal data. A newly initiated doctoral study explores the legal regime for personal data legally made accessible on the Internet as a basis for the development of AI from a comparative perspective, covering the law of the EU, the U.S. and China (Li: "Publicly Available Personal Data: Should It Be Left in the Public Domain? Comparison of Different Legal Regimes and Their Impacts on AI Development").

With its research on data access and use rights, culminating in its Position Statement on the Commission's Data Act Proposal in 2022, the Institute contributes to the development of the European legal framework of the data economy.

Project Leader

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Publication

Drexl, Josef; Carolina Banda; Begoña González Otero; Jörg Hoffmann; Daria Kim; Shraddha Kulhari; Valentina Moscon; Heiko Richter; Klaus Wiedemann, Position Statement of the Max Planck Institute for Innovation and Competition of 25 May 2022 on the Commission's Proposal of 23 February 2022 for a Regulation on Harmonised Rules on Fair Access to and Use of Data (Data Act) (Max Planck Institute for Innovation & Competition Research Paper, No. 22-05), 2022, 124 pages, http://dx.doi.org/10.2139/ssrn.4136484, 17.06.2022.

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Coordination of Intellectual Property Law with the New European Data Law

By the end of 2023, the outgoing European Commission was able to present an impressive list of new legislation laying the ground for a new European data law, located at the interface of data protection, intellectual property, competition, consumer protection and tort law. As typically is the case, the drafters concentrated on the new rules, while confirming that the acquis communautaire should not be changed. In principle, this also applies to the new legislation's relationship with intellectual property law, including trade secrets protection, albeit with an important exception for the sui generis database right provided for in Article 43 Data Act. When the Institute drafted its Position Statement on the Commission's Data Act Proposal in spring 2022, however, it realized that the intricate interface and interaction with intellectual property law deserved closer attention. Building on its analysis of the Data Act, the Institute decided to take the coordination of intellectual property law with the new data law as the topic of the EIPIN Conference held in Munich in June 2023. The Institute thus sought to increase awareness among legal scholars of the relevant issues, contribute its own research to the Conference and ultimately highlight additional need for legal reform.

In the light of the definition of data in Article 2(1) Data Act as "digital representation of acts, facts or information and any compilation of such acts, facts or information, including in the form of sound, visual or audio-visual recording", the relevance of intellectual property is undeniable. On the semantic level, data as the subject matter of data law will often fulfill the requirements of copyright protection, the sui generis database right, related rights for non-creative photographs and sound recordings or trade secrets protection.

Conflicts Between the New Data Access Rights and IP, Including Trade Secrets Protection

From a policy perspective, many rules of data law are designed to make data more broadly available so as to reap the multiple welfare benefits of increased use of the data. Thus, data access and use rights have the potential of entering into direct conflict with IP rights and trade secrets protection. The relationship is further complicated by the fact that

the existence and ownership of the respective IP rights and trade secrets protection are uncertain. The mentioned IP rights do not require registration, and whether courts will ultimately confirm the very vague requirements for trade secrets protection can often hardly be foreseen. Such uncertainties have two major consequences: First, data holders may simply resort to claiming "ownership in their data" irrespective of whether their de facto data holding is supported by IP and trade secrets protection. Secondly, data holders and other parties may strategically claim IP or trade secrets protection to restrict access to and use of data, thereby undermining the effectiveness of the newly created data rights of recent EU legislation.

The latter concern also inspired the EU legislature to adopt Article 43 Data Act to exclude sui generis database rights from the scope of application of the Act and to safeguard the IoT data access and use right pursuant to Articles 4 and 5 in particular. However, in its Position Statement (see in general at B II 1.5, p. 72), the Institute criticized this as insufficient. On the one hand, Article 43 Data Act cannot replace a general reform of the sui generis database right. This right can also undermine data access and use rights outside the scope of application of the Data Act. On the other hand, the sui generis database right is not the only right that can be used strategically. Especially in an IoT context, machine-generated data can often result in pictures, sounds and audiovisual recordings being eligible for protection by copyright or at least by related rights. In addition, it cannot be determined with certainty that no IoT data is included in any copyright-protected databases.

Moreover, the legislature could not avoid addressing the relationship of data access and use rights with trade secrets protection in the Data Act. If trade secrets protection prevailed over data access and use rights, this would considerably undermine the effectiveness of the latter. De facto data holders could simply refuse to share the data by claiming that their data constituted trade secrets, and thereby force the data petitioners to go to court to clarify the issue. Therefore, the Institute criticized Article 8(6) Data Act, which even in its final version makes the precedence of trade secrets protection the default rule as regards any data access rights under national or EU law. In particular, the Institute cited the especially inappropriate result in situations where the data holder and the trade secrets holder are different persons. In such a situation, the data holder finds itself in a most uncomfortable situation of selfassessing the risks of either violating the trade secrets of the other person by granting access to the data or disregarding the data access right, which could result in a considerable fine under Article 40.

As regards the coordination of trade secrets protection with the IoT data access and use right laid out in Chapter II of the Data Act, the Commission proposed an approach that the Institute also recommended for other data access and use rights, namely to combine the data access rights with confidentiality requirements imposed on the data recipient. The Commission's proposal caused major debates in the course of the legislative process. As a result, the final and very complex text of Article 4(6), (7) and (8) and Article 5(9), (10) and (11) of the Data Act, in contrast to the Commission's proposal, no longer completely prevents the data holder from refusing to share data. In particular, the final text allows a refusal to share IoT data in exceptional circumstances and imposes on the data holder the duty to notify the refusal to the competent authority. The EU legislature wisely restricted this rule to cases where the data holder is also the trade secrets holder.

Other IP-Related Issues

As regards the Data Act Proposal, the Institute identified several other instances where it advocated additional coordination between the two fields of the law. This includes potential copyright protection of application programming interfaces (APIs), which could seriously compromise the establishment of interoperability. The final text of Article 33(1)(c) on interoperability requirements for European data spaces refers to APIs without raising the issue of potential copyright protection. In this regard, the Institute's Position Statement recommended the Commission to consider explicit exclusion of copyright protection for APIs in the context of future copyright legislation.

Another interface with IP law appears in the context of Article 11(1), where the Data Act explicitly confirms that the IoT data holder who is under an obligation to grant access to the data may apply technical protection measures (TPMs). What the Data Act does not consider in this context is that TPMs are protected against circumvention under the rules of the Copyright Directive 2001/29 in the Information Society (InfoSoc Directive) and the Computer Programs Directive 2001/24, provided that TPMs are used to protect against copyright infringements. In this regard, the Institute claimed that such protection would be unjustified where the data holder wrongly refuses to grant access to the data. Yet the EU legislature did

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EIPIN Conference attendees in June 2023, brought together by the Institute to discuss the coordination of intellectual property law with the new European data law.

not implement the Institute's recommendation that Article 11(1) Data Act should not be used as a means to prevent interoperability of the data which the data holder is under an obligation to make available. A member of the Institute delved further into the topic at the EIPIN Conference in June 2023 (Moscon).

Excessive Cross-Border Protection of IP and Trade Secrets

In its Position Statement, the Institute particularly criticized the Commission for what has ultimately been enacted in Article 32(1) Data Act. Following the model of Article 31(1) Data Governance Act (DGA), this provision requires data processing service providers, such as cloud- or edge-computing service providers, to take adequate measures to prevent international and third-country government access and transfer of nonpersonal data held in the EU where such transfer or access would create a conflict with Union law or with the relevant national law. Moreover, both rules appear to follow the approach found in data protection law whereby Articles 44–50 GDPR set up a special regime under which an international data transfer may only take place where the law of the third country provides for an adequate level of protection.

The Institute criticized this approach in its Position Statement on the Data Act Proposal and further elaborated on this criticism in two presentations at the EIPIN Conference of June 2023. One reason for criticism arises from the breadth of the fields of the law that Article 32(1) Data Act covers. These fields are

in no way limited, hence, they also include intellectual property and trade secrets law, which Recital 101 specifically mentions in this context. Even more, the model of the DGA informs us that the protection of trade secrets against leaking was a particular motivation for the adoption of the provision. Here, it is to be noted that the DGA seeks to make public sector information (PSI) more broadly available than the PSI Directive so far quaranteed. For this purpose, Article 5(7) and (8) DGA guarantees that even PSI protected by IP or trade secrets law could be reused if this occurs in full compliance with the intellectual property and trade secrets law. Furthermore, Article 5(9) through (11) DGA sets up a system of international transfer of data protected by IP and trade secrets rules which follow the model of the GDPR for personal data, including an adequacy assessment of the foreign law.

The Institute further developed the criticism expressed in its Position Statement in two presentations at the EIPIN Conference in June 2023. This criticism can be summarized as follows: First, the situation in the field of IP and trade secrets law considerably differs from that in data protection law. As regards the former, the law is harmonized to a large extent by international conventions, especially the TRIPS Agreement. Second, for answering the question of whether there is a conflict with the law in the EU, this law needs to apply pursuant to the established choice-of-law rules of the Rome II Regulation, which in turn excludes extraterritorial application of EU law. Third, to guarantee the fulfillment of Article 32(1) Data Act, cloud- and edge-computing (data processing) service

providers would be required to monitor the semantic content of the transferred data, which is in direct conflict with the very nature of such services. Fourth, intervention to protect intellectual property and trade secrets under Article 31(1) DGA and Article 32(1) Data Act is opposed to the private-law character of these fields of the law, which essentially relies on private enforcement. In particular, it is part of the foundations of trade secrets law that it is for the trade secrets holder to take reasonable measures to ensure the secrecy of the information, so as to justify protection.

Ultimately, limiting their application as they do to non-personal data, the rules of Article 31(1) DGA and Article 32(2) Data Act are also misconceived. Non-personal data does not constitute a form of sensitive data. It is only characterized by the absence of privacy interests in the data. The legislature's failure to take this into account can produce absurd results where personal data is simultaneously protected by intellectual property or trade secrets law. In such situations, the data may always be transferred, if the law in the third country provides adequate data protection, although the transfer would conflict with IP or trade secrets rules existing in the EU.

Looking Beyond the Data Act

The EIPIN Conference of 2023 also looked at the need to coordinate the Digital Markets Act (DMA) and competition law with intellectual property. One

speaker explored the question of whether intellectual property rights and trade secrets protection are to be recognized as defenses in the context of the DMA's data access rules. Another speaker raised the question of whether the problem of distinguishing between IP-and trade secrets-protected data and other data should argue for giving up the prevention of the emergence of a new product as an additional requirement in cases of refusals to license an intellectual property right as compared to simple cases of refusals to deal.

Two further speakers had the task of exploring: (1) the interface of intellectual property and trade secrets protection of data needed for AI development; and (2) the need to coordinate eventual protection of the software elements of AI systems with future European access and use regimes.

Trade Secrets Protection for the Modern Digital Economy

As regards trade secrets protection, there is the more far-reaching question whether the current European and international frameworks are still adequate to respond to the needs of the modern data economy. A member of the Institute acted both as an external advisor for the EU-commissioned "Study on the Legal Protection of Trade Secrets in the Digital Economy" and as an expert in the "WIPO Symposium on Trade Secrets and Innovation", both of which explored the future trade secrets regime for digital data (Drexl).

The project focuses on the need to coordinate intellectual property and trade secrets protection with the emerging EU data law.

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Conference Held at the Institute

EIPIN Conference 2023: Coordination of Intellectual Property Law with the New European Data Law, EIPIN, Max Planck Institute for Innovation and Competition, Munich, June 2023.

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Contracts for Sharing Data and Models for the Development of AI – A Project of the Global Partnership on Artificial Intelligence

Access to data is a critical factor in the development of artificial intelligence (AI) systems and applications. Enhanced access to data works as a catalyst for AI-driven innovation across various sectors. Recognizing the need to facilitate the voluntary sharing of data and models for AI innovation, the Institute – in the framework of the Global Partnership on Artificial Intelligence (GPAI) – engages in collaborative research to explore how contractual practices in this domain can be supported with a focus on advancing the efforts towards the standardization of contract terms.

Background

Established in 2020, the Global Partnership on Artificial Intelligence (GPAI) is a multi-stakeholder initiative aiming to promote AI innovation in alignment with human rights, inclusion, diversity and sustainable development goals. Committed to the OECD Recommendation on AI, the initiative seeks to foster international collaboration, multidisciplinary research and the integration of theory and practice. It addresses key AI issues through its four working groups focused on responsible AI; data governance; the future of work; and innovation and commercialization.

In June 2020, the Federal Republic of Germany initially appointed Josef Drexl as an Expert for the Data Governance Working Group. Subsequently, he also became a member of the Intellectual Property (IP) Advisory Committee of the Innovation and Commercialization Working Group (GPAI I&C WG), and a co-lead of the AI Data and Model Sharing Initiative within GPAI, together with Professor Lee J. Tiedrich (Duke University). The initiative focuses on addressing challenges in sharing data and models for fostering AI innovation, emphasizing the importance of developing standard contracts.

Research Objective, Questions and Approach

The project agenda is shaped by the following premises: the widespread consensus about the need for additional tools to facilitate voluntary data sharing; the recognition that standardization of agreements for sharing AI data and models has the potential of streamlining transactions and facilitating negotiations; and the awareness that international initiatives for standardizing agreements for AI data and models are in their early stages and face numerous challenges. The overall goal of the project is to support

and advance these efforts, thereby enhancing the use of AI data and models for the benefit of society.

To achieve this goal, the GPAI AI Data and Model Sharing Initiative promotes a multi-stakeholder dialogue and endorses emerging initiatives that strive to develop and implement standardized contract clauses for minimizing the risks and maximizing the benefits associated with the sharing of AI data and models. Various methods are employed for this purpose, including semi-structured interviews with diverse stakeholders, expert workshops, literature research and the synthesis of legal and policy issues related to the contractual sharing of AI input data and models.

Research Activities and Outcomes

Interviews

In 2022, the GPAI I&C WG conducted semi-structured interviews with experts possessing knowledge and hands-on experience in the area of data transactions and the standardization of contract terms for sharing AI data and models. These multi-stakeholder exchanges were instrumental in providing insights and pinpointing specific issues related to such contractual practices and initiatives for developing standardized agreements for AI data and model sharing. Several challenges and even obstacles of technical, economic and legal nature have been identified, including the need to establish technical definitions, data interoperability and data quality standards; business uncertainties in assessing risks and benefits of Al data and model sharing; and legal uncertainties related to the potential infringement of third-party rights in Al data and models. The latter has been compounded due to unresolved uncertainties regarding the applicability and the scope of IP rights, along with the evolving AI-specific legal framework, encompassing

extra-contractual liability and safety regulations, for instance, in the form of the future AI Act and the revised EU product liability rules. Interview findings regarding the persisting challenges of securing access and use rights in AI data and models, by and large, align with the findings of the review of available literature on this subject.

Expert Workshops

In 2023, the Institute and Duke University co-organized two hybrid multi-stakeholder workshops, which took place in Munich in April and Washington, D.C. in June. The workshops aimed to provide a platform for indepth multi-perspective discussions and engage a broad range of stakeholders in exploring pathways and solutions to facilitate the voluntary sharing of Al data and models, with a focus on the standardization of contract terms.

While the first workshop broadly surveyed the landscape, revisiting the status of existing initiatives and the challenges they encounter, the second workshop honed in on the standardization of licenses, specifically delving into topics related to generative AI. These workshops were structured as moderated thematic sessions, providing a platform

for participants to exchange perspectives on the questions and problems outlined in the workshop agenda in advance. Both workshops garnered high participation and engagement and fostered dynamic and insightful discussions.

Reports

Based on the findings of the interviews and workshops, as well as literature research, two reports, co-authored by members of the Institute (Drexl, Kim), were published: "GPAI IP Expert Preliminary Report on Data and AI Model Licensing" (2022) and "Fostering Contractual Pathways for Responsible AI Data and Model Sharing for Generative AI and Other AI Applications" (2023).

The 2022 report synthesizes findings from interviews and initial literature research, making a strong case for the crucial role of standardized contract terms in streamlining and facilitating the sharing of Al data and models. It takes stock of various initiatives dedicated to developing data licensing templates, guidance and principles, including efforts led by the Linux Foundation, Microsoft, Responsible Al Licenses (RAIL), Open Data Commons, Creative Commons, and the Ministry of Economy, Trade and Industry in Japan.



Local and global: Engaged participants, both in-person and virtual, at the GPAI workshop in April 2023.

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Acknowledging the diverse nature of contractual scenarios and Al use cases, the report advocates for the development of a menu of provisions or agreements, similar to the approach embraced by Open Source and Creative Commons licenses. At the same time, the report highlights that prior attempts at contracting using Open Source and Creative Commons licenses showed limitations in addressing the unique characteristics of AI data and model sharing. It also points out that, while the need for standardized terms for AI data and model licenses is gaining recognition, bespoke licenses are likely to remain relevant in certain situations. The presented findings outline the specifics of the contractual allocation of access and usage rights in AI data and models. This encompasses issues related to privacy and confidentiality clauses, data interoperability and quality, contractual allocation of liability for risk materialization, and peculiarities of software-as-aservice and other business models. Recognizing the challenges in developing standardized terms covering all these aspects, the report identifies some starting points for addressing these complexities.

The 2023 report highlights the sustained demand for standardized contracts and underscores the need for a collaborative approach to support the ongoing initiatives. It provides an overview of the developments in the field of standardization of contract terms for Al data and model sharing, including advancements made by the Linux Foundation, RAIL, the United Nations Commission on International Trade Law (UNCITRAL), the Open Knowledge Foundation, and Creative Commons. The report discusses emerging challenges posed by the evolving legal landscape, characterized by complex, yet-to-be-clarified interactions between legal fields, pending court decisions in high-profile cases, and the introduction of new rules such as mandatory contract law and data governance requirements under the AI safety framework. These factors are likely to impact the freedom of contract within the Al domain. Against this backdrop, the need to develop contractual solutions to facilitate the voluntary sharing of Al data and models in the face of uncertainties gains prominence. The report explores the potential benefits of standard contract terms in addressing issues such as imbalances of bargaining power, liability, ethics, safety risks, and regulatory compliance. Additionally, it discusses how contracts could be complemented by technical tools and business codes of conduct. Overall, the report emphasizes the need for strategies and guidance in navigating the complex interplay between rights and obligations among contracting parties and third parties involved in or affected by the sharing of AI data and models. In this regard, the report shares considerations about how future work on standardizing data and model-sharing agreements can address some of the challenges so as to enhance legal certainty and mitigate risks without compromising benefits.

Outlook

The GPAI IP Advisory Committee, in collaboration with various organizations, is preparing to launch the Al Contract Terms Incubator to further advance the development and adoption of standardized contract terms for enhancing the sharing of Al data and models. The Incubator is conceived as a platform for stakeholders to exchange ideas and receive feedback, including through virtual meetings and hybrid workshops to encourage collaboration. A series of workshops will commence with one in March 2024 which will explore the emerging landscape of opensource and open-access approaches for AI, distinct from traditional open-source models. Amid the rise of generative AI, there is a heightened emphasis on the importance of new open-source and open-access approaches for AI licensing, as evidenced by a recent OECD survey involving G7 members as part of the Hiroshima Al Process. The series' inaugural workshop will address questions on how to advance trust, reliability, and safety in AI through licensing, strategies for organizing and enforcing provisions to ensure responsible AI development, the challenge of license proliferation in Al, and the need for standardization in Al licensing, along with effective enforcement methods for these obligations or licenses.

Another topic the Incubator is likely to address regards the role of standard contract terms to mitigate legal uncertainties arising from copyright law as concerns the use of Internet scraping as a means to develop AI such as those based on large language models (LLMs). While in the EU it is not yet settled whether the provisions on text and data mining (Articles 3 and 4 Digital Single Markets Directive) also apply to the case of using scraped data for the purpose of AI development, in the U.S. legal uncertainty mostly arises from uncertainties that still persist concerning the application of the fair use doctrine.

In sum, this research connects well with the Institute's research on data access rights (B II 1.5, p. 72) and the coordination of intellectual property law with the emerging European data law (B II 1.6, p. 80). While data access rights are needed to overcome resistance to sharing data on the part of unwilling data holders, standard contract terms can work as facilitators for voluntary data sharing. GPAI, as an initiative that is not mandated to come up with proposals for legal reform, is a useful forum for a multi-stakeholder dialogue to pave the ground for practical progress. However, it also informs the Institute's related research on further reforming the law to enable AI development and help society to reap the benefits of AI application.

Related Policy Work

The Institute was also represented by an external advisor (Drexl) in the ALI-ELI Project for Principles for a Data Economy – Data Transactions and Data Rights (finalized in 2021) – which inter alia proposed default contract rules for data-sharing contracts.

The standardization of data-sharing contract clauses is also the focus of the work conducted by UNCITRAL. The Institute is represented in this association by

an active member (Hoffmann) of the working group currently negotiating a set of draft default rules that form the basis of the work on the topic of data provision contracts. The Institute holds the view that tailoring the default rules to the specificities of data-sharing contracts is crucial, and it emphasizes the importance of not relying on already existing concepts that fail to address the value cycles of data and their differences from tangible goods. While these rules were initially drafted in light of the United Nations Convention on Contracts for the International Sale of Goods (CISG), it was eventually commonly agreed that seeking to apply its provisions had limited utility due to significant differences between contracts for the sale of goods and data provision contracts. A similar common understanding was reached regarding the nondifferentiated parallel application of intellectual property (IP) rules and considerations specific to know-how contracts. It remains to be seen how the vast political tensions between the Global South and the Global North may further impact the negotiation processes. The work conducted throughout the GPAI project has been integrated into these discussions, influencing their trajectory and shaping the current state of the draft rules.

The Institute seeks to enhance access to and use of AI data and models by advancing international collaboration in developing standardized agreements for their sharing.

Project Leader

Josef Drexl (co-lead), in cooperation with Lee Tiedrich (Duke University)

Project Participant

Daria Kim

Related Contributor

Jörg Hoffmann

Project Duration

Since 2022

Publications

Drexl, Josef; Daria Kim; Hisao Shiomi; Lee Tiedrich, GPAI IP Expert – Preliminary Report on Data and AI Model Licensing, 2022, 36 pages, https://gpai.ai/projects/innovation-and-commercialization/intellectual-property-expert-preliminary-report-on-data-and-AI-model-licensing.pdf, 04.11.2022.

Drexl, Josef; Iban Avdulla; Daria Kim; Lee J. Tiedrich, Fostering Contractual Pathways for Responsible AI Data and Model Sharing for Generative AI and Other AI Applications. GPAI I&C WG: Protection Innovation, Intellectual Property (IP) Project. Report, 2023, 44 pages, https://gpai.ai/projects/responsible-ai/IC_Intellectual%20Property%20project.pdf, 08.11.2023.

1.8

Data Governance in Emerging Economies to Achieve the Sustainable Development Goals

In the year 2021, amidst the COVID-19 pandemic, the Institute discerned an imperative need for expanded legal scholarship concerning the evolving law on the digital sector in emerging economies. Also recognizing the great potential of digital technology for providing effective responses to major challenges of humankind, such as climate change, the Institute built up a research network with partners from universities in Senegal, India and Brazil to conduct a joint research project on data governance in emerging economies to achieve the UN Sustainable Development Goals (SDGs). The project was launched at a critical point when the European Union was adopting an impressive number of regulatory acts for the digital economy, not least with the intention to set a global standard, and ideas on data colonialism were spreading in the literature on global data law. In contrast to those two developments, the project takes the SDGs as the objectives for data legislation in emerging economies and methodologically relies on data governance systems as the best means to bring about tangible benefits in terms of sustainable human, social and economic development.

In 2015, in its study titled "Data Driven Innovation – Big Data for Growth and Well-Being", the OECD identified data sharing as key for fostering digital innovation in the interest of achieving multiple public interest goals. In the following years, this insight inspired the Institute in its research and policy work regarding the development of the legal framework for the Internet of Things (IoT) and artificial intelligence (AI). While the focus was first on the legal framework in the EU, in 2021 the Institute shifted its attention to also address the issue of how data policies should be framed in emerging economies.

However, the insight of course also holds true as regards other parts of the world. To complement past and ongoing research on intellectual property and competition law in developing and emerging economies, at the beginning of 2021 a new research project was launched on the adequate design of the legal framework for data law in emerging economies.

A Four-Party Collaboration Extending Across Four Continents

Institutionally, the Institute was excellently placed. In addition to its expertise in the field and the existence of a highly qualified research team working on various sub-topics related to the data economy, the Institute was able to reach out to cooperation partners placed in three other continents (Africa, Asia and South America) to create a network of collaboration.

In Africa, the Institute was able to benefit from the particular advantage that one of its former postdoc

researchers originating from Senegal (Mor Bakhoum) had just returned to his home country to start a career as a professor at Senegal's first online university, the Université virtuelle du Sénégal (UVS), which has since been renamed the Université numérique Cheikh Hamidou KANE. On the eve of the project launch, Mor Bakhoum successfully applied for Max Planck funding to establishing a Max Planck Center at his university on the topic of competition law in the digital economy. In India, the Institute reached out to Arul Scaria, a former doctoral student and graduate of the Institute's former International Max Planck Research School, who had since become a law professor at the National Law University Delhi. During the course of the project, Arul Scaria left Delhi to join the National Law School of India University Bengaluru, which is often acclaimed as India's leading law school. He was joined by Vikas Kathuria, also Indian, another former postdoc at the Institute who, during the pandemic, decided to return to his home country and meanwhile has joined the faculty of BML Munjal University School of Law situated in the Delhi National Capital Region. In Latin America, the Institute contacted Vicente Bagnoli, a competition law professor from Mackenzie Presbyterian University in São Paulo, who had been a visiting scholar at the Institute before the pandemic. Mor Bakhoum and Vicente Bagnoli brought in additional colleagues from their universities.

The four-party geometry was key for paving the way of the research. While the year 2021 was still affected by the pandemic, it was nevertheless possible to launch the project. In multiple online meetings, the entire research group conceptualized the research

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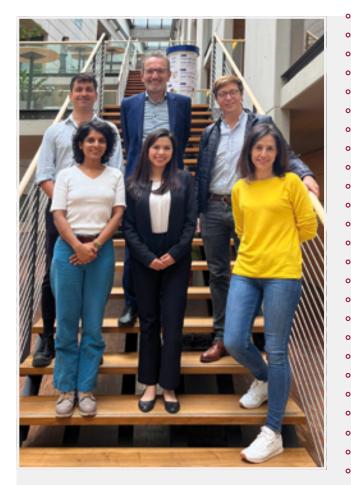
and decided to focus on the Sustainable Development Goals (SDGs) defined by the UN as the guidepost for designing the legal framework. This resulted in the selection of individual SDGs and relevant sectors for which the team planned to organize workshops in Senegal, India and Brazil. Small teams with participants from the postdoc and doctoral level at the Institute and the partners from the hosting countries were established to work on the preparation of the workshops. Ultimately, in the course of 2022, the research group managed to hold all three workshops (Dakar, March 2022; Bangalore, September 2022; São Paulo, December 2022).

Drafting scholarly papers with in-depth analysis of the results of the individual workshops consumed most of 2023. The first paper was published at the beginning of 2024, and the second one is forthcoming. In December 2023, an internal workshop was organized in Munich to conceptualize the future work of the project, including the publication of final results of the research in the form of an edited book.

The First Breakthrough: From the Brussels Effect and Data Colonialism to the SDGs

At the beginning of the project, the team had to agree on the methodological approach. It was not far-fetched to rely on a comparative law approach. Comparative law offered three possible approaches to the topic: (1) to recommend an already existing law as a legal transplant; (2) to take already existing legal approaches as a template and adopt them to the specific socio-economic context of the emerging economies; and (3) to develop a completely new type of regulatory system that is tailor-made for emerging economies.

Without much debate, the group rejected the first approach. This is explained by the fact that the project idea was considerably driven by the concern that the European Union's approach, to become the lead jurisdiction for the regulation of the digital sector and then export European laws to third countries (the so-called "Brussels effect"), would not best serve the needs of emerging economies. Simultaneously, the group also observed that new theories about neocolonialism had by now reached the global level of the data law debate in the form of a "data colonialism" theory



The project team at its home base in Munich.

compare today's digital economy, dominated by a few big tech companies which mostly originate from the U.S., with the global economic system of the colonial era. This culminated in accusations that the Big Tech companies make huge use of personal and nonpersonal data from the Global South to only serve the interests of companies and societies in the Global North. Such ideas even seemed to have reached the policy level in some states, including India, where the government at least for a time thought about whether it should generally control the transfer of data to other countries - assimilating "their" data with national resources - as leverage for enforcing fair benefit sharing. In this latter regard, the research group was concerned that the data colonialism approach could seriously harm the development of the domestic digital sector in emerging economies, on the one hand, and would not guarantee that income from "digital benefit sharing" would trickle down to generate tangible benefits for the people.

In short, between the two extremes of the "Brussels effect" and "data colonialism", the middle ground of proposing necessary adaptations of the various data laws to the socio-economic needs of emerging economies seemed to be preferable. At the start, the research team worked in this direction when it tried to develop a taxonomy of the socio-economic features of emerging economies that need to be taken into account for legislation on the data economy. However, the group also realized that it additionally needed to agree on criteria to distinguish between beneficial and unsuitable legislation. An obvious approach could have been to differentiate between the various data laws and focus on their individual objectives. However, this proved to be equally unsatisfactory. The example of data protection law can illustrate the problem. Data protection law seeks to protect the privacy interests of individuals in personal data from a fundamental rights perspective. Thus, the model of data protection a jurisdiction chooses critically depends on the constitutional law status of fundamental rights and not on whether a country can be considered an emerging economy or not. Indeed, all three jurisdictions considered have by now adopted data protection law. India was the latest to do so, in 2023, responding to a Supreme Court decision in 2017 that affirmed the existence of a fundamental right to data privacy. Yet jurisdictions will typically frame the right to data protection as an absolute right. The question therefore is how emerging economies have to strike a balance between this right and conflicting including economic - interests in their data protection legislation. Hence, the focus of the Institute's project needed to be on the guiding principles for balancing these interests, taking into account the development needs of the given jurisdiction.

For this reason, the research group elected to take the UN's 17 Sustainable Development Goals (SDGs) as the guidepost for the research. The SDGs have the particular advantage that they provide a globally accepted framework of multiple objectives relating to ecological, economic and human development that, taken together, can be considered to promote "sustainable development", irrespective of what the concrete constitutional setting of the individual jurisdiction is.

The Workshops

Taking the SDGs as guidance was key for the research group's decision to engage in a comprehensive fact-finding exercise in the form of three consecutive workshops held in Senegal, India and Brazil. Collaborating closely with the partners, the research group identified specific sectors for each of the countries for which the employment of digital technologies promises particular benefits in terms of sustainable development. The sectoral approach was also supported by the insight that certain sectors cannot always be directly equated with one SDG. The research had to take account of the multiple interactions among different SDGs. In many instances, they can be mutually supportive; in other instances, they may conflict.

Ultimately, the team decided to address the following sectors in the framework of the individual workshops:

- Dakar (Senegal): Agriculture and financial services
- Bangalore (India): Health
- São Paulo (Brazil): Climate change and green cities

The idea was to invite representatives from diverse stakeholder groups, encompassing private enterprises, governmental institutions and civil society, to learn from them what was happening on the ground and test the fitness of their respective regulatory frameworks. As part of the preparatory work this also required the identification of the existing laws in the three jurisdictions that were relevant for the sectors considered.

Dakar, March 2022

In Senegal, a large portion of the population still lives from farming. Situated in the Sahel region, which is particularly exposed to the consequences of climate change, the country is not able to feed its quickly growing population. Moreover, large parts of the population do not hold any bank account. Economic inclusion of the population therefore requires action as regards access to payment systems and other financial services. Thus, the research team chose the agricultural and financial services sector as being particularly important for Senegal to achieve sustainable development.

The Max Planck Partner Group in Senegal

n 2021, the Max Planck Society approved the establishment of a Max Planck Partner Group affiliated with the Institute at the Université virtuelle du Sénégal in Dakar, later renamed Université numérique Cheikh Hamidou KANE. The official opening event of the Max Planck Partner Group took place in Dakar on 16 and 17 March 2022.

The collaboration aims to conduct joint research on data access and regulation in the context of sustainable development. Head of the Max Planck Partner Group is Mor Bakhoum, who was a Senior Research Fellow at the Institute from 2009 to 2018 and is still associated with the Institute as an Affiliated Research Fellow.

The Partner Group is conceived to comprise, apart from Mor Bakhoum, seven postdoctoral researchers, two doctoral students and a research assistant. Research within the Partner Group is closely linked to the Institute's research project Data Governance in Emerging Economies to Achieve the Sustainable Development Goals. The Group publishes reports, like the Senegal Country Report in the aforementioned project together with colleagues of the Max Planck

Institute for Innovation and Competition, as well as other research articles. It also supports doctoral students at the Université numérique Cheikh Hamidou KANE working on the topic of data and the digital economy.

The Max Planck Partner Groups are an instrument of the Max Planck Society in the joint promotion of researchers with countries interested in strengthening their research through international cooperation. A Partner Group can be set up on condition that outstanding young researchers, following their tenure at a Max Planck Institute, return to their home country and carry out further research on a subject that is also of interest to their previous host Institute. More than 70 Partner Groups exist worldwide at the moment.





Mor Bakhoum, Head of the Max Planck Partner Group.

Members of the Université virtuelle du Sénégal and members of the Institute at the official opening event in Dakar in March 2022.



The Dakar workshop brought together a remarkable selection of young entrepreneurs and representatives of NGOs that make use of digital technology. This has the potential of reducing poverty and stabilizing the economy by affording small-scale farmers and entrepreneurs access to pivotal information and financial services. Thus, the workshop provided evidence that digital technologies indeed work as catalysts for economic growth and foster financial inclusion through the establishment of an effective data governance framework. As regards agricultural sector, the workshop also showed that digital applications already in use produce benefits in terms of making farming more resilient, such as by reducing the consumption of water, which is crucial in times of climate change (SDG 13 – Climate Action).

Yet the workshop also made clear that focusing exclusively on the horizontal legal frameworks, such as data protection law and competition law, would not be the right way forward for conducting the project.

Publication

→ Bakoum, Mor, Begoña González Otero, Jörg Hoffmann, Minata Sarr, Data Governance in Emerging Economies to Achieve the Sustainable Development Goals – Senegal Country Report Based on the Workshop Shaping Data Sharing Policies in the Agricultural and the Financial Services Sector (Dakar, March 16-17, 2022) (Max Planck Institute for Innovation & Competition Research Paper, No. 24-05), 2024, 91 pages, http://dx.doi.org/10.2139/ ssrn.4740275, 28.02.2024.

Bangalore, September 2022

In 2022, India became the most populous country in the world. Therefore, as proven by the UN reporting figures, India faces an urgent need to identify a strategy to promote SDG 3 (Good Health and Well-Being) enabling the country to cope with its demographic challenges and to guarantee human, social and economic welfare for its future. SDG 3 has interlinkages with almost all other SDGs and presents a good example for the integrative and multi-sectoral approach to achieving the SDGs, requiring the involvement of the public and private sector, as well as civil society and academia.

The Bangalore workshop brought together a wide range of stakeholders, with representatives from pioneering industry in the health sector (NIRAMAI Health Analytix, Saathealth, DRiefcase, Ambee); industry associations like NASSCOM; and private initiatives like Swasth Alliance and iSPIRT, as well as public bodies such as NITI Aayog. In addition, independent researchers and research institutions in the area of health, members of civil society and scholars with a political science and legal background were also invited.

One key takeaway from the workshop was that there is enormous innovation happening in diverse areas based on the use of both personal and non-personal data for the purpose of achieving SDG 3. It was also observed that India benefits from its experience in setting up a digital public infrastructure, the Unified Health Interface (UHI), which has the purpose of improving access to health care for patients.

While the taking up of such initiatives in the health sector has been encouraging, a regulatory framework governing this largely technological solution to data sharing in health still seems to be lacking. Researchers highlighted the practical hurdles to operationalizing existing open data mandates and complained about the lack of quality and accessibility of public health data. Legal scholars present at the workshop criticized existing laws and policies in this area as being too outdated to support data sharing in a robust manner while also being responsive to data protection concerns. A recurring theme was the absence, at the time, of a comprehensive data protection regime in India (ultimately adopted in 2023).

The workshop report highlights in detail some of the challenges and opportunities for a balanced framework of data sharing for good health and well-being, particularly in the Indian context. Most importantly, it identifies the need to broaden the scope of the project beyond data sharing.

Publication

→ Scaria, Arul George, Vikas Kathuria, Shraddha Kulhari, Vidya Subramanian, Data Governance for Good Health and Well-Being: India's Way Forward to Achieving Sustainable Development Goal 3, forthcoming.

São Paulo, December 2022

Brazil faces a critical challenge in addressing climate change, a problem with national significance and profound global implications. In recent years, the country has struggled to improve its indicators to meet SDG 13 on climate action. To tackle this challenge, innovative solutions based on data and related technologies could become tools. In light of this, the research group decided to choose climate change as the focus of the São Paulo workshop to research the role of data and how its correct governance could contribute to achieving SDG 13 in Brazil. Given the sheer size of Brazil's territory and its diverse realities, the workshop focuses on two distinct regions of the country: São Paulo, a metropolis characterized by its high consumption and pollution rates; and the Amazon, a region heavily impacted by illegal deforestation carried out with the goal of land exploitation. While each region has its unique urban or rural dynamics and different climate challenges, the territorial approach also aimed to reveal its interactions throughout the product value chain.

Based on this methodology, the workshop sought to gather insights from the private sector, civil society, governmental bodies and academia. Different use cases were analyzed to explore how data-driven business models and non-profit initiatives can be leveraged to mitigate climate change and develop adaptation strategies. The agribusiness sector deserves particular attention. On the one hand, it contributes over a quarter to Brazil's GDP, making the country the world's largest net exporter of food. On the other hand, the country's agribusiness is a significant source of greenhouse gases. The workshop included start-ups assisting farmers in leveraging data to enhance the agri-food chain's productivity, resilience and sustainability. There were also participants focusing on data-related initiatives to move from mere land exploitation transit to a bio-economy. Another use case had to do with urban strategies, including smart cities and clean transportation initiatives from local municipalities.

The workshop showed the widespread use of data-related technologies for climate purposes by both enterprises and NGOs. These experiences demonstrate the great potential of data sharing and technology for the fight against climate change. Innovative solutions, mainly offered by civil society, collect valuable data that would also serve the informational needs of the government. From a legal perspective, while there are data laws providing for rules on data protection and access to public sector information, there is a clear lack of concrete legal mechanisms to govern data for each of the presented use cases.



Panel at the São Paulo workshop addresses deforestation in Brazil.



Ready to dive into insightful discussions: Carolina Banda and Germán Oscar Johannsen at the workshop in São Paulo.

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The Second Breakthrough: From Data Access Rules to Data Governance Regimes

While still present at the conference venue in São Paulo, the research team, comprising all four partners, re-convened for an internal meeting to discuss the next steps. This discussion marked a turning point in the development of the project. The São Paulo workshop ultimately confirmed what the previous workshops had already indicated: the project should focus on data governance systems tailored to the purpose of achieving the SDGs, instead of, as originally conceived, focusing on the general data laws and, more specifically, on data access rules. This insight was particularly striking in the context of this last workshop, since neither data protection law, competition law nor even the law on public sector information played a major role in addressing the challenges of climate change. On the contrary, what was found missing was collaboration of the government with the private and often non-governmental initiatives that generate considerable data on illegal deforestation and mining, for one reason because the government under the former president was not willing to enforce existing laws against such criminal acts. In addition, the São Paulo workshop also underlined the importance of establishing cross-border data governance regimes, in particular for the purpose of tracking agricultural products along international supply chains.

Methodologically, the analysis needed to be turned around. Instead of focusing on how the existing legal regime impacts the achievement of the SDGs and how this system can be improved to reach better results, the project had to take the SDGs as the starting point of the analysis.

For legal scholarship, this approach can be framed as one of "mission-oriented law" (see chapter A, p. 21). This is not without challenges, since the design of data governance systems has to acknowledge the existence of horizontal laws whose objectives are of a general nature, such as protecting data privacy as a fundamental right or protecting competition to enhance consumer welfare. While the focus on data governance must not ignore these laws, the data governance approach has to start from both a broader and a contextual perspective. The approach needs to be broader since, beyond the legal framework, data policies also have to take account of technological aspects, such as data interoperability, and consider institutional arrangements, such as infrastructural arrangements facilitating the sharing and use of data.

The Methodological Framing

The year 2023 was mostly consumed by writing down the results of the workshop, so that when the entire group next met for an internal workshop in Munich, it had to address the more specific theoretical framing of the project. The focus was put on the concept of "data governance" to be used for the project. In addition, it was also observed that taking the SDGs as a starting point for the analysis meant the project would also have to reflect on the legal implications of the UN's SDGs.

The Legal Implications of the SDGs

The research group must note that it relies on the SDGs in a way that goes beyond the metric-based approach of the UN, using targets and indicators to measure advancements towards achieving the goals by 2030. The UN did not intend to make the attainment of the SDGs legally binding.

Certainly, there is merit in the objective approach embodied in the measurement of targets and indicators. Some scholars prefer to go a step further, proposing additional legal indicators to cover topics related to disciplines such as environmental law. Conversely, UN members, including emerging economies, are not precluded from autonomous normativization of the SDGs. The revised Constitution of Senegal explicitly provides for a right to a healthy environment. In its recent judgment of 21 March 2024, based on constitutional provisions on equality and the protection of life, the Indian Supreme Court recognized a fundamental right against climate change. This judgment calls to mind the ruling of the German Federal Constitutional Court of 2021 in which it recognized a constitutional duty of the state to reduce greenhouse emissions to protect future generations' right to freedom. In a judgment of 4 April 2024, the European Court of Human Rights, considering the adverse effects climate change can have on individuals, recognized a duty of the state to protect the climate based on the right to life under Article 2 and the right to respect for private and family life, which is protected under Article 8 ECHR.

Beyond fundamental rights, constitutional rules may also recognize general objectives that reflect the SDGs. Article 3(3) of the European Union Treaty even defines "sustainable development" as an objective of the EU, including the economic, social and ecological dimensions of such development.

However, even where such normativization does not take place, the research group is not prevented from recommending the SDGs as guidance for a coherent policy framework on data governance systems. For jurisdictions where normativization of the SDGs actually takes place, such policy framework would even have higher relevance.

The Concept of Data Governance

"Data governance" seems to be used in many contexts today, though its conceptual foundations remain unclear. Even the EU Data Governance Act of 2022 refrains from defining the term. Its ultimate goal consists in making data more broadly available to promote data-driven innovation to the end of achieving multiple public interest goals. For the research on emerging economies, this ultimate goal seamlessly connects with the SDGs. Data governance can be used as a framework concept for guiding both research and legislation.

In its communication accompanying the Data Governance Act, however, the Commission enumerates the more immediate objectives of the legislation: the Act is expected "to increase trust in data sharing, strengthen mechanisms to increase data availability and overcome technical obstacles to the re-use of data". These immediate goals of data governance are important for identifying the required measures. These measures are not limited to allocating legal rights and obligations of stakeholders. Data governance also includes a technical and institutional dimension. Technically, data sharing requires the data to be interoperable to make them reusable for different stakeholders. Moreover, privacy-enhancing technologies (PETs) can help data subjects safeguard their data autonomy. Data protection can also be improved by institutional measures such as data intermediaries, which supervise the use of personal data on behalf of data subjects. Institutional measures can also include establishing data spaces for the integration of data from different sources. The technical and institutional dimensions of data governance are also relevant from a legal perspective. To a considerable extent, they require a legal framing. Moreover, the data governance approach is not limited to a regulatory (interventionist) approach. It should also, and primarily, seek to enhance voluntary data sharing.

Data governance starts with data as the key resource for digital innovation. In general, data governance is to steer how data ought to be generated and used. Depending on the actor, data governance can mean different things. For a business entity, data governance connotes the strategy of generating and using data for the purpose of bringing value to its data. For states, data governance relates to policies concerning the generation and use of data in various contexts to promote the attainment of public interest goals.

As regards the latter, the research group identified several principles for the legal framing of data governance: first, it identified the need for a contextspecific approach to achieve the SDGs through the design of data governance systems. Second, in designing those data governance systems, the interactions with various horizontal laws (e.g. data protection law, intellectual property law, competition law) that do not pursue data governance-specific purposes need to be taken into account. Some of them give rise to individual rights in data, which in principle needs to be acknowledged when designing data governance systems. Third, there is also a need to consider the interaction with sector-specific laws, such as health laws and environmental laws. As regards both the horizontal and the sectorspecific laws, there may be a need for legal reform to coordinate the goals of these laws with the requirements of data governance. Fourth, the data governance approach may also require the adoption of specific data laws to promote the goals of data governance. This includes legislation on open data and the re-use of public sector information, as well as rules on data intermediaries, such as data trustees, that can help make data more broadly available. Fifth, sector-specific data governance systems need to be integrated in larger data ecosystems to make data more broadly available both across different sectors and across borders.

The research group found further inspiration in the "Framework Paper for GPAI's Work on Data Governance" of November 2020, which is described as the "baseline paper" of the Data Governance Working Group of the Global Partnership on AI. As a member of this Working Group, Josef Drexl was a member of the Project Advisory Group for the drafting of this paper. Though developed for the purposes of AI development, this document also provides useful guidance for data governance as a framework concept for general data policies to achieve the SDGs. In particular, the document offers guiding principles for actors who have to make decisions in the course of the data lifecycle. These guiding principles relate

to four different aspects: (1) data decisions; (2) data activities; (3) data value; and (4) data sharing. The principles are key for making optimal use of data. In particular, the "FAIR" data value principles (findability, accessibility, interoperability and reusability) quarantee optimal use of data. The "QRES" data value principles (quality, resource awareness, ecological footprint, sustainability) particularly include ecological sustainability as an aspect of data value. The "CROP" principles on data (contracts, rights in data, open data, public interest) and "CARE" principles (collective benefit, authority to control, responsibility, ethical re-use) on data sharing directly address legal concepts. The same is true of the "TASQ" principles for data activities (transparency, accountability, safety and security, quality), as well as the "LEAP" principles for data decisions (lawfulness, ethicalness, assessment, participation). The GPAI framework paper even links ethicalness with the SDGs, arguing that data ethics includes "human rights, inclusion, diversity, innovation, economic growth, environmental protection, and societal benefit, as enshrined in the UN Sustainable Development Goals".

Interim Findings and Outlook

In sum, the major achievements of the project regard both the methodology and the concrete fact-gathering. The workshops as the chosen research tool proved to be key in both regards. The workshops produced a different outcome than expected. While the initial hope was to gather information from the stakeholders on legal obstacles for data sharing as a basis for proposing reforms for already existing data laws, the workshops brought forward many examples demonstrating how digitalization and digital business models can contribute to achieving the SDGs. In Senegal, India and Brazil, digital applications, often

implemented by domestic start-ups and even NGOs, were developed and brought to the market at a time when data governance frameworks were still under construction. In all three jurisdictions, the public sector and the larger civil society play a key role in fostering non-profit initiatives and business models regarding data use and re-use. While digital transformation is facilitating progress towards achieving the SDGs, it also became clear that the results could be improved if data policies directly targeted the SDGs. It is interesting to note that Senegal and India have already moved to the normativization of the SDGs on the constitutional level with a particular focus on climate change and environmental protection. However, what is missing is the implementation of the constitutional rules in form of data governance principles guiding the design of workable data governance systems.

For the next and final stage, the research group considers publishing a book that not only reports on the workshops, but should more importantly include additional chapters written by the group members. The research group has not yet made a final decision on the book concept. However, as a next step, chapters on the normative implications of the SDGs and the concept of data governance are envisaged. These chapters ought to provide the framework for additional chapters that could either delve into the analysis of selected governance frameworks of particular jurisdictions, address overarching legal issues relevant for data governance, such as open data policies in emerging economies or cross-border aspects of data governance. These chapters will not seek to exhaust the topic. Rather, they are supposed to provide examples of legal scholarship focusing on data governance-based research for emerging economies in view of achieving the sustainable developments goals.

In collaboration with scholars from Senegal, India and Brazil, the Institute researches how the concept of data governance can be used in emerging economies to better achieve the UN Sustainable Development Goals.

Project Leader

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Project Participants

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Project Duration

Since 2021

1.9

Intellectual Property and Competition Law

Technological and societal developments are undoubtedly changing the way in which innovation processes and market competition occur. This, in turn, has an impact on the innovation-promoting role of intellectual property rights (IPRs) and the use market actors make of them. As in previous years, a significant part of the research of the Institute has concentrated on issues concerning the interplay between IPRs and competition law. In this context, the complex questions surrounding the licensing and enforcement of standard-essential patents (SEPs) and the integration of innovation as a key competitive parameter into the analytical framework of the competition rules have very much been in the focus of the Institute's research.

Standard-Essential Patents (SEPs) – The Case for Regulatory Intervention

In the last three years, questions related to the licensing and enforcement of SEPs have continued to attract the attention of policymakers, enforcers, practitioners and academics alike. The inclusion of a patented technology in a standard set by a standarddeveloping organization (SDO) is commonly made dependent upon the patent holder's commitment to license it on fair, reasonable and non-discriminatory (FRAND) terms. Though its underlying purpose is clear - to strike a fair balance between the SEP holder's interest in receiving an appropriate return on their innovations and the standard implementers' interest in obtaining access to the standard - the mere existence of a FRAND declaration does not necessarily prevent disputes between SEP holders and standard users in which they reproach each other for engaging in patent holdup or holdout, respectively.

Case law on SEP/FRAND has proliferated in the wake of the CJEU's landmark *Huawei* judgment. National courts around the world have gradually addressed the manifold questions left open by the CJEU's ruling and contributed to making its general procedural framework operational. Courts of the EU Member States have been reluctant to set FRAND royalties themselves in individual cases. Not so courts in foreign jurisdictions. In particular, courts in the UK and China have affirmed their jurisdiction to set, and actually determine, FRAND royalty rates on a worldwide basis. Litigation over SEPs has significantly increased around the world as a consequence. Moreover, the increased recourse by national courts - especially, though not exclusively, those in China - to anti-suit injunctions in order to prevent parallel FRAND determinations or infringement claims in other jurisdictions, and the anti-anti-suit injunctions brought in response to these, have exacerbated jurisdictional tensions. The European Union's request for the establishment of a panel under the WTO dispute settlement rules to examine the compatibility of China's anti-suit injunction policy and its concrete application by Chinese courts with the TRIPS Agreement certainly reflects the potential of these problems to lead to broader trade and geopolitical conflicts.

Against this intricate international background, the Institute and the Florence School of Regulation at the European University Institute jointly organized the Florence Seminar on Standard Essential Patents in October 2022. Twenty-two unpublished papers from both legal and economic fields were presented and discussed. Beyond the mentioned SEP-related jurisdictional and trade conflicts, the papers covered further contentious issues such as the existence of holdout as a strategy employed by implementers, the determination of FRAND licensing levels in complex value chains or the merits of different approaches designed to improve SEP transparency, as well as recent developments in national patent laws.

At the policy level, developments in Europe have been marked by the Commission's proposal for a Regulation on SEPs published in April 2023. The development and convergence of novel technologies brought about by digitalization and, in particular, the crucial role that interoperability and connectivity standards are called to play in the Internet of Things (IoT), pose significant technical, economic and legal challenges. Already in 2017, the Commission published a Communication in which it outlined principles for a balanced and predictable framework for SEPs. With the proposed Regulation, it now aims at improving the licensing of SEPs by reducing the uncertainty that surrounds licensing negotiations and lowering transaction costs. Concretely, the proposal implements (1) the setting

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The European Commission headquarters in Brussels, highlighting key policy areas like research, innovation, and industrial technologies.

up of a mandatory register for SEPs with non-binding essentiality checks, (2) the establishment of a process for determining a non-binding aggregate royalty rate and (3) a mandatory pre-litigation conciliation procedure for FRAND royalty determination, combined with (4) voluntary guidance on SEP licensing. Institutionally, it envisions a new competence center within the European Intellectual Property Office (EUIPO) to manage and perform these tasks.

The Institute has closely followed the contentious debate that arose on the heels of the proposal, and has engaged in various public discussions on policy level. In its Position Statement of 6 February 2024 on the Commission's Proposal for a Regulation on Standard Essential Patents subscribed by the economic and legal departments, the Institute assessed the proposal in the light of its adequacy to address the challenges of SEP licensing in an IoT context and its potential for contributing to a balanced global licensing framework. For this assessment, the Institute was able to draw on the insights gained through the work carried out in previous years (see, e.g., the previous Activity Report 2018-2020, B II 1.11) as well as important groundwork by a doctoral thesis on the competition law assessment of under- and over-declarations of SEPs (see, e.g., the previous Activity Report 2018-2020, B II 2.27).

Based on these insights, the Institute welcomes the initiative for additional regulatory intervention. The growing importance of compatibility standards as infrastructural elements of a digitalized economy and the significance of standardization as a collaborative innovation model in the information and communications technology (ICT) sector undoubtedly transcend the mere private interests of the stakeholders involved. This circumstance, together with the need to address different forms of market failure to which the licensing of SEPs is prone, justify intervention directed at ensuring the reliability and functionality of the whole standardization system.

Although there has been awareness about the particularities of the IoT for quite some time, its more immediate implications for the licensing of SEPs are only becoming palpable as IoT devices and use cases gradually spread. The systemic lack of transparency affecting SEP licensing negotiations and the information asymmetries confronting both implementers and SEP owners are even more pronounced in the IoT context. It is crucial to improve the factual background on which they base their licensing decisions. The Institute reads the Commission's proposal to set up a mandatory register for SEPs with non-binding essentiality checks and to establish a process for determining an aggregate

royalty as an attempt to increase transparency in this regard, which it welcomes. Though it will partly duplicate the information already available in the SDOs' databases, the centralized register and the electronic database would considerably simplify the search for the SEP-related data, which nowadays is highly diffuse. More importantly, they would complement the existing sources with a wider set of data better adapted to the informational needs of future licensees. The Institute also welcomes the introduction of essentiality checks. At the same time, it sees general limitations to the proposed measure as well as individual shortcomings in its specific design. In particular, essentiality checks will not eliminate the need of the negotiating parties to determine which SEPs are actually essential for the concrete implementing products. Likewise, while there are potential benefits associated with the determination of the total royalty burden for a given standard, for various reasons the operability and usefulness of such a measure in an IoT context is highly questionable.

The proposal – intentionally – does not directly address the question concerning the level in the supply chain at which SEPs are licensed. The Institute agrees with the Commission that a determination of the level of licensing is currently too controversial to be mandated, while it shares the Commission's concern that this issue constitutes a major source of frictions in licensing negotiations. More fundamentally, the Institute is convinced that the beneficial effect of important measures envisioned in the proposal not least, the facilitating role that the register information can play in licensing negotiations - and ultimately the attainment of its goals largely depends on creating more clarity on this crucial issue. For this reason, the Institute in its Position Statement urges the Commission to take over this task instead of entrusting it to the newly created competence center at the EUIPO and to the appointed experts and conciliators.

On substance, the Institute holds SEP licensing at the component level to be more conducive to a predictable and efficient licensing framework for the IoT. Both eliminating uncertainty as to the extent SEPs may be lawfully used and guaranteeing a level playing field for those using them on different levels of the value chain constitute structural requirements of an innovation-oriented standardization. As the Institute's analysis shows, neither of them is adequately taken into account when SEPs are licensed

to end-product manufacturers. Thus, all legal instruments proposed to clarify the legal position of upstream implementers fall short of providing the necessary legal certainty and uniformity across all EU Member States. Furthermore, in an IoT context, where the number of implementers will increase immensely and their detection will often be difficult, comprehensively licensing to the multitude of IoT end-device manufacturers will be an impossible task. Selective and thus inconsistent licensing would be the likely outcome. From a public policy perspective, both circumstances have the potential to compromise the benefits of standardization as the very foundation of collaborative innovation.

As mentioned, the Commission's initiative is set in an international context increasingly shaped by jurisdictional races and regulatory competition. Whereas it concerns only SEPs in force in one or more EU Member States, it would also impact the worldwide SEP licensing landscape. The Institute supports the proposal for a global FRAND determination. As a system of voluntary dispute settlement, it is compliant with the accepted principles of international jurisdiction. Nevertheless, the proposal may have the unintended effect of delaying court proceedings in the EU and thus create incentives for plaintiffs to start parallel proceedings before a court or other adjudicative venue in foreign jurisdictions, which would terminate the FRAND determination in the EU. The Institute proposes amendments to mitigate this effect (see Position Statement, paras. 121 f.). In general, the Institute is convinced of the proposal's potential for offering a useful system for settling global FRAND disputes that will be attractive for parties whether they are settled within or outside the EU.

Protecting Competition in Innovation – Reform of the R&D Block Exemption Regulation and the Horizontal Guidelines

The integration of innovation – as a key competitive parameter – into the analytical framework of competition rules is one of the most challenging issues facing competition authorities, courts and the entire legal and economic doctrine. During the reporting period, the European Commission has had the opportunity to present new innovation-related theories of harm. In the AdBlue case, it concluded for the first time that a collusion on technical development amounts to a cartel, thus showing the relevance of protecting innovation competition for

the benefit of sustainability (B II 1.11, p. 106). For its part, the prohibition of the vertical merger between the U.S. companies Illumina and GRAIL, based on a novel theory of harm to innovation, reflects the Commission's determination to test the limits of the competition rules in order to protect competition in innovation.

In the context of the regular review of the Research and Development Block Exemption Regulation (R&D BER) and the Guidelines on Horizontal Cooperation, the Commission seriously considered a special exemption rule for agreements that only affect innovation competition. In its initial reform proposal, the Commission obviously took inspiration from scholarly writing from the Institute arguing that the consideration of such agreements as agreements among non-competing undertakings and their general exemption was too generous. At the last stage of the

review, this proposal became the major battleground. In this situation, the Commission contacted the Institute for further advice. The Institute initiated a meeting with the Expert Committee for Competition Law of the German Association for Intellectual Property Law (GRUR) and Commission representatives to discuss the matter. The Institute also agreed to take on the role of co-moderator at an online hearing of the Commission with stakeholders in summer 2022. Ultimately, the Commission refrained from revising the existing rules. While there is by now near consensus that it is conceptually unsound to classify agreements that affect innovation competition as agreements among non-competitors, it proved too difficult to come up with rules that would provide sufficient certainty for undertakings to self-assess the application of the exemption rule. The fundamental question remains whether and how both concerns can be best taken into account.

Beyond the solution of specific problems, the Institute research offers new perspectives to approach the relationship between intellectual property and competition law against the background of technological and societal developments.

Project Leaders

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Project Duration

Ongoing

Publication

Drexl, Josef; Dietmar Harhoff; Beatriz Conde Gallego; Peter R. Slowinski, Position Statement of the Max Planck Institute for Innovation and Competition of 6 February 2024 on the Commission's Proposal for a Regulation on Standard Essential Patents (Max Planck Institute for Innovation & Competition Research Paper, No. 24-03), 2024, 41 pages, https://dx.doi.org/10.2139/ssrn.4719023, 08.02.2024.

1.10

Competition Law, Regulation and Data Protection in the Digital Economy

The increasing concentration of digital markets to the benefit of a comparatively small number of platform operators has stirred international debates on how to control "big tech". The implications of the business models of these companies and their regulation for innovation, consumer autonomy and market entry have been a focus of the Institute's research, which aims to provide input for the EU's parallel intention of modernizing competition law's approach to dominance. In addition, the Institute has contributed to the debate on implementing the new European rules on regulating the platform economy. The Institute's contributions mostly concern new forms of anticompetitive market conduct and provide guidance on amending the legal framework. This work reflects the increasing interrelation of competition law, data privacy and considerations of anti-competitive behavior among platforms, which has culminated in the Digital Markets Act.

Introduction

The shift to digital markets has produced a wide range of innovative products and services that benefit consumers, businesses and society at large. Digital platforms have played a central role in enhancing this transition by facilitating the search for, comparison and assessment of information, while at the same time providing interfaces for economic transactions. Platforms act as intermediaries. However, their operators also set the rules of the game for any thirdparty transaction taking place over the platform. Strong network and lock-in effects have resulted in digital ecosystems controlled by platform operators that strive to maximize collection of data of individual Internet users across different markets. This has the effect of entrenching these operators, giving them a critical amount of economic power. This raises the question of how to deal with the business models of the large digital platform operators within and outside the realm of competition law.

Competition Law in the Digital Economy

The evolving digital landscape poses a challenge to traditional approaches to assessing market power while avoiding both under- and over-enforcement of competition law. A major reason is new sectoral features, such as data control, platform structures and personalized business relationships that have reshaped market dynamics and power relations between economic actors. This scenario has raised questions about the effectiveness and appropriateness of the concept of dominance, the traditional path to enforcing competition law against unilateral abuses. In this context, new social science perspectives have informed the legal and policy debate over whether a reinterpretation of the dominance rule or even new

categories of economic power are needed in digital contexts. The Institute's research has addressed different aspects of this debate, focusing mainly on the European legal system. One aspect concerns relational conceptualizations of power, primarily grounded on theories of B2B economic dependence, that are key for designing new data access rules (see also the research on data access rules, B II 1.5, p. 72). Another aspect concerns the need for assessing economic power across different product markets ("digital ecosystems"). Likewise, there is a need to consider the institutional, procedural and evidentiary issues faced by competition laws when analyzing power dynamics in digital contexts: these provide arguments for systemic modifications, either within competition laws or in the form of market regulation.

The increasing significance of data and its role as a source of economic power in the digital economy underscores the importance of evaluating the competitive effects of mergers with a focus on data accumulation. Research conducted at the Institute in the last three years sheds light on data-related theories of harm in the context of merger control.

Publication

→ Hoffmann, Jörg, Germán Oscar Johannsen, EU-Merger Control & Big Data – On Data-specific Theories of Harm and Remedies (Max Planck Institute for Innovation & Competition Research Paper, No. 19-05), 2019, 74 pages, https://ssrn.com/abstract=3364792, 09.04.2019. Updated version forthcoming 2024.

From this perspective, two types of harmful effects are analyzed, one referring to the control of exclusive non-ubiquitous information, and the other referring to ubiquitous and broadly accessible information. This research shows that both constellations - so far neglected by the Commission in its merger control practice – pose threats to competition. Addressing the latter category of harmful effects, the Institute has worked to examine potential remedies. It explores the applicability of existing EU data-related rules, such as data protection and access regimes (e.g. the Second Payment Services Directive or the data portability right under the GDPR), as normative remedies that may mitigate data-specific competition concerns post-merger. Additionally, criteria for evaluating conglomerate power structures are considered in the context of data access remedies within the EU merger control system. By acknowledging the nuanced impact of data control on competition, the EU merger control system can better align with the evolving dynamics of the digital economy.

In recent years, questions regarding the relationship between data protection and competition law have attracted increasing attention. Many of today's digital business models have major implications for both legal regimes, given that they are characterized by the intrusive processing of personal user data. Big tech companies use these data for all kinds of personalization (such as personalized search results) and to increase connectivity between services. For many companies, the commercialization of user data in the form of targeted advertising represents their main source of income. Market power and data protection rights can easily come into conflict, such as when a powerful company violates data protection rights in order to gain a competitive advantage. A prominent example is the Facebook litigation subsequent to the abuse-of-dominance investigation initiated by the Bundeskartellamt. At the same time, competitive problems may arise when overly data protection-friendly conduct is used as a pretext to harm competitors (such as in the Apple ATT cases under investigation in France, Germany and Italy). In the Meta judgment (4 July 2023, C-252/21), the CJEU ruled that a competition law assessment may have to take infringements of the GDPR into consideration when they are relevant for the competitive process. Furthermore, the EU's principle of sincere cooperation implies that competition and data protection authorities have to effectively cooperate with each other. Yet many facets of how to align these two legal regimes in a constructive and progressive way remain open to discussion.

Publications

- → Vásquez Duque, Omar, Jörg Hoffmann, Can Data Exploitation Be Properly Addressed by Competition Law? A Note of Caution, Concurrences 1 (2021), 75–82.
- → Wiedemann, Klaus, Datenschutz- und Kartellrecht auf Facebook und andernorts – Anmerkung zu EuGH in Sachen Meta Platforms u.a./Bundeskartellamt, NZKart – Neue Zeitschrift für Kartellrecht 11, 11 (2023), 601–604.
- → Wiedemann, Klaus, Data Protection and Competition Law Enforcement in the Digital Economy: Why a Coherent and Consistent Approach is Necessary, IIC – International Review of Intellectual Property and Competition Law 52, 7 (2021), 915 – 933.
- → Wiedemann, Klaus, Can Data Protection Friendly Conduct Constitute an Abuse of Dominance under Art. 102 TFEU?, in: Maria Ioannidou, Despoina Mantzari (eds.), Research Handbook on Competition Law and Data Privacy, Edward Elgar Publishing, Northampton, MA, USA; Cheltenham, UK 2024, forthcoming.

One of the emerging business strategies in the digital economy concerns the use of machine learning techniques for personalized pricing. The incentives driving this practice depend on the structural and relational features of digital markets, while the analysis of its effects on competition and consumers depends on the theoretical economic approach adopted to analyze counterfactual scenarios. At the Institute, doctoral legal research has been conducted to assess whether EU competition law on unilateral abuses - and in its interaction with other areas of law, such as EU consumer laws and data protection would serve to address the concerns identified in these scenarios (see B II 2.9, p. 124). From a competition law perspective, theories of harm are explored in the light of the case law on price discrimination (i.e., dissimilar conditions for equivalent transactions) and excessive pricing. This analysis leads to a more fundamental discussion on the goals of EU competition law in digital settings, which pits the welfarist approach against consumer choice and structural considerations grounded in egalitarian principles.

Competition Policy-Related Research

The exclusive control and limited sharing of information have impeded the development of innovative datadriven services, adversely affecting competition and innovation and hindering the establishment of a Single European Payments Market. However, positive shifts have occurred with the mandated opening up of account information to third parties. This measure has enhanced innovation and competition by promoting market transparency, engaging consumers, mitigating lock-in scenarios and catalyzing the diversification of innovative data-driven services and choices. Examples such as the UK's Open Banking and the EU's regulatory responses under the Second Payment Services Directive (PSD2) have laid the foundation for a sector-specific data governance system, serving as a blueprint for the evolving EU data law.

→ See on asymmetric data access rights vis-à-vis gatekeeper undertakings:

Hoffmann, Jörg, Safeguarding Innovation through Data Governance Regulation – The Case of Digital Payment Services, in: Federal Ministry of Justice and Consumer Protection, Max Planck Institute for Innovation and Competition (eds.), Data Access, Consumer Interests and Public Welfare, Nomos, Baden-Baden 2021, 343–400.

The proposed Third Payment Services Directive (PSD3) and Payment Services Regulation (PSR) further evolve data governance aspects. The Institute's work has focused on evaluating these sector-specific data governance models, assessing their advantages, identifying potential pitfalls, and highlighting shortcomings (see B II 2.8, p. 122). This analysis is crucial for shaping a comprehensive and coordinated EU data law. Furthermore, the Institute has examined systemic competition concerns in financial services markets, especially arising from major platform undertakings. Notably, data governance-specific policy recommendations have successfully influenced the formulation of the EU Data Act, incorporating measures such as asymmetric data access provisions.

Bots – a derivation of the term "robot" – have been used for decades in various programmed forms to automatically perform tasks on the Internet. They are employed in areas such as medicine, the financial sector and the e-commerce market. In recent years, this technology has become increasingly popular

due to the vast development and use of artificial intelligence, a prominent example being the chatbot ChatGPT, introduced by OpenAI. Along with the many advantages that this technology offers, there are also risks from a competition policy perspective. An ongoing doctoral project at the Institute is analyzing this topical problem from a legal and technical perspective (Herrmann: "Bots als Wettbewerbsbedrohung – Wettbewerbspolitische Gefahrbetrachtung und Regulierungsansätze"). Of particular interest is the question of the need for regulation. The focus here is on whether dysfunction can be observed in the approaches used under current law and, if this is the case, what a normative regulatory approach for bots could look like in the future.

"Ad tech" generally refers to the intermediated sale of online display advertising, and it has - where used by dominant undertakings - recently generated competition law concerns. "Ad tech" markets constitute a crucial backbone of the digital economy, as many online services rely on the revenue they can derive from online advertising. In practice, these markets are characterized by an overwhelming market dominance of Google and the failure of the European competition rules to effectively prevent and resolve Google's numerous abuses of dominance. An ongoing doctoral project analyzes the shortcomings of the current European competition law framework and examines the effects of novel regulatory instruments introduced in the Digital Markets Act and the 10th and 11th amendments to the German Act against Restraints of Competition on these markets (Kestler: "Competition Law Solutions for Digital Advertising Intermediation Markets"). The goal of the Institute's work is to provide quidance on how to implement these rules and, where necessary, to propose amendments to the legal framework.

Artificial intelligence (AI) is a transformative technology that has changed and continues to reshape business models and competition in digital markets by fostering innovation and enhancing productivity. Over the past few years, the advancement of the capabilities of AI foundation models, such as large language models and generative AI, has gained incredible speed. The development of foundational models depends on having large enough data sets with high quality data, a circumstance which poses a significant challenge for potential competitors seeking to enter this field. Access to such comprehensive datasets is essential for developing robust and effective AI systems. In an

ongoing doctoral project, the Institute concentrates on assessing the need for a legal framework regulating data sharing for AI development, and, if applicable, developing a data access regime, which is crucial for the kind of innovative and competitive digital markets that will enable the full realization of this emerging technology's potential (Chen: "Unlocking the Full Potential of AI – Towards Mandatory Data Access Rules for the Purpose of AI Development").

The Digital Markets Act

The Digital Markets Act (DMA), applicable since 2 May 2023, is a novel type of regulation that applies to gatekeeper platforms offering so-called core platform services to business users and end users established or located in the European Union. As some platform operators have accumulated substantial economic power transcending national boundaries, the Act imposes a number of obligations on companies providing these services that are designated as gatekeepers when they surpass certain thresholds of size or structural importance outlined in the DMA. With the objective of ensuring contestable and fair digital markets, the Act's approach of listing numerous obligations and outright bans of certain illegal behavior is inspired by previous experience of competition law enforcement against digital technology companies in particular. In its Position Statement on the implementation of the DMA, the Institute primarily focused on analyzing the scope of the Digital Markets Act and its specific interaction with already established fields of law, including competition law in particular. A clear understanding of the DMA's scope is key for assessing whether and to what extent national laws with similar objectives to those pursued by the DMA still apply. Furthermore, the Institute's work has centered on analyzing the required implementation measures to achieve the DMA's objectives. While it acts as the DMA's primary enforcer, the European Commission has also endorsed its parallel private enforcement. In this regard, the Institute addressed the need to guarantee uniform application throughout the Union to prevent internal market fragmentation.

→ See on the need for continued application of national competition law:

Hoffmann, Jörg, Liza Herrmann, Lukas Kestler, Gatekeeper's Potential Privilege – the Need to Limit DMA Centralisation, Journal of Antitrust Enforcement 12, 1 (2024), 126–147.

Even though the DMA's considerable obligations are predominantly based on previous competition law cases, its core aims of ensuring fair and contestable markets are unprecedented. As a new regulatory framework for the digital sphere, addressing specific market actors, its principles and application must principally be interpreted in an autonomous manner. However, as competition law, in particular the rules of an abuse of dominance, remain applicable, the Act's implementation should be in line with competition law, which continues to serve important complementary functions in the platform economy. Therefore, the Institute's work will further focus on the harmonious application of these two correlating legal regimes, as well as the implications of the DMA for unfair competition law and private international law. The new legal challenges consist in redefining the role of competition law in the digital economy, guaranteeing coherent enforcement mechanisms through national competition authorities and the Commission and framing private enforcement. The latter includes an assessment of the Digital Services Act, the Data Act and the future AI Act. A habilitation project is specifically dedicated to the private enforcement of the DMA (Pauer: "Private Rechtsdurchsetzung auf Plattform-Märkten").

The effectiveness of legal rights essentially hinges on their efficient enforcement. Despite the emphasis placed by the Commission on public enforcement of the obligations under the DMA (Articles 5–7 DMA), their private enforcement in national court proceedings has been generally accepted as an expedient possibility for enhancing the Act's objective to foster fair and contestable markets. Particularly, the broad obligations regarding access, interoperability and transparency may be predestined to be filled out by contractual specifications agreed between gatekeepers and business or private users and assessed according to the Act's requirements in civil courts. As

competition law in digital markets has proven to be difficult to enforce in a timely manner, parties active or dependent on platforms should be empowered to file private claims and seek correlating remedies, such as injunctions and damages for a breach of the DMA's comprehensive obligations.

The challenges posed by digital platforms stem largely from their business models and market dynamics, particularly the role that network effects play in these types of economies. These elements are not new, as other economic sectors are characterized by network effects as well. A prominent example is the telecommunications sector. By now, with the application of the DMA, regulation has emerged in both sectors to remedy the structural difficulties of competition law to address competition concerns. However, the DMA features several inconsistencies with the system of telecommunications regulation, for instance, regarding its objectives, its relationship to competition law and its implementation. An ongoing doctoral project conducted at the Institute aims to explore the reasons for this divergence, to understand whether it can be explained solely by differences between the telecommunications sector and digital platforms, or whether this rather reflects a more fundamental evolution of competition and market regulation in the European Union (Matarazzi: "The Digital Markets Act Between Competition Policy and Command Regulation: Teachings from the Electronic Communications Regulatory Framework"). Further, the thesis seeks to draw conclusions from this analysis for the implementation of the DMA.

The Future Regulation of the Internet Infrastructure

As the Internet ecosystem faces rapid changes due to new technologies (e.g. low earth orbit satellites for enabling IoT) and business models (e.g. for cloud and edge computing), questions arise as to whether the current regulatory framework can continue to protect an open and global Internet without stifling innovation and competition in the digital sector. In this context, the Institute organized a two-day workshop in 2022 with several experts in Internet regulation to better understand the current issues, market dynamics and possible lines of research for future development. One of the main conclusions relates to the growing presence of big-tech companies in the telecommunications markets and as the undertakings generating most data traffic worldwide. This new landscape has had an impact on the economic power of the different market players, their competitive advantages and how profits are shared along the Internet value chain. Consequently, two ongoing research projects have been launched subsequent to the workshop. One, in the framework of a European Commission consultation process, discusses whether some big tech should be legally obliged to cofinance telecommunications infrastructures. The other takes a comparative approach to discuss the relevance of net neutrality rules in different socio-political contexts, taking into account the possible effects on competition and innovation.

In different formats the Institute researches the evolving legal framework for the Internet platform economy with a particular focus on the interface with data protection law, the implementation of the Digital Markets Act and the regulation of telecommunications services linked to the technical infrastructure.

Project Leader

Josef Drexl

Project Participants

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Project Duration

Since 2017

1.11

A More Political Approach to Competition Law

The question of the goals of competition law has been a constant matter of debate. The profound and diverse challenges societies are increasingly facing – from climate change to rising social inequalities and the erosion of democratic values – have reignited the debate on the role that competition law can and should play in addressing them. Shaping competition policy and enforcing competition law to pursue broader societal interests such as preserving the functioning of democratic institutions and to complement political agendas like the European Green Deal entail a more political approach to competition law. Central to the Institute's research is whether competition law should commit to objectives beyond the protection of market competition and the promotion of consumer welfare and how its analytical tools should be adapted to attain these other aims.

Competition Law and Democracy

Recent research at the Institute has focused on the relationship between competition law and the influence of large corporations on the policymaking process. Economic literature exists that links competition variables such as market structure and firm size to the political activism of corporations. In this context, the main mechanism at play is the use by corporations of economic profits to financially support political parties and to lobby regulations and policies that facilitate the foreclosure of markets, so that the players can entrench their market power. To the extent that the interests of large corporations depart from those of society at large, this political activism may negatively impact the functioning of democratic institutions and, more broadly, lead to sub-optimal policy results with regard to sustainable development goals.

Given the important role that market power plays in political dynamics, various Institute publications have delved into the relevance of competition law to address this phenomenon. An academic article published in 2023 explores the link between economic and political institutions and discusses two areas of analysis where political influence considerations could be taken into account in competition law cases. Concretely, against the background of legal administrability considerations, the article focuses on whether firms' political influence should be considered in the assessment of market power and whether political activism by firms with the aim to promote market-foreclosing regulation can be regarded as anticompetitive behavior.

A further article from the Institute, also published in 2023, examines the comparative benefits of using competition law enforcement to combat firms' anticompetitive political activism as compared to other

options in the competition law toolkit. Specifically, the article analyzes the powers conferred on competition authorities in selected legislations in Ibero-America to control regulation that restricts competition. This control is generally of a soft nature. In most jurisdictions, public authorities are either required or advised to consult the competition authority, which in turn issues a non-binding opinion on the competitive effects of the proposed regulation. However, in some jurisdictions, competition authorities have coercive powers against other public authorities regarding the validity of anticompetitive regulations. In Peru, for example, the national competition authority (INDECOPI) has the power to declare a regulation inapplicable with inter partes effects. In order to annul regulations with erga omnes effects, the INDECOPI has to promote legal action against the issuing authority. A similar power is found in proportionality principle legislation in the EU Member States such as the Law on the Guarantee of Market Unity (Ley de Garantía de Unidad de Mercado) in Spain. This law empowers the Spanish competition authority, the CNMC, to sue for the invalidity of anticompetitive regulation that is not proportional to the attainment of other public policy objectives. While it depends on the specific circumstances of the case, the article regards such legal powers as useful complements to a prospective provision that assigns competition law liability to the firms lobbying for the regulation with anticompetitive effects.

Future research of the Institute will address further aspects of the relationship between competition law and the political influence of dominant firms. In particular, it will explore the complementarity of competition law and other regulatory frameworks aimed at curbing the negative effects of lobbying on market dynamism and the welfare of the general population as well as the impact of firms' political influence in public procurement, especially in those

markets where the state has a significant share of demand. Given the breadth of the topics to be covered and their interrelationship, the output of this research is expected to be published in the context of a post-doctoral book project.

Competition Law and Sustainable Innovation

In recent years, a lively policy and academic debate has taken place on the role that competition law may and should play in mitigating climate change and how it could complement other policy measures towards green transition. Much of this debate has centered on the deterrent effect that competition rules may have on environmentally positive industry collaboration and the need to improve legal certainty in this regard. Legislative amendments and guidelines for the competition law assessment of sustainability agreements have been issued, both at national and European level. At the same time, strong competition law enforcement is considered to be key in promoting sustainable market outcomes. This view aligns with economic evidence showing that firms' exposure to sustainable consumers' attitudes fosters green innovation, all the more as competition is strong. While there is consensus on the need to combat harmful greenwashing vigorously, exploring alternative paths to actively foster sustainability via competition law enforcement is still necessary.

In February 2022, the Institute held a workshop aimed at identifying research-relevant questions in IP and competition law on climate change. The workshop, which was markedly exploratory in character, examined the role of both the patent system in structuring technological responses to climate change and competition law enforcement in promoting sustainable market outcomes. In the same year, the Alumni Conference of the Institute was devoted to the topic of environmental sustainability. The interdisciplinary conference was structured along two main blocks of topics. Recognizing the specific challenges that sustainable innovation faces, the focus was first on the incentives and instruments to promote R&D on and the commercialization and diffusion of sustainable technologies. The aim of the second block was to gain more insights into how competition law can best contribute to the attainment of sustainability goals. Taking as its starting point the various initiatives at national and European level to provide quidance as to the competition law assessment of sustainability agreements, the conference delved into the more fundamental questions on the long-term consequences of enhanced industry collaboration and its intertwinement with other governmental policy measures. Moreover, the question was explored of how best to adapt theories of harm, in particular innovation-related theories of harm, and analytical tools to take environmental harm into consideration.

In various formats, the Institute researches how modern competition law could be applied to achieve more political goals, such as safeguarding the democratic political process and ecological sustainability.

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Project Duration

Since 2022

Publications

Beneke Ávila, Francisco E., Competition Law and Political Influence of Large Corporations: How Antitrust Analysis Can Capture the Link Between Political and Economic Institutions That Affect Market Competition, in: Christine Godt, Matthias Lamping (eds.), A Critical Mind – Hanns Ullrich's Footprint in Internal Market Law, Antitrust and Intellectual Property, Springer, Heidelberg 2023, 111–129.

Beneke Ávila, Francisco E., El análisis de instituciones económicas en el Derecho de competencia, Revista De Derecho Administrativo 21 (2022), 52–67.

2 Selected Doctoral Dissertations

2.1

Promoting Access and Sharing of Health Data from IoT (mHealth) Devices: A Holistic Approach to Balancing Data Protection, Competition, and Innovation

Mobile health, or mHealth, refers to the use of smart wireless devices in healthcare provision. It includes technologies such as glucose-monitoring sensors, digital pills and heart-monitoring wearables. The European Commission recognizes mHealth as a tool for empowering patients and delivering healthcare cost-effectively. The significance of mHealth, particularly for remote monitoring and disease management, was underscored during the pandemic, but its potential extends beyond this. Specifically, data from mHealth applications offer significant opportunities to enhance personalized medicine, drug discovery and research. However, access and sharing of mHealth data face critical challenges such as limited access to health data for patients and researchers, complex and misaligned legal rules on data in the EU, privacy issues, reduced interoperability and private parties' de facto role as data controllers. Overcoming these obstacles of legal, economic and technical nature is crucial to unlock the full potential of mHealth for research and innovation.

Background and Problem Description

mHealth data remain underutilized, impacting both patient care and research opportunities. Accessibility issues make it impossible to reap the full potential of these data. Consequently, a thorough understanding of how the EU legal framework manages health data is vital for fostering data-driven innovation and AI in this field. While it is crucial to acknowledge that, in the wrong hands, use of these data could harm patients, the current legal framework, especially the GDPR, appears overly focused on the potential negative consequences of access and sharing. It insufficiently recognizes the benefits that access to these data could bring, especially in terms of advancing patient care and societal benefits through research. This thesis advocates for a more balanced approach, one that equally prioritizes patient care (primary use) and research and innovation (secondary use).

Research Question

In light of the presented problem, the thesis queries: Does the EU legal and policy framework enable mHealth data access and sharing to promote research and innovation while respecting data protection? If not, how should the legal framework be adapted to promote mHealth data sharing for innovation?

Hypothesis

The existing EU legal framework, including the GDPR, EU Competition Law, the Data Act, and the upcoming European Health Data Space (EHDS) Regulation do not adequately address mHealth's unique challenges, resulting in the suboptimal use of mHealth data for innovation in healthcare. A holistic approach is needed for effective governance of mHealth data.

Methodology

mHealth, a complex phenomenon driven by the convergence of cutting-edge technologies, market dynamics and stakeholder interests, requires an interdisciplinary approach. To this end, this study analyzes mHealth in three parts. The first part includes a techno-market analysis of mHealth technologies and markets. The second part deploys a legal doctrinal method and critically examines relevant laws and regulations. Finally, the third part proposes a data governance model integrating legal, technical, and organizational recommendations. Additionally, insights from informal conversations with stakeholders of the mHealth ecosystem supplement the model, providing empirical perspectives that enhance its relevance and applicability in real-world mHealth scenarios.

Thesis Structure and Findings

The first part presents a comprehensive taxonomy of mHealth products and services. A key finding here is that the health data lifecycle is often opaque, particularly for patients, doctors and researchers. The thesis argues that mHealth data are predominantly controlled by private entities, such as device manufacturers and software developers, because of their role in designing the devices and managing data flows. Unfortunately, these de facto data controllers may lack sufficient incentives to share the data, or when they do, it is often with exclusive third parties.

The GDPR analysis shows that despite the existence of the Right to Access and Portability, data subjects cannot control and share their health data meaningfully. These rights have several limitations regarding scope and technical aspects. Another overlooked issue is that not all data subjects may have the digital literacy skills to exercise these rights. The GDPR contains an exception for research purposes in Article 89(1), which should be used with the legal basis in Article 9(2)(j). However, researchers face critical challenges when relying on the research exception, because its application depends on Member States' derogations. This has led to fragmented interpretations across the EU, hampering research and adversely affecting innovation. On top of that, regrettably, the GDPR does not provide adequate guidance about safeguards, e.g. anonymization and pseudonymization.

The analysis of EU competition law, particularly through the Sanofi/Google and Fitbit/Google merger cases, shows evolving criteria but also underscores the need for refinement. Moreover, due to the particularities of the ecosystem, applying the doctrine of essential facilities to mHealth is challenging, and assessing market dominance is difficult in particular. The limitations of both merger control law and the

control of abuses of market dominance for addressing health data access and sharing suggest that sectorspecific legislation might be more effective. Yet the Data Act and the proposed European Health Data Space (EHDS) Regulation, while marking important steps forward, have their own limitations. The Data Act does not include inferred and derived data access for users and does not grant proper access rights for innovators. The EHDS Proposal also does not include inferred and derived data, and access to users is mainly for cross-border electronic health records (EHR), which runs the risk of overlooking mHealth's unique challenges, which are distinct from EHR. Against this background, the final part of the thesis proposes a tailored data governance model for mHealth, balancing data protection, competition and innovation. This model integrates legal, institutional and technical measures, addressing gaps in the existing legal framework. It proposes differentiated data access rights for various stakeholders, including patients, researchers and market actors, supported by specialized institutions like data trusts. Additionally, the model emphasizes the need for technical standards, such as interoperability and APIs, complemented by state-ofthe-art privacy-preserving technologies, to overcome challenges posed by GDPR requirements.

Conclusions

The legal barriers are the most significant impediments to mHealth data access and sharing. Hence, a more integrated and holistic approach is necessary for effective governance of mHealth data. This approach should include tailored legal mechanisms, specialized institutions for data rights support and technical standards for interoperability. Such a framework would better empower patients, facilitate research and foster innovation in healthcare, thereby unlocking the full potential of mHealth data.



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Assignment of the Right of Priority under European and American Laws

The right of priority is a cornerstone of the international protection of inventions. First established in the Paris Convention during the first diplomatic conference in Paris in 1883, and amended in the subsequent revision conferences, it has been implemented by all member states of the Convention. After filing a patent application, the applicant has twelve months to expand international protection of an invention by filing subsequent patent applications in the Paris Convention member states. This is the essence of the right of priority. However, the provisions on the transferability and related elements of the priority right are not uniform, as they are based on national law. This may have negative consequences for the validity of the assignment of the right of priority as a part of international transactions of technology. The consequences can be severe. If the transfer of priority is invalid, the subsequently claimed invention lacks novelty.

The research project focuses on the issues related to the transferability of the right of priority (hereinafter also "priority right"). It examines the problem in the national jurisdictions of the selected countries (the Federal Republic of Germany, the Republic of Poland, the United States of America and the United Kingdom), the relevant international agreements (the Paris Convention (PC), the European Patent Convention (EPC), the Patent Cooperation Treaty (PCT), the TRIPS Agreement and the Agreement on a Unified Patent Court with the Regulation on Unitary Patent Protection), the judicial practice of the European Patent Office's Boards of Appeal (BoA) and of the national courts of the foregoing countries. Transfer of the right of priority is not governed by any of the above acts, which leads to discrepancies in the judicial practice of the BoA and the national courts. Although the PC created the international concept of priority in order to alleviate the negative consequences caused by the principle of territoriality, the other features of the right of priority remain at each Paris Convention member state's discretion. They are in particular its transferability and enforcement requirements as well as the relationship between the priority right and other rights belonging to an inventor.

The thesis advances recommendations de lege ferenda on establishing uniform rules regarding the assignment of the right of priority that can standardize trade agreements on technology transfer in the future. The structure of the research is based on the issues which were compared between the examined jurisdictions. As a basis for the proposed uniform rules on the assignment of priority rights, the following issues were studied: First is the relation between the right of priority and the right to obtain the patent, which might both be considered "pre-

grant" rights. This part required the examination of legal concepts on the right of priority developed in the relation to the PC, PCT, EPC and national provisions. Second, the key element is the time when the right of priority should be transferred. The general approach among the studied jurisdictions and the BoA judicial practice is that an assignment of the right of priority should occur before the filing of the subsequent patent application. This cannot take place at the time of filing the declaration of priority. Third, the right of priority can be a subject of joint ownership, which effects the way such right is exercised. The relation between the co-owners is described by introducing the three approaches based on the EPC and national jurisdictions. Fourth, the conditions for the assignment of ownership to the right of priority are different between the countries. They are related to the form of the agreement, contractual clauses and additional elements of the contract (e.g. transmitting the necessary documentation). Fifth, the assignment of the right of priority between different countries raises a question about the applicable law. There are no solutions as to which conflict-of-law rule shall apply in such situations, as they are not regulated in the PC, PCT or EPC.

The research project was conducted by examining and comparing the legal provisions of the international and national legal acts relevant for the assignability of the right of priority; the judicial practice of the EPO BoA and of the national courts; and the literature. The issues collected were examined between the selected countries using a comparative approach. The research included the empirical method of study which was based, among other things, on consultations with experts from the EPO and national patent offices, as well as practitioners.

Based on the results collected, the research proposed a soft-law solution to be implemented by the practitioners willing to assign the right of priority. It is recommended that the transfer of the right of priority should take place in a written agreement expressing clearly the will to assign this right. Two corresponding declarations of will are required. Not all PC member states provide that contracts transferring priority must be in writing, but this does not rule out the use of the written form by the parties. Establishing a common standard for assigning the right of priority can counterbalance the increase of proceedings challenging priority in the national and regional patent offices. Adoption of proposed standard soft-law contractual provisions in contracts may mitigate the negative consequences of having to choose conflict-of-laws rules, which still causes problems in the BoA judicial practice and may lead to discrepancies in the judicial practice of the Unified Patent Court. The proposed contractual conditions are in coherence with the BoA judicial practice and admissible according to the national laws; therefore they can lead in all cases to the valid assignment of the right of priority. To this end the project examines the private commercial laws in relation to patent regulations and practice in the civillaw countries, and the British and the U.S. common-law legal systems.

The research highlights the different terminology of the same "pre-grant" patent rights related to priority, which is detrimental to the stability of the law, and proposes de lege ferenda to standardize certain nomenclatures. The comparison of the presented results helped to better understand the national concepts and the interrelationships between the approaches that have evolved as a result of the PC revisions and market

changes. Regarding the legal nature of the right of priority, in accordance with the BoA judicial practice and the majority of national jurisdictions, this right is an independent right to the other rights belonging to the inventor. Notwithstanding the fact that this right is independent, the assignment of the sole right of priority, without transferring the entitlement to the other rights belonging to an inventor (for example the right to the invention, or the right to obtain the patent) may not be in the best interest of the assignee. This means that the right of priority must be assigned together with other accompanying rights, even though it is considered to be independent of them. In order to claim the right of priority validly, the assignment of such a right has to occur before the filing of the subsequent patent application. Filing a declaration of priority does not prove that this right was lawfully transferred. Assignment of priority can be subject to conditions subsequent and precedent, and may contain additional clauses, such as a prohibition on the future transfer of such a right. When the right of priority is a subject of joint ownership, there are three approaches on how this right can be exercised: the "all applicants approach," the "one or more applicants approach" and the "joint applicants approach" ("sharing of priority"). Research revealed that these terms are not used with the same meaning by the judicial practice of the BoA and of national courts, which leads to discrepancies in the literature and practice. It is recommended that coowners sign a joint agreement setting out the rules for exercising the priority right. On the question which law shall apply for the international assignment of the right of priority, the thesis proposes a "two-stage solution" related to the first and the subsequent assignment of the right of priority.



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The Right to Genetic Resources – Patent Law, Nagoya Protocol and Further Regulatory Options

Genetic resources have increasing relevance for innovation in biotechnological sectors. International law sets governance rules for resources located in sovereign territories. Authorization for their use, and sharing of benefits that arise from it, can be required. However, the experience with this regulatory regime has been frustrating for both users and countries of origin due to inefficiency, legal uncertainty and low volume of shared benefits. Based on the ideal scope of rights to genetic resources, this thesis proposes appropriate measures de lege ferenda at national, regional and international levels to provide a fair and equitable benefit sharing without unjustifiably harming innovation.

Context

Different biotechnology sectors have used genetic resources for the development of new products that contribute to solving current global challenges, such as medicines, foods, biofuels and cosmetics.

However, the use of these resources may be subject to conditions. According to the Convention on Biological Diversity (CBD) and the Nagoya Protocol (NP), access to genetic resources is subject to prior informed consent (PIC) from and mutually agreed terms (MAT) with their countries of origin. Among other things, this regulation aims to promote a fair and equitable sharing of benefits that arise from the use of genetic resources.

In spite of these instruments, this goal has not yet been achieved. On the one hand, high transaction costs and inefficient procedures for access and benefit sharing (ABS) in countries of origin reduce the incentive for the use of resources. On the other hand, users have not observed national ABS rules. In particular, countries with a large number of users (e.g. USA, Switzerland, Japan and EU) either are not parties to the CBD or tend to interpret their provisions very narrowly. The limitations on the substantive and temporal scope of the CBD and the NP hinder the achievement of their objectives.

Objective

The thesis aims to propose legal mechanisms that provide a fair and equitable benefit sharing without unjustifiably harming innovation.

Structure and Research Questions

The thesis is divided into three chapters. Each of them has specific research questions. The first one aims to verify the scope of the rights related to genetic resources according to the CBD and the NP. This controversial issue involves questions related to derivatives, digital sequence information (DSI), taxonomy and the temporal scope of protection. The second chapter analyzes measures countries may adopt at the national level to promote a more effective legal protection of genetic resources, especially in case of non-compliance by users. This involves measures of control and sanctions in civil, criminal, administrative and patent law, as well as their compatibility with international law. Since national measures have intrinsic limits of effectiveness, the third chapter indicates appropriate measures de lege ferenda at the regional and international levels to enhance the effectiveness of the ABS system.

Methodology

To define the scope of the legal provisions of international treaties, the thesis uses recognized methods of legal interpretation (grammatical, historical, systematic and teleological). This requires the investigation of the function of the legal protection provided for in these treaties. In order to analyze the effectiveness of the examined measures, relevant legal and economic aspects are duly considered. The research encompasses, among other methods, review of literature, documents of international organizations and legislative acts of selected countries, as well as the analysis of their historical evolution.

Key Findings

The primary function of benefit sharing is the protection of biodiversity and of countries' sovereignty over their genetic resources. However, this sovereignty is relative. Contracting parties have to observe the limits and exceptions set by the CBD and the NP.

Taxonomic research, collections, derivatives, DSI and synthetic genes fall under the scope of the CBD and the NP. The national ABS norms of the countries of origin must be observed in these cases. However, national ABS mechanisms are intrinsically inefficient when it comes to DSI and synthetic genes.

At the national level, countries interested in ensuring their rights to genetic resources should adopt a well-balanced ABS regulation that also considers the interests and capabilities of users. Efficient ABS procedures, including model contractual clauses for PIC and MAT, are also necessary.

Effective mechanisms are required for controlling use and sanctioning cases of non-compliance by users. General measures of civil law, criminal law and administrative law are ineffective, especially due to difficulties related to the (i) burden of proof, (ii) setting of the amount of sanction, (iii) sharing of non-monetary benefits, (iv) recognition in other countries and (v) restriction of access to innovative products.

Although patent law has a distinct function from the CBD and the NP, the duty to disclose both the origin of genetic resources used and the compliance with national ABS regulation in patent applications, as well as the sanction of rejection of the application in case of non-compliance, are particularly effective. Since access to genetic resources predates the invention, the uncertainty about the results of their use (including economic performance of an invention) promotes a lawful conduct ex ante by national and foreign users in order to avoid future economic losses. Revocation

and annulment of the patent in these cases are appropriate complementary measures. Depending on its regulatory design, this sanction may be compatible with TRIPS, PCT and PLT. However, amendments to the EPC, to EU Directive 98/44/EC and eventually to the UPOV (in case of equivalent measures applicable to plant varieties) would be necessary for its member countries to implement it.

At the regional level, the implementation of a common benefit-sharing mechanism in the case of transboundary resources, the adoption of common patent measures and sanctions in the case of non-compliance by users and the promotion of institutional cooperation between countries interested in effectively protecting genetic resources is advisable.

However, greater effectiveness and balance in the legal protection of genetic resources can only be achieved through the adoption of further measures at the international level. This should include (i) the creation of a binding dispute resolution mechanism, (ii) the delineation of a clear and adequate scope of rights to genetic resources, (iii) the determination of effective checkpoints to control use (including, but not limited to, the patent office), (iv) the adoption of common effective sanctions outside of the patent law, (v) the creation of a global facility for procedures related to PIC, MAT and benefit sharing, (vi) the adoption of a common set of ABS measures for transboundary resources and (vii) the implementation of a multilateral mechanism for benefit sharing in certain cases related to DSI and synthetic gene sequences.



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Shaping Europe's Digital Future: Rethinking EU Copyright and Related Rights Remuneration Mechanisms for Outputs Generated by Artificial Intelligence Systems

The dissertation advocates for fair and equitable remuneration for copyright-protected works used to train Generative AI (GenAI) systems, thereby preserving human creativity and artistic expression. It recommends the establishment of remuneration mechanisms in line with Article 4 of the EU Directive on Copyright and Related Rights in the Digital Single Market (CDSM Directive) and collective licensing to establish a robust remuneration regime in the fragmented EU copyright harmonization. The research further investigates the compatibility of the proposed remuneration scheme with the core justifications for copyright protection and the foundational principles of the arts.

Purpose and Background

In recent times, numerous GenAl companies have engaged in the extraction of copyright-protected material from rights holders without obtaining prior permission. This unauthorized use of copyrightprotected works, particularly when it directly competes with or acts as a substitute for the original creative works, highlights the pressing necessity for appropriate remuneration models. This scenario has led to a series of lawsuits in multiple jurisdictions. In light of these challenges and with a view towards promoting innovation, this dissertation delves into the potential of EU copyright law as a tool for safeguarding human creators against the adverse impacts brought forth by GenAl. By advocating for the implementation of fair and equitable remuneration schemes, the dissertation revisits the foundational rationales underpinning copyright law, focusing on the naturalist and instrumentalist theories. Through this examination, the dissertation contends that art theories and copyright law are intrinsically aligned, serving as a sound foundation for the establishment of such remuneration models.

Research Questions

Could art theories and the foundational rationales underpinning copyright law help to justify the imposition of remuneration for the use of copyright-protected works in the GenAl training systems to preserve human creativity? If so, which legal framework within copyright and related rights is best suited for the imposition of such legal obligation? And what are the appropriate methods for distributing remuneration to rights holders?

Methodology

To address the research questions posed, this project employs a two-pronged methodological approach: the doctrinal-legal method and an exploration of historical-philosophical sources pertaining to art and copyright. The doctrinal-legal method provides a rigorous framework for examining the current legal landscape and its applicability to the challenges presented by GenAl technologies. Concurrently, an investigation into historical and philosophical sources will enrich our understanding of art and copyright, tracing their evolution and examining how these domains have interacted over time.

Preliminary Findings

First, on the remuneration of rights holders for the use of their copyright-protected works in training GenAl systems, the dissertation posits that unlicensed use of copyright-protected works in the training of GenAl systems could compromise the market for copyrightprotected works that are used in such training data (market-encroaching uses). The analysis shows that market-encroaching uses became the reason for copyright lawsuits filed by rights holders against GenAl companies and demanding fair remuneration such as in *Universal Music Publishing Group v. Anthropic*, Authors Guild v. OpenAI, Getty Images v. Stability AI and others. By considering the market-encroaching uses, the dissertation explores the question whether the rights reservation approach in Article 4 of the CDSM Directive could be used as reference to establish the remuneration mechanism for authors.

The dissertation finds that remuneration through Article 4 is theoretically possible, but only if the creative industry and AI companies reach agreement on machine-readable rights reservation protocols that express different rights holders' standpoints. However, as long as the automated, machine-based identification of rights holders and the automated processing of payments remains complicated or unreliable, the opt-out approach is unlikely to open the way for remuneration. Moreover, considering the highly fragmented copyright harmonization in the EU and in order to establish a robust remuneration regime for rights holders, the dissertation proposes collective-based licensing.

Second, on the remuneration distribution model, the dissertation proposes a new regime such as lump-sum or one-time payment and ongoing remuneration with an "author-centric approach". The agreement regarding ongoing remuneration could be reached through consensus-based decision making, considering the public interest, where parties involved may discuss the number of flat rates and the remuneration method to be used. To determine the flat rates and to achieve economic success, GenAl providers may consider the number of subscriptions, advertising and procurement costs before establishing their average flat rates. As regards distributing the remuneration to rights holders, the question arises which copyright-protected works (out of millions or billions) in the training set would be given credit for a newly generated output. The dissertation proposes an allocation calculated along two dimensions: (1) the quantum of content rights holders have contributed to the training set, and (2) the performance of that content over time.

This research thoroughly examines the complexities surrounding the remuneration of rights holders in the context of their copyright-protected works being used to train GenAl systems. It highlights the significant challenges in implementing fair and equitable compensation mechanisms, particularly under the current legal frameworks. The exploration of marketencroaching uses and the potential application of Article 4 of the CDSM Directive offers a theoretical basis for remuneration but underscores the need for practical solutions to identify rights holders and calculate the remuneration. The dissertation advocates for a collective licensing model in order to facilitate a more streamlined remuneration process.



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Kenntniserlangung der Host-Provider – Die Haftung der Host-Provider für die Verletzung von Persönlichkeitsrechten in der EU, Deutschland und China

Untersuchungsgegenstand der Arbeit ist die Kenntniserlangung der Host-Provider, die der zentrale Referenzpunkt für den Prüfungsmaßstab der Providerhaftung in der EU, Deutschland und China ist. Aus praktischer Sicht ist der Beweis der Kenntniserlangung der Host-Provider über die einzelnen Persönlichkeitsrechtsverletzungen besonders schwierig. Auf der Rechtsfindungsebene ist tatsächliche Kenntniserlangung von Kennenmüssen zu unterscheiden. Ob die Regelungen dem Zweck, den Host-Providern Rechtssicherheit zu verleihen, genügen können, hängt davon ab, wie Kennenmüssen ausgelegt wird. Kennenmüssen kann als eine Vermutung auf der Grundlage statistischer Tatsachen oder im Sinne einer Pflicht verstanden werden. Die erste Möglichkeit verleiht mehr Rechtssicherheit, während die zweite mehr Flexibilität bietet. Laut der vorhandenen Forschung ist davon auszugehen, dass die EU und China einen Wandel von der ersten Interpretationsvariante zur zweiten erlebt haben. Ebenso ist zu klären, wie Sorgfaltspflichten definiert werden sollen, um Rechtsicherheit zu gewährleisten.

Unsicherheiten in Bezug auf die Kenntniserlangung von Host-Providern über die Verletzungen von Persönlichkeitsrechten kommen häufig vor. Zum einen sind die Möglichkeiten des Host-Providers zur Sachverhaltsaufklärung begrenzt. Zum anderen ist das Persönlichkeitsrecht ein Rahmenrecht, so dass seine Verletzung nur durch Abwägung festgestellt werden kann. Analogie und Vermutung sind zwei mögliche Methoden, die Richtern zur Verfügung stehen, um Schwierigkeiten bei der Ermittlung des tatsächlichen Kenntnisstands der Host-Provider zu lösen. Demgemäß ist die tatsächliche Kenntniserlangung vom Kennenmüssen zu unterscheiden. Kennenmüssen kann abhängig vom Kontext entweder als eine Vermutung auf Grundlage statistischer Tatsachen oder als eine Pflicht zur Kenntnisverschaffung verstanden werden. Die erste Auslegungsvariante kann die Rechtssicherheit erhöhen und somit das Haftungsrisiko von Host-Providern verringern. Die zweite bietet mehr Flexibilität wegen des Spielraums bei der Ermittlung der Sorgfaltspflichten.

Im Unionsrecht wurde die erste Variante in der E-Commerce RL 2000 aufgegriffen. Allerdings näherte sich die darauffolgende Rechtsprechung des EuGH der zweiten Variante an. Die neue Regelung in Art. 16 Abs. 3 Digital Services Act spiegelt diese Tendenz ebenfalls wider. Die erste Variante wurde früher auch im chinesischen Urheberrecht angenommen. Mit der Zeit ist Kennenmüssen in der urheberrechtlichen und persönlichkeitsrechtlichen Rechtsprechung immer mehr als Auferlegung von Sorgfaltspflichten im Rahmen der Verschuldenshaftung verstanden worden. In

der deutschen Rechtsprechung wird Kennenmüssen zwar nicht von der tatsächlichen Kenntnis unterschieden, aber schon bei der Ermittlung der Pflichten der Host-Provider zur Kenntnisverschaffung behilft sich die Rechtsprechung mit dem Ansatz der Prozeduralisierung und der Analogie zur Gestaltung der (außer-) gerichtlichen Verfahren. Der Begriff "Kenntnis" in der deutschen Rechtsprechung ist im normativen Sinne zu verstehen.

Unter dieser Bedingung ist es notwendig, die Inhalte der aufzuerlegenden Pflichten zu ermitteln, um Rechtssicherheit zu gewährleisten. Die aus dem Urheberrecht stammende "notice and take down"-Regel, die erfolgsorientiert ist und die Bewertung der Kenntniserlangung vernachlässigt, gilt nach Ansicht der deutschen Rechtsprechung und der chinesischen Literatur wegen des Schutzes der Meinungs- und Informationsfreiheit nicht in Bezug auf das Persönlichkeitsrecht.

Die Arbeit schlägt vor, durch Typologisierung von Fällen größere Rechtssicherheit zu schaffen. Die durch die Hinweise der Rechteinhaber ausgelöste Kenntniserlangung ist ein Untertyp der zu bewertenden normativen Kenntniserlangung. Bei Mängeln dieser Hinweise in Bezug auf Inhalt oder Form können Host-Provider weitere Sorgfaltspflichten zur Anforderung oder Ermittlung notwendiger Informationen zur behaupteten Rechtsverletzung treffen. Hinweise über Persönlichkeitsrechtsverletzungen sind als Behauptungen zu verstehen, auf deren Grundlage die Host-Provider feststellen, ob eine Rechtsverletzung vorliegt.

Allerdings ist in Bezug auf die Feststellungsergebnisse vom Host-Provider nicht dasselbe Maß an Verlässlichkeit wie bei einer richterlichen Entscheidung zu verlangen. Wenn Host-Provider bestmögliche Anstrengungen unternommen haben, ohne eine Verletzung feststellen zu können, haften sie trotz später gerichtlich festgestellter Rechtsverletzung nicht. Die von den Host-Providern vorgenommenen Anstrengungen sind unter Berücksichtigung mehrerer Faktoren umfassend zu bewerten. Die Grenzen der Sorgfaltspflicht ergeben sich aus den Kriterien der Zumutbarkeit und Möglichkeit. Die Host-Provider haften nicht, wenn die Erfüllung der Sachverhaltsaufklärungspflichten entsprechend der deutschen Rechtsprechung oder dem Digital Services Act bewiesen werden kann.

Neben diesem Typus gibt es in der Praxis noch andere Typen der Kenntniserlangung, wie die durch Hinweise eines Dritten ausgelöste Kenntnis. Ein Hinweis, der nicht vom Rechtsinhaber, sondern einem Dritten übermittelt wird, kann den Host-Provider unzumutbar überfordern, da die Persönlichkeitsrechtsverletzung in der Regel personenbezogen ist. Ein solcher Hinweis eines Dritten sollte dennoch vom Host-Provider bearbeitet werden, wenn er beispielsweise mit Beweisen unterlegt wird und der Fall öffentliche Inte-

ressen berührt oder von strafrechtlicher Relevanz ist. Die Beschwerde von vertrauenswürdigen Hinweisgebern ("trusted flaggers") im Sinne des Art. 22 Digital Services Act sollte im Prinzip als relevant angesehen werden. Wie bei den Hinweisen der Rechteinhaber ist die Durchführung der Sachverhaltsaufklärungs- oder Inhaltsmoderationspflichten im positiven Recht ein Entlastungsgrund. § 3b Absatz 3 Satz 2 NetzDG bietet trotz seines Außerkrafttretens auch einen sachlichen Anhaltspunkt für die Bewertung der bestmöglichen Anstrengungen.

Außerdem kann die Kenntnis über Persönlichkeitsrechtsverletzung durch eine aus eigenem Antrieb vorgenommene Prüfung erworben werden. Art. 7 Digital Services Act regelt, dass sich Provider die Haftungsprivilegierung nicht allein durch auf Eigeninitiative beruhender Überprüfung erhalten können. Es ist im Einzelfall mit Blick auf andere Kriterien umfassend zu bewerten, ob ein Host-Provider über eine konkrete Rechtsverletzung Kenntnis hätte haben müssen. Die Bewertungskriterien können die in der deutschen Rechtsprechung genannten Faktoren (Funktion, Aufgabenstellung und Eigenverantwortung desjenigen, der die rechtswidrige Beeinträchtigung selbst unmittelbar vorgenommen hat) umfassen.



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Verfahrensdokumente aus Kartellverwaltungsverfahren im Kartellschadenersatzprozess

Die Arbeit untersucht mögliche Zugangsrouten zu Verfahrensdokumenten der Europäischen Kommission ("Kommission") und der schweizerischen Wettbewerbskommission ("Weko"). Kern der Arbeit ist die Frage, ob die Ausgestaltung der Zugangsmöglichkeiten und deren Handhabe seitens der Wettbewerbsbehörden dem Zweck des Kartellschadenersatzes gerecht wird. Um diese Frage zu beantworten, wird der Zweck des Kartellschadenersatzes erörtert. Hiernach werden verschiedene Zugangsrouten erkundet und auf ihre Zweckdienlichkeit hin untersucht. Die Untersuchungsergebnisse bilden sodann den Gegenstand legislatorischer Anpassungsvorschläge, die den Zweck des Kartellschadenersatzes gleichermaßen wie das Bedürfnis nach einer wirksamen öffentlichen Durchsetzung berücksichtigen.

Das "private enforcement" und das "public enforcement" bilden gemeinsam das Durchsetzungssystem, das den wirksamen Wettbewerb sicherstellen soll. Die Durchsetzungswege sind voneinander unabhängig, weisen allerdings mehrere Berührungspunkte auf und beeinflussen sich gegenseitig. Der in dieser Arbeit interessierende Berührungspunkt ist der Zugang Dritter zu Verfahrensdokumenten der Kommission bzw. der Weko, um die Durchsetzung des Kartellschadenersatzanspruchs zu ermöglichen. Diesem Themenkomplex spürt die Arbeit anhand der folgenden Forschungsfrage nach:

Wird die Ausgestaltung der Möglichkeiten des Zugangs zu Verfahrensdokumenten der Wettbewerbsbehörden dem Zweck des Kartellschadenersatzes gerecht?

Die Forschungsfrage wird anhand eines dreistufigen Prüfschemas untersucht. Der erste Prüfschritt untersucht den Zweck des Kartellschadenersatzes, woraufhin im zweiten Prüfschritt die Zugangsrouten zu Verfahrensdokumenten der Behörden erkundet werden. Abschließend werden im 3. Prüfschritt die verschiedenen Zugangsmöglichkeiten auf ihre Zweckdienlichkeit hin analysiert und jeweils Vorschläge zur Gestaltung der Rechtslage *de lege ferenda* erarbeitet.

Im ersten Prüfschritt wird die kartellrechtliche Durchsetzung in drei Phasen unterteilt: die Ex-ante-, die Interims- und die Ex-post-Phase. Sodann kann festgestellt werden, dass den jeweiligen Durchsetzungszielen in jeder der drei Durchsetzungsphasen eine unterschiedliche Bedeutung zukommt und dass die Ausgestaltung eines Durchsetzungsinstruments andere Durchsetzungsinstrumente positiv wie negativ beeinflussen kann. Zudem ergibt sich, dass der Kartellschadenersatz potenzielle Kartelltäter zwingt,

marktkonform zu wirtschaften. Auch trägt der Kartellschadenersatz zur Generalprävention bei. Diese Erkenntnisse ermöglichen es, dem Zweck des schweizerischen und des europäischen Kartellschadenersatzes ein zweigliedriges Zweckverständnis zuzuweisen, das neben dem wirksamen Rechtsschutz der Kartellopfer (Ausgleich) auch die wirksame Rechtsdurchsetzung (Generalprävention) erfasst.

Im zweiten Prüfschritt werden die Zugangsrouten zu den Verfahrensdokumenten der Kommission bzw. der Weko untersucht. Die erste Zugangsroute betrifft das Recht auf Akteneinsicht von Verfahrensbeteiligten. Hier stellen sich die Fragen, wer zur Teilnahme am Behördenverfahren berechtigt ist, in welche Verfahrensdokumente Einsicht genommen werden kann und ob die Dokumente zur Durchsetzung kartellzivilrechtlicher Ansprüche verwertet werden dürfen.

Die zweite untersuchte Zugangsroute ist die Veröffentlichung der Beschlüsse der Kommission bzw. der Sanktionsverfügungen der Weko. Für Kartellopfer sind diese Veröffentlichungen richtungsweisend. "Detailschwangere" Veröffentlichungen können positive Rückwirkungen auf andere Zugangsrouten haben. Zum einen können allfällige Zugangsgesuche präziser gestellt werden. Zum anderen kann besser eruiert werden, ob ein zivilrechtliches Vorgehen überhaupt angezeigt ist. Als besonders zweckdienlich erscheint die Möglichkeit, einen bereits veröffentlichten Beschluss erneut und mit einer höheren Detaildichte zu veröffentlichen.

Der Öffentlichkeitszugang wird als dritte Zugangsroute untersucht. Hier interessiert der Zugang zu den Verfahrensdokumenten der Kommission nach der TransparenzVO. Da die Anforderungen an den Nach-

weis eines öffentlichen Interesses sehr hoch und in der Praxis kaum zu erfüllen sind, nutzen Kartellopfer diese Zugangsroute nur selten erfolgreich. In der Schweiz wurde diese Zugangsroute bisher im Rahmen der kartellzivilrechtlichen Geltendmachung kaum genutzt. Sollte es zu einer vermehrten Inanspruchnahme des Öffentlichkeitsgesetzes ("BGÖ") durch Kartellopfer kommen, zeigt die Arbeit auf, wie im Einzelfall dem Rechtsschutz der Kartellopfer, aber auch dem berechtigten Interesse an einer wirksamen öffentlichen Durchsetzung gedient ist. Zudem wurde der verfassungsrechtlich geschützte und vorteilhaftere Akteneinsichtsanspruch untersucht. Die Einsicht kann mit einer Verwertungsbeschränkung verbunden werden, was die Durchsetzung kartellrechtlicher Ansprüche sichert und zugleich das "public enforcement" nicht über Gebühr beeinträchtigt.

Als vierte und letzte untersuchte Zugangsroute wird die Übermittlung von im Besitz einer Wettbewerbsbehörde befindlichen Verfahrensdokumenten an ein Zivilgericht analysiert. Mit Blick auf die EU und die Schweiz konnte aufgezeigt werden, dass die Zivilgerichte über ein ausreichendes Repertoire an Schutzmaßnahmen verfügen, um die übermittelten Verfahrensdokumente im erforderlichen Umfang zu schützen. Nicht zu übersehen ist hingegen, dass Kartellopfer häufig bereits vor Klageerhebung über ausreichende Informationen verfügen müssen, um ihre Ansprüche gerichtlich geltend machen zu können.

Im dritten Prüfschritt fällt die Antwort auf die Forschungsfrage in Bezug auf die Möglichkeiten des Zugangs zu den Verfahrensdokumenten der Kommission enttäuschend aus. Die derzeitige Auslegung und Handhabe der Zugangsmodalitäten werden dem Zweck des europäischen Kartellschadenersatzes nicht gerecht. Ein leicht anderes Bild ergibt die Gesamtschau der Zugangsrouten zu den Verfahrensdokumenten der Weko. Die dargestellten Zugangsmöglichkeiten können dem Zweck des Kartellschadenersatzes gerecht werden. Die entsprechenden Normen räumen den Behörden den erforderlichen Ermessensspielraum ein, um im Einzelfall den relevanten Interessen des Durchsetzungssystems gerecht zu werden.

Die Arbeit zeigt zudem Vorschläge auf, um das aktuelle Regime des Zugangs und der Verwendung von Dokumenten aus Kartellverwaltungsverfahren neu zu gliedern und zu vereinheitlichen. Dies um dem zweigliedrigen Zweck des Kartellschadenersatzes, aber ebenso dem Interesse an einer wirksamen öffentlichen Durchsetzung gerecht zu werden. Anstelle eines absoluten Schutzes gewisser Dokumente ist im Einzelfall darüber zu entscheiden, ob das Interesse an einer wirksamen öffentlichen Durchsetzung das Interesse des Kartellopfers an einem wirksamen Rechtsschutz überwiegt und die Dokumente somit in den Kartellzivilprozess einfließen dürfen.



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Social Scoring durch Staaten: Legitimität nach europäischem Recht – mit Verweisen auf China

Der Begriff "staatliches Social Scoring" weckt gemeinhin dystopische Vorstellungen. Bei einer realitätsbezogenen Verwendung des Begriffs umfasst er aber Systeme, die in der Europäischen Union (EU) bereits existieren. Trotzdem fällt der Begriff Social Scoring im Westen meistens einzig in Verbindung mit dem chinesischen Sozialkreditsystem. Medienberichten nach würde in China ein flächendeckendes Überwachungssystem jedes Verhalten aufzeichnen und die entsprechenden Daten unmittelbar in das Scoring-Verfahren übertragen. Menschen mit guten Scores kämen in den Genuss unzähliger Privilegien, während Personen mit schlechten Scores in einer Negativspirale gefangen wären. In vorauseilendem Gehorsam würden sich die Menschen stets möglichst konform verhalten und den wahrgenommenen Vorstellungen des Staates entsprechen. Ein solches Scoring-System gibt es allerdings bislang nirgendwo, auch nicht in China, wo eher lokale Scoring-Pilotprojekte mit geringer Relevanz vorhanden sind.

Die vorliegende Arbeit löst sich daher von dem verbreiteten Verständnis von Social Scoring und verwendet den Begriff als Zusammenfassung bereits bestehender staatlicher Systeme, die wie eine Vorstufe zu den Vorstellungen erscheinen können. Sie definiert staatliches Social Scoring als ein datenbasiertes Instrument zur Unterstützung staatlicher Entscheidungen, die sich auf natürliche Personen beziehen. Je mehr Daten aus verschiedenen Bereichen zusammenkommen und je weiter die Daten von der zu entscheidenden Angelegenheit entfernt sind, desto eher spricht die vorliegende Arbeit von Social Scoring. Derartige Systeme haben bereits erhebliche individuelle und gesellschaftliche Auswirkungen, weswegen ihnen mehr Aufmerksamkeit geschenkt werden sollte.

Wegweisend für eine angemessene Behandlung in der EU ist die Frage nach der rechtlichen Legitimität von staatlichem Social Scoring. Damit ist die Beurteilung gemeint, ob und unter welchen Bedingungen staatliches Social Scoring rechtmäßig sein soll. Social Scoring ist prinzipiell für vielseitige Ziele und in unterschiedlichen Kontexten einsetzbar, so etwa für staatliche Entscheidungen im Bereich der Sozialhilfe und der öffentlichen Sicherheit. Ist den Bewerteten die Existenz des Social-Scoring-Systems bewusst und sind dessen Konsequenzen für sie hinreichend relevant, ist zusätzlich ein Element der Verhaltenssteuerung vorhanden. Social Scoring beeinflusst dann menschliches Verhalten und hat eine regulatorische Wirkung.

Die Dissertation beginnt mit einem Blick auf China, der auch praktische Schwierigkeiten von staatlichen Scoring-Systemen offenbart. Daraus kann die EU lernen – die gleichen Fehler in Form besonders invasiver und schlecht konzipierter Systeme müssen nicht wiederholt werden. Der zweite Blick richtet sich auf die EU selbst, wo ebenfalls invasive Systeme bestanden haben und bestehen. Anschließend bietet die Dissertation Erkenntnisse zu praktischen Auswirkungen, Vorteilen und Problemen staatlichen Social Scorings.

Auf dieser Basis ist eine fundierte rechtliche Untersuchung möglich. Zur Bewertung der rechtlichen Legitimität staatlichen Social Scorings ist zunächst eine Herausbildung der verfassungsrechtlichen Anforderungen notwendig. Maßstab ist die Charta der Grundrechte der Europäischen Union (GRCh). Zentral sind die Anforderungen der Geeignetheit, der Bestimmtheit, des Demokratieprinzips, der Menschenwürde und der Nichtdiskriminierung. Sie betonen die Bedeutung der Ziele der staatlichen Social-Scoring-Systeme. Wenn die Systeme darauf abzielen, die Interessen des Allgemeinwohls zu fördern, sind resultierende grundrechtliche Eingriffe leichter zu rechtfertigen, als wenn sie ausschließlich auf Kostenersparnis ausgerichtet sind. Die verfassungsrechtlichen Anforderungen bieten bereits wichtige Anhaltspunkte für die Ausgestaltung rechtlich legitimen staatlichen Social Scorings in der EU.

Eine einfachgesetzliche Ausgestaltung ist dennoch wünschenswert, denn sie kann eine konkretere Anleitung vermitteln und die Umsetzung der verfassungsrechtlichen Anforderungen gewährleisten. Unter den bestehenden Gesetzen kommt hierfür vor allem die europäische Datenschutz-Grundverordnung (DSGVO)

in Betracht, sie könnte ein entscheidender Baustein sein. Tatsächlich leitet die DSGVO staatliches Social Scoring teilweise in eine verfassungsgemäße Richtung, so vor allem mittels ihrer Grundsätze der Zweckbindung, der Datenminimierung, der Speicherbegrenzung und der Datenrichtigkeit. Außerhalb der Ebene der Datenverarbeitung enthält die DSGVO allerdings nur wenige Anhaltspunkte und ihre Ausrichtung deckt sich lediglich teilweise mit den verfassungsrechtlichen Anforderungen an staatliches Social Scoring. Anforderungen etwa des Demokratieprinzips erfüllt sie nicht.

Da Social Scoring auch in China existiert und Teil eines prominenten staatsgeleiteten Projektes ist, könnten dort gewisse rechtliche Ansätze vorhanden sein, die für eine europäische Ausgestaltung verwertbar sind. Die vorliegende Arbeit nimmt dabei keinen umfassenden Rechtsvergleich vor, denn eine Auseinandersetzung beispielsweise mit der faktisch wenig bedeutsamen chinesischen Verfassung würde für das europäische Recht kaum hilfreich sein. Insbesondere das schwache Verfassungsrecht und das Einparteiensystem dürften wichtige Ursachen für die vormals besonders invasiven Formen sein, die kein Vorbild für die EU sein sollten. Die Unterschiede zwischen dem europäischen und chinesischen Rechtssystem sowie

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ihrem Staatsaufbau sind beträchtlich, ein klassischer Rechtsvergleich bietet sich deshalb wenig an. Nichts destotrotz gibt es einzelne interessante Ansätze im chinesischen Datenschutzrecht und den spezifischen Vorschriften zu den lokalen Scoring-Pilotprojekten, die übertragen auf den europäischen Kontext sinnvolle Anregungen bieten.

Auf Grundlage aller gesammelten Erkenntnisse rechtlicher und praktischer Art schließt die Dissertation mit einigen Vorschlägen für den Umgang mit staatlichem Social Scoring in der EU. Die Vorschläge sollen die Lücken füllen, die das europäische Datenschutzrecht mit Blick auf die verfassungsrechtlichen Anforderungen hinterlassen hat. Es zeigt sich, dass staatliche Social-Scoring-Systeme eine große Anzahl an Anforderungen erfüllen müssen, um rechtlich legitim zu sein. Infolgedessen stellt sich abschließend die Frage, ob es staatliches Social Scoring überhaupt geben sollte. Angesichts der zahlreichen Probleme und Anforderungen wäre ein umfassendes Verbot der einfachste Weg. Das würde jedoch die mannigfaltigen Anstrengungen von Staaten ignorieren, vorhandene Daten sinnvoll für neue Anwendungen zu nutzen. Deswegen gibt die Dissertation rechtliche Anstöße, die diese Anstrengungen in eine verfassungskonforme Richtung leiten.



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Economic Self-Determination of Market Actors as Data Governance Concept: The Example of Digital Payment Services

The study conceptualizes a data governance concept that stimulates data-driven innovation within traditional private law settings and facilitates a unified doctrinal approach to EU data law. Central to this concept is a principle of economic self-determination of market actors, grounded in economic and technological considerations and aligned with the acquis communautaire. Rooted in the EU's fundamental freedoms, this concept seeks to guide EU policymakers. It operates across three layers, addressing infrastructure, technology and market ordering, that are crucial for shaping data-sharing laws conducive to innovation and fostering an EU single market for data. Applied to the regulatory framework for digital payment services, the study pinpoints legal shortcomings and proposes amendments.

The current debate on the appropriate regulatory framework for data sharing, the role of states and the level on which intervention is needed is intense. The overarching question this study addresses is the following: What is the appropriate regulatory framework for data sharing in private law settings that is conducive to data-driven innovation?

The study begins by emphasizing the substantial welfare-enhancing potential of data sharing and datadriven innovation. Accordingly, the study positions data-driven innovations as pivotal under general public interest considerations. This is of particular importance in light of the market economy and the principle of party autonomy. The EU legislature increasingly links EU private law to general public welfare by making the private interests of contracting parties more aligned with public interests. The EU's commitment to the "twin transition", the digital and green transformation of the economy, reflects its key political priorities. Europe's digital transformation, integral to the green transition, hinges on elevated data sharing and innovations, considering grand challenges, global competitive pressures and dependencies, and the EU's changing role in the global order.

The study further assesses that despite the existence of privately ordered data sharing solutions, the predicted economic and technological potential, especially in the AI context, has not fully materialized. It identifies obstacles to data sharing, emphasizing the ongoing debate on defining the right regulatory framework for fostering data driven innovation. The lack of coherence in the *acquis communautaire* applicable to data contributes to uncoordinated legal realities, high transaction costs, liability risks, legal uncertainty and

informational and trust issues. Legislative measures at the EU level, initially sector-specific, are evolving to address those issues and design cross-sectorial data economies.

Yet emerging technologies like artificial intelligence (AI), machine learning (ML), distributed ledger technology (DLT) and autonomous systems present further legal challenges related to data access, reuse, liability and solidarity. Information and communications technology, now foundational to all modern economic systems and not merely a specific sector anymore, prompts a reassessment of legal considerations of factors such as transaction costs, market power, transparency, privacy and information asymmetries in the face of increased datafication.

Against this backdrop, this study reflects on the evolutionary process of EU data law, scholarly work and policy. The scholarly and legal discourse has shifted from a focus on data sharing and access per se to broader data governance approaches. Data governance involves both the governing of data through multiple means – not limited to the law – to ensure secure, trustworthy and non-discriminatory sharing and a theoretical concept addressing data sharing against the backdrop of various regulatory factors and value perceptions. Those concepts typically reflect the abovementioned broader governance mechanisms.

The study contributes to this current debate by creating its own data governance concept. Consequently, it outlines the economic, technical, and legal fundamentals essential for defining the role of data sharing in data-driven innovation and the regulatory governance needed. Accordingly, the study considers infrastructural and market-structural considerations,

contestability, fairness, value allocation, investment incentives, informational duties and transparency obligations. Addressing the current regulatory framework, the study evaluates the allocation of data and its value, contractual data sharing obligations and statutory rights, and potential legal dysfunctionalities within the acquis communautaire.

This analysis of existing EU legal frameworks for data access reveals that, while the acquis has borrowed varied concepts from public utility regulation, contract law, competition law, and IP and unfair competition law, it lacks a cohesive and unified approach. To address this and provide remedies, the study introduces the concept of economic self-determination of market actors, aiming to enable the standardization and doctrinal conceptualization of an EU data law. This concept takes recourse to specific existing legal fields and tries to overcome still existent path dependencies that hinder the ideal regulatory design for an EU data governance framework. This will positively affect datadriven innovation by providing legal clarity, equality before the law and a reduction of compliance costs.

The data governance concept draws from the economic, technical and legal fundamentals and the general regulatory principles identified. Ordoliberal thinking inspired this concept. It further transposes specific aspects from competition, unfair competition and intellectual property, as well as contract theory and legal practice into the innovation-specific data reality. It also takes recourse to data-specific innovation economics, information economics and infrastructural and technological aspects. Accordingly, the study develops a three-layered approach - infrastructural, technological and market ordering - that is

normativized and legally linked to EU fundamental freedoms.

The study tests this concept against the backdrop of the existing sector-specific data governance framework established by the Second Payment Services Directive (PSD2) and further developed in the Proposal for a Third Payment Services Directive (PSD3 Proposal) and the Proposal for a Regulation on payment services (PSR Proposal). In light of the principle of economic self-determination of market actors, the study finds that infrastructural considerations related to the fundamental freedom of payments, systemic competition concerns, bargaining power disparities and behavioral and informational issues justify the concrete intervention thresholds and the chosen design of data governance laws in the payment services sector. While addressing certain technical aspects, this legal framework only partially addresses challenges related to market entry, contestability, third-party rights, and liability, reflecting the limitations of the regulatory approach. The data governance concept developed in this study takes account of all of these factors.

In conclusion, the study advocates for a nuanced and holistic data governance concept centered around economic self-determination of all market actors and taking account of sector-specific market realities. This comprehensive approach, integrating economic, technical and legal dimensions, aligns with EU fundamental freedoms and holds the potential to foster a legally sound framework for data-driven innovation within the dynamic EU data ecosystem. This improves the existing uncoordinated, non-coherent and scattered EU legal data governance framework.



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Personalized Pricing and Private Power in Digital Markets: Rethinking the EU Competition Toolbox vis-à-vis Egalitarian Considerations

In a world shaped by networks and personalized interactions, using algorithms to identify and influence individual willingness to pay may become widespread. By focusing on distributive issues, this thesis examines the relationship between data-driven personalized pricing and new ways to understand economic power in digital markets. From a normative standpoint, it takes a resource-egalitarian basis to develop a regulatory theory for market ordering that reconciles the core values of economic freedom and equality of opportunity, to discuss legal and policy implications of discrimination mechanisms in the market economy. The findings lead to five desirable courses of action: restating equal treatment as a foundational principle of EU competition law on unilateral abuses; refocusing the dominance analysis from product markets to network systems; creating a legal category of power appropriate for B2B relations; creating a legal tool for market investigations that considers a sandbox approach; and introducing a remedial principle of collective bargaining action.

Background

Most competition law and policy literature on personalized pricing focuses on welfare outcomes, drawing on traditional neoclassical models, which highlight context-dependent static efficiencies. The negative distributional impact on the weaker transactional party does not raise any major concern, assuming that price competition and retaliation of consumers against discrimination may prevail. However, digital competition dynamics are more complex, and deeper is the impact of power imbalances between market players. Thus, the thesis questions the neoclassical assessment, starting from two kinds of market failure. First, it notes permanent transfers of wealth from one side of the market to the other as opposed to the counterfactual scenario without power disparities. Secondly, personalized pricing also distorts market access conditions, and, therefore, other market players cannot enter into a truly merit-based competition game.

Hypothesis

Algorithmic price discrimination (APD) poses threats to functioning markets that are of a distributive nature. These threats should be tackled by addressing the source of power disparities between market players. A resource-egalitarian approach to market ordering serves to interpret the EU competition toolkit consistently and guide policy action in response to legal gaps.

Methodology

The work is structured in two parts. The first (Chapters 1 through 4) discusses the socioeconomics of person-

alized pricing and digital power by confronting mainstream price theory assumptions with behavioral, relational and social network insights. The second (Chapters 5 through 8) deals with normative aspects. It draws on political philosophy reasoning to propose a regulatory theory for market ordering. This analytical framework serves to interpret the EU competition toolkit related to discriminatory pricing in view of historical and doctrinal considerations. Ultimately, the thesis proposes policy action by articulating regulatory principles.

Structure and Findings

Chapter 1 describes the incentives to set prices closer to each individual willingness to pay. Taking price theory as a starting point, the chapter concludes that firms may have incentives to invest in partitioning strategies to set APD as long as the implementation costs are lower than the benefits. These strategies may aim to obtain relevant data and increase price opacity, dynamism and automation. As for the latter, technology costs remain high, but are expected to decrease.

Chapter 2 sets out the digital market features and failures favoring profitable APD. From a market-structure angle, an underlying assumption in the literature is that price discrimination will be subject to disciplining forces of price competition and consumer retaliation on grounds of injustice and distrust. This assumption is examined in light of digital market features and failures that reinforce power imbalances between market players and, thus, their decision-making process.

Chapter 3 discusses the legitimacy of scientific methods to inform market-related legal reasoning. The literature proposes various approaches to measuring economic power in digital markets. The present work contributes to this literature by creating a taxonomy of workable methods for assessing different forms of power: monopoly, informational, relational and network. It is claimed that network systems, rather than product markets, may offer a better benchmark to identify power relations leading to APD with exploitative potential.

Chapter 4 assesses socioeconomic effects of APD in light of the proposed taxonomy. This chapter shows both generalizable and context-specific distributional effects. Moreover, it identifies four sets of theories of harm based on the different power dimensions. The effects consist in either permanent transfers of wealth from the weaker side of the market to the stronger (outcome distribution) or the uneven access of different platform users to network systems, and thus a distortion of intra-platform competitive dynamics (resource distribution). Furthermore, the chapter argues that the concerns should be addressed by targeting the sources of power disparities rather than by direct price regulation.

Chapter 5 explains why a deontological approach to normative market ordering should be preferred to utilitarian justifications. Drawing on Dworkin's work, the thesis proposes a resource-egalitarian approach to developing a regulatory theory for market ordering that reconciles, on the one hand, freedom as a condition for entrepreneurial initiative and thus productive efficiency and, on the other hand, equality as a condition for merit-based competition and thus just distribution. The argumentation draws on fairness as an EU fundamental legal principle to legitimize the reliance on this normative theory for interpreting EU

law. This framework serves to seek complementary ex ante and ex post regulatory remedies.

Chapter 6 assesses the suitability of EU competition law on unilateral abuses to deal with APD concerns. A historical approach serves to argue in favor of equal treatment as a fundamental competition law goal. While doctrinally underdeveloped, it acquires relevance to guide legal analysis in a platform economy tending towards power concentration and discrimination. Doctrinal and practical barriers to tackle APD theories of harm are discussed in light of the case law on direct harm, differential treatment and dominance. As for the latter, difficulties to integrate other forms of power within the dominance rule make it insufficient to address APD concerns.

Chapter 7 explores the suitability of EU fairness-based regulations to deal with APD concerns. Informational rules designed for personalized pricing are criticized due to circumvention risks. Different EU provisions contribute to addressing relational issues in digital contexts, but they are not APD-specific, do not solve all issues in network structures and do not provide an adequate framework to balance interests in intraplatform cases with B2B relational power.

Chapter 8, in conclusion, proposes a resource-egalitarian program for APD in digital markets. The work concludes that the ubiquity of digital markets makes a convincing argument for a systemic EU-level solution to fill the gaps. Identified enforcement principles refer to new, flexible, fairness-oriented regulatory tools within EU competition law. This is envisaged in the form of assessing relational power infringements and market investigations, including regulatory sandboxes. Finally, the thesis proposes collective bargaining between platform users and operators as a remedy.



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Innovative Models for Multi-Territorial Licensing of Musical Works for Online Use: An Answer to the Fragmentation Problem?

Online distribution of music in the form of streaming and download services has largely replaced analog distribution via records and CDs. Already more than 20 years ago, collective rights management organizations (CMOs) attempted to develop a new model of reciprocal representation agreements (RRAs) seeking to replace classical territorial licensing by multi-territorial licensing. The goal was to offer users a "one-stop shop" allowing them to use works on the Internet without territorial restrictions based on a single license. Yet, despite various attempts by the EU to enable multi-territorial licensing, the system has become more fractured and complex than ever. The thesis explores ways in which the major causes of fragmentation can be overcome on the EU level to optimize the licensing system.

Online music services (Spotify, Deezer or Apple Music) offering access to millions of songs via streaming or download have become increasingly popular with end users in Europe, who enjoy having constant access to large numbers of musical works on any device. However, in order to operate on an EU-wide level, these services face a complex licensing process, resulting in high transaction costs and presenting a substantial barrier to entry for new online music services. The thesis suggests that the complex licensing process is due to the threefold fragmentation in the multi-territorial online music licensing market in Europe - territorial fragmentation, rights fragmentation and repertoire fragmentation. Efforts to facilitate the multiterritorial licensing process have come from both the EU legislature and the music industry. However, they benefit mainly right holders (particularly major music publishers) without properly accounting for the interests of online music services as users. While these efforts have addressed the territorial fragmentation, they have neglected other forms of fragmentation and contributed to the proliferation of individual licensing and the rising number of licensing entities, thus rendering the licensing landscape more complex.

To answer the question of how the situation could be improved, the thesis uses qualitative empirical research methods, doctrinal and economically informed research, and policy analysis. The thesis first dives into the history of online music licensing to describe the persisting problems and visualize past regulatory failures. The doctrinal part then delves into competition law, and particularly sector-specific regulation based on the EU Directive 2014/26/EU on collective rights management (CRM Directive),

which includes specific provisions on multi-territorial licensing. While focusing on the EU situation, in order to describe the phenomenon of repertoire fragmentation, the thesis also takes into account the different licensing tradition in the Anglo-American jurisdictions. The thesis also explores the role of the availability and management of metadata on works for a functioning licensing system.

The thesis is structured in six chapters. Chapter 1 explores the existing problem of rights fragmentation. Chapter 2 analyzes the fragmentation along the lines of different right holders. Chapter 3 reviews several past attempts to solve the problems of fragmentation. Chapter 4 presents the landscape of newly emerging licensing entities. Chapter 5 addresses the additional informational problem that users encounter, due to the lack of availability of the metadata concerning ownership of rights, when they have to identify the relevant right holders from whom they have to take a license. In Chapter 6, the thesis ultimately turns to discuss measures for overcoming or at least alleviating the identified problems.

The thesis provides policy recommendations to ameliorate the impact of fragmentation on online music services and facilitate multi-territorial licensing. It suggests that improvements should be implemented in the framework of the CRM Directive. The recommendations, which are particularly inspired by compulsory licensing systems, are divided into two parts – measures to reduce the impact of the current fragmentation on online music services and measures to prevent future fragmentation.



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(EIPIN) – Innovation Society European Joint Doctorate



The EIPIN Innovation Society European Joint Doctorate

The evolving role of intellectual property (IP) in the innovation ecosystem, transitioning from a mere exclusionary right to a complex adaptive system, prompted the establishment of the EIPIN Innovation Society European Joint Doctorate (EJD). This initiative of the European Intellectual Property Institutes Network (EIPIN), including the Munich Intellectual Property Law Center (MIPLC) and the Max Planck Institute for Innovation and Competition, sought to provide European leaders and stakeholders with research-based recommendations for refining IP regulation to foster innovation, economic growth,

and ensure justice within the innovation society.

The EJD was financed by the European Union (EU) through the prestigious Horizon 2020 Program under the Marie Skłodowska-Curie Action, Innovative Training Network – European Joint Doctorate, from March 2017 until February 2021. Five leading IP research and training centers were the academic partners:

- (1) MIPLC with the University of Augsburg as the applicant for the EJD and the Institute as one of its partners,
- (2) Queen Mary Intellectual Property Research Institute (University of London),
- (3) University of Alicante with its Magister Lucentinvs,
- (4) Maastricht University (the coordinator of the EIPIN Innovation Society EJD), and
- (5) the Center for International Intellectual Property Studies (University of Strasbourg).

The Institute and the other academic partners each recruited and supervised three doctoral candidates ("Early Stage Researchers" (ESRs)) as the primary institution and supervised three other ESRs as the secondary institution.

The joint supervision model was a distinguishing feature of the program, with ESRs spending time at both their primary and secondary institutions. This facilitated the exchange of expertise and collaboration, enriching the research process. Additionally, ESRs benefited from external advisors from non-academic organizations, gaining practical insights to complement their academic training.

Beyond supervision, the Institute offered ESRs exceptional resources, including the most comprehensive IP law library in the world, a diverse research community, and the MIPLC's broad course program encompassing IP, competition law, economics, and innovation management. This multi-faceted approach ensured a comprehensive and well-rounded educational experience for the ESRs.

Towards Global Data Governance: The Data Protection Dilemma at the WTO

Rapid technological advancements driven by data highlight the importance of data protection like never before. Free flow of data is crucial for maximizing the value that can be derived from it, only for this to be threatened by global fragmentation of data protection rules. Data protection has thus emerged as a global public good exemplifying the need for global convergence of data protection norms for frictionless flow of data across borders. Efforts are afoot at various international fora offering varying normative solutions. This thesis explores whether the World Trade Organization can serve as an adequate venue for the global convergence of data protection norms parallel to provisions on free flow of data amongst its Members. It analyzes the challenge of incorporating a human rights approach at the WTO and relies on the proportionality principle for balancing trade and non-trade interests.

Background

Tension between cross-border data flows and data protection is observed to be a result of the lack of standards for legal rules on data protection globally. This tension permeates institutional and technical aspects of global data governance. Within this context, the unsuccessful convergence of international data protection norms forms the core challenge of the global data economy.

So far, convergence has been sought to be engineered in various ways such as the extraterritorial applicability of the EU's General Data Protection Regulation with a focus on individuals' fundamental rights. Attempts at reconciling data flows with data protection have also been made at other for such as the OECD and APEC. Yet another venue tackling these conjoined aspects have been trade agreements. With a focus on ensuring free movement of data, preferential trade agreements (PTAs) are seen to adopt normative approaches ranging from binding to aspirational provisions when it comes to data protection, highlighting the fragmentation problem. Consequently, the thesis assesses the feasibility of a multilateral solution and looks to the WTO as a venue for convergence of data protection norms.

Hypothesis

The World Trade Organization (WTO) can serve as a forum for global data governance (embodying legal, institutional and technical roles). However, informational privacy and data protection rules are an essential component of data governance and their incorporation at the WTO presents a challenge. This

raises the primary research question whether the WTO can serve as an adequate venue for achieving convergence of data protection norms.

Thesis Structure

The thesis is divided into two parts. Part I provides an analytical framework based on data governance, and Part II adopts comparative legal research methodology with the proportionality principle as the *tertium comparationis*.

Part I of the thesis conceptualizes data protection as a global public good and highlights the need for its effective provision globally, a notion that has direct implications on cross-border data flows, which are essential to the global data economy. Further to this, data governance is identified as a regulatory theory deriving from the study of legal, institutional and technical elements concerning data flows. Understanding data governance as multisource regulation is crucial because each of these elements cumulatively require effective governance for the data-driven society. Part I concludes by situating data protection at the core of any data governance framework.

Part II begins by recognizing that the most crucial point of divergence in answering the research question arises from the impossibility of positioning a fundamental human right at the multilateral forum of WTO. That the WTO remains a trade-liberalizing body with the sole purpose of granting and adjudicating economic rights needs to be assessed against the challenges of the global data economy for the data-driven society. Accordingly, the thesis

approaches tension between cross-border data flows and data protection by searching for a balanced provision at the WTO. In addition, it studies whether institutional aspects of the WTO could be improved to acknowledge the possibility within the Dispute Settlement Understanding to exercise judicial review of such a provision. Proportionality as a general legal principle shows the way forward in undertaking such a balancing exercise.

Thus, a proportionality analysis for cross-border data flows and data protection is required at two levels, first at the level of drafting a balanced provision and then at the stage of judicial review. As an essential first step, arguments anchored in legal theory will be made regarding the use of the proportionality principle as an adjudicatory tool at the WTO.

Against this backdrop, the thesis progresses to understanding proportionality as applied to data protection cases in the EU and the author's home country, India. While the EU is a mature jurisdiction when it comes to the recognition and adjudication of the right to privacy and data protection as fundamental rights, India is only beginning to address this area. The aim is to undertake a comparative analysis in order to extrapolate a standard for proportionality. The thesis then assesses the applicability of this standard

of proportionality at the WTO. While doing so, it builds on the preceding legal analysis, and makes an assessment at the level of legislative activity in terms of studying the (now stalled) Joint Statement Initiative on E-Commerce covering provisions on cross-border data flows and data protection. Whether the provisions are drafted as standalone provisions to be balanced against each other will be considered against instances where these aspects are drafted in a rule-exception relationship. The manner in which provisions on crossborder data flows and data protection are drafted, as well as the exercise of judicial review, has a bearing on how well these interests can be reconciled during a dispute. In this way, the thesis seeks to make an academic contribution to resolving the deadlock and moving towards a multilateral solution at the WTO.

In conclusion, the analytical framework considering the identified regulatory theory of data governance complements comparative legal research. The study addresses legal and institutional aspects in depth while undertaking the aforementioned multi-level comparison of the proportionality principle at the legislative and judicial review stages. For the sake of completeness, the technical aspect is appreciated in brief by looking at privacy-enhancing technologies, and at the enabling or withholding role the WTO might play.



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Competition Law Control of Excessive and Unfair Prices of Pharmaceuticals: An EU and South African Perspective

The contentious issue of exploitative excessive pricing, especially in the pharmaceutical industry, presents significant challenges for competition law. There are concerns that ex post competition law regulation of such pricing may stifle innovation. Focusing on the EU and South Africa, the research aims to determine whether competition law should be used to control such pricing. The findings reveal that the prevailing approaches inadequately accommodate the industry's diverse innovation and competitive dynamics, especially in the context of new market settings. Therefore, the thesis argues for a nuanced approach that reflects the industry's multifaceted dynamics and adapts to evolving market settings, including those related to emerging therapies. It analyzes the implications of the complexities in the different market settings within the industry on competition law and their influence on the interplay with sector regulations and intellectual property laws.

Background

The rising costs of medicines are a significant problem in both developing and developed jurisdictions. Some jurisdictions, like the EU and South Africa, use competition laws to control these prices. However, there are concerns that ex post competition law intervention may stifle innovation in dynamic industries like the pharmaceutical industry. The industry comprises conventional and personalized medicine therapies that utilize either small-molecule or biological drugs, presenting varying innovation and competition dynamics. Despite these distinctions, the literature on competition law and policy has so far discussed innovation concerns as if homogeneous markets existed within the industry.

Research Questions and Methodology

Against this backdrop, the research aims to determine whether competition law should be used to control exploitative excessive pricing in the industry and examines the considerations regarding such intervention within the EU and South Africa. To achieve this primary objective, the research delves into several sub-questions using a combination of methodologies.

The research uses a legal doctrinal approach to outline how the EU's and South Africa's legal, regulatory and institutional frameworks address exploitative excessive pricing in the industry and determine the policy grounds on which these jurisdictions justify their control of such pricing.

Using a combination of case studies, inductive analysis and a normative approach, the research examines the extent to which the competition law jurisprudence in the EU and South African pharmaceutical industry has evolved in response to exploitative excessive pricing and how effectively the existing jurisprudence balances the goals of promoting access to medicines and fostering innovation.

Furthermore, the research adopts analogical and normative analyses to identify the critical challenges faced by the EU and South African competition authorities and courts in applying the existing jurisprudence to new market settings, such as biological drugs and personalized medicine therapies, and how to address them.

Lastly, the study evaluates the circumstances under which competition authorities and courts should intervene to control pricing in the industry and explores policy options for effective enforcement.

A comparative analysis of the EU and South Africa provides valuable insights. Each chapter reviews the relevant literature, including scientific literature, relevant laws, regulations, cases and scholarly articles.

Hypothesis and Key Findings

The research rests on the hypothesis that a lack of customized and nuanced strategies in implementing the competition law in the EU and South Africa contributes to the ineffectiveness of addressing exploitative excessive pricing within the industry.

The EU and South African approaches exhibit notable differences and commonalities. The EU and South Africa prohibit exploitative excessive pricing as an abuse of dominant position. When South Africa enacted its competition law, it incorporated the CJEU's United Brands case principles on applying Article 102(a) TFEU to unfair pricing. However, South Africa's law evolved differently in practice. Nonetheless, both jurisdictions first analyze the excessiveness of the dominant firm's price using different parameters, followed by an analysis of factors that could justify the price. Unlike the EU and EU Member States, which rely on case-law principles, South Africa has statutory factors for such analyses. Despite notable differences, both jurisdictions can justify a dominant firm's price as a reward for innovation.

The research concludes that competition policy justifications for interventions in the EU and South Africa are grounded in economic principles that promote fair and competitive markets. However, South Africa also accommodates policies driven by human rights, public interest and public health considerations. Notably, both jurisdictions also view competition and IP policies as playing complementary roles.

Moreover, the existing jurisprudence in the industry mainly evolved based on small-molecule drugs used in conventional therapies. In the EU, the drugs involved were either generics or orphan drugs under regulatory exclusivity protection. In contrast, the South African Competition Commission investigated a case involving small-molecule antiretroviral drugs in 2002. However, the parties settled before the Commission was able to prosecute the case at the Competition Tribunal. A patented biological drug case

is pending before the Tribunal and may establish applicable principles.

The current principles encounter challenges in the context of markets for biological drugs used in conventional therapy. For example, under the established assessment criterion for generics, authorities presume that manufacturers recover their investment during the patent term, thereby precluding the justification of excessive pricing on grounds of innovation considerations. However, this principle is not directly applicable to off-patent biological drugs, as their manufacturers might face substantial R&D costs, unlike with generics. The thesis argues for an exception to this principle, as articulated in the UK case Napp Pharmaceutical Holdings Ltd v. Director General of Fair Trading, to be adopted as the norm for off-patent biological drugs, where firms proving unrecouped expenses must be considered regardless of the lack of patent term.

Furthermore, the traditional analytical tools for defining a relevant product market have limitations in the context of personalized medicine therapies because they focus only on drugs, ignoring the integral role of diagnostics, a core component of personalized medicine therapies, along with their related cost concerns.

The thesis affirms the hypothesis, arguing for a nuanced approach that reflects the industry's diverse innovation dynamics and adapts the law to the unique challenges posed by biological drugs and personalized medicine therapies. It outlines guidelines and the circumstances under which competition authorities may intervene.



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Local Famous Trademarks in China: Towards Reasonable and Appropriate Governance

This study is anchored on two starting points: (1) intellectual property rights (IPRs) are private rights, yet they require government action such as registration and enforcement to ensure their protection; and (2) IPRs could be instrumental in achieving specific public policy goals. Establishing clear boundaries for governmental interventions in IPRs and differentiating between reasonable and appropriate actions and those that are excessive and unjustified is crucial for adequately exercising IPRs as private rights and for balanced and effective public governance. This thesis contributes to defining those boundaries by examining China's local famous trademark (LFTM) system, a complex and long-standing instrument with numerous unresolved issues, and formulating policy recommendations to solve them purposefully. Given that similar governmental interventions occur outside China, the findings of this research have broader applicability.

This study comprises three main parts.

Part I provides a descriptive analysis of the LFTM regime, examining its origins, legal framework and the motivations behind local governments' promotion of it. For a holistic overview, this Part covers the causes of the emergence of the LFTM regime, its specific protection strategies, the primary motivations that have driven the local governments' relevant promotion, and the extended scope of protection it offers to certain trademarks.

The study takes the 31 provincial LFTM laws in Mainland China as a primary information source; it makes the documents available to the public in Chinese and English on Google Drive.

In analyzing the historical roots and status quo (inter alia the institutional flaws) of the LFTM, this study goes beyond the mere legal discussion and extends its analysis to include political perspectives and various sources like literature reviews, news reports and case studies.

Part II further explores the LFTM from the dimensions of trademarks and famous trademarks.

The trademark dimension aims to set up the normative basis of trademark protection. It first explores the definitions of trademarks found in international treaties and documents and in national legislation. Then, to explain the internal structure of a trademark, a semiotic method is applied, which is helpful for the comparison in the following steps regarding several different types of famous trademarks. Finally, concerning the rationale for the protection of trademarks, in particular the functions of trademarks and the corresponding expanding scope of protection, it explores legal doctrines, literature and judgments, with a focus on EU-related documents.

The famous-trademark dimension, adapting a legal doctrinal approach, distinguishes the characteristics of China's LFTM regime through horizontal comparisons from several similar-in-name famous trademarks at the international and regional levels (inter alia well-known marks in Article 6bis of the Paris Convention, trademarks with a reputation in the EU and well-known marks in the U.S.), assessing the LFTM's alignment with or divergence from conventional famous trademarks. It concludes that the LFTM fundamentally differs from the latter and thus it cannot be justified by their rationale of protection. A tailored assessment framework is needed for the LFTM.

Part III thus conducts a comprehensive assessment of the LFTM against the benchmarks of the core trademark protection rationale and the balance of the market subjects' interest, examining possible relevant conflicts and discussing how potential conflicts could be resolved.

Such benchmark-focused examination is crucial since the LFTM regime's problems could consist of non-major flaws that can be addressed through an improved institutional design. Other problems, however, may only be solved by abolishing the LFTM regime, wholly or partly. Either way, specific benchmarks are necessary to draw reasonable conclusions.

Per the benchmarks set-up, this Part outlines the red lines that the LFTM system, as an appropriate governmental intervention in trademark protection, should proactively avoid and offers corresponding recommendations for reconciling the dissonance between the function of the LFTM regime in China and the ideal/typical functions of trademarks and trademark law. It seeks to solve tensions between the core trademark rationale, the balance of market subjects' interests, the goals of LFTM protection, and the modalities of fulfilling these concerns. Moreover, this Part aims to clearly define and appropriately restrict the scope of the LFTM protection and the modalities of achieving this within the context of rebalancing national trademark laws (and policies) while promoting local trademark strategies and economic developments. It strives to contribute to the larger global context of the shifts in intellectual property laws' functions resulting from the governmental interventions in the competitive process - such interventions are not exclusive to China. The Italian historical trademark, the marco storico, serves as a recent parallel.

In addition to a two-benchmark evaluation, Part III looks into whether the specific red lines addressing the corresponding flaws of LFTMs prove to be sufficient, in particular considering China's long-lasting IPRs administrative protection history. The LFTM is one specific design of the extensive administrative intervention in IPR protection. Without improvements to the social soil it is rooted in, similar "LFTM" issues will easily reoccur. Therefore, this Part explores further policy recommendations that are more broadly applicable and aims to encourage positive interactions between the legal and administrative protection of the IPRs with regard to the rule of law based on a more reasonable and predictable IPR governance.

The policy recommendations advanced by this study include transforming and separating administrative competencies and limiting them by performing a balancing of interests between different market subjects and acknowledging the rationale basis of the IPR protection. Interaction between administrative regulation and national legislation should be improved, as this will effectively limit the administrative interventions and render them clear, justifiable and accountable.



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The Rise of Open Source in Interoperability Standards: A Challenge for the EU Standardization Legal Framework

Open source software development has become a core instrument in the information and telecommunication (ICT) industries and is playing a central role in the definition of interoperability standards. In this context, new institutions focusing on the development of open source reference implementations compete with more formal standard developing organizations (SDOs). The integration of open source within the more traditional standardization framework presents economic and legal challenges. This research assesses the adaptability of the current European legal standardization framework to the phenomenon of open source and proposes legal mechanisms to steer the transition towards a new standardization approach.

Open source has become a core instrument in the "open innovation era" for the software industry. Already for some time, the European Commission has been advocating for the integration of open source into standardization. Accordingly, SDOs should adapt their standardization processes and render them more dynamic and flexible by introducing open source as a tool to boost the development of the standard. Moreover, the increasing "softwarization" of products and services and faster innovation cycles have led to the emergence of alternatives to formal standardization bodies - consortia and alliances - to address the needs of fast-delivered and customized products. Consortia are thus gaining momentum in the ICT sector and competing not only with each other. but also with more formal standardization bodies.

Technological developments and changing economic dynamics challenge the EU standardization system. Beyond this, the growing relevance of software and the progressive integration of open source projects into standardization settings call for a revision of current policy and legal frameworks around the EU standardization system. A lack of both institutional and legal adaptation to new standardization dynamics risks harming standardization processes by deterring companies from participating in European standardization – or standardization processes affecting European markets. This, in turn, could negatively affect interoperability, as a core policy and innovation goal in the EU, and ultimately harm both competition and innovation in standardization markets.

The thesis assesses the adaptability of current interoperability standardization frameworks to the phenomenon of open source and proposes legal

mechanisms to steer the transition towards a new standardization approach. To this end, the project explores the dynamics, strengths and weaknesses of current standardization and open source models and analyzes the legal and economic implications of open source for existing legal frameworks of interoperability standardization platforms, both from a competition law and a standardization law perspective.

In a first step, interoperability standards and the dynamics of standardization processes are examined to understand the relevance of interoperability for the digital economy and as a value to protect. Both consensus-based formal standardization and consortia-based informal standardization models are presented and compared. Whereas the two standardization models might develop competing standards, they also complement each other. Thus, standardization work at a consortium might serve as a fast-paced pre-standardization phase focused on bringing cohesion among industry participants in the development of a technical specification, which can then be adopted by a formal SDO. Likewise, standardization processes are, in both cases, heavily influenced by intellectual property rights (IPRs) business models, focused either on the proprietary control of the standard and the extraction of royalties from essential IPRs or on generating massive traction and fast-paced iteration through open source IPR policies.

The study subsequently delves into the open source phenomenon, both as a collaborative software development process, which enables royalty-free access to source code on the basis of broad copyright and patent licenses, and as an increasingly

essential innovation model in the ICT sector. This innovation model has the potential to accelerate and improve the development of standards due to timing, transparency and technical benefits. At the same time, the intersection of open source and interoperability standards has an impact on various – conceptual, procedural and IP-related – dimensions of standardization. The question thus arises whether the European legal framework, in particular the competition rules and Regulation 1025/2012 on EU standardization, are fit to tackle the consequences of this impact.

With regard to Article 101 TFEU, and in particular the Guidelines on its applicability to horizontal cooperation agreements, the thesis ascertains the ambiguity of the Guidelines and the lack of reference to software reference implementations and open source. Organic innovation within standardization processes and different exploitation models for IPRs are not adequately considered. For competition law to play a role in achieving an efficient transition to standardization approaches enabling organizational innovation, the thesis recognizes the need for a more granular approach to the assessment of anticompetitive conducts. Concretely, the thesis

elaborates on how to target anticompetitive effects stemming from the manipulation of a standardization process, in particular in competitive innovation settings such as open source development. With this, the thesis contributes to re-invigorating the role of EU competition law in private innovation settings, which traditionally have been under the aegis of public institutions – such as European Standardization Organizations (ESOs) – and where private companies have been able to leverage their bargaining power and false negatives have been institutionalized.

The thesis further proposes conceptual modifications to and the inclusion of new legal instruments in Regulation 1025/2012. Accordingly, software reference implementations should be considered key components of interoperability standards and be defined in the Regulation. From an institutional perspective, mechanisms to strengthen cooperation between ESOs, consortia and the Commission should be explored. Likewise, a stronger involvement of stakeholders on the basis of Article 5 of the Regulation should be promoted. Additionally, the Regulation should provide for the possibility to rely on pre-standardization processes supervised by the Commission and taking place outside of ESOs.



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Meca-Medina-Test des EuGH – Berücksichtigung sportspezifischer außerwettbewerblicher Faktoren im europäischen Kartellrecht

Im Rahmen der Anwendung des Kartellrechts auf den Sport stellt sich die Frage, inwieweit außerwettbewerbliche sportspezifische Belange als Rechtfertigungsgründe für Beschränkungen zu berücksichtigen sind. Hierfür hat der EuGH grundsätzliche Leitlinien aufgestellt; die Details dieser Herangehensweise werden in der vorliegenden Arbeit erforscht.

Dass außerwettbewerbliche sportliche Faktoren innerhalb des europäischen Kartellrechts zu berücksichtigen sind, ist im Grundsatz inzwischen weitgehend anerkannt. Diese Berücksichtigung erfolgt innerhalb sportlicher Sachverhalte anhand von Kriterien, die der EuGH 2006 in seiner Entscheidung Kommission/Meca-Medina und Majcen aufgestellt hat (Meca-Medina-Test). Seither wurde dieses Vorgehen schon vielfach von EU-Kommission, Wettbewerbsbehörden sowie Gerichten angewandt. Dennoch bestehen weiterhin große Unsicherheiten und Lücken bezüglich der Details der Anwendung des Meca-Medina-Tests und der Berücksichtigung sportlicher Besonderheiten im Kartellrecht. Auch nach den jüngsten Entscheidungen des EuGH im Dezember 2023 zu dieser Thematik (die aber nicht mehr Betrachtungsgegenstand der vorliegenden Arbeit sind) dürften die Kontroversen weitergehen.

Ziel dieser Arbeit ist es deshalb, den *Meca-Medina-*Test auf allen Ebenen genau zu untersuchen und so eine dogmatisch detaillierte und in die Tiefen des Sports eindringende Darstellung desselben zu liefern. Hierfür werden zunächst die gesamte sportbezogene und an die Berücksichtigung sportlicher Belange anknüpfende Rechtsprechung des EuGH, EuG und deutscher Gerichte sowie die Fallpraxis der EU-Kommission und des Bundeskartellamts analysiert. Zum Verständnis werden zudem Grundlagen des Sports und des europäischen Kartellrechts in Bezug auf den Sport dargestellt.

Im eigentlichen Hauptteil der Arbeit wird dann der *Meca-Medina-*Test selbst untersucht: Zunächst wird eine ausführliche dogmatische Einordnung des Tests vorgenommen. Demnach übernimmt der *Meca-Medina-*Test für den Spezialfall des Sports den Rechtsgedanken der Schrankensystematik der *Cassis de Dijon-*Doktrin. Das ergibt sich insbesondere aus der systematischen Fundierung des *Meca-Medina-*Tests

und der partiellen Konvergenz zwischen dem Ansatz zur Rechtfertigung von Beschränkungen der Grundfreiheiten und von Wettbewerbsbeschränkungen. Technisch ist im *Meca-Medina*-Test eine besondere Form der Verhältnismäßigkeitsprüfung zu sehen.

Auch weitere grundsätzliche Fragen wie die Anwendbarkeit, das genaue Prüfungsschema sowie grundlegende prozessuale Fragen werden umfassend beleuchtet: Die Arbeit kommt zu dem Ergebnis, dass der Test auf alle sportlichen Regeln anwendbar ist, also für alle, die mittelbar oder unmittelbar sportlichen Zwecken dienen. Für den *Meca-Medina-*Test ergibt sich ein dreistufiger Aufbau bestehend aus einer legitimen Zielstellung als Ausgangspunkt der Prüfung, der kohärenten und inhärenten Zielverfolgung sowie der Verhältnismäßigkeit der beschränkenden Maßnahme.

Anschließend analysiert die Arbeit die einzelnen Stufen im Detail, wobei besonders ausführlich auf die abstrakte und konkrete Herleitung legitimer Zielstellungen sowie auf die auf jeder Stufe und in jedem Unterschritt genau anzuwendenden Prüfungs- und Kontrollmaßstäbe eingegangen wird. Auf Basis der dogmatischen Einordnung des Tests erfolgt auf seiner ersten Stufe die Herleitung legitimer Ziele aus den zwingenden Gründen des Allgemeininteresses in Form der Besonderheiten des Sports und seiner sozialen Dimension, festgelegt durch die Rechtsprechung des EuGH und deskriptiv ausgefüllt durch Art. 165 AEUV. Diese Einordnung ermöglicht die konsistente Behandlung der Belange des Sports über das gesamte Unionsrecht hinweg. Daraus ergibt sich eine Vielzahl an legitimen Zielstellungen, welche grundsätzlich geeignet sind, eine Wettbewerbsbeschränkung zu rechtfertigen. Auf der zweiten Stufe wird dann zum einen der kohärente Zusammenhang zwischen der Zielstellung und dem sonstigen Regelungsverhalten betrachtet. Zum anderen wird geprüft, inwieweit die Beschränkung gewissermaßen in der Natur der legitimen Zielstellung liegt und somit ein enger Zusammenhang zwischen den beiden besteht. Diese Prüfungsstufe dient der Kontrolle der Plausibilität der Zielverfolgung durch die beschränkende Maßnahme. Liegt dieser grundlegende Zusammenhang vor, ist auf der dritten Stufe die Qualität dieses Zusammenhangs zu untersuchen, ob also eine mildere gleich effektive Maßnahme zur Zielerreichung in Sicht ist (relative Unverhältnismäßigkeit) oder ob der Vergleich der Vorund Nachteile der Regelung ergibt, dass die Wettbewerbsbeschränkung zu schwerwiegend ist (absolute Unverhältnismäßigkeit).

Nach dieser Detaildarstellung werden Übertragungsmöglichkeiten des *Meca-Medina-*Tests innerhalb des Kartellrechts und außerhalb auf andere Rechtsbereiche, in denen sich der Sport bewegt, betrachtet und Modifikationen, die gegebenenfalls vorgenommen werden sollten, diskutiert. Dabei wird festgestellt, dass der *Meca-Medina-*Test über die Verwendung in Art. 101 Abs. 1 AEUV hinaus auf Art. 102 sowie 106 AEUV übertragen werden kann. Parallel dazu kann der *Meca-Medina-*Test auch im deutschen Kartellrecht (§§ 1 f. und 18 f. GWB) weitgehend wertungsgleich zum Einsatz kommen. Blickt man über das Kartellrecht hinaus, fügt sich der *Meca-Medina-*Test in ein größeres System an weitgehend parallel laufenden Prüfungsschemata zur rechtfertigenden Berücksich-

tigung sportlicher Besonderheiten und Faktoren ein. So können solche Faktoren beispielsweise in der Beihilfenkontrolle im Rahmen des Art. 107 Abs. 3 AEUV weitgehend wertungssynchron zum *Meca-Medina-*Test behandelt werden.

Im Ergebnis wird aufgezeigt, dass die differenzierte Verwendung des Meca-Medina-Tests zu einer strengen Beurteilung von wettbewerbsbeschränkenden Regelungen führt, wobei die Wahrscheinlichkeit einer Rechtfertigung mit der Schwere des Eingriffs sinkt. Aufgrund der strengen, mehrstufigen Prüfung anhand der Meca-Medina-Kriterien kann auch Bedenken einer zu weiten Rechtfertigungsmöglichkeit anhand wettbewerbsfremder Gründe und einem Wirkungsverlust des Kartellrechts begegnet werden. Im Gegenteil ist das Vorgehen in Form des Meca-Medina-Tests letztlich zwingend und zeugt von dem Ausgleich verschiedener Zielsetzungen sowie der Komplexität und Vielschichtigkeit der Abwägung gegeneinander laufender Interessen. Diese Abwägung hat auch im Wettbewerbsrecht auf Basis von nicht wettbewerblichen Faktoren – wenn auch nur im eng umrissenen Umfang legitimer Zielstellungen und auf Basis eines restriktiven und differenzierten Vorgehens – stattzufinden. Für diese Zielstellung eignet sich der Meca-Medina-Test in der vorgestellten Form für den Bereich des Sports hervorragend.



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Publication

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Patent Legislation and Drug Repositioning: A Comparative Study from the Perspective of Acceleration of Drug Development

Drug repositioning (DR), identifying a new indication for an existing drug, is recognized as cost-effective drug development because the grant of market approval for a repositioned drug can rely on some of the clinical data submitted for the original drug and thereby omit certain clinical trials. Following a new paradigm, industry-academia technology transfer through patent licensing is an effective way to accelerate DR drug development. Though patents play a vital role, despite the existence of international IP treaties such as the TRIPS Agreement, a patentable invention is not internationally defined due to the territoriality of patent protection. This thesis proposes a design of the patent system suitable for accelerating DR drug development through technology transfer.

The thesis focuses on the legal problems of DR drug development on the basis of an analysis of statutory and case law, as well as practical issues arising from current patent legislation. The legal analysis is conducted using the dogmatic method and is accompanied by a doctrinal description and a comparative law method. Patent law serves as the legal framework. The necessity of harmonization is discussed in the light of the results of the comparative analysis. The jurisdictions considered are Japan, the EU, Germany and the UK, with some additional references to the U.S.

Based on interviews, the thesis looks for a possible licensing model to provide for a functional system for collaboration to enhance innovation. Concretely, it identifies the license of right (LoR) scheme as a suitable matching system. In the LoR scheme, the patent offices provide a database of patent applications and high-quality technical documents and thereby enable collaboration. Furthermore, also taking a comparative law perspective, the thesis verifies the suitability of DR drug invention and patents for licensing, thereby answering the following sub-questions:

Is an invention of a DR drug eligible for a patent?

The thesis answers the question in the affirmative. The invention of DR drugs is defined as a second medical use invention under the practice of the European Patent Office and as a medical use invention under the practice of the Japan Patent Office. The invention can be characterized as both incremental, producing significant benefits to the industry and society, and an evergreening one, which attempts to extend the patent protection period. The DR invention is justified as an incremental invention on the ground that the DR strategy improves the productivity of drug development and public health, and the DR drug

does not affect the market for the original drug. This categorization clearly identifies inventions that are in need of protection, such as DR inventions that truly produce benefits for society.

Does a repositioned original drug prevent a DR invention from being patented?

This question is answered in the negative. A patent is granted for an invention that technically contributes to the development of the industry. To assess the contribution of the invention, patent laws stipulate the requirements for patentability, including novelty and inventive step. Since the DR drug shares the same chemical substance with the original drug, one problem is whether the DR invention is patentable. Yet the point is that the patentability of the DR invention results from the combination of an indication and the chemical substance. As the combination is easily identifiable and different from the invention of the original drug, outcomes of the patentability assessments of the DR invention are predictable.

Does the DR patent provide sufficient protection?

Here, the answer is again in the affirmative. After the patent is granted, it is important to clearly define the technical scope of patented DR inventions to facilitate licensing activities, and to clearly define the legal scope of exclusivity to be protected in the market. As regards these two scopes of the EU patent, the German patent, the UK patent and the Japanese patent, DR drug patents are to be characterized as purpose-limited product patents. The drug is for a patented indication.

To sell the drug, marketing approval is necessary under the law of the different jurisdictions. To compensate for the time that is consumed prior to the

marketing approval, an extended term may be granted for a pharmaceutical patent. One requirement for the extension is that the approval be the first one. Since the approval of the DR patent has been determined as the first approval in Japan and the EU, the extension is also granted for the DR patent.

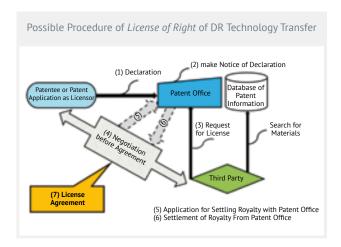
How can patent law be harmonized internationally for DR technology transfer?

In the pharmaceutical sector, since pharmaceutical products are regulated by national medicinal regulations and the pharmaceutical market is not global, full harmonization of the legal regimes is not necessary. On the other hand, harmonization of legislation should take into account the transitional situation of emerging countries and allow for flexibility in defining their innovation policy to ensure sustainable development.

Harmonization can be achieved with different degrees of stringency, consisting of either a top-down (centralized) approach or a bottom-up (decentralized) approach. A fully centralized model would be unrealistic and make it difficult to maintain local business cultures, while the decentralized model leaves room for each nation to develop its national patent law. Thus, the thesis proposes a hybrid form of harmonization, consisting of centralization and decentralization, as a suitable LoR of DR technology transfer.

The main research question is to be answered as follows: Though a LoR system has been adopted in many countries, there is no uniformity of the rules. To identify the most suitable system for the DR technology transfer, the thesis analyzes some existing systems. The proposed LoR procedure is as follows

(the number corresponds to the number in the figure): (1) a patentee submits a declaration for LoR with a patent office; (2) the patent office registers the declaration and makes it available to the public; (3) any person can apply to the patent office for the grant of a license; (4) the parties have the opportunity to negotiate the terms and conditions of the agreement; (5) if the parties fail to agree on royalties; (6) the patent office settles the dispute upon request; and (7) the licensee is granted a non-exclusive license for the declared patent or invention upon execution of the licensing agreement.



The threshold of patentability and the extended term of protection for DR patents depend on the jurisdiction and national policy, and could be defined in a decentralized manner. On the other hand, the LoR procedure stated above should be designed in a centralized manner, hence uniformly for all jurisdictions. Since it is easy to define the scope of the DR invention and the patent protecting a purpose-limited product, these scopes could equally be defined in a centralized manner.



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Die Konkurrenz von Urheberrecht und Lauterkeitsrecht im Binnenmarkt

Die Forschungsarbeit beleuchtet eine Normkollision im grünen Bereich, das Überlappen von Urheberrecht und Lauterkeitsrecht. Diese Problemstellung hat, anders als zum Beispiel die Kollision von Marken- und Lauterkeitsrecht, bisher wenig wissenschaftliche Aufmerksamkeit erfahren. Die Studie geht über den Stand der Forschung auch zu anderen Rechtsüberschneidungen insofern hinaus, als sie die unterschiedlichen Herangehensweisen an die Problemstellung verbindet und gleichzeitig zur Anwendung bringt.

In einem ersten Schritt werden Regelungs- und Regelungskomplexkollisionen als methodisches Problem interpretiert und auf einem abstrakten Niveau bzw. von einem entfernten Blickpunkt aus behandelt. Dabei geht die Untersuchung zurück bis zu den instruktiven rechtsmethodologischen Arbeiten von Dietz (1934) und Engisch (1935) zu Normkollisionen und der Einheitlichkeit und Folgerichtigkeit der Rechtsordnung und entwickelt daraus ein modernes Handwerkszeug zur Auflösung von Normkollisionen, wobei die Einbettung des nationalen Rechts in die europäische Immaterialgüter- und Wettbewerbsrechtsordnung besondere Berücksichtigung findet. Dieses Handwerkszeug erhebt den Anspruch, über den konkreten Untersuchungsgegenstand hinaus auf alle denkbaren Rechtsüberschneidungen – dabei insbesondere auch jene von Immaterialgüterrechten – anwendbar zu sein. Aktuell rückt die Fragestellung mit Blick auf einen anderen Kollisionspartner des Urheberrechts – namentlich das Designrecht – in den Fokus der wissenschaftlichen Diskussion. Die diesbezüglichen Überlegungen des EuGH zur grundsätzlich kumulativen Anwendbarkeit kollidierender Regelungskomplexe (Rs. Cofemel) bedenkt die Arbeit dabei ebenso wie das Erfordernis einer wertungseinheitlichen, systematisch-teleologischen Interpretation im Einzelfall.

In einem zweiten Schritt arbeitet die Forschungsarbeit die Soll-Funktionen bzw. Zwecke beider Regelungskomplexe heraus und stellt sie in Verhältnis zueinander. Mit Blick auf das Urheberrecht entwirft sie ein integratives, monistisches Modell aus der Kombination eines wirtschaftsfunktionalen Primärzwecks mit zahlreichen – auch urheberpersönlichkeitsrechtlich



Timmy Pielmeier was honored with the Faculty Prize 2023 for his dissertation by the Ludwig-Maximilians-Universität's Faculty of Law (see also B III 6, p. 210).

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geprägten – Sekundärzwecken. Primär- und Sekundärzwecke stehen dabei nicht in einem Rangverhältnis, sondern in einem Verhältnis funktionaler Abhängigkeit. Das Lauterkeitsrecht setzt die Arbeit ins Verhältnis zum Urheberrecht und postuliert ebenfalls einen monistischen Zweck. Mit Bezug auf die eingehende Untersuchung Peukerts zu Güterzuordnungszwecken im Lauterkeitsrecht gelangt sie zu dem Ergebnis, dass Urheberrecht und Lauterkeitsrecht gänzlich verschiedene Zwecke verfolgen. Während das Urheberrecht einem Markt für ein immaterielles Gut durch Anwendung des Ausschließlichkeitsprinzips erst zur Entstehung bringt, setzt das Lauterkeitsrecht einen bestehenden Markt bereits voraus und bezweckt den Schutz des Marktmechanismus und dabei insbesondere der Wettbewerbsfreiheit. Ein generelles Kumulationsverbot zwischen beiden Regelungskomplexen muss deshalb ausscheiden.

Die Untersuchung bleibt aber auf diesem abstrakten Niveau nicht stehen, sondern stellt die entwickelte Methode in einem letzten Schritt auf den Prüfstand. Anstatt sich auf reine akademische Theorie und die

praktisch nur schwer anwendbare Forderung nach Wertungseinheitlichkeit zu beschränken, macht sie die Methode durch deren Illustration anhand von acht Fallgruppen greifbar. Gleichzeitig lassen sich die Thesen nachfolgend leichter überprüfen. Indem die Kollisionsmethodik anhand der konkreten Fallgruppen zur Anwendung gebracht wird, bietet die Studie Handelskammern und Rechtsanwendern ein anschauliches Handbuch zur Auflösung von Wertungswidersprüchen im Untersuchungsbereich, das über das Postulat abstrakter Methodenregeln weit hinausgeht.

Die vorliegende Arbeit greift beide Ansätze, den abstrakt-methodologischen und den einzelfallbezogenen, auf und verbindet so das Beste aus beiden Welten. Sie leistet einen Beitrag zur Methodenlehre unter Berücksichtigung des europäischen Rechts, zur Untersuchung der Soll-Funktionen von Urheber- und Lauterkeitsrecht im europäischen Binnenmarkt und schließlich zur Handhabung acht verschiedener konkreter Fallgestaltungen, die Kautelarpraxis und Rechtsprechung fortlaufend beschäftigen.



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Publication

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Fairness als Rechtsprinzip – Die anständigen Marktgepflogenheiten der Digitalwirtschaft

Von Plattformmärkten bis zu künstlicher Intelligenz erscheint "Fairness" als das Leitmotiv für die Regulierung der digitalen Wirtschaft. Was aber bedeutet der schillernde Begriff im Recht? Dieser sowohl aus grundlagenwissenschaftlicher als auch praktischer Sicht drängenden Frage geht die Arbeit "Fairness als Rechtsprinzip" nach. Auf Basis eines interdisziplinären Ansatzes entwirft sie eine neue, übergreifende Fairness-Theorie für das wettbewerbsbezogene Wirtschaftsrecht (Lauterkeits-, Kartell-, Immaterialgüter-, Geschäftsgeheimnis-, Vertrags-, Antidiskriminierungs- und Datenschutzrecht). Im Zentrum steht die Idee einer modernisierten Rückbesinnung auf die klassische Formel des Art. 10bis Abs. 2 PVÜ, wonach "unfair competition" jedes Wettbewerbsverhalten ist, das den "anständigen Gepflogenheiten in Handel und Gewerbe" zuwiderläuft. Die zuletzt in den Hintergrund getretene Annahme, es handele sich hierbei um einen kontrollierten Verweis auf außerrechtliche, gesellschaftliche Ordnungsgefüge, bedarf im Angesicht von Globalisierung und Digitalisierung neuer Aufmerksamkeit.

Fairness erscheint als das Leitmotiv für die Regulierung der digitalen Wirtschaft. Der Begriff steht im Zentrum zahlreicher Leitlinien zur Regulierung künstlicher Intelligenz: Internetplattformen und Tech-Unternehmen sollen sich an Regeln der Fairness orientieren, Wettbewerbsbehörden faire Märkte sicherstellen, etc. Obwohl das Phänomen der Fairness die Jurisprudenz in regelmäßigen Wellen beschäftigt, ist noch immer unzureichend geklärt, worin sein exakter rechtlicher Gehalt liegt. Dieser Zustand ist unbefriedigend – sowohl aus Perspektive grundlagenwissenschaftlichen Erkenntnisinteresses als auch aus praktischer Sicht auf Rechtssicherheit angewiesener Marktakteure.

Als internationalrechtlicher Ursprung des Ansatzes, moderne Märkte am Maßstab der Fairness zu messen, lässt sich der im Jahre 1925 eingefügte Art. 10bis Abs. 2 PVÜ begreifen: Danach ist "unfair competition" jedes Wettbewerbsverhalten, das den "anständigen Gepflogenheiten in Handel und Gewerbe" zuwiderläuft, bzw. "contrary to honest practices in industrial or commercial matters" ist. Diese klassische Formel wird bis heute als Bewertungsmaßstab für die Zulässigkeit oder Unzulässigkeit einer wettbewerblichen Handlung in diversen Rechtsgebieten herangezogen, in jüngerer Vergangenheit wieder in der EU-Richtlinie zum Schutz von Geschäftsgeheimnissen. Die gegenständliche Arbeit zeigt auf, dass eine modernisierte Rückbesinnung auf einen klassischen Interpretationsansatz von Art. 10bis in überzeugender Weise den Weg zum Verständnis auch eines übergreifenden Fairness-Prinzips des wettbewerbsbezogenen Wirtschaftsrechts zu weisen vermag.

Dabei handelt es sich um die Idee, dass es sich bei diesen "anständigen Gepflogenheiten" um einen Verweis auf außerrechtliche, gesellschaftliche Ordnungsgefüge handele – klassischerweise etwa Verkehrssitte, Handelsbräuche, Geschäftsethik oder unternehmerische Verhaltenskodizes. Derlei Erscheinungsformen "gesellschaftlicher Normsetzung" haben knapp 100 Jahre nach Hinzufügung des Art. 10bis Abs. 2 in die PVÜ einen ungeahnten Bedeutungsgewinn erfahren: Denn die Globalisierung bringt es mit sich, dass - in Ansehung territorial begrenzter Steuerungsmacht der Nationalstaaten – transnational agierende nichtstaatliche Akteure mit aufs Parkett der Ordnung des Welthandels getreten sind. Die Digitalisierung bewirkt, dass sich die Macht der Gesellschaftssteuerung zunehmend auf private Marktakteure verlagert, die über durch "Big Data"-Auswertung gewonnenes Wissen verfügen und die algorithmischen Infrastrukturen einer software-basierten, "smarten" Welt beherrschen.

So haben Sozialnormen der Software-Community, Allgemeine Geschäftsbedingungen mächtiger Plattformen, Verhaltenskodizes transnationaler Tech-Unternehmen und verhaltenssteuernde Wirkungen von Computer-Technik maßgeblichen Einfluss auf die "Spielregeln" digitaler Märkte. Wer etwa mit einem "selbstfahrenden Auto" von A nach B gelangen möchte, kann dies nur im von der Programmiererin/dem Programmierer vorgesehen Umfang – und auch die "Entscheidung" des Autos im Gefahr- und Schadensfalle wird durch den Code determiniert. Wer auf einer Plattform Waren und Dienstleistungen anbieten oder nachfragen, Immaterialgüterrechte nutzen möchte, kann dies nur in dem Maße, das Plattform-Regularien

und Plattform-Algorithmen gestatten: Die Kontroverse um "Upload-Filter" im Urheberrecht hat diese Problematik in den Fokus einer breiten Öffentlichkeit gerückt. Solch gesellschaftliche Normsetzung birgt offenkundig zahlreiche Gefahren – aber nicht nur: Seit jeher beruht etwa die "lex mercatoria" der Kaufleute nach populärer Lesart auf den Vorzügen sachverständiger Selbstregulierung. Umso mehr gilt heute, dass die technische Expertise, derer es etwa für sinnvolle technische Normung bedarf, auf Seiten privater Marktakteure liegt, während das staatliche Recht nach einer verbreiteten Metapher dem rasanten technischen Fortschritt regelmäßig "hinterherhinke". Der Analyse solcher Phänomene widmet sich das interdisziplinäre Feld der Rechtspluralismusforschung.

Nun liegt auf der Hand, dass sich die faktische Wirkmächtigkeit solch rechtspluralistischer Erscheinungen keineswegs auf diejenigen Aspekte des Wirtschaftslebens beschränkt, die rechtssystematisch dem Lauterkeitsrecht unterfallen. Vielmehr prägt gesellschaftliche Normsetzung auch die Regelungssphären angrenzender Gebiete der Wettbewerbsregulierung wie Immaterialgüter-, Kartell-, Datenschutz- und Vertragsrecht. Daraus folgt, dass die Formel der "anständigen Gepflogenheiten", so es gelingt, sie sachgerecht mit Leben zu füllen, weit über das Lauterkeitsrecht hinaus das Potential innehat, die in all jenen Gebieten vorzufindenden Fairness-Tatbestände zu durchdringen und den Weg zur Konturierung eines übergreifenden Rechtsprinzips zu weisen. Dessen Ziel ist klar: Aus den zunächst soziologisch beobachtbaren Gepflogenheiten sind vom staatlichen Recht diejenigen herauszufiltern, die im normativen Sinne "anständig" sind, und es ist denjenigen regulativ entgegenzutreten, die es nicht sind.

Die Arbeit weist vor diesem Hintergrund dem Fairness-Prinzip die Rolle zu, aus Sicht des staatlichen Rechts die Interaktion staatlicher und nicht staatlicher Marktverhaltensregeln in insgesamt gemeinwohldienliche Bahnen zu lenken. Das bedeutet einerseits, dass nicht-staatliche Marktverhaltensnormen, welche gewissen Legitimitätsstandards genügen und damit im normativen Sinne als "anständig" erscheinen, zur Konkretisierung staatlich-rechtlicher Fairness-Tatbestände in allen Bereichen des wettbewerbsbezogenen Wirtschaftsrechts heranzuziehen sind. Es bedeutet andererseits, dass staatliche Regulierer faktisch vorzufindende gesellschaftliche Normen durch anreizbasierte Strategien der "Meta-Regulierung" dahingehend steuern sollten, dass auch sie den staatlich-rechtlichen Gemeinwohlzielen, insbesondere der grund- und menschenrechtlichen Werteordnung, umfassend zum Durchbruch verhelfen und nicht zuwiderlaufen. Das Fairness-Prinzip kann damit als normatives Brückenprinzip zwischen Recht und Gesellschaft definiert werden.



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Analyse dysfunktionaler Effekte bei der Durchsetzung von Immaterialgüterrechten – Eine Gesamtbetrachtung

Immaterialgüterrechte, insbesondere Patente, sind subjektive Rechte, die zu einem bestimmten Zweck, d.h zur Erfüllung einer bestimmten Funktion gewährt werden. Diese Funktion ist ökonomisch betrachtet die Reduktion von Marktversagen, das durch unzureichende Anreize für Innovation und Kreativität auftreten kann. Die Ausgestaltung des Schutzes in diesem Bereich muss sich daher an der Funktion orientieren, um dysfunktionale Effekte durch Unterschutz oder Überschutz zu verhindern. Dies muss die Ebene der Rechtsdurchsetzung einschließen. Die Arbeit untersucht die verschiedenen Aspekte der Rechtsdurchsetzung im Gesamtkontext.

Rechtspositionen stehen und fallen mit der Möglichkeit ihrer Durchsetzung. Dabei ist die Rechtsdurchsetzung einerseits ein Fokalpunkt der Probleme in einem Rechtssystem, andererseits kann sie Ansatzpunkte für Lösungen bieten. Das gegenwärtige System der Rechtsdurchsetzung, insbesondere im Patentrecht, weist Charakteristika auf, die einen funktionsgeleiteten Ausgleich der Interessen der Rechtsinhaber und anderer Marktteilnehmer zumindest erschweren, in Teilen sogar unmöglich machen. Will man hier Abhilfe schaffen, so müssen die einzelnen Aspekte der Rechtsdurchsetzung insgesamt betrachtet werden, da der Versuch isolierter Problemlösung den Blick auf die eigentlichen Probleme verstellt. In der rechtswissenschaftlichen Literatur erschienen in den letzten Jahren zahlreiche Publikationen, die sich mit Einzelaspekten der Rechtsdurchsetzung und deren Problemen beschäftigten. Schwerpunkte lagen hier auf der Flexibilisierung des Unterlassungsanspruchs im Patentrecht, dem patentrechtlichen Trennungsprinzip, dem Missbrauch des Instruments der Abmahnung im Urheberrecht und der Grenzbeschlagnahme von rechtsverletzenden Waren im Transit. Über alle Schutzrechte hinweg stellt die Ausgestaltung des einstweiligen Rechtsschutzes ein nach wie vor hochaktuelles Thema dar. Diese Arbeit verknüpft bisherige Ansätze in der Lehre in zweierlei Hinsicht neu. Zum einen wird aufgezeigt, wie die einzelnen Teile der Durchsetzungssysteme zusammenhängen, um Lösungen an der richtigen Stelle zu implementieren. Zum anderen wird aus der Funktion der Schutzrechte eine Funktion der Rechtsdurchsetzung speziell im Bereich des Immaterialgüterrechts entwickelt. Auf dieser Funktion der Rechtsdurchsetzung aufbauend wird sodann für die einzelnen Maßnahmen der Rechtsdurchsetzung eine spezifische Funktion abgeleitet, die als Maßstab für eine funktionale Rechtsdurchsetzung herangezogen wird.

Die Arbeit beginnt mit einer Darstellung des völkerrechtlichen Rechtsrahmens in Form des Übereinkommens über handelsbezogene Aspekte der Rechte des geistigen Eigentums (TRIPS) sowie des EU-Rechts in Form der Durchsetzungs-Richtlinie. Ergebnis dieser Analyse ist, dass sowohl Völkerrecht als auch EU-Recht nicht nur ausreichend flexibel sind, um Durchsetzungsinstrumente funktionsorientiert auszugestalten, um zu einem Interessenausgleich zu gelangen, sondern eine solche Ausgestaltung des nationalen Rechts vielmehr fordern. Die Arbeit wendet sich sodann der Analyse der Elemente der Rechtsdurchsetzung in Deutschland zu. Hierzu werden Beispiele aus dem Durchsetzungsverfahren (die Trennung von Verletzungsfrage und Bestandsfrage sowie der einstweilige Rechtsschutz) und spezifische Ansprüche (Unterlassung und Schadensersatz) herangezogen.

Für alle Immaterialgüterrechte und deren Schutz entscheidend ist der einstweilige Rechtsschutz, da Verletzungen oftmals kaum revidiert und nur teilweise kompensiert werden können. Zugleich impliziert gerade der einstweilige Rechtsschutz das Risiko von Fehlentscheidungen, die beim vorgeblichen Verletzer gravierende negative Konsequenzen mit sich bringen können. Eine systemische Gefahr besteht vor allem bei ex parte-Verfahren, in denen den Interessen des mutmaßlichen Verletzers nicht genug Beachtung geschenkt wird. Die Arbeit zieht die zum Wettbewerbsund Markenrecht ergangene Rechtsprechung des Bundesverfassungsgerichts heran und überträgt sie auf die anderen Schutzrechte. So wird aufgezeigt, wie eine interessengeleitete Nutzung des Instruments des einstweiligen Rechtsschutzes gelingen kann. Als zweiter Aspekt des einstweiligen Rechtsschutzes analysiert die Arbeit den Schadensersatzanspruch des mutmaßlichen Verletzers für den Fall, dass sich der

Erlass der einstweiligen Verfügung im Nachhinein als unzutreffend erweist. Hier wird die Rechtsprechung des EuGH einer kritischen Betrachtung unterzogen und herausgearbeitet, dass durch die Interessenabwägung die in Deutschland bislang gängige verschuldensunabhängige Haftung gerechtfertigt ist.

Im Hinblick auf Verfahrensaspekte analysiert die Arbeit zudem das in Deutschland bestehende patentrechtliche Trennungsprinzip. Dabei werden einerseits die bestehenden Vorteile des Trennungsprinzips dargestellt, andererseits wird das systemische Versagen in der praktischen Funktionsweise des Systems herausgearbeitet. Die Arbeit zeigt auch auf, dass die letzten beiden Reformen die Defizite nicht beheben können. Im Hinblick auf die Kombination des Trennungsprinzips mit dem einstweiligen Rechtsschutz wird zudem gezeigt, dass das Trennungsprinzip zwingend aufgebrochen werden muss, um im Eilrechtsschutz den Interessen von Rechtsinhabern und mutmaßlichen Verletzern überhaupt gerecht werden zu können.

Bezogen auf die zur Verfügung stehenden Ansprüche, mit deren Hilfe Rechtsinhaber ihre Positionen durchsetzen können, wird der Fokus auf die Unterlassung und den Schadensersatzanspruch gelegt. Beide werden nicht nur isoliert auf ihre funktionsorientierte Ausgestaltung untersucht, sondern darüber hinaus auch im Wechselspiel miteinander. Hierzu wird auch die jüngst erfolgte Reform des Unterlassungsanspruchs im Bereich des Patentrechts kritisch betrachtet. Da die kodifizierte Flexibilisierung nach dem Willen des Gesetzgebers lediglich klarstellende Funktion haben soll, muss sie auch für die übrigen Immaterialgüterrechte gelten. Es wird auch herausgearbeitet, weshalb die Flexibilisierung des Unterlassungsanspruchs zwar eine Reihe von dysfunktionalen Effekten ausgleichen kann, jedoch systemische Schwächen, die etwa durch das Trennungsprinzip hervorgerufen werden, hierdurch nicht nachhaltig aufgefangen werden können.

Neben den Ergebnissen zu den Teilaspekten der Rechtsdurchsetzung findet sich am Ende der Arbeit das Plädoyer für eine gesamtheitliche Betrachtung der Rechtsdurchsetzung. Dazu gehört die Forderung, diese nicht auf die Durchsetzung subjektiver Rechte zu reduzieren, sondern sie im Hinblick auf die Verwirklichung der Zielsetzungen der Immaterialgüterrechte auszugestalten. So kann es gelingen, ein nachhaltig resilientes Schutzinstrumentarium zur Verfügung zu stellen, das sich an veränderte Verhaltensweisen der Marktteilnehmer anpassen lässt.



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2.20

Personality Merchandising and the GDPR: An Insoluble Conflict?

Personal images are personal data in the sense of the EU General Data Protection Regulation (GDPR). Hence, the GDPR also applies to the use of personal images of celebrities for advertising purposes. Over the last 100 years, German case law has developed a strong tradition, including an economic right of publicity in such images used in such personality merchandising. This thesis identifies the frictions between the two legal systems and proposes how these frictions could be avoided both de lege lata and de lege ferenda.

The broad scope of application of the General Data Protection Regulation (GDPR) and its primacy over national law pose some challenges for reconciliation with established national laws regarding the commercial exploitation of personal images for advertising purposes. There is however a jurisdiction that could serve as a model for illustrating this discourse: Germany. The GDPR aims to enhance control over personal data by restricting personal autonomy in private law, as consent is increasingly used as a tool to exploit personal data under the quise of personal autonomy. In contrast, the German legal system expressly recognizes the property component of the right to one's own image and de facto allows for the licensing of the right to one's own image to address the inevitable and widespread market of commercializing personal portraits. Therefore, an interesting contrast awaits exploration.

Both the German legal system and the GDPR pursue (partially) the same goal, namely to strengthen informational self-determination, and both aim to combat the widespread commercialization of personality to some extent. However, they employ different legal instruments. Under almost identical application conditions, the GDPR is supposed to override the German legal regime concerning the commercial exploitation of personal images for advertising purposes, notwithstanding the flexibility Article 85 GDPR provides for Member States. This raises the following research questions: How does the GDPR regulate the commercial exploitation of personal images for advertising purposes? Are the consequences practically appropriate and theoretically justified?

Ultimately, the enforcement of unstable legal relationships between affected individuals and data controllers does not seem to meet the needs of

celebrities and companies for collaboration. If in this regard the rules of the GDPR are not appropriate or reasonable, German experiences in dealing with the monetization of personal data could provide valuable insights for the GDPR to find a fair balance between the interests of the data economy through the exploitation of personal data and the protection of natural persons against the negative consequences of exploitation. Overall, the risk-based approach of the GDPR relies on clarifying and assessing risks in specific sectors, and in this regard, the German legal system regulating the right to one's image offers more than 100 years of experience in mature markets of commercial exploitation of personal images for advertising purposes.

Part I of the dissertation establishes a framework explaining how the German legal system has regulated merchandising in both contract and tort law. Part II examines the application of the GDPR to unauthorized merchandising and merchandising with consent. The regulatory differences between the German approach and the protection offered by the GDPR are presented in Part III. Against this background, Part IV offers solutions de lege lata and de lege ferenda for the identified discrepancies. Part V, finally, concludes the dissertation with 25 theses.

Since this dissertation aims to propose concrete solutions to a very practical problem, case studies are essential. Therefore, at the beginning of Part I, several German merchandising cases are listed that will be examined throughout the work, as they provide a good starting point for comparing different legal systems. On the one hand, by assessing the same cases decided by German courts under the rules of the GDPR, the thesis manages to illustrate issues related to the regulation of the GDPR in the field of merchandising. Thus, the insights into the

incompatibility of the two legal regimes are reliable and convincing. On the other hand, the solutions proposed in Part IV can be evaluated in real cases to determine which of them are robust enough to achieve a regulatory outcome that is not inferior to that of the German legal system.

To ensure that the overall picture of the German legal system and the GDPR is not compromised by the detailed description of cases, the first chapters of Part I and Part II provide a historical and comprehensive examination of case law and literature on both legal systems. The case study is only a tool to highlight regulatory differences. However, the proposed solutions are based on a comprehensive and in-depth understanding of the principles and objectives of the GDPR and German law in regulating the processing of personal data for merchandising purposes.



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2.21

Personalized Medicine – Incentives from Exclusivities Provided by IP and Regulatory Law

Traditionally, the (bio)pharma industry has relied on patent protection for its high-investment innovations. The industry's desire for broad markets and thus products applicable to the general population has led it to focus on treating the "average patient" according to the "one drug fits all" model, rather than personalizing treatment for individual patients. While this approach may be profitable for the industry, it has several disadvantages for patients and public healthcare, and even for the industry itself, as treatment for the general population does not take into account the specific differences between patients and hence can cause side or adverse effects. These in turn cause extra costs for public healthcare as well as negative consequences for patients. Developments in molecular biology, genetics and computer science have stimulated interest in personalized medicine (PM). PM offers great promise, particularly in the long term. However, the question remains as to whether the traditional legal means of incentivizing innovation can stimulate investment in research and development of PM and thus facilitate the paradigm shift away from a one-drug-fits-all approach. This has been particularly questioned due to the widespread allegation that PM will only be dedicated to smaller markets. If the market is small, the expected profit is also smaller, thus decreasing incentives. The financial opportunities that the market offers, rather than exclusivity per se, provide the incentive. The dissertation presents a comprehensive evaluation of exclusivity regimes, including those that are specifically designed for pharmaceuticals (such as SPC and regulatory exclusivity).

Considering the high relevance of PM, an assessment has been conducted to determine whether de lege lata incentives can encourage investment in PM. One of the most significant objections to the exclusivity-based incentives is that, even if exclusivity rights can be obtained, the industry may not be motivated to invest in PM due to the low expected return on investment. This, in turn, is a consequence of the small market.

The aim of the dissertation is to evaluate how de lege lata accommodates PM, considering specifically whether it allows for exclusivity, the extent of its protection, the rights it confers, and whether it provides de facto exclusivity.

Firstly, the author delves into the intricacies and dismantles the specific subject matter of PM that can benefit from exclusivity rights. There is no single official definition of PM, nor is there a single product or innovative process that alone constitutes the PM. PM is understood to be an innovative approach to healthcare in which therapy is tailored to a specific patient (subpopulation), including by the detection of biomarkers through the use of molecular diagnostic tests. For the purposes of the assessment, the author breaks down PM into certain innovations – diagnostics

and subpopulation drugs – which have been further analyzed in the terms of eligibility and ability to obtain exclusivity, rights conferred and scope of protection.

Although the EU has set the goal of becoming a leader in PM research, and the timely translation of PM into practice in Europe is highly relevant due to an ageing society and rising healthcare costs, there are no specific incentive instruments dedicated to PM. Instead, PM has to be accommodated by the traditional incentive mechanisms. Therefore, the analysis commences with the general legal framework for incentive mechanisms in the form of exclusivity rights available for the biotech and pharmaceutical sectors – the field in which the identified topics, diagnostics and subpopulation medicines – are found.

For the purposes of the patentability analysis, the specific subject matter that may be patentable has been distinguished and analyzed against the backdrop of PM. PM diagnostics is split into genes and diagnostic methods, while drug personalization falls under the patent category of (second) medical use claims.

The legal framework chapter also provides a comprehensive depiction of the framework of the regulatory exclusivity system in Europe. Regulatory exclusivity refers to the exclusive marketing rights or data exclusivity rights that are adjunct to the marketing authorization of a medicinal product. They prevent the authorization and thus the marketing of generic or biosimilar products, either by prohibiting the use of the originator's regulatory data (data protection) or by prohibiting the authorization itself (market exclusivity). Regulatory exclusivity is independent of and distinct from patents, and the effect of regulatory exclusivity is not affected by the existence of a patent.

Regulatory exclusivities gain relevance as an incentive for (bio)pharmaceuticals. However, it is important to keep in mind that the initial rationale was not only to provide incentives in the form of exclusivity for originators but also to enable generics to enter the market as soon as the exclusivity expires. This is to enable generic competition and facilitate affordability, and hence broad availability and access for patients. This cannot be overlooked when introducing new regulatory exclusivities or making a new architecture of the regulatory exclusivity system.

A comprehensive analysis of orphan drug incentives was conducted due to the similarities between PM and orphan drugs. The analysis concluded that the specific targeted regulatory exclusivity has been successful in increasing the number of new orphan drugs on the European market. Therefore, regulatory incentive mechanisms could be employed to achieve specific goals that cannot be accomplished through patent law due to the prohibition of discrimination based on technology under TRIPs. However, the analysis also highlighted significant dysfunctionalities within the regulatory exclusivity system caused by exclusivities blocking market entry of exclusivity-free drugs.

The analysis concludes that the patent system has largely adjusted to the latest developments in PM. Both diagnostics and subpopulation drugs are patentable in Europe. However, the enforcement of these patents is severely hampered. The issues with enforcement of patents on subpopulation drugs and the ambiguity of enforcement of these patents can be exploited by both the patent holders of subpopulation drugs and generic manufacturers, leading to dysfunctional effects on the market. The enforcement complexities have manifold reasons. First, these are the scenarios where the originator holds a second-

medical-use patent covering the (soon-to-be) offpatent substance or composition. The question that arises is how to distinguish the market for the drug covered by the second-medical-use patent from the market for the generics of the off-patent drug when both are composed of the same off-patent substance or composition. Second, the substitution obligation imposed by the Member States requires doctors to prescribe and pharmacists to dispense the cheapest medicine containing the particular active ingredient, regardless of the indication for which it is intended and regardless of the patent status of the medicine. Substantiating patent infringement has been a challenging task when a drug with the same active pharmaceutical ingredient(s) is prescribed and dispensed for a patented indication, despite the fact that the outer appearance of the generic drug does not suggest its use for that patented indication (known as skinny labelling) – this is referred to as cross-label use.

The tests used by courts throughout Europe have been diverse, and they have encountered difficulties in achieving the appropriate balance between the interests of generic manufacturers and originators. While generic drug marketing should not be impeded, originators of personalized drugs covered by secondmedical-use patent claims should not be deprived of patent incentives due to the impossibility of ceasing and desisting from patent infringing use. On the one hand, hindrances to the enforcement of second-medical-use patents can incentivize generic manufacturers to intentionally target, or negligently enjoy, marketing their generics not only for patentfree indications but also for those covered by secondmedical-use patents. On the other hand, if a generic manufacturer is threatened with an infringement lawsuit if it tries to market its generic product for offpatent indications, it may be reluctant to manufacture and sell generic products, thereby prolonging the de facto exclusivity of the off-patent.

In the first scenario, this can disincentivize investment in such personalized subpopulation drugs currently covered by second-medical-use patents. In the second scenario, it can contribute to the blocking of generics marketing.

The analysis of regulatory exclusivity reveals certain deficiencies within the system. While regulatory exclusivity can be used to address specific aims, such as incentivizing certain fields of medical innovation, there are shortcomings de lege lata that have led to interpretations of the provisions resulting in dysfunctional effects on the markets. The CJEU's interpretation of the Orphan Drug Regulation has led to the exclusion from the market of generic versions of drugs that themselves no longer enjoy exclusivity. As it is often the case that the same substance or composition has multiple orphan indications authorized at different times by the same sponsor, the CJEU's interpretation of the Orphan Drug Regulation has enabled de facto extension of the exclusivity of those orphan drugs whose own orphan drug market exclusivity has expired. This is particularly dangerous given the impact of exclusivity on the pricing of orphan drugs.

In conclusion the author provides recommendations de lege ferenda. These recommendations are particularly relevant as the European regulatory incentive system is currently under scrutiny, and the Commission has put forward legislative proposals to improve general pharmaceutical regulation.

The author concludes that the common perception presented in literature regarding PM and its small markets, at least for diagnostics and drugs for subpopulations, is short-sighted. The fact that a market is segmented does not automatically make it smaller or unprofitable.



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2.22

Global IP Law and Local Politics: The Political Economy of African Seed Business Law

Farmers worldwide have always produced their own seed, but for the last hundred years, seed companies have been producing seed for Western farmers. In order for seed companies to be able to develop a business model, it is necessary to introduce laws that give companies control over their varieties (intellectual property) and that keep counterfeit seeds from the market (seed laws). By providing specialized breeding products, seed companies allow farmers to produce more, while at the same time undermining the farmers' independence. Experts differ on whether this system can also work in the global South. Optimists emphasize the possibilities, but skeptics want farmers to remain self-reliant. They fear that laws made for seed companies are dangerous because they erode biodiversity. Both optimists and skeptics predominantly look at richer developing countries and do not sufficiently venture out to talk to farmers and local officials. This thesis fills exactly those two gaps. First, it presents an overview of the current state of "seed business law" in the poorest African countries. As it turns out, these laws are hardly used. Then, the thesis seeks to explain why this is so. It looks into rice seed in Senegal and cotton seed in Burkina Faso, making use of stakeholder interviews and visiting farmers and companies.

The World Trade Organization has promoted Westernstyle intellectual property (IP) norms around the globe via the Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPs Agreement, 1995). These IP-related endeavors can be seen as part of a global move in the direction of less state and more private entrepreneurship, often called "neoliberalism". Whereas some "orthodox" development scholars have welcomed the turn towards market institutions in development policy, other "critical" development scholars have argued that Western IP norms are illsuited to the needs of developing countries, especially in the agricultural sector.

Both orthodox and critical scholars have two blind spots in their research. On the one hand, they have focused on emerging economies and extrapolated their findings about "neoliberal" policy prescriptions to the rest of the developing world. The poorest African countries have been manifestly ignored in many studies about seed sector development. These countries are often classified as least-developed countries or low-income countries. On the other hand, there is a problematic lack of – even qualitative – data on how the law works on a day-to-day basis. Few scholars have asked farmers and seed companies about their exposure to the law.

The thesis aims to contribute to filling these geographical and empirical gaps. It specifically looks at the implementation of "seed business law" in Africa. It coins this term and defines it as including patent

law on agrobiotechnology, plant variety protection law and seed law. These are the legal frameworks that have been transplanted to the Global South over the past decades – in the so-called "neoliberal era" – to support seed companies on their mission towards agricultural intensification.



Bean seeds at the Kiziba Community
Seed Bank.

In addition to a broad desktop study including statistics and legal sources, the thesis makes use of interview-based comparative case studies of seed business law conducted regarding rice in Senegal and cotton in Burkina Faso. Senegal and Burkina Faso have the same legal framework for seed business law (OAPI intellectual property laws and UEMOA and ECOWAS seed laws), but different political economies, especially for crops as different as rice and cotton. Accordingly, comparing the two value chains allows for isolating the effects of political economy on the use of seed business law. The thesis links the fieldwork findings to the development studies literature.

The argument, which emerged bottom-up from the fieldwork, is that seed business law is not supporting multinational seed companies to the extent usually assumed, but is rather locally adapted to the interests of domestic elites (politicians, bureaucrats, traditional leaders, landlords, businessmen, army generals, traders etc.). These interests, part of the local political economy, sometimes revolve around clientelist redistribution via patronage networks, which results in separate circuits of capital accumulation. Local elites have a stake in local seed distribution and

try to capture profits from that seed value chain. Multinational seed companies know this and approach local elites to be included in the local seed economy. Multinational seed companies realize that this is a far more effective way of protecting technologies and capturing markets than using seed business law. Accordingly, seed business law is to a large extent disused (not implemented) and to some extent dysfunctional (working towards goals other than the ones for which it was designed), when it is used by local elites to further their own local rural agenda. The research shows that seed business law is not implemented - or at least not as intended because local rulers are not on board. They often have their own interests in seed production that can be disrupted by seed business law, which is therefore viewed with suspicion. Multinational seed companies turn out to be less powerful than expected.

To understand how international economic law works in poor African countries, one must take a genuine interest in how the domestic politics of those countries work. The thesis argues that legal scholars should scrutinize domestic elites when researching the effects of international legal norms on development in Africa.



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2.23

Art Investments - The Applicability of Investor Protection and Transparency Regulations to the Art Market

The thesis delves into the legal intricacies of distributed ledger technology (DLT)-based art investments, exploring how they fit into existing financial regulatory frameworks. In essence, it seeks to map the intersection of art, technology and law, providing insights into how DLT is reshaping the landscape of (art) investments and exploring the implications of this shift in the realm of investor protection and market transparency.

Initially conceived as a study on anti-competitive practices in the art market concerning potentially harmful investment behaviors in the secondary art market, this research ultimately adopted a more technical approach to art investments. It focuses on the evolving landscape of DLT-based investment forms in art and their regulation in the European Union and the U.S. The DLT, characterized by its decentralization and transparency, offers a new paradigm for asset management and ownership. Especially its contrast to the traditionally less regulated art market creates a rich ground for comprehensive legal analysis.

The research project starts from the following observation: In the face of increasing inflation rates and global political as well as economic turmoil, investors have been looking for alternatives to securities and bonds to store value. Among those asset classes benefitting from this trend is art. Record-breaking results at auctions as well as a quick market recovery following the pandemic have stirred the interest of a growing number of investors in this form of alternative investment, which promises stability in times of economic uncertainty. Technological advancements, particularly in DLT, have further facilitated access to art investments. In particular, concepts like "tokenization" and "fractional ownership" have dismantled traditional barriers, inviting a wider audience to partake in what was once a rather exclusive domain. It is through the division of high-value assets into smaller fractions and their tradability as well as traceability on a blockchain that art as an investment opportunity comes within reach of small and medium-sized investors.

With a growing target group of providers offering art-related investment services, the question arises to what extent art is regulated as an asset class. Traditionally, securities and bonds are safeguarded by stringent regulations ensuring transparency and investor protection. However, the art market, known for its opacity and discretion, presents a stark contrast. The longstanding practice of confidentiality in art transactions effectively veils critical information about previous and current sales. This lack of transparency leads to a deficit in essential data, making it challenging for investors to accurately assess risks in the art market.

This dissertation investigates whether art in its different manifestations as an emerging asset class falls within the ambit of existing financial instrument regulations in the EU and the U.S. It questions whether the current regulatory framework adequately addresses issues such as due diligence, risk disclosure and conflict of interest in the context of alternative forms of investment. To this aim, not only is the compatibility of the MiFID framework with the presented investment methods thoroughly examined, but also more recent regulatory approaches, such as the DLT Pilot Regime or MiCAR, are put under scrutiny.

The study also explores the potential for regulatory reforms that could enhance transparency and investor confidence in the art market. In this context, it is crucial to understand that while DLT presents opportunities for increased transparency and accessibility, it also poses unique challenges in terms of legal categorization and investor protection. The research aims to unravel these complexities, providing a comprehensive legal analysis that is integral to the sustainable growth of DLT-based art investments in an increasingly digitalized world.



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2.24

Aktionärsstruktur und Wettbewerb: Gefährden horizontal-diversifizierte Großaktionäre durch ihr Netzwerk aus Minderheitsbeteiligungen den Wettbewerb?

Die Bedeutung horizontal-diversifizierter Großaktionäre ("HGA") in der Aktionärsstruktur von börsennotierten Unternehmen nimmt stetig zu. Meist handelt es sich um institutionelle Investoren wie Vermögensverwalter mit ihren Investmentfonds, deren Beteiligungen weitläufige indirekte Unternehmensverflechtungen ("Common Ownership") innerhalb vieler Branchen entstehen lassen. Aufgrund des Ausmaßes des Marktstrukturphänomens stellt sich die Frage einer Verschärfung des Kartellrechts oder einer Regulierung der Vermögensverwaltungsbranche. Diese Arbeit untersucht die bisher entwickelte Schadenstheorie zu unilateralen Effekten durch Common Ownership und zeigt, dass diese auf zwei Grundannahmen beruht, die weder die rechtlichen Rahmenbedingungen noch die tatsächlichen Beteiligungsstrukturen vieler HGA ausreichend berücksichtigen.

Indirekte Horizontalverflechtungen entstehen, wenn mindestens zwei Unternehmen, die in einem horizontalen Wettbewerbsverhältnis stehen, einen gemeinsamen Anteilseigner haben. In Rechts- und Wirtschaftswissenschaft wird diskutiert, ob solche Verflechtungen über Minderheitsbeteiligungen zu wettbewerbsmindernden Effekten führen, die das europäische und deutsche Kartellrecht in seiner jetzigen Form nicht erfassen kann. Eine zentrale Bedeutung bei der Beantwortung der Frage nimmt die wettbewerbliche Schadenstheorie ein. Das Detailverständnis zu den Wirkmechanismen und Zusammenhängen ist jedoch noch unausgereift. Daran knüpft diese Arbeit mit ihrer Forschungsfrage an. Sie soll beantworten, ob sich unter Berücksichtigung der rechtlichen und tatsächlichen Rahmenbedingungen eine wettbewerbliche Schadenstheorie begründen lässt, die eine Verschärfung des Kartellrechts oder eine Regulierung der Vermögensverwaltungsbranche rechtfertigen würde. Dafür analysiert die Arbeit die für die Verflechtungen verantwortlichen Aktionäre, ihr Geschäftsmodell sowie ihre rechtliche Struktur und Handlungsbeschränkungen. Sie setzt sich das Ziel, die Auswirkungen der Aktionärsstruktur auf das Wettbewerbsverhalten aus einer rechtlichen Perspektive zu beurteilen.

Im Rahmen der Erläuterung der bisher entwickelten wettbewerblichen Schadenstheorie zu unilateralen Effekten durch Common Ownership wird herausgearbeitet, dass diese auf zwei Grundannahmen beruht, deren Überprüfung den Hauptteil der Arbeit bildet. Die erste Annahme geht von Einflussmöglichkeiten der HGA auf das Wettbewerbsverhalten ihrer Portfoliounter-

nehmen aus. Diese Möglichkeiten werden anhand des geltenden Rechts (insbesondere des deutschen Aktienund Kapitalmarktrechts sowie des europäischen Kartellrechts) und der wissenschaftlichen Literatur dargestellt und bewertet. Die zweite Annahme unterstellt HGA ein Gesamtbrancheninteresse. Die Überprüfung erfolgt zweistufig mit einem Fokus auf Vermögensverwaltern. Zunächst wird die Frage des Gesamtbrancheninteresses in der Theorie untersucht. Dabei liegt ein besonderer Schwerpunkt auf Investmentfonds, deren Treuhandeigenschaft sowie möglichen Interessenkonflikten. Sodann wird die Theorie einer empirischen Überprüfung an einem Praxisbeispiel unterzogen. Dazu werden ETF-Portfolios eines großen Vermögensverwalters mittels einer empirisch-quantitativen Analyse mit deskriptiver Statistik auf Branchenabdeckungen und Interessenkonflikte ausgewertet.

Die Arbeit kommt zu dem Ergebnis, dass sich die Schadenstheorie auf die meisten in der Praxis zu beobachtenden Verflechtungen nicht oder nur sehr eingeschränkt anwenden lässt. Beiden Grundannahmen stehen begründete Zweifel entgegen. Es sind zwar direkte und indirekte Möglichkeiten der HGA denkbar, Einfluss auf das Management der Portfoliounternehmen zu nehmen. Jedoch eignen sich diese in der Praxis kaum zu einer gezielten Einwirkung auf das operative Geschäft. Darüber hinaus gibt es umfangreiche rechtliche Grenzen durch das Kartell-, das Gesellschafts- und das Kapitalmarktrecht. Bei Beachtung dieser Vorgaben durch die HGA bleibt allenfalls Raum für eine unpräzise und indirekte Einflussnahme über das Vorstandsvergütungssystem.

Ob ein HGA ein Gesamtbrancheninteresse hat, ist eine Frage des Einzelfalls. Objektiv betrachtet dürften Vermögensverwalter als mit Abstand wichtigste Gruppe der HGA dieses Interesse nicht haben. Als Treuhänder verwalten sie Kapital im Auftrag ihrer Anleger über eine Vielzahl verschiedener Fonds. Jeder Fonds verfolgt andere Anlageschwerpunkte und enthält ein anderes Portfolio. Daraus ergeben sich in der Theorie Interessenkonflikte zwischen den einzelnen Fonds und ihren Anlegern, die ein einheitliches Interesse ausschließen. Die Vorgabe zur Wahrung der Anlegerinteressen ist rechtlich abgesichert. Der Vermögensverwalter darf daher nicht nach (s)einem übergeordneten Interesse handeln.

Die empirische Auswertung der verschiedenen ETF-Portfolios des untersuchten Vermögensverwalters beweist, dass Interessenkonflikte zwischen den Fonds in der Praxis bestehen. Die Branchenabdeckung liegt für die meisten Fonds mit ein bis zwei Unternehmen deutlich unter der des Vermögensverwalters als Einheit. Zudem unterscheiden sich die Beteiligungen der einzelnen Portfolios, wodurch Interessenkonflikte entstehen. Für den untersuchten Vermögensverwalter lässt sich demnach kein Gesamtbrancheninteresse nachweisen. Die Ergebnisse rechtfertigen begründete Zweifel am Gesamtbrancheninteresse der großen Vermögensverwalter im Allgemeinen. Die Aufteilung in einzelne Fonds und die Abdeckung einer Vielzahl von Anlageschwerpunkten führt dazu, dass Interessenkonflikte zwischen den Fonds einem Gesamtbrancheninteresse entgegenstehen. Auch die vertikale Diversifikation durch Beteiligungen in vor- und nach-

gelagerten Branchen spricht gegen ein Gesamtbrancheninteresse.

Für die Schadenstheorie folgt daraus, dass sie nur für den seltenen Fall von Beteiligungsunternehmen mit einem relevanten Einfluss auf das Management unproblematisch angenommen werden kann. Für eine Anwendung auf Vermögensverwalter als ihren meistdiskutierten Anwendungsfall fehlt es ihr an Plausibilität. Die teilweise in ökonomischen Studien festgestellten negativen Effekte bei indirekten Horizontalverflechtungen dürften vielmehr durch einen passiven Mechanismus hervorgerufen werden. Es erscheint denkbar, dass nicht eine aktive Einflussnahme, sondern gerade eine Passivität der HGA negative Auswirkungen auf den Wettbewerb zwischen Portfoliounternehmen haben könnte. Wenn HGA vom Management keine expansive Wettbewerbspolitik einfordern und ihre Einfluss- und Kontrollmöglichkeiten nicht wahrnehmen, könnte dies zu einer wirtschaftlichen Ineffizienz bei den Unternehmen führen.

Nach den Erkenntnissen dieser Arbeit ist zum aktuellen Zeitpunkt eine Verschärfung des Kartellrechts oder eine Regulierung zur Begrenzung indirekter Horizontalverflechtungen nicht angezeigt. Die Argumentation zu den Grundannahmen der Schadenstheorie setzt jedoch ein rechtmäßiges Verhalten der HGA und ihrer Portfoliounternehmen voraus. Von fundamentaler Bedeutung ist daher, dass die Wettbewerbs- und Finanzaufsichtsbehörden sich der potenziellen Gefahr bewusst sind und das bestehende Recht in enger Zusammenarbeit durchsetzen.



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2.25

Der Missbrauch einer kollektiven marktbeherrschenden Stellung in der digitalen Wirtschaft

Den Gegenstand dieser kartellrechtlichen Dissertationsarbeit bildet der Missbrauch einer kollektiven marktbeherrschenden Stellung in der digitalen Wirtschaft. In bisherigen Untersuchungen zur kollektiven Marktbeherrschung wird der kollektiven Marktbeherrschung oft nur eine ergänzende Aufmerksamkeit zuteil. Die digitale Wirtschaft zeichnet sich zudem durch einige Besonderheiten aus, die ein Entstehen von kollektiver Marktbeherrschung begünstigen können. Die Dissertation identifiziert das kartellrechtliche Verbot des Missbrauchs kollektiver Marktbeherrschung als ein effektives Instrument, um mit hochdynamischen und disruptiven Veränderungen im Kontext der digitalen Transformation von Wirtschaftssektoren fertig zu werden.

Die vorliegende Arbeit verfolgt einen qualitativen Ansatz, der sich auf die Rechtsprechung und die behördliche Praxis stützt, um induktiv auf die allgemeinen Kriterien für die Feststellung einer kollektiven Marktbeherrschung und für die Identifizierung des Missbrauchs einer kollektiven Marktbeherrschung zu schließen. Die Arbeit folgt auch der deduktiven Logik. Ausgehend von den allgemeinen Kriterien für die Feststellung einer kollektiven Marktbeherrschung und deren Missbrauch werden die Erscheinungsformen des missbräuchlichen Verhaltens in der digitalen Wirtschaft ermittelt, wobei die Besonderheiten der digitalen Wirtschaft berücksichtigt werden.

Die Lehre der kollektiven marktbeherrschenden Stellung ergibt sich aus dem Oligopolproblem. Unter dem Einfluss der oligopolistischen Interdependenz gibt eine kleine Anzahl von Unternehmen die Wettbewerbsinitiative im Innenverhältnis auf und erwirbt durch eine stillschweigende Zusammenarbeit (stillschweigende Kollusion) gemeinsam die Fähigkeit, unabhängig von anderen Marktteilnehmern zu handeln. Dies führt dazu, dass sie als eine kollektive Einheit gemeinsam eine marktbeherrschende Stellung einnehmen, als wären sie ein einziges Unternehmen.

Eine kollektive Marktbeherrschung kann nicht mit oligopolistischen Marktstrukturen gleichgesetzt werden. Eine Oligopolstruktur bzw. oligopolistische Interdependenz können starke Indizien für kollektive Marktbeherrschung sein, rechtfertigen jedoch keine zwingenden Schlussfolgerungen. Eine kollektive Marktbeherrschung kann nur dann entstehen, wenn das aus der oligopolistischen Interdependenz resultierende Parallelverhalten eine gewisse Stabilität aufweist. Mit anderen Worten: oligopolistische Markt-

bedingungen ermöglichen das Funktionieren von Mechanismen der stillschweigenden Kollusion.

Eine kollektive Marktbeherrschung kann nicht mit einer stillschweigenden Kollusion gleichgesetzt werden. Die kollektive Marktbeherrschung ist eine wirtschaftliche Machtstellung mehrerer Unternehmen in einem statischen Sinne. Die stillschweigende Kollusion ist ein Gleichgewicht, das die Wettbewerber in einem dynamischen Sinne im Rahmen wiederholter Interaktionen erreichen. Außerdem ist die stillschweigende Kollusion nur eine der Grundlagen für das Entstehen einer kollektiven Marktbeherrschung. Wirtschaftliche Verbindungen zwischen Unternehmen können ebenso dazu führen.

Die kollektive Marktbeherrschung hat in der digitalen Wirtschaft große Praxisrelevanz, da die Wettbewerbsbedingungen auf dem Markt der digitalen Wirtschaft stillschweigende Kollusion und damit die Begründung und Verstärkung einer kollektiven Marktbeherrschung begünstigen. Positive Netzwerkeffekte, Skaleneffekte und Großfusionen führen unweigerlich zu einer erhöhten Marktkonzentration. Vor allem Netzwerkeffekte in der Plattformwirtschaft stärken mit zunehmender Zahl der Nutzer die Marktmacht einzelner Plattformbetreiber. Wenn eine bestimmte kritische Masse an Nutzern der Plattformen erreicht ist, wird der Markt in Richtung einer oder weniger Plattformen kippen. Infolgedessen weisen die Märkte der digitalen Wirtschaft in der Regel oligopolistische Marktstrukturen auf.

Die Fallgruppe des Missbrauchs einer kollektiven Marktbeherrschung durch Hebelverhalten der Plattformen, d. h. durch die Übertragung von Marktmacht von einem Primärmarkt auf andere komplementäre Märkte, wodurch der Wettbewerb eingeschränkt wird, spielt in der Digitalwirtschaft eine große Rolle. Ein Hebelverhalten liegt insbesondere in den Fällen der Kosten-Preis-Schere, Selbstbevorzugung sowie der Kopplung und Bündelung vor. Der einzelne Plattformbetreiber hat einen starken Anreiz, seine Marktmacht auf weitere Märkte auszudehnen, um eigene, kaum mehr angreifbare digitale Ökosysteme aufzubauen. Das vertikal integrierte Geschäftsmodell ermöglicht den Plattformen, ihre bereits vorhandene Marktmacht zu nutzen, um weitere Märkte zu erschließen. Die virtuelle Natur von Daten und Algorithmen erleichtert die Übertragung von Marktmacht auf kosteneffiziente Weise. Entscheidend ist auch, dass die Besonderheiten des digitalen Marktes die Grenzen der Theorie des einzigen Monopolgewinns aufzeigen. Dies kann daher erklären, dass es für marktbeherrschende Plattformen profitabel ist, eine Hebelwirkung auszuüben.

Eine weitere bemerkenswerte Fallgruppe des Missbrauchs einer kollektiven Marktbeherrschung in der digitalen Wirtschaft bilden die "Facilitating Practices". Gemeint ist der Fall, dass wirksamer Wettbewerb durch das Bestehen einer kollektiven Marktbeherrschung bereits geschwächt ist und die "Facilitating Practices" weiter zur Aufrechterhaltung dieses Status quo beitragen. Zusätzliche Maßnahmen zur weiteren Erhöhung der Transparenz, zur Verstärkung der Anreize für die dauerhafte Aufrechterhaltbarkeit einer stillschweigenden Koordinierung sowie Maßnahmen zur Steigerung der Wirksamkeit von Droh- und Sanktionsmechanismen gegen Abweichungen sind Beispiele dafür. Die weiteren Beispiele sind Minderheitsbeteiligung und der Einsatz der Meistbegünstigungsklauseln, die die Verflechtungen zwischen Unternehmen verstärken und die Wiederherstellung eines wirksamen internen Wettbewerbs einschränken können.

Wenn die "Facilitating Practices" von einem Algorithmus durchgeführt werden, ist die Gefahr und das Ausmaß einer Schädigung des Wettbewerbs wahrscheinlich größer. Überwachungsalgorithmen, Signalisierungsalgorithmen und Sanktionsalgorithmen können die Wirksamkeit der drei Elemente, die das Entstehen und die Stabilisierung stillschweigender Kollusion begünstigen, erheblich verbessern. Hochintelligente Algorithmen können sogar die Entscheidung treffen, in bestimmten Fällen auf Sanktionen für Abweichungen zu verzichten, um Gewinneinbußen aufgrund von Fehleinschätzungen oder Preiskämpfen zu vermeiden.



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Publications

Xu, Zhiren, Theoretical Evolution and Development of the Collective Dominance, Competition Policy Research 1 (2022), 81-93.

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2.26

Legal Responses to Unjustified Threats of Patent Infringement – Intellectual Property Approach or Unfair Competition Approach?

This dissertation discusses the concept of "threats of patent infringement proceedings" as a market behavior whereby patent holders can make their rights known and enforced. However, the enforcement of a patent beyond its protectable scope could suppress competitors. In light of this, the thesis seeks to answer the question of how to assess this behavior and which criteria can be feasibly and universally applied within the legal framework of the Paris Convention. The jurisdiction-based analyses aim to offer a clear picture of how the legal systems in the UK, Germany, China and the U.S. resolve the common problem of groundless threats to sue for patent infringement, including from the perspective of statutes and judicial practice. A comparison of these four jurisdictions' similarities and differences is carried out, followed by a critical evaluation of the investigated legal solutions with the assistance of the principle of proportionality. Based on this analysis, the final chapter proposes a general rule for dealing with unjustified threats of patent infringement proceedings. The proposals contained in this chapter aim to provide suggestions for a coherent harmonization of rules on the international level.

This dissertation explores the topic of groundless threats of patent infringement. On the one hand, warning letters are of considerable significance, as patentees and potential infringers are encouraged to enter into a negotiating dialog to solve the infringement dispute. A constructive conversation can produce a similar outcome to a judicial trial, without imposing the costs of time-consuming and inefficient litigation on society. Nevertheless, the enforcement of a patent beyond its protectable scope may have an adverse impact on undistorted competition. Particularly, the accused infringer can become a victim of commercial interference and reputational damage. Considerable competitive harm arises when letters are aimed at secondary actors or at the public. In light of this, this dissertation seeks to answer the question of how to assess this type of market behavior and which criteria can be feasibly and universally applied.

The dissertation adopts doctrinal legal methodology. Functional comparative law is applied in Chapters 2 to 5. Chapter 6 puts forth proposals for systematic legislation on the issue for the international level. The dissertation first offers a clear picture of how different legal systems solve this common problem, including from the perspective of statutes and judicial practice. In the UK, the specific provisions restraining unjustified threats of patent infringement are contained in the Intellectual Property (Unjustified Threats) Act 2017. In contrast, Germany and China rely on the application of the general tort clause and unfair competition law. Both these models are followed in the U.S. legislation and case law.

The study analyzes the similarities and differences of the legal solutions offered by these four jurisdictions. The comparative research demonstrates that all four legal systems exemplify the intellectual property approach and the unfair competition approach. Under the intellectual property approach, patentees' liability derives from the general balance of interests inherent in this system. As long as the factual and legal situations are correct, proprietors are entitled to send out infringement warning letters, an instrument that forms an important part of the enforcement of their intellectual property rights. If the accusation is found to be factually incorrect, threat-makers must bear liability regardless of whether the threat was sent with recklessness or with negligence. This corresponds to a standard of liability for intellectual property infringement because infringers have to be subject to injunctive relief and damages when they negligently or intentionally trespass on protectable rights. The ex post analysis of the issue of infringement and validity is the determinant. Conversely, liability in the unfair competition approach originates from the inappropriate ways of making warning letters, and herein lie the ex ante considerations. The emphasis in this approach is placed on the type of threats, the parties to be targeted and the means of threatening. The question of whether the threat-maker has met the due-care requirements plays a crucial role in appraising the unjustified nature of the threat. The heart of the matter here is the behavior adopted against unfair competition. In short, the "what" and "how" are different points of focus in the intellectual property approach and the unfair competition approach, respectively.

All four jurisdictions well exemplify a combination of the intellectual property approach and the unfair competition approach, but in various ways. In the UK, China and Germany, patent holders tend to have more freedom to threaten primary actors compared to sending communications to secondary actors or to the public, while the U.S. legal system does not distinguish between these two situations. It developed a completely cumulative method combining the intellectual property approach and the unfair competition approach to restrain all badfaith warning letters. This double bad-faith standard in the U.S. embodies the rule of intellectual property in its accuracy requirement and the rule of unfair competition in its subjective bad-faith prerequisite.

In Germany and China, the combination of the intellectual property approach and the unfair competition approach also prevails. The judges there consider all circumstances in each individual case, including the content or the form of warning letters, how these letters have been issued, and whether the due-care obligations have been complied with. Considering all these factors allows courts to apply a sliding scale so that the strength of one criterion can compensate for the weakness of another. The core of this can be seen as a hybrid cumulative combination of the intellectual property approach and the unfair competition approach. In the UK threats regime, either the safe-harbor statute, which concerns the intent and manner of sending out warning letters, or the accuracy

of the content contained in the communication, could be a justification for threat-makers' behavior. This criterion is rooted in an alternative combination of the intellectual property approach and the unfair competition approach.

Chapter 5 undertakes a critical evaluation of these diverse approaches based on the principle of proportionality, with the goal of discerning which of the possible solutions is most suitable and just.

Chapter 6 presents a further elaboration of the suggested solution put forward in Chapter 5. Patentees are essentially allowed to threaten their competitors when they discover a potential patent infringement conducted by a competitor, except when the infringement allegation is objectively baseless and the threat is conducted in bad faith. What the patent holders are allowed is more restricted if the recipients are actual or potential retailers or customers of the competitors. Either the allegation of infringement has to be proven to be true from an ex post perspective, or threat-makers must ensure an equitably high degree of accuracy of the accusation and fulfillment of the due-care requirements. It is proposed that these requirements be added to item (iii) of Article 5(2) of the WIPO Model Provisions, serving as a model for implementing the obligations of Article 10bis(3) (b) of the Paris Convention and for modernizing the domestic legal framework dealing with unjustified threats of patent infringement.



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3 The Smart IP for Latin America Initiative

Humanity is facing huge challenges. While it was possible to mitigate the COVID-19 pandemic thanks to cutting-edge vaccination technology, it has been a reminder that other health crises continue to lurk, such as antimicrobial resistance and future pandemics. More apparent are the consequences of climate change, where the measures taken so far are not remotely sufficient to achieve the policy objectives. Less attention has been paid, at least in developed countries, to another growing problem: food security for the world population, which is still rapidly expanding under increasingly difficult conditions.

Global Challenges and Latin America

Overcoming such global challenges will only be possible through coordinated efforts of all parties involved. It is crucial that they all contribute what they have at their disposal and what they can do best. This concerns a number of factors that are available in different forms in the various parts of the world. One of the most important factors is a country's innovative strength, but also its specialization in certain sectors, which allows individual actors to play a leading role in overcoming certain major challenges in the interest of all. No less relevant is the availability of resources found in nature, above all renewable resources. Especially with regard to the said challenges, these two factors can be mutually dependent.

Latin America plays a prominent role here already today, and it has outstanding potential to assume an even more important position. With its large areas of land, this region is traditionally one of the world's major suppliers of food. In terms of energy production, the region has long provided a significant proportion of the resources used, particularly fossil fuels. With the transition to producing more sustainable energies, certain countries will take on an even more important task - not just in terms of the minerals required for the newest technologies. Beyond that, wind, sun and hydropower are almost inexhaustibly available, above all for the production of electricity. Furthermore, certain countries in Latin America have a wealth of natural and biological resources that are far from being fully exploited.

At the same time, the innovative strength in a number of Latin American countries is considerable as well, most notably in – but not limited to – the field of agriculture. Modern genetic technologies, in combination with digitalization and artificial intel-

ligence (AI), can dramatically increase efficiency by achieving substantially higher yields from the same space with less fertilizer. This not only directly benefits food security, but also reduces negative effects with regard to climate change in the long term and not least mitigates the ecological problems that agriculture itself is struggling with in the context of food production.

Exploitation of the Existing Potential in Latin America

Ensuring that such existing potential is put to optimal use is generally difficult, but particularly so in countries with unstable political conditions, widespread corruption and, as a result, usually insufficiently functioning competition. Unfavorable conditions in this respect often result in a regulatory framework that does not promote innovation; depending on the circumstances, an unfavorable legal system can even prevent investments from being made in the development of modern technologies that could help to overcome the major global challenges.

In this respect, Latin America is not necessarily different from other regions of the world, but it has other special features that need to be taken into account in order to understand why it is crucial to support these countries in their development. One is that the individual states could achieve far more if they were to pool their interests and assert them together in the global competition of political positions. Given their similar histories, comparable cultural ideas and, in particular, their common language, they would certainly be in a position to do so. The fact that scant use has been made of this at the diplomatic level to date has had an impact at various levels, including largely in the lack of scientific cooperation across national borders.

A further determining factor stems from the difficulties of Latin American countries to exploit the abundant natural resources in their own interest. Instead, foreign economic powers have repeatedly managed to assert their influence and realize their own interests instead of contributing to the region's upswing. The inglorious colonial period is well known, but even the independence movements at the beginning of the 19th century did not bring real autonomy. Instead, the emerging northern neighbor succeeded in expanding its influence in the region, symbolized to this day by what is known as the Monroe Doctrine; this name goes back to the speech given by U.S. President James Monroe to the U.S. Congress on 2 December 1823, in which he spoke out against influences from outside the American continent.

However, other players have long since entered the scene, one of which recognized Latin America's potential early on and has recently been trying to use its influence more and more offensively in its own interests: China. The concerns of this country, which has been on an inexorable rise to become a major economic power for around three decades, are quite understandable, as it is by no means self-sufficient in terms of feeding its own population, nor does it have the necessary quantities of raw materials that are needed in the course of growth and technological development. At the same time, it is obvious that the investments made over many years, especially in infrastructure facilities, were also in the interests of the Latin American countries concerned.

Yet the growing influence of China, but also of other economically powerful players, has so far hardly led to Latin American economies being able to increase their own innovative strength or put them in a better position to derive the primary benefit from their local resources themselves. If, for example, large quantities of lithium are still being exported today, instead of using it to build associated technology, such as batteries, and further develop this technology locally, this increases dependencies on players with no interest in the economic upturn in Latin America.

An absence of development is not only detrimental to the region itself. If Latin America cannot play the role it has the potential to play, it also undermines the endeavor to overcome the major global challenges. As mentioned above, this can only succeed if all parties involved coordinate their efforts in such a way that everyone does what they do best. To achieve this, it

is crucial that technologies be utilized where they have the greatest impact – but also that they can be further developed where experience can be gained. The reason this cannot be taken for granted is that the rights to such technologies are rarely in the hands of actors in those countries where the resources required for their utilization are found – again, just think of wind, sun or water.

This means that, on the one hand, access to technological knowledge must be as unhindered as possible and, on the other hand, the most efficient mechanisms to obtain the necessary rights of use and allow further developments are required. In essence, it is therefore a question of creating or optimizing regulatory framework conditions that help to exploit existing potential in the region in the first place, but which also benefit the whole world – just consider the almost limitless possibilities to produce hydrogen. Other examples include the cooperative use of the incomparable biological resources (for instance in the medical sector) or the sustainable production of food, with which Latin America can supply a large part of the world that is unable to do so on its own.

The Smart IP for Latin America Initiative

The Max Planck Institute for Innovation and Competition has been researching such correlations for decades, often focusing on specific regions. The special focus on Latin America has also existed for a long time. However, such research traditionally takes place at the Institute. The Smart IP for Latin America (SIPLA) Initiative was initiated in 2017 to complement this research with the aim of having a stronger impact on the ground, particularly in the form of closer academic cooperation, but also in close collaboration with other local stakeholders and decision-makers.

→ Website SIPLA Initiative: https://sipla.ip.mpg.de/en/initiative.html

The primary aim of the SIPLA Initiative is to provide a neutral forum for academic debate in the region, focused on highlighting the wider implications for stakeholders and policymakers and thus contributing to the optimization of certain regulatory frameworks. Although the focus is on aspects of intellectual property and competition law – as in the Institute's own activities

- research issues by their very nature extend far beyond this. Of interest are all those levels of regulation that have an influence on innovation processes and the economic – but also cultural – development of the countries in the region. The objective is to support and promote existing local endeavors in the expectation that the creation of sustainable socio-economic values will not only serve the region, but can ultimately benefit humanity as a whole.

The objectives pursued by the SIPLA Initiative serve Europe's vital interests as well. As mentioned, various forces are trying to benefit from the region's potential, but Europe not only has a special responsibility due to its history, but also the advantage of social and cultural proximity and familiarity. This offers unrivalled opportunities to cultivate and actively expand scientific and economic relations with Latin American countries. The importance of this is demonstrated not only by the fact that China has become the most important trading partner for the majority of these countries in just a few years, which should be a wake-up call, as it has overtaken not only Europe but also the USA. Further cause for concern is Europe's continued high dependence on fossil resources from economies that do not share Europe's values; this also shows the long-term importance of Latin America with regard to the joint development and utilization of sustainable technologies based on renewable resources.

Politics has certainly recognized the importance of Latin America, as shown in particular by the efforts to conclude free trade agreements with individual countries or groups of countries and, more specifically, to conclude long-term cooperation agreements with regard to the exploitation of natural resources. Germany's substantial investments in this region are also anchored in solid foundations, most recently in particular with the "German Accelerator" program to facilitate contact between companies and investors for projects in key areas. With a broad vision including various technologies, as well as specific programs in life sciences, climate technology and artificial intelligence, this program enables German start-ups to scale globally by accessing the world's leading innovation hubs in the U.S., Asia and South America. At the same time, this makes it easier for regional start-ups to cooperate with German companies. In this context, the SIPLA Initiative has a particularly important role to play, in that basic legal and economic research is

required in order to work out the specific framework conditions existing in the various countries. Specific research projects are being carried out to determine how legislation can be further developed in a targeted manner and, where appropriate, harmonized in order to strengthen the region as a whole.

Cooperation Partners

Despite the enormous importance of cooperation between the countries of Latin America in the intensifying global competition between economic clusters, the different local conditions must be taken into account. The region is currently a long way from economic and academic integration, which means that research projects need to be organized on a largely decentralized basis. Accordingly, it is important to have hubs in particularly important countries, which is being realized in the SIPLA Initiative in the form of "observatories" that currently exist at three universities that work in close coordination with the responsible persons at the Max Planck Institute for Innovation and Competition.

The first observatory was set up in November 2018 as part of a collaboration between the Institute and the University of Buenos Aires. The Institute has the closest organizational and personnel links with this observatory and it functions as the hub of the whole region. In order to add reinforcement to the decentral structure of the SIPLA Initiative, a second observatory was opened at the University Externado in Bogotá in November 2022; a third was instated at the University of São Paulo in April 2023.

The latter two observatories have a certain degree of autonomy, but they are committed to providing resources for joint projects and, in particular, to fostering collaborations with other local research institutions. Meanwhile, the Initiative has created a broad network of academics and experts that enables a constant exchange and allows the latest developments in the region to be recognized and incorporated. The Initiative also has its own newsletter for this purpose.

→ SIPLA Initiative newsletter:
https://sipla.ip.mpq.de/en/news.html

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On 27 October 2021, Reto M. Hilty signed a collaboration agreement with Argentina's Ministerio de Ciencia, Tecnología e Innovación, represented by State Secretary Diego Hurtado.

As part of the collaboration on specific research projects, several workshops are held annually in various places, usually with the participation of local experts. In addition, since 2018, a large, public interregional conference has been organized on current topics and that in recent years has been dedicated to the global challenges described above and the role of Latin America in solving them.

To secure the broadest possible academic support for such activities, the researchers involved in the SIPLA Initiative work together with an advisory board whose members are internationally renowned Latin American lawyers and economists who have a particularly good knowledge of the region and its special features.

Research Projects

Many of the specific projects carried out as part of the SIPLA Initiative are interrelated. The aim of this report is therefore to provide an overview of certain key research areas rather than to describe the individual projects. Individual projects are explained in detail on SIPLA's dedicated website. Some publications related to completed research projects of the SIPLA Initiative are also available there in full text or via links.

- → SIPLA Initiative projects: https://sipla.ip.mpg.de/en/projects.html
- → SIPLA Initiative publications: https://sipla.ip.mpg.de/en/publications.html

As the challenges and the potential of Latin America described above make clear, these key areas lie to a significant extent in certain technological sectors. However, the SIPLA Initiative is also interested in neighboring areas in which Latin America has a lot to offer – in terms of economic importance, but also culturally.

A project usually begins with a comparative analysis of certain conditions in the Latin American countries where the topic is of particular significance. This mostly relates to the regulatory framework, but also to practice, in particular based on court decisions or the involvement of actors concerned. This approach to a topic allows the research team to determine needs for more in-depth or more specific research activities. In certain core areas, this leads to continuing and long-term projects, while in others the comparative analysis is sufficient to make recommendations for the attention of decision-makers.

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Reto M. Hilty delivers an address at the launch of the book "Los derechos de Propiedad Intelectual y la Libre Competencia" held at the University Externado in Bogotá, November 2021.

Technology in General

In terms of overall technology issues, a current backbone of SIPLA research is patent law, which is generally seen as a mechanism for promoting innovation. However, this is not even half the truth, primarily because incentives to invest in innovation are based on quite different factors – or such incentives may be lacking, despite the possibility of obtaining patent protection.

Furthermore, the exclusivity provided by a patent can also have numerous negative effects. In particular, patent protection can prevent new technologies from being used in the public interest. In order to prevent such dysfunctional effects, WTO law in particular allows national legislatures to shape their patent legislations relatively flexibly.

In cooperation with twenty international patent experts, the Institute has worked out in detail what national patent legislation can stipulate, in its "Declaration on Patent Protection – Regulatory Sovereignty under TRIPS", which was published in 2014 and sets new standards worldwide (see Activity Report 2012–2014, B II 1.3). Important research projects in Latin America build on this fundamental research.

Above all, a comprehensive analysis carried out as part of the SIPLA Initiative has shown that national legislatures make little use of this flexibility in some cases. This is primarily to the detriment of their own economies, but in the wider context also to the detriment of other regions of the world, given that Latin America fails to use the potential described above to the greatest extent possible.

Based on this observation, a mixed research team of the SIPLA Initiative in cooperation with regional specialists has embarked on a large-scale and ambitious follow-up project: the development of a regional regulatory framework (its working title is "Regional Instrument on Patentability, Exceptions and Limitations") that contains concrete provisions on how the national legislatures of Latin America should organize their patent laws in a beneficial way. In the medium term, this Instrument is intended to win over political actors, while at the same time deepening the integration of national patent systems in the region and thus breaking down barriers to trade.

Technology-Related Areas

Based on this backbone of patent law research, the SIPLA Initiative also focuses on related regulatory areas. Most importantly, it deals with questions of technology transfer in the region. This goes far beyond the role played by patent law; above all, it is about practical problems, such as the framework of incentives and restrictive regulatory requirements, but also difficulties in negotiation or in obtaining licenses on reasonable terms.

In addition to aspects of contract law, issues relating to the functioning of competition are of pronounced interest, as technology agreements can put third parties at a disadvantage – an effect that can be amplified by exclusive rights such as patents. Here, too, follow-up projects are envisaged, focusing primarily on how national laws regulating anti-competitive practices should be framed in order to strengthen innovation competition in Latin America.

One area in which Latin America has unrivalled strengths, and which is also closely linked to technological progress, is its enormous biodiversity. The valorization of these genetic resources is to be expected in the pharmaceutical sector, for instance, but also with regard to the newest genetic technologies. However, currently, this potential has gone unrealized due to large bureaucratic obstacles and ineffective laws for benefit sharing. The research of the SIPLA Initiative in this area aims to make regulatory recommendations for the proper development of this potential for the benefit of the economies concerned.

Although legally different, technical or commercial knowledge also plays a decisive role in the competitive strength of market players. Its value arises primarily from secrecy, that is, protection is essentially of a factual nature – and therefore relatively weak. Particularly economically strong regions such as the USA, the EU and China have therefore endeavored to provide specific legal protection for trade secrets in recent years – while a comparative study, which will be completed shortly, shows that Latin America has a lot of catching up to do. The next step here will be to draw up recommendations.

Sustainable Technologies

In light of the above considerations concerning the great challenges the world faces and Latin America's potential to respond to them (B II 1.1, p. 52), in recent years the SIPLA Initiative has focused in particular on how the regulatory framework can strengthen incentives for innovations that serve sustainability. As mentioned, this concerns for instance resources available in the region as well as technologies relating to the production and storage of energy.

In the healthcare sector, there is a complex array of specific regulations, in particular market authorization law or special data-related aspects; however, patent law also plays a somewhat different role compared to other fields of technology. This became clear during the pandemic in connection with the highly politicized debates on whether patents on COVID vaccines or diagnostic technologies should be waived in order to ensure supply in poorer countries.

However, a position paper from the Institute that was influential at the political level highlighted the

devastating consequences that would follow from a blanket waiver.

Publication

→ Hilty, Reto M.; Pedro Henrique D. Batista; Suelen Carls; Daria Kim; Matthias Lamping; Peter R. Slowinski, Covid-19 and the Role of Intellectual Property – Position Statement of the Max Planck Institute for Innovation and Competition of 7 May 2021 (Max Planck Institute for Innovation & Competition Research Paper No. 21-13), 2021, 15 pages, http://dx.doi.org/10.2139/ ssrn.3841549, 20.05.2021.

Based on this, a targeted statement framed within the SIPLA Initiative addressed the specific situation in Latin America. In particular, it was pointed out that the Ministerial Decision on TRIPS and COVID-19 was to be implemented domestically and that it was only a clarification of the TRIPS Agreement's provisions, in particular those on compulsory licensing.

Another area of focus is food production, in which Latin America already plays a leading role in terms of scale. This involves completely different levels of regulation, such as new biotechnological methods, in the use and further development of which some Latin American economies are at the forefront, for example to make crops more resistant to the consequences of climate change. In the context of "smart farming", in contrast, the focus lies on legal issues relating to data and AI, among other things. Competition law also plays a prominent role in view of powerful market players in the agricultural sector. These topics will be the subject of the annual interregional conferences between 2024 and 2026.

Distinctive Signs

In the light of Latin America's role as one of the world's major suppliers of food and the region's significance in terms of global food security, collectively usable distinctive labelling is of great importance. Legal certainty is crucial if such signs are to be effective in the interests of both suppliers and buyers. To achieve this, various legal instruments are available based on different regulatory approaches: trademarks, collective marks, certification marks, geographical indications and seals.

First, the SIPLA Initiative conducted a comparative study. It found that several Latin American countries have indeed adopted such legal instruments in the last several years to reach new markets. However, in cooperation with local experts, it was learned that in some cases, the tools are not adequate to achieve the intended objective or to promote the local sustainable development.

Publication

→ Blasetti, Roxana Carmen; Pedro Henrique D. Batista; Suelen Carls, Distinctive Signs for Collective Use in Latin America: Development Promotion by Valuing Origin and Quality (Max Planck Institute for Innovation & Competition Research Paper, No. 22-15), 2022, 131 pages, http://dx.doi.org/10.2139/ssrn.4153286, 05.08.2022.

The next step is therefore to develop guidelines or parameters to encourage public policymakers to use the available tools properly and efficiently in a way that fits the countries' necessities. The aim is to address best practices, including technical standards, labelling, quality and reputation. Cooperation amongst local producers and a joint marketing and communication strategy are also to be promoted. As far as geographical indications are concerned, guidance is needed on how to make effective use of the flexibilities of WTO law in national legislation while complying with its obligations.

The growing use of such legal instruments also raises competition concerns. Measures may be needed to avoid market distortions and ensure a fair and healthy competition environment. However, this leads to a large number of research projects, especially as the situation in the region is quite heterogeneous. With the resources currently available, the projects deemed necessary can therefore only be tackled selectively at best.

Creative Sectors

The SIPLA Initiative also deals with aspects of the creative industries, which are of outstanding importance for Latin America from different perspectives. Traditionally, the region's cultural industries play a major role, especially in the music sector, but also in film. The Latin cultural market finds its frontiers expanding, arousing great interest in various markets. Collective management organizations, which collectively manage the copyrights to such works and are particularly responsible for ensuring that rights

holders are adequately paid for the use of their works, play a central role in this.

However, such collecting societies often enjoy monopolies and are prone to inefficient structures due to inadequate statutory requirements and a lack of public supervision. This is not only to the detriment of the rights holders they represent, as it is often the creatives who do not receive adequate remuneration. Since such societies cooperate worldwide via reciprocal representation agreements, the functionality of the system as a whole also suffers.

A large-scale study conducted between 2019 and 2021 on the situation in Latin America, as never before undertaken, gave a mixed picture. It also showed that – similar to patent law – important flexibilities provided by international legislation are not being put to use. Here too, this tends to lead to dysfunctional effects, particularly in that uses of protected works in the public interest are not permitted.

At the classical cultural level, this primarily affects so-called transformative uses, meaning that rights to pre-existing works hinder the development of new creations. However, copyright protection extends much further – including into educational use. Above all, however, research is at risk of being hindered. The less a country ensures that the required sources of information can be accessed and used despite existing copyrights, the more it harms its own scientific community.

This has particular consequences in areas where the use of innovative technologies is required, such as text and data mining. If the necessary authorizations are missing from copyright legislation, as is currently still the case in most Latin American countries, this has devastating consequences – not to mention leaving the potential of Al untapped.

It is not a convincing solution for a country to simply accept illegal user behavior instead of legally permitting what serves the nation's cultural and scientific progress. For this reason, the SIPLA Initiative is also running a large-scale project to develop a regional regulatory framework in copyright ("Regional Instrument on Permitted Uses in Copyright"). Here, however, a model exists in the form of an "International Instrument on Permitted Uses in Copyright Law", which the Institute has developed in collaboration with a large number of scholars from around the world (see Activity Report 2018–2020, B II 1.4).

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Outlook

By its very nature, the Initiative is a long-term endeavor, as its objectives are not limited to legal and economic analyses and corresponding publications, but aim at sustainable economic and technological development. On the one hand, this is achieved through a rapidly growing academic network. The Institute's research in collaboration with the observatories is indeed attracting lively interest in the countries concerned, which allows for the successive expansion of interregional cooperation. On the other hand, such contacts increase the possibilities of exerting direct influence on decision-makers with regard to optimizing the regulatory legal framework in the countries concerned. However, all this takes time and is not free of concerns, in particular regarding longterm funding.

It is in fact not always easy to finance the local research activities in the region, especially when it comes to public funding; in most countries, such resources are rarely available to the required extent. At the same time, it is crucial that players from industry who are willing to provide funding but are driven by their own interests do not capture the Initiative, as this would severely damage the independence and credibility of the research activities and thwart the Initiative's objectives as described above.

The continuation of the Initiative is currently secured via the special funding of an Emeritus Research Group through the Max Planck Society until 2026. It is to be hoped that this funding will remain in place to the extent necessary in the following years to be able to continue the various projects outlined in this report. Some of them will then still be running and should be further developed to achieve the overall goals. In view of this aim, local efforts are also being made



Francisco Beneke Ávila at the inauguration of the second observatory hosted by the University Externado in Bogotá in November 2022.

at various levels in the region in order to put the financing of the overall Initiative on a broader and, above all, more solid basis.

However, the coordination of the whole Initiative with its various projects is being carried out from the Max Planck Institute for Innovation and Competition in Munich, as the necessary experience is only available here and it is also only this globally respected Institute that has the necessary standing to bring the various players together. To ensure this coordination, secure central funding is crucial. Nevertheless, parallel funds are also required for the core activities on site, which have to be planned and securely financed in the long term.

Smart IP for Latin America: Overcoming Global Challenges Through Appropriate IP and Competition Policies in Latin America.

Project Leader

Reto M. Hilty

Project Participants

Pedro Henrique D. Batista, Francisco Beneke Ávila, Roxana Carmen Blasetti, Juan I. Correa, Nicolás Hermida, Matthias Lamping

Project Duration

Since 2017



III Publications, Presentations, Supervised Research Theses, and Other Scientific Activities

1 Publications

1.1 Journals

1.1.1 Journals of the Institute

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Oxford University Press, Oxford, C.H. Beck, Munich, XXVIII + 1204 pages.

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1.1.2 Journals Co-edited by Members of the Department

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sic! – Zeitschrift für Immaterialgüter-, Informations- und Wettbewerbsrecht, Schulthess, Zurich.

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1.2 Series

1.2.1 Series of the Institute

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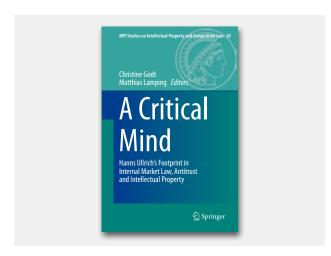
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see also Blasetti, Roxana Carmen; Pedro Henrique D. Batista; Suelen Carls

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see also Hilty, Reto M.; Pedro Henrique D. Batista; Francisco Beneke Ávila; Roxana Carmen Blasetti; Suelen Carls; Juan I. Correa; Matthias Lamping; Gonzalo Maria Nazar de la Vega see also Hilty, Reto M.; Pedro Henrique D. Batista; Suelen Carls; Daria Kim; Matthias Lamping; Peter R. Slowinski

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see also **Drexl, Josef; Luc Desaunettes-Barbero; Jure Globocnik; Begoña González Otero; Reto M. Hilty; Jörg Hoffmann; Daria Kim; Shraddha Kulhari; Heiko Richter; Stefan Scheuerer; Peter R. Slowinski; Klaus Wiedemann**

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Xu, Zhiren, Theoretical Evolution and Development of the Collective Dominance, Competition Policy Research 1 (2022), 81–93.

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Hilty Reto M.; Jyh-An Lee; Kung-Chung Liu, Artificial Intelligence and Intellectual Property, Oxford University Press, Oxford 2021, XII + 449 pages.



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2 Presentations

Banda, Carolina

2023

Presentation on panel O Open Health do Brasil encontra o European Health Data Space: desafios de portabilidade, dados abertos e reaproveitamento de dados de saúde; Computers, Privacy and Data Protection (CPDP) LatAm 2023, Fundação Getulio Vargas, Rio de Janeiro, online, July 2023

2022

Data Sharing in Emerging Economies & Climate Action in Brazil; Max Planck Law Annual Conference 2022: Solidarity, Max Planck Law, Berlin, November 2022

Does the current competition law framework address the data access and sharing problems in mHealth?; 17th ASCOLA Conference: Competition and Innovation in Digital Markets, Academic Society for Competition Law (ASCOLA), Universidade Católica Portuguesa, Porto, July 2022

2021

Designing an EU Legal Framework for Health Data Collected by Mobile Devices and Apps (mHealth); Max Planck Law Annual Conference 2021: What is the future of law?, Max Planck Law, Berlin, October 2021

Barycki, Michał

2023

Transferability of the priority right to obtain a patent under the European Patent Convention – an analysis of the issue based on the case law of the Board of Appeal of the European Patent Office; 42nd Seminar for IP Courts Judges, Patent Attorneys and Barristers in Poland, Cedzyna, September 2023

Stimulating development of hydrogen technologies in the Visegrad Group countries – between state intervention and patent law; 18th Annual Conference of the EPIP Association: IP, Innovation and Technology – Challenging the Present, Inspiring the Future, European Policy for Intellectual Property (EPIP) Association, Jagiellonian University, Kraków, September 2023

Stimulating the development of hydrogen technologies in Europe; Max Planck Climate Conference for a Sustainable Anthropocene, Max Planck Law Initiative Law, Climate Change, and the Environment, Berlin, July 2023

Hydrogen Technologies and Patent Policy – Towards Providing New Incentives for Innovation; Fifth IP & Innovation Researchers of Asia (IPIRA) Conference, IP & Innovation Researchers of Asia (IPIRA) Network, Nanyang Technological University, Singapore, online, March 2023

2022

Issues Concerning the Transfer of the Right of Priority Regarding European Patent Applications; Fourth IP & Innovation Researchers of Asia (IPIRA) Conference, IP & Innovation Researchers of Asia (IPIRA) Network, online, February 2022

2021

Public Sphere; Seminar Civil education in the community, Doctoral School of Social Sciences, Jagiellonian University, Kraków, October 2021

Non-fungible tokens – a new kind of electronic notice, or the need to redefine the concept of property rights?; Doctoral School of Social Sciences, Jagiellonian University, Kraków, October 2021

Batista, Pedro Henrique D.

2023

Economic View of Innovation; 43rd International Congress on Intellectual Property, Brazilian Intellectual Property Association (ABPI), Rio de Janeiro, August 2023

Digital Sequence Information (DSI) under the Nagoya Protocol: Need for Further Regulation?; 41st ATRIP Congress: The Interface of Intellectual Property Law With Other Legal Disciplines, International Association for the Advancement of Teaching and Research in Intellectual Property (ATRIP), University of Tokyo, July 2023

Panel Energia Renovável, Transferência de Tecnologia e Inovação: Visão Geral sobre Regulação e Mercado (moderator); Smart IP for Latin America Annual Conference 2023: Transferência Regional de Tecnologia e Inovação – O Exemplo da Produção de Energia Renovável, University of São Paulo, Max Planck Institute for Innovation and Competition, São Paulo, April 2023

Responsabilidade das Plataformas Digitais por Violação de Direitos Autorais e Marcas na União Europeia – Visão Geral; XXII ASPI International Intellectual Property Congress, Association for Intellectual Property of the State of São Paulo (ASPI), São Paulo, online, March 2023

2022

Moralische Gründe für den Patentierungsausschluss CRISPR-bezogener Erfindungen im medizinischen Bereich; Symposium Fragen der Stammzellethik, University of Düsseldorf, December 2022

2021

Das Nagoya-Protokoll und seine Umsetzung in der EU und in Deutschland; Symposium Biobanken: Ressource für Wissenschaft, Diagnostik und Therapie, Gemeinschaft Deutscher Kryobanken (GDK), Münster, November 2021

Vacinas, Patentes e Desenvolvimento; Faculty of Law at Centro Universitário 7 de Setembro, Fortaleza, online, June 2021

Beneke Ávila, Francisco

2023

Feasibility of a multilateral competition law regime through the lens of political economy; Private Rights and Public Autonomy in a Fragmented World II, University of Cambridge, Ludwig-Maximilians-Universität, Munich, June 2023

Workshop Competition law and environmental harm by dominant firms (moderator); Max Planck Institute for Innovation and Competition, São Paulo, April 2023

El análisis de instituciones económicas en el Derecho de competencia; Evento de Presentación de la Revista de Derecho Administrativo No. 21, Círculo de Derecho Administrativo, online, April 2023

2022

Workshop Introducing competition in markets strategic for sustainable development objectives in Latin America (moderator); Max Planck Institute for Innovation and Competition, Universidad Externado de Colombia, Bogotá, November 2022

Consideraciones de desarrollo económico en el derecho de competencia; Inauguración del Observatorio de Propiedad Intelectual en la Universidad Externado de Colombia, Smart IP for Latin America (SIPLA), Max Planck Institute for Innovation and Competition, Universidad del Externado, Bogotá, November 2022

Political economy considerations in the balance between private rights and public autonomy in international competition law; Private Rights and Public Autonomy in a Fragmented World, University of Cambridge, Ludwig-Maximilians-Universität, Cambridge (UK), September 2022 Workshop Adapting Competition Law to the Socio-Economic Needs of Latin America (moderator); Max Planck Institute for Innovation and Competition, Buenos Aires, March 2022

2021

Derecho de Competencia y Propiedad Intelectual en Latinoamérica; Lanzamiento del libro Los derechos de Propiedad Intelectual y la Libre Competencia, Universidad Externado de Colombia, Bogotá, November 2021

Aspectos de derecho de competencia en la transferencia de tecnología; Desafíos de la gestión tecnológica y la propiedad intelectual como políticas públicas: del laboratorio al territorio, Ministerio de Ciencia, Tecnología e Innovación de Argentina, Buenos Aires, October 2021

Chen, Yiqiong

2023

Access to and (Re-)use of Data for Developing AI Systems; 7th Annual Max Planck Law PhD Workshop, Max Planck Law, Berlin, October 2023

Access to and (Re-)use of Data for Developing AI Systems; EIPIN Doctoral Seminar, EIPIN, Max Planck Institute for Innovation and Competition, Munich, June 2023

Chiettini, Anna

2023

Generative AI as Creator – Redefining the Boundaries of Patent and Copyright Law (joint presentation with Richard Brunner and Malte Köllner); Dennemeyer, Munich, October 2023

The inventive step in AI-related inventions; 41st ATRIP Congress: The Interface of Intellectual Property Law With Other Legal Disciplines, International Association for the Advancement of Teaching and Research in Intellectual Property (ATRIP), University of Tokyo, July 2023

The inventive step in AI-related inventions under the EPC and in EPO practice; IP Researchers Europe Conference 2023 (IPRE 2023), University of Geneva, World Intellectual Property Organization (WIPO), World Trade Organization (WTO), Geneva, June 2023

2022

The Inventive Step in Al-Aided/Generated Inventions; Nordic/German IP Network Meeting, Stockholm University, September 2022

Conde Gallego, Beatriz

2023

Standards v. Patents – Competition Law and Access to Technologies; Boehmert & Boehmert Training Course, Munich, July 2023

2022

Discussant to the paper presented by Mathias Scheer on FRAND Obligation after the Transfer of the SEP – The Legal Successor's Obligation under Competition Law; Florence Seminar on Standard Essential Patents, European University Institute, Max Planck Institute for Innovation and Competition, Florence, October 2022

Salud pública, sostenibilidad e innovación: el papel de las normas y la política de competencia; Congreso internacional: El acceso a las prestaciones sanitarias esenciales en tiempos de pandemia, Universidad Nacional de Educación a Distancia (UNED), Madrid, online, July 2022

Standard Essential Patents and Competition Law: Reaching the Boundaries of Competition Law or Exploring New Paths to Protect Dynamic Competition?; Jean Monnet Conference: Protection of Intellectual Property in the Digital Era, EUPROIN Project, Association Henri Capitant Moldova, Chişinău, online, March 2022

Die Rolle des Kartellrechts bei der Förderung des Klimaschutzes (together with Jörg Hoffmann); Climate Change Workshop, Max Planck Institute for Innovation and Competition, Munich, February 2022

2021

EIPIN IS Lessons for IP Research: Experiences and outlook; Final EIPIN IS conference: Vision(s) for Intellectual Property in Europe – The Role of Research, European Intellectual Property Institutes Network Innovation Society (EIPIN IS), Centre for International Intellectual Property Studies (CEIPI), University of Strasbourg, online, June 2021

Dermawan, Artha

2023

On the Cambrian Explosion of Emotional Generative AI: Could the Common Framework of Copyright Be the Way Forward for the ASEAN?; Regulating Artificial Intelligence Workshop, The University of Lapland, online, December 2023

On Generative Artificial Intelligence vs. Copyright Law: What's Next?; The Nordic Conference on Law and Information Technology 2023: Law, AI and Society – Regulating AI-Based Technology as Transition to a Sustainable, Resilient and Inclusive Future, The University of Lapland, Rovaniemi, October 2023

The ASEAN Way: An Author Centric Approach to Regulating Artificial Intelligence Systems; Inaugural Asian Intellectual Property Scholars Conference 2023, The University of Washington School of Law, Seattle, October 2023

Sustainable Patent Governance of Artificial Intelligence in the EU; 23rd Intellectual Property Scholars Conference 2023, Benjamin Cardozo Law School, New York City, August 2023

Fair and Equitable Remuneration for Musicians in the Digitized Music Industry: Development and Challenges in Indonesia; IP Researchers Europe Conference 2023 (IPRE 2023), University of Geneva, World Intellectual Property Organization (WIPO), World Trade Organization (WTO), Geneva, June 2023

Sustainable Patent Governance of Artificial Intelligence. Recalibrating the European Patent System to Build Resilient Infrastructure, Promote Inclusive and Sustainable Industrialization, and Foster Innovation (SDG 9); GAI-2023: Governing Artificial Intelligence – Designing Legal and Regulatory Responses, Trinity College Dublin, Vrije Universiteit Brussel, Brussels, May 2023

Text and Data Mining Exceptions in the Development of Generative AI Models: What the EU Member States Could Learn from the Japanese "Non-Enjoyment" Purposes?; Fifth IP & Innovation Researchers of Asia (IPIRA) Conference, IP & Innovation Researchers of Asia (IPIRA) Network, Nanyang Technological University, Singapore, March 2023

Can Artificial Intelligence and Patent Law be Regulated to Achieve the UN Sustainable Development Goals?; Istanbul Youth Summit 2023, Youth Break the Boundaries, Istanbul, February 2023

Intellectual Property Law, Artificial Intelligence and the Metaverse; WhatNext.Law Conference 2023: Living Together in the Cities of the Future and the Metaverse, Nova School of Law, online, February 2023

2022

Fan-Powered Royalties (FPR) for Musicians in the Digitized Music Platforms: A New Alternative to the Pro-Rata System?; The Second IP/IT Colloquium and Recreating Europe Conference on Video Games: Accessibility and Cultural Heritage in the Digital Age, University of Szeged, November 2022

Text and Data Mining Exceptions in the Development of Creative AI-Assisted Output; Research Atelier AI and IP, Institute for Civil Law, Intellectual Property Media and Data Protection Law (IRGET), TU Dresden, July 2022

Drexl, Josef

2023

MPI Project: Data Governance in Emerging Economies to Promote the Sustainable Development Goals; Global Data Law Conference Series: Comparative Data Law, Max Planck Institute for Innovation and Competition, University of Passau Research Centre for Law and Digitalisation (FREDI), Munich, December 2023

Data Governance in Emerging Economies to Achieve the SDGs – Methodology; Workshop Data Governance in Emerging Economies to Achieve the SDGs, Max Planck Institute for Innovation and Competition, Munich, December 2023

Balancing Superior Bargaining Power under the Roles of the EU Data Act; Workshop Exploring Pathways to the Standardization of Licenses for Data and Machine Learning Models, Global Partnership on Artificial Intelligence (GPAI), Washington, online, June 2023

The Data Act: Prohibition of International Data Transfers as an Obligation of Cloud Service Providers; G-IPTech Centre Launch Event: Global IP/IT Challenges for a Sustainable Algorithmic Society, Queen's University Belfast, June 2023

The Data Act: Prohibition of International Data Transfers as an Obligation of Cloud Service Providers; EIPIN Conference 2023: Coordination of Intellectual Property Law with the New European Data Law, EIPIN, Max Planck Institute for Innovation and Competition, Munich, June 2023

L'interdiction du transferts des données non personnelles au pay tiers: Data Governance Act et Data Act; Colloque international: Démondialisation et re-mondialisation, Association Internationale de Droit Economique (AIDE), European University Institute, Florence, May 2023

2022

The Emerging European Data Law and the Objectives of Innovation & Competition; Workshop Data Sharing & Climate Action in Brazil, Max Planck Institute for Innovation and Competition, Mackenzie University, São Paulo, December 2022

Regulation of the Data Economy in Emerging Economies (Context and Overview); Workshop Data Sharing & Climate Action in Brazil, Max Planck Institute for Innovation and Competition, Mackenzie University, São Paulo, December 2022

The Emerging European Data Law and the Objective of Innovation; University of Tokyo, online, November 2022

The Emerging Data Law and Intellectual Property – The Need for More Coherence; EIPIN International Conference: The interaction of the new European Digital Acts with the European Intellectual Property System, EIPIN, University of Alicante, November 2022

Der EU Data Act und das Immaterialgüterrecht; VPP-Herbstfachtagung 2022, Association of Intellectual Property Experts (VPP), Potsdam, October 2022

Is the Data Act a Good Deal for Consumers?; Seminar The European Data Act: Is the Data Act a Good Deal for Consumers?, Federal Ministry for the Environment, Nature Conservation, Nuclear Safety and Consumer Protection (BMUV), online, October 2022

Regulation of the Data Economy in Emerging Economies (Context and Overview); Workshop Data Sharing for Good Health & Well-Being: India's Way Forward to Achieving Sustainable Development Goal 3, Max Planck Institute for Innovation and Competition, National Law School of India University Bengaluru, BML Munjal Law School, Bengaluru, September 2022

R&D Agreements among Undertakings Competing in Innovation – The Future Exemption Regime between Economic Theory and Legal Certainty; Meeting between the GRUR Special Committee Antitrust Law and representatives of the European Commission, German Association for Intellectual Property Law (GRUR), online, August 2022

Standards vs. Patents – Competition Law and Access to Technologies; Böhmert & Böhmert IP Seminar, Munich, July 2022

Panel Trade Secrets and Digital Data; WIPO Symposium on Trade Secrets and Innovation, World Intellectual Property Organization (WIPO), Geneva, May 2022

Fairness in Data Access and Use: New data access rights – A first evaluation; 3rd GRUR Expert Round Table The EU Data Act – Expectations Met?, German Association for Intellectual Property Law (GRUR), online, May 2022

Der EU Data Act – Ein gelungener Ausgleich zwischen Datenkontrolle und Datenzugang?; Ausschuss für gewerblichen Rechtsschutz und Urheberrecht, Federation of German Industries (BDI), online, May 2022

Marchés numériques, droit de la concurrence et développement économique; Inauguration of the Max Planck Partner Group and Workshop Shaping Data Sharing Policies in the Agricultural and the Financial Services Sector, Max Planck Institute for Innovation and Competition, Université virtuelle du Sénégal, Dakar, March 2022

2021

Introducing new data access rights?; 2nd GRUR Expert Round Table: The EU Data Act, German Association for Intellectual Property Law (GRUR), online, December 2021

Datenzugang und Wettbewerbsrecht; FIW-Dialog: Aktuelle Entwicklungen und Entscheidungspraxis im Kartellrecht, Forschungsinstitut für Wirtschaftsverfassung und Wettbewerb (FIW), online, November 2021

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Régulation de l'économie digitale face aux enjeux du développement durable; Inauguration de l'Ecole doctorale, Université virtuelle du Sénégal, Dakar, online, August 2021

Ediboğlu Sakowsky, Ezgi

2023

Protection of Agricultural Production through International Environmental Law; 4th International Congress on Agriculture and Food Ethics, Association of Agriculture and Food Ethics (TARGET), Ankara University, November 2023

The Legal Personality of the Conference of Parties to the United Nations Climate Change Regime Treaties; Max Planck Climate Conference for a Sustainable Anthropocene, Max Planck Law Initiative Law, Climate Change, and the Environment, Berlin, July 2023

Endrich-Laimböck, Tobias

2023

The Tradition of "Non-Traditional Marks" in International Trademark Law; IP Researchers Europe Conference 2023 (IPRE 2023), University of Geneva, World Intellectual Property Organization (WIPO), World Trade Organization (WTO), Geneva, June 2023

Copyright Issues in the EU Design Law Reform Proposals; Masaryk University, online, May 2023

Feng, Chuqi

2023

Protection against Unfounded Notices of Intellectual Property Infringement in Bad Faith on Online Market-places. A legal comparison between the EU, Germany, and China; IP Researchers Europe Conference 2023 (IPRE 2023), University of Geneva, World Intellectual Property Organization (WIPO), World Trade Organization (WTO), Geneva, June 2023

Epistemological Reflection on the Chinese Case Guidance System regarding Intellectual Property Law; Tsinghua – Berkeley Joint IP Scholars' Forum, Center for Law and Technology, University of California, Berkeley, Center for Intellectual Property, Tsinghua University, Beijing, May 2023

Methodological Reflection on the Chinese Case Guidance System regarding Intellectual Property Law; Fifth IP & Innovation Researchers of Asia (IPIRA) Conference, IP & Innovation Researchers of Asia (IPIRA) Network, Nanyang Technological University, Singapore, March 2023

Ferrero Guillén, Rebeca

2023

From Enemies to Allies: 3D Printing, IP, and Sustainability; IP Researchers Europe Conference 2023 (IPRE 2023), University of Geneva, World Intellectual Property Organization (WIPO), World Trade Organization (WTO), Geneva, June 2023

2022

Access to technology in the 3D Printing sector: An enabler to reach sustainability; EIPIN Doctoral Seminar, EIPIN, University of Alicante, November 2022

2021

Technology Democratisation in 3D Printing: An Interplay between the Law and Innovation Models; EIPIN Doctoral Seminar, EIPIN, Maastricht University, October 2021

Round Table Technology Democratisation, SMEs and IP; 16th Annual Conference of the EPIP Association: IP and the Future of Innovation, European Policy for Intellectual Property (EPIP) Association, Spanish National Research Council (CSIC), Madrid, September 2021



Science in your hands: A model helps visualize complex ideas.

Technology Democratisation in 3D Printing: An Interplay between the Law and Innovation Models; EPIP PhD Workshop, European Policy for Intellectual Property (EPIP) Association, Spanish National Research Council (CSIC), Madrid, September 2021

Gocci, Alessandro

2021

Between Tradition and Sustainable Innovation: The Role of Intergenerational Change within the GI scheme; MEA Seminar, Max Planck Institute for Social Law and Social Policy, Munich, online, January 2021

González Otero, Begoña

2023

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Regulation as a tool to facilitate interoperability: special attention to Competition Law; Webinar Interoperability in the Metaverse, Spanish & Portuguese Chapter of Licensing Executive Society International (LESI), Chair for the responsible development of the Metaverse, online, December 2023

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Begoña González Otero: Inspiring also the next generation of female scientists.

Régulation des données à caractère personnel au Sénégal et Économie numérique: enjeux et perspectives; Conférence sur les données à caractère personnel, Université Numérique Cheikh Hamidou KANE, Dakar, online, November 2023

Roundtable on AI regulation in the European Union; First interWAIQ event, Fundacion Pons, Madrid, November 2023

La protección de los elementos computacionales de los sistemas de IA a través de los derechos de propiedad industrial, intelectual y secretos comerciales; Congreso Internacional: Retos de la Propiedad Industrial e Intelectual ante la IA, Facultad de Derecho de la Universidade da Coruña, A Coruña, October 2023

Roundtable What Comes Next? New Challenges at the Interface of IP, Competition and Data Law; EIPIN Conference 2023: Coordination of Intellectual Property Law with the New European Data Law, EIPIN, Max Planck Institute for Innovation and Competition, Munich, June 2023

Data portability and interoperability; Global Data Governance Conference, Centre for a Digital Society, Organisation for Economic Co-operation and Development (OECD), Florence, June 2023

2022

The Text and Data Mining Exceptions; Lecture in the Master Derecho de la Sociedad Digital, University of Alicante, March 2022

2021

Panel Use of the Privately Held Data by the Public Sector (moderator); European Data Summit 2021, Konrad Adenauer Foundation, Berlin, online, December 2021

Panel Data Access and Use in Business-to-Business Situations (moderator); European Data Summit 2021, Konrad Adenauer Foundation, Berlin, online, December 2021

Al and IP law; Workshop Series, Center for Intellectual Property and Competition Law at the University of Zurich, Swiss Federal Institute of Intellectual Property, Zurich, June 2021

(re)WIPS5 – Workshop on Intellectual Property Rights; University of Szeged, online, April 2021

Time to revisit software protection? The case of machine learning models under EU copyright law; Reinventing Inventiveness, Recreating Creativity – International Perspectives on AI and IP Law, Macquarie University, Edith Cowan University, Australia, online, April 2021

Legal, Economic, and Technical Perspectives on Interoperability or How to Gain Normative Strength via Technical Determination by Law; Munich Intellectual Property Law Center Lecture Series, Max Planck Institute for Innovation and Competition, Munich, online, March 2021

Herrmann, Liza

2023

Gatekeeper's Potential Privilege – The need to Limit DMA Centralisation (together with Jörg Hoffmann and Lukas Kestler); 18th ASCOLA Conference: Competition as an Institution and Economic Transformations: A Change of Paradigm?, Academic Society for Competition Law (ASCOLA), University of Athens, June 2023

Herausforderungen durch international heterogene Gatekeeper-Regulierung (together with Lukas Kestler); 8. Tagung GRUR Junge Wissenschaft – Kolloquium zum Gewerblichen Rechtsschutz, Urheber- und Medienrecht: Plattformen – Grundlagen und Neuordnung des Rechts digitaler Plattformen, German Association for Intellectual Property Law (GRUR), University of Potsdam, June 2023

Cyber Bots as a Competitive Threat – A Competition Policy Risk Assessment and Regulatory Approaches; EIPIN Doctoral Seminar, EIPIN, Max Planck Institute for Innovation and Competition, Munich, June 2023

Introduction to European Competition Law; Guest lecture as part of the Bachelor course Economic Law, University of Antwerp, March 2023

Hilty, Reto M.

2023

Laudatio for Prof. Dr. Geertrui Van Overwalle; Emeritaatsviering Geertrui Van Overwalle, KU Leuven, December 2023

"Paris Bar" – Gedanken zur Werkausführung im Auftrag; Kunst und Recht 2023, University of Basel, June 2023

Patentrecht und Klimawandel – Möglichkeiten und Grenzen; Goethe University Frankfurt, June 2023

2022

Introducción; Inauguración del Observatorio de Propiedad Intelectual en la Universidad Externado de Colombia, Smart IP for Latin America (SIPLA), Max Planck Institute for Innovation and Competition, Universidad del Externado, Bogotá, November 2022 Discurso a la ocasión de la firma del contrato; Meeting with authorities of the Ministerio de Ciencia Tecnología e Innovación de la República Argentina (MINCYT) on the occasion of signing a cooperation contract, Ministerio de Ciencia Tecnología e Innovación de la República Argentina (MINCYT), Buenos Aires, October 2022

Address at the German Embassy; German Embassy Buenos Aires, September 2022

Introducción; Mesa Redonda Innovación en Tecnologías Sostenibles, Smart IP for Latin America (SIPLA), Max Planck Institute for Innovation and Competition, Buenos Aires, September 2022

Potencial y límites del derecho de patentes para abordar el cambio climático; FLACSO Argentina, Maestría en Propiedad Intelectual Ceremonia de Apertura de la Cohorte VII, Universidad FLACSO, Buenos Aires, September 2022

Workshop Caminos hacia una adecuada regulación del derecho de autor en América Latina; Smart IP for Latin America (SIPLA), Max Planck Institute for Innovation and Competition, University of Curitiba, September 2022

Gerechtigkeit und Solidarität bei der Allokation von Medikamenten: Globale Perspektiven; Annual Meeting of the German Ethics Council: Hohe Preise – Gute Besserung? Wege zur gerechten Preisbildung bei teuren Arzneimitteln, Berlin, June 2022

Potential and Limits of IP Law to Address Climate Change; ELI Environmental Law SIG Seminars, University of Ferrara, May 2022

Exceptional measures in exceptional situations: A look at the international legal framework beyond the IP-Waiver for Covid-Vax patents; Who owns and how can be exploited Covid-Vax patents generated through public or private funds?, University of Bologna, February 2022

2021

Are Related Rights to Photographs (also) "obsolete"?; The Hugenholtz League Conference: Intellectual Property and Sports, Institute for Information Law (IVIR), University of Amsterdam, September 2021

Panel Daten, Innovation, Wettbewerb; Ceremony in honor of Prof. Dr. Rolf H. Weber, University of Zurich, September 2021

The "Value Gap" in Copyright Law and Germany's Attempt to Fill it; 100 Anniversary IP Forum, Xiamen University, April 2021

Hoffmann, Jörg

2023

Workshop Data Governance in Emerging Economies to Achieve the SDGs; Max Planck Institute for Innovation and Competition, Munich, December 2023

Data Governance and AI Regulation in the EU; Workshop on Data Governance in Senegal, Université virtuelle du Sénégal, Dakar, online, November 2023

Data Sharing Model Contract Clauses and Principles for the Automation of Contracting; Working Group IV Meeting, United Nations Commission on International Trade Law, Vienna, October 2023

The DMA as viable solution for Attaining Contestable and Fair Digital Markets?; Competition Law Course, Bilgi University, Istanbul, online, August 2023

The Scope of the DMA and the Intersection with other Legal Regimes; 18th ASCOLA Conference: Competition as an Institution and Economic Transformations: A Change of Paradigm?, Academic Society for Competition Law (ASCOLA), University of Athens, June 2023

Legal issues in the Data Act Proposal; Internal discussion round, European Parliament, Strasbourg/Brussels, online, January 2023

2022

Workshop Data Sharing & Climate Action in Brazil; Max Planck Institute for Innovation and Competition, Mackenzie University, São Paulo, December 2022

Legal issues in the Data Act Proposal; Internal discussion round, European Parliament, Strasbourg/Brussels, online, October 2022

Workshop Data Sharing for Good Health & Well-Being: India's Way Forward to Achieving Sustainable Development Goal 3; Max Planck Institute for Innovation and Competition, National Law School of India University Bengaluru, BML Munjal Law School, Bengaluru, September 2022

Introduction to Platform Regulation and Economics; University of Ghent, May 2022

Introduction to Competition Law; University of Ghent, May 2022

Workshop Shaping Data Sharing Policies in the Agricultural and the Financial Services Sector; Max Planck Institute for Innovation and Competition, Université virtuelle du Sénégal, Dakar, March 2022 Die Rolle des Kartellrechts bei der Förderung des Klimaschutzes (together with Beatriz Conde Gallego); Climate Change Workshop, Max Planck Institute for Innovation and Competition, Munich, February 2022

2021

Discussion round Obstruction to interoperability, IP and trade secrets protection and data access and use; Joint Research Centre, European Commission, Seville, online, December 2021

Data Access and Use in Business-to-Business Situations; European Data Summit 2021, Konrad Adenauer Foundation, Berlin, online, December 2021

Data Access, AI and the Legal Protection of Data in the EU; Data and Innovation International Summit, Tsinghua University, Beijing, online, June 2021

Legal, Economic, and Technical Perspectives on Interoperability or How to Gain Normative Strength via Technical Determination by Law; Munich Intellectual Property Law Center Lecture Series, Max Planck Institute for Innovation and Competition, Munich, online, March 2021

Huckschlag, Marc

2023

Das Verhältnis zwischen Urheberrecht und Designrecht unter dem einheitlichen europäischen Werkbegriff; Doctoral seminar, Ludwig-Maximilians-Universität, Neustift Abbey, Vahrn, September 2023

2022

Shaping the Interface of Copyright and Design Law; Nordic/German IP Network Meeting, Stockholm University, September 2022

Johannsen, Germán Oscar

2023

Al and Data Regulation, Some EU Trends; Faculty of Computer Sciences, Universidad de Chile, Santiago de Chile, December 2023

Digital Markets Act, Challenges and Prognoses; Faculty of Law, Universidad Católica de Valparaiso (Chile), May 2023

2022

Data Sharing & Climate Action in Brazil – Methodology; Workshop Data Sharing & Climate Action in Brazil, Max Planck Institute for Innovation and Competition, Mackenzie University, São Paulo, December 2022 Introduction to Panels; Workshop Shaping the Internet for the Future, Max Planck Institute for Innovation and Competition, Munich, June 2022

2021

Digital Platforms & Economic Dependence in Chile – Any Room for Competition Theories of Harm without Dominance?; 16th ASCOLA Conference: Competition and Innovation in Digital Markets, Academic Society for Competition Law (ASCOLA), online, July 2021

Kestler, Lukas

2023

Competition Law Solutions for Digital Advertising Intermediation Markets; 7th Annual Max Planck Law PhD Workshop, Max Planck Law, Berlin, October 2023

Gatekeeper's Potential Privilege – the Need to Limit DMA Centralisation (together with Jörg Hoffmann and Liza Herrmann); 18th ASCOLA Conference: Competition as an Institution and Economic Transformations: A Change of Paradigm?, Academic Society for Competition Law (ASCOLA), University of Athens, June 2023

Herausforderungen durch international heterogene Gatekeeper-Regulierung (together with Liza Herrmann); 8. Tagung GRUR Junge Wissenschaft – Kolloquium zum Gewerblichen Rechtsschutz, Urheber- und Medienrecht: Plattformen – Grundlagen und Neuordnung des Rechts digitaler Plattformen, German Association for Intellectual Property Law (GRUR), University of Potsdam, June 2023

Kim, Daria

2023

Technological risk regulation: Navigating Compliance Challenges; Kyiv National Economic University named after Vadym Hetman, online, December 2023

Introduction to IP Valuation; IP Office of the Republic of Uzbekistan, online, December 2023

Navigating (Un)known Unknowns of Precision Genome-Editing in International Trade Law; 8th Asian International Economic Law Network (AIELN) Conference: The New Generation of Economic Agreements, National Taiwan University, Taipei, December 2023

Enabling AI-aided Drug Discovery and Development: Towards a Holistic Legal and Regulatory Framework; Faculty of Law at Victoria University of Wellington (New Zealand), November 2023 Al "Agency" as a Catalyst of a Crisis in Law?; Max Planck Law Annual Conference 2023: Crisis, Max Planck Law, Berlin, October 2023

A Potential Extension of the Ministerial Decision on the TRIPS Agreement to Therapeutics and Diagnostics: Legal and Practical Considerations; The Council's Informal Thematic Session for External Stakeholder Input under Paragraph 8 of the Ministerial Decision on the TRIPS Agreement, World Trade Organization (WTO) Council for TRIPS, online, September 2023

Artificial Intelligence and Civil Liability: Recent developments in the EU; Brazilian Institute of Competition, Consumption and International Trade Studies (IBRAC), online, September 2023

Artificial Intelligence and Competition Law and Policy: Mapping out challenges and coping mechanisms; Competition law enforcement and consumer protection in digital markets, Competition Promotion and Consumer Protection Committee of the Republic of Uzbekistan, Tashkent, July 2023

Global Intellectual Property Law and Policy in the Wake of the Covid-19 Pandemic; III International Legal Forum at the Intellectual Property Office of the Republic of Uzbekistan, Tashkent, May 2023

Patent Law and Policymaking: Principles, Challenges and Strategies; Intellectual Property Office of the Republic of Uzbekistan, Tashkent, May 2023

Exploring Pathways to the Standardization of Licenses for Data and Machine Learning Models (co-organizer and moderator); Global Partnership on Artificial Intelligence (GPAI), Duke University, Max Planck Institute for Innovation and Competition, Munich, April 2023

International IP Law and Technology Transfer: A review of key issues; VI ВСЕУКРАЇНСЬКОЇ НАУКОВО-ПРАКТИЧНОЇ КОНФЕРЕНЦІЇ СТВОРЕННЯ, ОХОРОНА, ЗАХИСТ І КОМЕРЦІАЛІЗАЦІЯ ОБ'ЄКТІВ ПРАВА ІНТЕЛЕКТУАЛЬНОЇ ВЛАСНОСТІ з міжнародною участю Присвячено Міжнародному дню інтелектуальної власності (VI All-Ukrainian Scientific and Practical Conference: Creation, Protection, Enforcement and Commercialization of Intellectual Property Rights Objects with International Participation Dedicated to the International Day of Intellectual Property), National Technical University of Ukraine "Igor Sikorsky Kyiv Polytechnic Institute", Kyiv, online, April 2023

Regulation of the Data Economy: Where is the EU heading?; VIII Міжнародна науково-практична інтернетконференція «ІННОВАЦІЙНЕ ПІДПРИЄМНИЦТВО: СТАН ТА ПЕРСПЕКТИВИ РОЗВИТКУ» (VIII International Scientific and Practical Internet Conference: Innovative Entrepreneurship: State and Prospects of Development), Kyiv National Economic University named after Vadym Hetman, online, March 2023

Roundtable Rebuilding Ukraine: The Case of the Health Sector (co-organizer and moderator); Max Planck Institute for Innovation and Competition, Munich, March 2023

2022

AI&IP: Should AI be the last patented invention made by humans?; Faculty of Law, University of Bergen, December 2022

Unlocking the Potential of Health Data: A policy and legal dimension; How to extract value from health data obtained from the public and private sector?, Medical Faculty, University of Bergen, December 2022

Online Roundtable Facilitating Access to Affordable Medicines During Wartime in Ukraine; Max Planck Institute for Innovation and Competition, online, December 2022

Confidentiality of Regulatory Data – Towards a more nuanced understanding; Seminar on Protection of Regulatory Data in Life Sciences, Institute of Law Studies at the Polish Academy of Sciences, online, November 2022

2nd Workshop on CRISPR/Cas Technology, Innovation and Regulation; Max Planck Institute for Innovation and Competition, Munich, October 2022

Towards Transparent & Explainable AI in Healthcare: The State of Play in the EU; International workshop Towards Transparent & Explainable AI in Healthcare, Macquarie Law School, Sydney, online, September 2022

Clinical Trial Data: Navigating the legal and regulatory landscape; ELSA Innsbruck summer school, European Law Students' Association (ELSA) Innsbruck, online, August 2022

Kommentare zu den Auswirkungen des Data Act auf Forschung; Stakeholder dialogue Datenzugangsrechte für die Forschung im Data Act, Federal Ministry of Education and Research, Berlin, August 2022

Al and Inventorship: A tool or more than a tool?; iLearn, European Patent Office, EPO Talent Academy, online, June 2022

Torts Law and Artificial Intelligence: A legislative reform in view of AI "autonomy"?; Torts Law Reform in Asia and Beyond, Chinese University of Hong Kong, online, May 2022

2021

Intellectual Property Law-Making as Line (Re-)Drawing; Max Planck Law, online, October 2021

IP law for forensic researchers; Training program How to cross the 'Valley of Death" between research and the forensic market, Università degli Studi di Bergamo, online, June 2021

Kulhari, Shraddha

2022

Data Sharing for Good Health & Well-Being: India's Way Forward to Achieving Sustainable Development Goal 3; Workshop Data Sharing & Climate Action in Brazil, Max Planck Institute for Innovation and Competition, Mackenzie University, São Paulo, December 2022

Workshop Data Sharing for Good Health & Well-Being: India's Way Forward to Achieving Sustainable Development Goal 3 (session introduction and moderator); Max Planck Institute for Innovation and Competition, National Law School of India University Bengaluru, BML Munjal Law School, Bengaluru, September 2022

Workshop Shaping the Internet for the Future (session introduction and moderator); Max Planck Institute for Innovation and Competition, Munich, June 2022

Kunko, Isaac Kundakogo

2023

Law and Africa Initiative: An Overview of Past and Future Activities; Max Planck Law Annual Conference 2023: Crisis, Max Planck Law, Berlin, October 2023

2021

The Application of Competition Law in the Control of Excessive and Unfair Pricing of Pharmaceuticals – An EU and South African perspective; EIPIN Doctoral Seminar, EIPIN, Maastricht University, October 2021

Lamping, Matthias

2023

Die Vorbenutzung in der Rechtsprechung des BGH und vor dem UPC; 43. Patent- und MarkenFORUM 2023, FORUM Institut für Management, Munich, November 2023

Who's in Charge of Patent Policy in the EU? (together with Tuomas Mylly); Helsinki IP Summit, IPR University Center, Helsinki, October 2023

Innovation à la carte; Vienna University of Economics and Business, August 2023

Die Panoramafreiheit im Urheberrecht – Am Beispiel Anna Fucking Molnar; Vienna University of Economics and Business, August 2023 Regulation through Litigation – Private Enforcement in the Public Interest; 41st ATRIP Congress: The Interface of Intellectual Property Law With Other Legal Disciplines, International Association for the Advancement of Teaching and Research in Intellectual Property (ATRIP), University of Tokyo, July 2023

Unitary Patent and UPC are on: and now what?; Global Digital Encounter (GDE) No. 26, Fundación para la Investigación sobre el Derecho y la Empresa (Fide), online, March 2023

2022

Flexibilidades en el derecho de patentes; Inauguración del Observatorio de Propiedad Intelectual en la Universidad Externado de Colombia, Smart IP for Latin America (SIPLA), Max Planck Institute for Innovation and Competition, Universidad del Externado, Bogotá, November 2022

2021

EPO, quo vadis? Verfassungsrechtliche Aspekte; VPP-Herbstfachtagung 2021, Association of Intellectual Property Experts (VPP), Bonn, October 2021

von Lewinski, Silke

2023

The EU approach to AI and Copyright. Artificial Intelligence and Intellectual Property; Istanbul Bilgi University, Turkish Ministry of Culture, Istanbul, October 2023

Use of works for producing Al-generated art, text and music – a legal assessment; The 5th Workshop on China-EU Innovation and Competition & 20th Anniversary of Tongji IP: Intellectual Property and Competition in the Age of Al, Tongji University, Shanghai, online, October 2023

Computer- or AI-generated works? A view from civil law countries; WIPO Conversation on IP and Frontier Technologies, World Intellectual Property Organization (WIPO), online, September 2023

Artificial Intelligence and Copyright; WIPO Summer School on IP, World Intellectual Property Organization (WIPO), Nanjing University of Science and Technology, online, September 2023

Herausforderungen von ChatGPT & Co. für Literatururheber; Online networking evening ChatGPT und die Zukunft kreativer Textarbeit, Münchner Kreis, online, June 2023

Al and Intellectual property for authors. Al: Legal, economic and ethical challenges of authors in the book sector; The EWC Burning Issues Forum: TO BOT. OR NOT TO BOT, European Writers Council, Berlin, June 2023

La rémunération des auteurs et artistes interprètes sur les plateformes en Allemagne; Colloquium La rémunération des auteurs et des artistes – Le juste prix dans les contrats d'exploitation en droit de la propriété littéraire et artistique, Nantes Université, May 2023

Copyright Exceptions & Limitations – international law perspectives; 30th Annual Intellectual Property Law & Policy Conference, Fordham IP Institute, New York City, April 2023

2022

Ringen um faire Bedingungen beim E-Lending; 10. internationale Urheberrechtskonferenz der Initiative Urheberrecht, Initiative Urheberrecht, Association Littéraire et Artistique Internationale (ALAI) Deutschland, Berlin, November 2022

Artificial Intelligence and Copyright; WIPO Summer School on IP, World Intellectual Property Organization (WIPO) and Nanjing University of Science and Technology, online, September 2022

Performers' Rights: Global status of protection – national reports' analysis; ALAI Conference 2022: Neighbouring Rights – State of Affairs and Further Outlook, Association Littéraire et Artistique Internationale (ALAI), Estoril, September 2022

2021

Kritische Gedanken zu Art. 14 DSM-Richtlinie. Reproduktionsfotografie – Der BGH-Fall "Museumsfotos" und die neue Rechtslage nach Umsetzung des Art. 14 DSM-Richtlinie in § 68 UrhG; Association Littéraire et Artistique Internationale (ALAI) Deutschland, online, December 2021

Looking to the Future Through Copyright and Innovation – Balance and Coexistence Between Owners and Users; Seoul Copyright Forum 2021, Korea Copyright Commission, online, October 2021

Deadline 2030: The Shape of Things to Come; IFRRO International Conference 2021: Copyright & Collective Licensing – New Demands in the New Decade, International Federation of Reproduction Rights Organisations (IFRRO), Copyright Clearance Center, online, October 2021

Implementation of Arts. 15, 17 and 18-23 DSM Directive in Germany; Spring Meeting of the Swedish Copyright Society, online, June 2021

Deep Dive: The German Transposition for Article 17; Final Countdown: Critical Article 17-Updates you need to know, Music Biz Online, Music Business Association – Music Biz, online, April 2021

EU Copyright Reform; 28th Annual Intellectual Property Law & Policy Conference, Fordham IP Institute, online, April 2021

Matarazzi, Giulio

2022

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Ex-ante regulation for digital platforms in the European Union: lessons from the telecommunications regulatory framework; EIPIN Doctoral Seminar, EIPIN, University of Alicante, November 2022

The European Digital Markets Act: A Revolution Grounded on Traditions; Literature Seminar, Max Planck Institute for Innovation and Competition, Munich, July 2022

The emergence of net neutrality rules and their impact on technological development and markets (panel introduction); Workshop Shaping the Internet for the Future, Max Planck Institute for Innovation and Competition, Munich, June 2022

Ex-ante regulation for digital platforms in the European Union: a comparison with the telecommunications access regulation; Doctoral seminar, Max Planck Institute for Innovation and Competition, Munich, February 2022

Mazaraki, Nataliia

2023

Professional ethics of mediators: the role of mediator associations and the community of mediators in Ukraine; Mediation today: professional and ethical policies, standards, institutionalization, Kyiv, December 2023

Criteria of full-functionality: reform of merger control in Ukraine; Competition policy development in Ukraine, Lviv, November 2023

CJEU judgments in the argumentation of legal positions of Ukrainian courts; Modern Challenges and Current Issues of Judicial Reform in Ukraine, Chernivtsi, October 2023

Mediators' rosters for court-connected mediation programs; Kharkiw International Legal forum, Yaroslav Mudryi National Law University, Charkiw, September 2023



Net neutrality in focus: Workshop participants discuss the future of the Internet.

Implementation of the Law of Ukraine "On Mediation": priorities for war and post-war times; VII International Forum: Mediation and Law, Ukrainian Academy of Mediation, online, July 2023

CJEU jurisprudence in civil and commercial litigation in Ukrainian Courts; Training of judges of the Supreme Court, Kyiv, May 2023

Postwar challenges of competition law and policy in Ukraine; XXXIX CLaSF Workshop: Markets in Crisis – the stress test for competition law, Centre for Social Sciences, Institute for Legal Studies, Hungarian Academy of Sciences Centre of Excellence, Budapest, April 2023

Militsyna, Kateryna

2023

Al as a Facilitating Tool of Humans; Kyiv National Economic University named after Vadym Hetman, Kyiv, online, September 2023

IP and Artificial Intelligence; IP and Emerging Technologies, IP Academy of Ukraine, World Intellectual Property Organization (WIPO), online, August 2023

Human Creative Contribution in Al-based Output – One Just Can('t) Get Enough; IP Researchers Europe Conference 2023 (IPRE 2023), University of Geneva, World Intellectual Property Organization (WIPO), World Trade Organization (WTO), Geneva, June 2023

Legal Framework for Work-Like Output Based on Artificial Intelligence; Doctoral seminar, Max Planck Institute for Innovation and Competition, Munich, February 2023

2022

Твороподібні Об'єкти, Створені на Основі Штучного Інтелекту: Як Економіка Може Допомогти Праву? (Work-Like Output Based on Artificial Intelligence: How Can Economics Help Law?); Об'єднані Наукою: Перспективи Міждисциплінарних Досліджень (United by Science: Prospects for Interdisciplinary Research), Taras Shevchenko National University of Kyiv, online, November 2022

Intellectual Property Law and Work-Like AI-Assisted and AI-Generated Objects; Ukrainian Scholars at the Institute Present Their Projects, Max Planck Institute for Innovation and Competition, Munich, May 2022

Moscon, Valentina

2023

Seminar The law of text and data mining: a comparative analysis (chair and moderator); Max Planck Institute for Innovation and Competition, Munich, December 2023

AI, Copyright and the Exceptions for Text and Data Mining under Italian law (within the EU Legal Framework); Seminar on the Italian implementation of the Directive on Copyright in the Digital Single Market (2019/790), Law Firm SPHERIENS, Florence

EU Data Access Rules and protection of TPMs in the Field of Scientific Research; Community over Commercialization. Open Science, Intellectual Property and Data, Faculty of Law at the University of Trento, October 2023

Coordination of Data Access Rules with Protection of TPMs against Circumvention; EIPIN Conference 2023: Coordination of Intellectual Property Law with the New European Data Law, EIPIN, Max Planck Institute for Innovation and Competition, Munich, June 2023

Music: Copyright and business models; Seminar series on copyright fundamentals, Universal Academy, Universal Studios, Milan, online, April 2023

2022

Territoriality in the internal market – prospect of an EU copyright title?; Institute for Information Law (IVIR), University of Amsterdam, online, August 2022

What advantages & barriers for uniform titles for copyright and related rights?; Institute for Information Law (IVIR), University of Amsterdam, online, April 2022

2021

Roundtable The future of copyright flexibilities; State of Exceptions & Limitations – Copyright flexibilities in the EU and its Member States, ReCreating Europe, online, June 2021

Copyright Infringement and Platform Liability under Article 17 of the DSM Copyright Directive; Seminar series, Universal Academy, Universal Studios, Milan, online, May and June 2021

New Copyright Contract Law Rules and Authors Remuneration in the DSM Copyright Directive; Seminar series, Universal Academy, Universal Studios, Milan, online, April and June 2021

Muñoz Ferrandis, Carlos

2021

Open Source & Patents in the Blockchain Realm; 2021 Blockchain Stampede, International Blockchain Stampede, online, September 2021

Open Sourcing AI: IP Rights Strategy for Platform Leadership; 16th Annual Conference of the EPIP Association: IP and the Future of Innovation, European Policy for Intellectual Property (EPIP) Association, Spanish National Research Council (CSIC), Madrid, September 2021

The Price of Openness: IP and competition law considerations for open dynamics in data-related markets; 16th ASCOLA Conference: Competition and Innovation in Digital Markets, Academic Society for Competition Law (ASCOLA), online, July 2021

Decentralized Dispute Resolution (moderator); Stanford CodeX Blockchain Law & Policy Summit 2021, Stanford Center for Legal Informatics, online, January 2021

Fintech Sandboxes and Regulatory Interoperability; Stanford CodeX Blockchain Law & Policy Summit 2021, Stanford Center for Legal Informatics, online, January 2021

Mustafa, Zeinab

2021

The Transfer of Priority Right; EIPIN Doctoral Seminar, EIPIN, Maastricht University, October 2021

Pauer, Nada Ina

2023

Approach to Digital Platform Regulation in Europe; The 20th Shanghai International Intellectual Property Forum – SICIP Sub Forum: Diversified dispute resolution mechanisms for intellectual property rights in the digital economy, Tongji University, Shanghai, December 2023

Richter, Heiko

2023

Das Wimmelbild der europäischen Digital-Gesetzgebung – oder: Was uns Kinderbücher über Gesetze lehren; Data:Matters, German Association for the Digital Economy, Berlin, November 2023 The Data Governance Act: Controlling International Data Transfers of Public Sector Data; EIPIN Conference 2023: Coordination of Intellectual Property Law with the New European Data Law, EIPIN, Max Planck Institute for Innovation and Competition, Munich, June 2023

International Data Transfers of Non-Personal Data: Emergence and Effects of a New Regulatory Framework; The Swedish Network for European Legal Studies (SNELS) and Centre de droit économique de l'université d'Aix-Marseille, University of Stockholm, June 2023

Zu einem Anspruch auf Datenbereitstellung? Ein kritischer Blick auf das Datennutzungsgesetz (DNG) und Open-Data-Regelungen; Leipzig University, January 2023

2022

Panel B2G under the Framework of the Data Act; European Data Summit 2022, Konrad Adenauer Foundation, Berlin, December 2022

Panel The Data Act – Fit for Purpose?; European Data Summit 2022, Konrad Adenauer Foundation, Berlin, November 2022

Business-to-Government (B2G) Data Sharing; Workshop on the Data Act, Tilburg Institute for Law, Technology, and Society (TILT), Tilburg Law and Economics Center (TILEC), online, October 2022

Freedom of Information in Germany; International Conference on the Perspectives of the Right to Freedom of Information, National Authority for Data Protection and Freedom of Information Hungary, Budapest, June 2022

Zu einem Anspruch auf Datenbereitstellung? Ein kritischer Blick auf das Datennutzungsgesetz (DNG) und Open-Data-Regelungen; Open Data Strategie Workshop, Berlin Senate Administration, online, May 2022

Open Data: Datenweiterverwendung; Trierer Gespräche zu Recht und Digitalisierung, Institute for Law and Digitization Trier, online, April 2022

Open Data und Datennutzungsgesetz (DNG): Zwischen rechtspolitischem Anspruch und rechtspraktischer Wirklichkeit; 8. Göttinger Forum IT-Recht, Göttinger Verein zur Förderung des internationalen und nationalen Medienrechts, online, February 2022

2021

B2G data sharing, protection against government access; 2nd GRUR Expert Round Table: The EU Data Act, German Association for Intellectual Property Law (GRUR), online, December 2021

Datenbankherstellerrecht in der EU – Quo Vadis?; Bucerius IP-Kolloquium, Bucerius Law School, Hamburg, online, September 2021

Die wettbewerbsrechtliche Dimension von Datenzugang; Forschungsstelle für Rechtsfragen neuer Technologien sowie Datenrecht (ForTech), University of Bonn, online, June 2021

Umsetzung der Datenstrategie der Bundesregierung – Zweites Open-Data-Gesetz und die Einführung des Datennutzungsgesetzes; Expert discussion, Konrad Adenauer Foundation, online, April 2021

Doing Contemporary International and Interdisciplinary Research: Look from Germany; EU Studies Research Laboratory, Jean Monnet Centre of Excellence, Kyiv Mohyla Academy, online, February 2021

Slowinski, Peter R.

2023

The proposed SEP Regulation; Seminar How Should Standard-Essential Patents (SEP) be Regulated in Europe?, IPR University Centre, Helsinki, online, December 2023

The person skilled in the art of using AI; 21st annual international conference: Cyberspace, Masaryk University, European Academy of ICT Law, Brno, November 2023

Key Developments in the European IP Landscape; Auto IP Europe 2023, Munich, November 2023

Old Issues with new urgency – Patent Law and Climate Change; 18th Annual Conference of the EPIP Association: IP, Innovation and Technology: Challenging the Present, Inspiring the Future, European Policy for Intellectual Property (EPIP) Association, Jagiellonian University, Kraków, September 2023

Covenants not to sue and SEP enforcement in the value chain; Emerging issues in licensing and enforcement of SEPs, Institute of Legal Studies of the Polish Academy of Science, Faculty of Law of the Adam Mickiewicz University, Warsaw, September 2023

Criminal Sanctions and Civil Law Remedies; 41st ATRIP Congress: The Interface of Intellectual Property Law With Other Legal Disciplines, International Association for the Advancement of Teaching and Research in Intellectual Property (ATRIP), University of Tokyo, July 2023

The Unitary Patent Court; Jones Day Client Conference 2023, Frankfurt, June 2023

Steinhart, Miriam

2023

Legal Incentives for Pharmaceutical Innovation in the Field of Bacterial Infections; 7th Annual Max Planck Law PhD Workshop, Max Planck Law, Berlin, October 2023



Our Ukrainian colleagues present their research.

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2022

Delinkage – Finanzierung von Antibiotika; Doctoral seminar Prof. Hilty: Herrschaft über immaterielle Güter, University of Salamanca, October 2022

Bakteriophagen: Eine Alternative zu Antibiotika?; Doctoral seminar Prof. Hilty: Welternährung, Sofia University, April 2022

Straus, Joseph

2023

IP Issues of CRISPR-Cas and Stem Cell technology-based Gene Therapy; The 5th Workshop on China-EU Innovation and Competition & 20th Anniversary of Tongji IP: Intellectual Property and Competition in the Age of AI, Tongji University, Shanghai, online, October 2023

Intellectual Property and Biotechnology, A Mutually Challenging – Beneficial Relationship; WIPO-China Summer School, Renmin University of China, Beijing, online, July 2023

Artificial Intelligence and Patenting; WIPO-China Summer School, Renmin University of China, Beijing, online, July 2023

Artificial Intelligence and Patenting; WIPO-China Summer School, Wuhan, online, June 2023

Artificial Intelligence and Patenting; Tsinghua University School of Law, Beijing, online, May 2023

Intellectual Property and Biotechnology, A Mutually Challenging – Beneficial Relationship; Tsinghua University School of Law, Beijing, online, April and May 2023

Chinese Academics and their Contribution to the Chinese Intellectual Property Rights Culture – Opening Address; Nanhu Forum Qingdao, online, April 2023

Intellectual Property and Biotechnology; Tongji-WIPO Joint Master Program, online, March and April 2023

2022

Intellectual Property Protection – A Strong Ally of Fashion and Industrial Design; China (Wuxi) International Design Expo, online, December 2022

Artificial Intelligence and Patenting; Zhongnan University, Wuhan, online, November 2022

Panel IP Law in the Pharmacy & Biology, The Challenges in Marrying Access to Health and Exclusive Rights to Medicinal Products; 5th WIPO-Tongji International Intellectual Property Forum, Tongji University, online, July 2022

L'Unione Europea dopo la crisi: rischi e opportunità; Una nuova politica economica e tributaria per L'Unione Europea, Accademia Nazionale dei Lincei, Rome, online, May 2022

Intellectual Property and Biotechnology; Tongji-WIPO Joint Master Program, online, April 2022

2021

Current Challenges for Law and Lawyers – From a European and Slovenian Perspective; 3rd Conference of Slovenian Lawyers from the World and Slovenia, Slovenian World Congress, online, November 2021

Impact of Intellectual Property Rights on the National Science System; International Scientific Conference: Science System – A Factor of Stimulation or Limitation in Development, Academy of Sciences and Arts of Bosnia and Herzegovina, Sarajevo, online, November 2021

The European Union's IPRs System and its Global Use; Shanghai International IP Forum, online, October 2021

Opening Address; International Conference on the Rule of Law, Dimitrie Cantimir Christian University, Bucharest, online, September 2021

Opening Address; WIPO-Shanghai International Intellectual Property College, online, September 2021

Pandemic, Vaccines and Patents: How to Balance the Legitimate Interests?; Special 30th Anniversary Conference: Medicine, Law and Society: In Times of Radical Change, University of Maribor, online, June 2021

Issues Surrounding Deposit and Release of Biological Material for Patent Granting Procedures; Tsinghua University School of Law, online, May 2021

Gene Editing and Human Embryonic Stem Cells – A Universal Challenge for Medicine, Ethics and Law & Patent Law Aspects; Tsinghua University School of Law, online, April 2021

Artificial Intelligence and Patenting; Tsinghua University School of Law, Beijing, online, March 2021

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Wiedemann, Klaus

2023

Data protection and competition law enforcement in the EU – Recent case law: Overview and analysis; Cofece Internal Online Session, online, September 2023

What's in a name? User anonymity in a digital (but still fragmented) world; Private Rights and Public Autonomy in a Fragmented World II, University of Cambridge, Ludwig-Maximilians-Universität, Munich, July 2023

Can data protection friendly conduct constitute an abuse of dominance?; 18th ASCOLA Conference: Competition as an Institution and Economic Transformations: A Change of Paradigm?, Academic Society for Competition Law (ASCOLA), University of Athens, June 2023

The data protection implications of the Digital Markets Act: A normative framework for the regulation of gatekeepers?; 16th International Conference Computers, Privacy and Data Protection (CPDP), Brussels, May 2023

Can GDPR compliance constitute an abuse of dominance under Art. 102 TFEU?; Bentham House Conference: Competition Law and Policy in a Data-Driven Economy, University College London, April 2023

2022

Is there a right to remain anonymous online?; Private Rights and Public Autonomy in a Fragmented World, University of Cambridge, Ludwig-Maximilians-Universität, Cambridge (UK), September 2022

Panel Personalisation between targeting and discrimination; Conference User protection against discrimination on sharing economy platforms, UCLouvain Saint-Louis Bruxelles, Brussels, June 2022

Panel What are users protected against?; Conference User protection against discrimination on sharing economy platforms, UCLouvain Saint-Louis Bruxelles, Brussels, June 2022

2021

Consumer Autonomy, Competition Law and Data Protection Law in the Digital Economy; 16th ASCOLA Conference: Competition and Innovation in Digital Markets, Academic Society for Competition Law (ASCOLA), online, July 2021



Different disciplines in sync: Colleagues from the legal and from the economics department share their latest research.

3 Supervised Research Theses

3.1 Completed Doctoral Dissertations

Prof. Dr. Josef Drexl

2023

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Fabian Böttger: The Impact of CAFTA-DR and other Free Trade Agreements on the Industrial Property System in Central America – A Contribution to the TRIPS-Plus Debate

Niccolò Galli: Patent Aggregation, Innovation and EU Competition Law

Moritz Sutterer: Das Kollisionsrecht der kollektiven Rechtewahrnehmung

Publication in:

Abhandlungen zum Urheber- und Kommunikationsrecht, 65, Nomos, Baden-Baden 2024, 555 pages.

Letizia Tomada: The Unitary Patent Court and its Implications for Innovation of Start-ups

Vicente Zafrilla Díaz-Marta: Over and Under-declaration of Standard-Essential Patents: An EU Regulatory Approach to their Effects on Innovation and Competition



Stefan Scheuerer (middle left) and Klaus Wiedemann (middle right) celebrate their successful final oral examinations with their doctoral supervisors.

2022

Klaus Wiedemann: Rechtliche Implikationen Profilingbasierter Preispersonalisierung

Publication in:

Munich Studies on Innovation and Competition, 20, Springer, Berlin 2023, XV + 317 pages.

2021

Vincent Angwenyi: Merger Regulation in Eastern and Southern Africa: The Need for Effective Implementation

Publication in:

MIPLC Studies, 40, Nomos, Baden-Baden 2021, 368 pages.

Prof. Dr. Reto M. Hilty

2022

Luc Desaunettes-Barbero: Trade secrets legal protection – From a comparative analysis of U.S. and EU law to a new model of understanding

Publication in:

Munich Studies on Innovation and Competition, 19, Springer, Berlin 2023, XXI + 501 pages.

Christopher Fischer: Wechselwirkungen zwischen technischem Fortschritt und Urheberrecht

Anja Geller: Social Scoring durch Staaten – Legitimität nach europäischem Recht mit Verweisen auf China

Robert Kordić: Patent Pools – Ein Beitrag zur Korrektur wettbewerbsrechtlicher Fehlstellungen

Publication in:

Schriften zum Wirtschaftsrecht, 344, Duncker & Humblot, Berlin 2023, 347 pages.

Stefan Scheuerer: Fairness und Rechtspluralismus – Die anständigen Marktgepflogenheiten der Digitalwirtschaft

Publication in:

Schriftenreihe zum gewerblichen Rechtsschutz, 200, Heymanns, Hürth 2023, XX + 408 pages.

Aaron Stumpf: Wie klingt die neue freie Benutzung? Zur Beurteilung von Originalität, Idee und Schutzbereich in der Musik

Publication in:

Abhandlungen zum Urheber- und Kommunikationsrecht, 64, Nomos, Baden-Baden 2023, 292 pages.

3.2 Ongoing Research Theses

3.2.1 Habilitations

Prof. Dr. Josef Drexl

Nada Ina Pauer: Negatorische Ansprüche als Regulierungsinstrument in der Plattformökonomie

Heiko Richter: Entmaterialisiertes Vertragsrecht

Klaus Wiedemann: Datenrecht als Rechtsgebiet – Strukturprinzipien eines menschenzentrierten und kohärenten Rechtsrahmens

Prof. Dr. Reto M. Hilty

Matthias Lamping: Immaterialgüterschutz in der Privatrechtsgesellschaft

3.2.2 Doctoral Dissertations

Prof. Dr. Josef Drexl

Carolina Banda: Promoting Access and Sharing of Health Data from IoT (mHealth) Devices: A Holistic Approach to Balancing Data Protection, Competition, and Innovation

Yiqiong Chen: Unlocking the Full Potential of AI – Towards Mandatory Data Access Rules for the Purpose of AI Development

Gil Dagan: Collective Management of Music Copyright in a Dynamic EU Market for Collective Rights Management

Liza Herrmann: Bots als Wettbewerbsbedrohung – Wettbewerbspolitische Gefahrbetrachtung und Regulierungsansätze

Jörg Hoffmann: Economic Self-Determination of Market Actors as Data Governance Concept: The Example of Digital Payment Services

Germán Oscar Johannsen: Personalized Pricing and Private Power in Digital Markets: Rethinking the EU Competition Toolbox vis-à-vis Egalitarian Considerations

Lukas Kestler: Competition Law Solutions for Digital Advertising Intermediation Markets

Shraddha Kulhari: Towards Global Data Governance: The Data Protection Dilemma at the WTO

Isaac Kundakogo Kunko: Competition Law Control of Excessive and Unfair Prices of Pharmaceuticals: An EU and South African Perspective

Rui Li: Publicly Available Personal Data: Should It Be Left in the Public Domain? Comparison of Different Legal Regimes and Their Impacts on AI Development

Charlotte Masselot: Pseudonymization and Anonymization as Elements of the EU Data Governance Framework

Giulio Matarazzi: The Digital Markets Act Between Competition Policy and Command Regulation: Teachings from the Electronic Communications Regulatory Framework

Haris Tsilikas: Standard-Setting Organisations, Regulation and Antitrust – Regulating the Private Regulators

Tien-Hsin Wang: Interpreting Non-Discrimination in the Context of FRAND Licensing in the ICT Sector

Prof. Dr. Reto M. Hilty

Pedro Henrique D. Batista: Das Recht an genetischen Ressourcen – Nagoya-Protokoll, Patentrecht und weitere regulatorische Optionen

Adrian Gautschi: Stoffschutz im Patentrecht

Fabian Hafenbrädl: Der Softwarevertrag: Urheberrecht – Schuldrecht – Rechtsvergleichung

Antje Heuer: Nanotechnologie und Patentrecht

Ansgar Kaiser: "Freier Werkgenuss"? – die Bewertung der bestimmungsgemäßen Verwendung im Urheberrecht anhand einer vergleichenden immaterialgüterrechtlichen Betrachtung

Mario Minder: Word Processing by Artificial Intelligence

Peter R. Slowinski: Analyse dysfunktionaler Effekte bei der Durchsetzung von Immaterialgüterrechten – Eine Gesamtbetrachtung

Miriam Steinhart: Rechtliche Anreize zur pharmazeutischen Innovation im Bereich bakterieller Infektionserkrankungen

Laura Valtere: Personalized Medicine – Incentives from Exclusivities Provided by IP and Regulatory Law

Max Wallot: Misuse of IP Rights

Fabian Wigger: Der Schutzumfang als Funktion der Schutzvoraussetzungen?

4 Cooperation in Further Doctoral Procedures

Prof. Dr. Josef Drexl

Secondary supervisor of a Ph.D. thesis at the Queen Mary University of London as part of the European Joint Doctorate Innovation Society: Lucius Klobučnik, Innovative Models for Multi-Territorial Licensing of Musical Works for Online Use: An Answer to the Fragmentation Problem? (Including parallel doctoral degree proceedings at the University of Augsburg with a first evaluation of the thesis), 13 July 2023

Secondary reviewer of a doctoral dissertation at the Ludwig-Maximillians-Universität Munich: Yukun Xiao, Private Rechtsdurchsetzung des Wettbewerbsrechts aus rechtsvergleichender Sicht: Europäische Union, Deutschland und China, 26 July 2021

Prof. Dr. Reto M. Hilty

Secondary reviewer of a doctoral dissertation at the Ludwig-Maximillians-Universität Munich: Fabian Böttger, The Impact of CAFTA-DR and other European Free Trade Agreements on the Industrial Property System in Central America – A Contribution to the TRIPS-plus Debate, 20 March 2023

Secondary reviewer of a doctoral dissertation at the University of Basel: Noah Martin, Die Individualität des Werks, 26 August 2022

Secondary reviewer of a doctoral dissertation at the Bucerius Law School, Hamburg: Maria Victoria Rivas Llanos, Follow-On Drugs and Due Diligence under the EU-SPC System: A Comparative Analysis with the US-PTE System, 3 December 2021

Member of the jury of the Catholic University of Leuven for the defense of the dissertation of Lodewijk Van Dycke, Global IP Law and Local Politics: The Political Economy of African Seed Business Law, 22 October 2021

5 Teaching Activities

Carolina Banda

MIPLC

Michał Barycki

Jagiellonian University in Kraków

Anna Chiettini

Bocconi University

Dr. Beatriz Conde Gallego

MIPLC

Gil Dagan

MIPLC; Sapir Academic College, Israel

Prof. Dr. Josef Drexl

Ludwig-Maximilians-Universität Munich; MIPLC; Université Paris – Panthéon-Assas

Dr. Ezgi Ediboğlu Sakowsky

Central European University Vienna

Dr. Tobias Endrich-Laimböck

Ludwig-Maximilians-Universität Munich; Masaryk University Brno; MIPLC

Seth Ericsson

MIPLC

Rebeca Ferrero Guillén

University of Alicante

Dr. Begoña González Otero

EU Business School Munich; Universidad de Girona; Universitat Oberta de Catalunya Barcelona; United Nations Institute for Training and Research (UNITAR)

Liza Herrmann

University of Antwerp

Prof. Dr. Reto M. Hilty

Ludwig-Maximilians-Universität Munich; University of Zurich

Marc Huckschlag

Ludwig-Maximilians-Universität Munich

Germán Oscar Johannsen

Pontificia Universidad Católica de Chile

Shraddha Kulhari

MIPLC

Dr. Matthias Lamping

Ludwig-Maximilians-Universität Munich; Tongji University Shanghai

Dr. Silke von Lewinski

MIPLC; Université Paris 1 Panthéon-Sorbonne; Université Paris-Saclay; Université de Toulouse 1; Zhongnan University for Economics and Law Wuhan

Giulio Matarazzi

MIPLC

Kateryna Militsyna

Taras Shevchenko National University of Kyiv

Carlos Muñoz Ferrandis

University of Alicante; Instituto Superior de Derecho y Economía Madrid; PONS Business School

Zeinab Mustafa

MIPLC

Dr. Heiko Richter

Ludwig-Maximilians-Universität Munich

Prof. Dr. Joseph Straus

MIPLC; Tongji-WIPO Joint Master Program; WIPO-HUST Summer School 2021 Wuhan

6 Honors, Prizes, Awards, Appointments and Placements

Honors, Prizes and Awards

The Spanish Association for the Development of Intellectual Property (Associación para el dessarollo de propriedad intellectual – Adepi) honored the Institute's **Department for Intellectual Property and Competition Law** with its prize in 2023. At a festive award ceremony at the Palacete de los Duques de Pastrana in Madrid on 5 July 2023, Begoña González Otero received the award on behalf of the Institute from the Spanish Minister of Culture and Sport, Miquel Iceta.

In 2021, **Anna Chiettini** was awarded first prize by the European Center for Law, Science and New Technologies (ECLT) of the University of Pavia for an essay on technological innovation, artificial intelligence and law.

Artha Dermawan received second prize in the annual ATRIP Essay Competition 2022, organized by the International Association for the Advancement of Teaching and Research in Intellectual Property (ATRIP), for his paper on text and data mining exceptions in the development of generative AI models.

Luc Desaunettes-Barbero was awarded the Faculty Prize 2022 of the Ludwig-Maximilians-Universität's Faculty of Law for his dissertation on trade secrets legal protection.

The Max Planck Society honored **Anja Geller** with the Dieter Rampacher Prize 2022, which is awarded annually to the society's youngest doctoral student for his or her outstanding doctoral degree. She completed her dissertation on social scoring by states at the age of 26.

In 2022, **Daria Kim** was awarded the Otto Hahn Medal by the Max Planck Society for her dissertation in recognition of her outstanding scientific achievements.

Timmy Pielmeier received the GRUR Dissertation Prize 2022 in the category of Trademark, Competition and Design Law as well as the 2023 Faculty of Law Prize of the Ludwig-Maximilians-Universität Munich for his dissertation on the relationship between copyright and fair trading law in the internal market.

Stefan Scheuerer was honored with the Faculty Prize 2022 for his dissertation that explored the concept of fairness as a legal principle by the Ludwig-Maximilians-Universität's Faculty of Law.

Aaron Stumpf's dissertation on music creation and copyright was recognized by the Ludwig-Maximilians-Universität's Faculty of Law with the award of the Faculty Prize in 2022.

Klaus Wiedemann was honored with the Faculty Prize 2023 for his dissertation on profiling-based personalized pricing granted by the Ludwig-Maximilians-Universität's Faculty of Law.



The Max Planck Society honors Anja Geller who has achieved the distinction of being the youngest doctoral student in 2022 to complete her dissertation.

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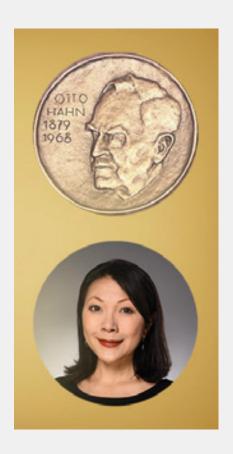
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Daria Kim received the Otto Hahn Medal for her work on "Access to Non-Summary Clinical Trial Data for Research Purposes Under EU Law", a study on the regulation of access to data collected during clinical trials in order to improve future drug research.

Daria Kim provides in her dissertation an in-depth study on the regulation of access to patient-level data generated in the context of clinical trials. As an interdisciplinary study, it integrates the insights from medical research, economics and public policy into normative legal analysis. The author elaborates a proposal of how the rules on access to data can be designed on the EU level to reconcile the policy objectives of leveraging the knowledge potential of data through exploratory analysis in the interest of society at large while protecting innovation incentives of research-based drug companies. She thereby substantially contributes to the further development of the legal system designed to promote innovation against the backdrop of the current development of digitization.

The Max Planck Society has been awarding the prize for outstanding scientific achievements, named after the "father of nuclear chemistry" Otto Emil Hahn (1879–1968), since 1978. The prize is intended to motivate young talented scientists to pursue a research career.

After her dissertation Daria Kim has continued her research at the Institute and is a Senior Research Fellow now.





Timmy Pielmeier presents his dissertation at the award of the GRUR Dissertation Prize 2022.

Begoña González Otero receives the Adepi award on behalf of the Institute.



Appointments and Placements

Michèle Finck was appointed as a Professor of Law and Artificial Intelligence at the University of Tübingen in 2021. Prior to her appointment, she worked as a Senior Research Fellow at the Institute.

Niccolò Galli, a former doctoral student of the European Joint Doctorate Innovation Society, supervised at the Institute, was appointed a Research Associate at the European University Institute of Florence in 2021.

In 2021, **Vikas Kathuria** left his position as a Senior Research Fellow at the Institute to become a Professor at BML Munjal University School of Law in India, where he now heads the Centre on Law, Regulation, and Technology (CLRT).

Silke von Lewinski was elected an honorary board member of the collection management organization VG WORT in 2021. In the same year, she was reelected as a Vice President of ALAI (Association Littéraire et Artistique Internationale) and as the President of ALAI Deutschland.

In 2021, Mark-Oliver Mackenrodt left his position as a Senior Research Fellow at the Institute and now holds the professorship of Law of Digital Goods, Commerce, and Competition at the TUM School of Management at the Technical University of Munich.

Sunimal Mendis, a former doctoral student at the Institute's International Max Planck Research School Competition and Innovation (IMPRS-CI), holding a doctoral degree from the Ludwig-Maximilians-Universität Munich, was appointed an Assistant Professor in Intellectual Property Law at the Tilburg Institute for Law, Technology, and Society (TILT) of Tilburg University in 2022.

Arul George Scaria transitioned from his role as an Associate Professor at the National Law University Delhi to assume the position of an Associate Professor at the National Law School of India University Bengaluru in 2022. During his time at the Institute, he was part of the inaugural batch (2008–2011) of doctoral students in the International Max Planck Research School Competition and Innovation (IMPRS-CI). He holds a doctoral degree from Ludwig-Maximilians-Universität Munich.



7 Memberships in Scholarly Societies and Committee Work of the Scientific Members

Josef Drexl is elected member of the Bavarian Academy of Sciences and Humanities (BAdW, since 2010) and the Chair of its Program Commission.

He also serves as a Member of the Executive Board of the Academic Society for Competition Law, for which he was the Founding Chair from 2003 to 2013. He also serves on the Executive Board of the German Association for Intellectual Property Law (GRUR).

He is a member of various other academic associations: Association Internationale de Droit Economique (AIDE; Vice President 2002–2021); Association Littéraire et Artistique Internationale (ALAI); Deutsch-amerikanische Juristen-Vereinigung (DAJV); Deutsche Gesellschaft für Rechtsvergleichung; Deutsche Gesellschaft für Internationales Recht; European Law Institute (ELI); Gesellschaft für Recht und Ökonomik; Institut Euro-Africain de Droit économique (INEADEC); International Academy of Comparative Law; International Association for the Advancement of Teaching and Research in Intellectual Property (ATRIP); Society for European Contract Law (SECOLA).

In the reporting period 2021–2023, he shared his expertise through the following advisory activities for public organizations and services to the scientific community:

Advisory Activities to Public Organizations

Expert Member of the Data Governance Working Group of the Global Partnership on Artificial Intelligence (GPAI) (since 2020)

External Advisor of the European Commission for the Study on the "Legal Protection of Trade Secrets in the Context of the Data Economy" (2022)

External Advisor of the European Commission for the Review of the Research and Development Block Exemption Regulation (2022)

Services to the Scientific Community

Speaker of scientific writers on the Administrative Board (Verwaltungsrat) as well as Head of the Statute's Commission of the German collective rights management organization VG Wort (re-elected 2023)

Member of the Board of Trustees of the NEXA Center for Internet and Society of the Polytechnic University of Turin (Politecnico di Torino)

Member of the Reaccreditation Committee for the Master's Program in Business, Competition and Regulatory Law at the Freie Universität Berlin (2021)

Member of the Reaccreditation Committee for the Master's Programs in "European and International Law" as well as "European and European Legal Studies" at Hamburg University (2022)

Reviewer for university appointments and promotions at the following universities: University of Cambridge (2022); Université Catholique Louvain Saint-Louis Bruxelles (2023)

Reviewer of two research grant applications to the German Research Foundation (2021; 2022)

Peer reviewer for individual articles submitted to the following journal: Concorrenza e Mercato (2023)

Reto M. Hilty is Vice-president of the German Association for Intellectual Property Law (GRUR) as well as a member of its Executive Board (Geschäftsführender Vorstand).

He is a member of various other academic associations: Association Internationale de Droit Economique (AIDE); Association Littéraire et Artistique Internationale (ALAI); Deutsche Gesellschaft für Recht und Informatik (DGRI); Deutsche Gesellschaft für Völkerrecht; Deutsche Zivilrechtslehrervereinigung; European Copyright Society (ECS); Institut für gewerblichen Rechtsschutz (INGRES); International Association for the Advancement of Teaching and Research in Intellectual Property (ATRIP).

In the reporting period 2021–2023, he shared his expertise through the following services to the scientific community:

Services to the Scientific Community

Member of the Academic Advisory Council of the Bucerius Law School

President of the Schweizer Forum für Kommunikationsrecht (SF-FS)

Member of the Editorial Committee of the Research Bulletins of the Jagiellonian University – Intellectual Property Law Papers

Member of the Editorial Board of the Revista Rede de Direito Digital, Intelectual e Sociedade (RRDDIS) (Network Journal of Digital and Intellectual Rights & Society)

Member of the Scientific Council of the Utrecht Law Review

Member of the Editorial Advisory Board of the The University of Western Australia Law Review

Member of the Editorial Advisory Board of the Zeszyty Naukowe Uniwersytetu Jagiellońskiego

Peer reviewer for a book project submitted to Springer (2021)

Reviewer for the appointment of a Chair on Innovation and Private Law at the University of Vienna (2021)



1 Events of the Department and the Institute

1.1 Conferences and Other Events

2023

Workshop Trade Secrets and Test Data Protection, Smart IP for Latin America (SIPLA), Max Planck Institute for Innovation and Competition, Buenos Aires, December 2023

Workshop Innovation and Access to Sustainable Technologies, Smart IP for Latin America (SIPLA), Max Planck Institute for Innovation and Competition, Buenos Aires, December 2023

Global Data Law Conference Series: Comparative Data Law, Max Planck Institute for Innovation and Competition, University of Passau Research Centre for Law and Digitalisation (FREDI), Munich, December 2023

Workshop Data Governance in Emerging Economies to Achieve the SDGs, Max Planck Institute for Innovation and Competition, Munich, December 2023

Workshop Regional Instrument on Permitted Uses in Copyright Law, Smart IP for Latin America (SIPLA), Max Planck Institute for Innovation and Competition, Buenos Aires, December 2023

Workshop The Development of a Regional Instrument for the Protection of the Public Interest in Patent Law, Smart IP for Latin America (SIPLA), Max Planck Institute for Innovation and Competition, Bogotá, November 2023

Strategy Meeting of the Max Planck Institute for Innovation and Competition, Westerham, September 2023

1st Workshop on Genetic Resources, Smart IP for Latin America (SIPLA), Max Planck Institute for Innovation and Competition, Bogotá, June 2023

Workshop Distinctive Collective Signs, Smart IP for Latin America (SIPLA), Max Planck Institute for Innovation and Competition, Bogotá, June 2023

Workshop Innovation on Sustainable Technologies, Smart IP for Latin America (SIPLA), Max Planck Institute for Innovation and Competition, Bogotá, June 2023

EIPIN Conference 2023: Coordination of Intellectual Property Law with the New European Data Law, EIPIN, Max Planck Institute for Innovation and Competition, Munich, June 2023

Workshop A Regional Instrument on Copyright, Smart IP for Latin America (SIPLA), Max Planck Institute for Innovation and Competition, São Paulo, May 2023

Symposium Perspectives on Innovation – Towards New Roadmaps for Research, Max Planck Institute for Innovation and Competition, online, May 2023

Workshop Competition Law and Environmental Harm by Dominant Firms, Smart IP for Latin America (SIPLA), Max Planck Institute for Innovation and Competition, University of São Paulo, São Paulo, April 2023

Exploring Pathways to the Standardization of Licenses for Data and Machine Learning Models, Global Partnership on Artificial Intelligence (GPAI), Duke University, Max Planck Institute for Innovation and Competition, Munich, April 2023 Workshop Trade Secrets and Test Data Protection, Smart IP for Latin America (SIPLA), Max Planck Institute for Innovation and Competition, University of São Paulo, São Paulo, April 2023

Smart IP for Latin America Annual Conference 2023: Transferência Regional de Tecnologia e Inovação – O Exemplo da Produção de Energia Renovável, Smart IP for Latin America (SIPLA), Max Planck Institute for Innovation and Competition, University of São Paulo, São Paulo, April 2023

Workshop Flexibilities in Patent Law: Towards an International Instrument, Smart IP for Latin America (SIPLA), Max Planck Institute for Innovation and Competition, University of São Paulo, São Paulo, April 2023

Roundtable Rebuilding Ukraine: The Case of the Health Sector, Max Planck Institute for Innovation and Competition, Munich, March 2023

2022

Workshop Data Sharing & Climate Action in Brazil, Max Planck Institute for Innovation and Competition, Mackenzie University, São Paulo, December 2022

Online Roundtable Facilitating Access to Affordable Medicines During Wartime in Ukraine, Max Planck Institute for Innovation and Competition, online, December 2022 Inauguración del Observatorio de Propiedad Intelectual en la Universidad Externado de Colombia, Smart IP for Latin America (SIPLA), Max Planck Institute for Innovation and Competition, Universidad del Externado, Bogotá, November 2022

Workshop Compulsory Licensing, Smart IP for Latin America (SIPLA), Max Planck Institute for Innovation and Competition, Buenos Aires, November 2022

2nd Workshop CRISPR/Cas Technology, Innovation and Regulation, Max Planck Institute for Innovation and Competition, Munich, October 2022

Florence Seminar on Standard Essential Patents, European University Institute, Max Planck Institute for Innovation and Competition, Florence, October 2022

Strategy Meeting of the Max Planck Institute for Innovation and Competition, Grassau, September 2022

Workshop Data Sharing for Good Health & Well-Being: India's Way Forward to Achieving Sustainable Development Goal 3, Max Planck Institute for Innovation and Competition, National Law School of India University Bengaluru, BML Munjal Law School, Bengaluru, September 2022

Roundtable Innovation in Sustainable Technologies, Smart IP for Latin America (SIPLA), Max Planck Institute for Innovation and Competition, Buenos Aires, September 2022



The 2022 Alumni Conference sparks a dynamic exchange of ideas between alumni, colleagues, and external experts.

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Thinking ahead at the Institute's Strategy Meeting 2023.

Workshop Ways for an Appropriate Copyright Regulation in Latin America, Smart IP for Latin America (SIPLA), Max Planck Institute for Innovation and Competition, Curitiba, September 2022

Sustainability – Changing Paradigms in Innovation and Competition?, Conference of the Max Planck Institute for Innovation and Competition in collaboration with the Institute's Alumni Association, Munich, July 2022

Workshop Shaping the Internet for the Future, Max Planck Institute for Innovation and Competition, Munich, June 2022

Symposium The Role of Intellectual Property in Times of Radical Change, Max Planck Institute for Innovation and Competition, Munich, June 2022

Our Ukrainian Colleagues at the Institute Present Their Research, Max Planck Institute for Innovation and Competition, Munich, May 2022

Workshop Adapting Competition Law to the Socio-Economic Needs of Latin America, Smart IP for Latin America (SIPLA), Max Planck Institute for Innovation and Competition, Buenos Aires, March 2022 Workshop Best Practices in Competition Law and Technology Transfer, Smart IP for Latin America (SIPLA), Max Planck Institute for Innovation and Competition, Buenos Aires, March 2022

Inauguration of the Max Planck Partner Group and Workshop Shaping Data Sharing Policies in the Agricultural and the Financial Services Sector, Max Planck Institute for Innovation and Competition, Université virtuelle du Sénégal, Dakar, March 2022

Smart IP for Latin America Annual Conference 2022: Innovación en Energías Sostenibles, Smart IP for Latin America (SIPLA), Max Planck Institute for Innovation and Competition, Ministerio de Ciencia, Tecnología e Innovación de Argentina (MINCYT), Buenos Aires, March 2022

Workshop Patent Flexibilites – Towards a Regional Instrument, Smart IP for Latin America (SIPLA), Max Planck Institute for Innovation and Competition, Buenos Aires, March 2022

Workshop Collective Distinctive Signs as Instruments of Sustainable Development, Smart IP for Latin America (SIPLA), Max Planck Institute for Innovation and Competition, Buenos Aires, March 2022

2021

Intellectual Property Law-Making as Line (Re-)Drawing, Max Planck Law, Max Planck Institute for Innovation and Competition, online, October 2021

Strategy Meeting of the Max Planck Institute for Innovation and Competition, Munich, September 2021

New Directions in the European Union's Innovation Policy?, Conference of the Max Planck Institute for Innovation and Competition in collaboration with the Institute's Alumni Association, Munich, July 2021

Impfstoff für alle! Was lässt sich tun?, Max Planck Forum Berlin with Director Reto M. Hilty, July 2021

IP Laws' Game Changers? The Cases of IoT and AI Technologies, Max Planck Law, Max Planck Institute for Innovation and Competition, online, June 2021

1.2 Guest Lectures

1.2.1 MIPLC Lecture Series

Vilhelm Schröder, Hannes Snellmann law firm, Helsinki, "The Unified Patent Court – A Nordic Perspective", October 2023

Dr. Begoña González Otero, Jörg Hoffmann, Max Planck Institute for Innovation and Competition, "Legal, Economic, and Technical Perspectives on Interoperability or How to Gain Normative Strength via Technical Determination by Law", March 2021

1.2.2 Patent Law Series

Dr. Klaus Bacher, Presiding Judge at the Federal Court of Justice, "Lieferungen im Ausland als Beteiligung an einer Patentverletzung im Inland", September 2023

Peter M. Huber, Former Federal Constitutional Court judge and former Thuringian Home Minister, "Verfassungsrechtliche Anforderungen an die Ausgestaltung supranationalen Rechtsschutzes", May 2023

1.2.3 Other Guest Lectures

Pratap Devarapalli, Ph.D., TC Bernie School of Law, University of Queensland, Australia, "Patent Inventorship in the Age of Generative AI: Who Shaped the Inventive Output?", November 2023

Prof. Dr. Meeyoung Cha, Korea Advanced Institute of Science and Technology (KAIST), Daejeon, South Korea, "Generative AI and the Challenges for Copyright Protection", September 2023

Prof. John Willinsky, Ph.D., Simon Fraser University, Burnaby, Canada, "Copyright's Broken Promise. How to Restore the Law's Ability to Promote the Progress of Science", Book presentation with discussion, October 2022

1.3 Reception of Delegations

Zhangjiang Institute for Advanced Study, September 2023 Max Planck Law, July 2023

The European Law Students' Association (ELSA) Bielefeld, December 2022

Pontificia Universidad Católica de Chile, June 2022



The Global Data Law Conference was organized together with the University of Passau Research Centre for Law and Digitalisation (FREDI).

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2 Participation in Conferences, Congresses, and Symposiums

2023

Workshop Geographical Indications and the Commons, Institute for Information Law (IViR), University of Amsterdam, online, December 2023 (Moscon)

Regulating Artificial Intelligence Workshop, The University of Lapland, online, December 2023 (**Dermawan**)

Global Data Law Conference Series: Comparative Data Law, Max Planck Institute for Innovation and Competition, University of Passau Research Centre for Law and Digitalisation (FREDI), Munich, December 2023 (numerous participants from the Institute)

Workshop Trade secrets and test data protection, Smart IP for Latin America (SIPLA), Max Planck Institute for Innovation and Competition, Buenos Aires, December 2023 (Batista, Beneke Ávila, Hilty, Lamping)

Workshop Innovation and access to sustainable technologies, Smart IP for Latin America (SIPLA), Max Planck Institute for Innovation and Competition, Buenos Aires, December 2023 (Batista, Hilty, Lamping)

Workshop Data Governance in Emerging Economies to Achieve the SDGs, Max Planck Institute for Innovation and Competition, Munich, December 2023 (Banda, Drexl, González Otero, Johannsen, Hoffmann, Kulhari)

Seminar Interoperability in the Metaverse, Spanish & Portuguese Chapter of Licensing Executive Society International (LESI), Chair for the responsible development of the Metaverse, online, December 2023 (González Otero)

8th Asian International Economic Law Network (AIELN) Conference: The New Generation of Economic Agreements, National Taiwan University, Taipei, December 2023 **(Kim)**

Conference of the Parties to the United Nations Framework Convention on Climate Change (UNFCCC), Expo City Dubai, November/December 2023 (Ediboğlu Sakowsky)

Workshop Regional Instrument on Permitted Uses in Copyright Law, Smart IP for Latin America (SIPLA), Max Planck Institute for Innovation and Competition, Buenos Aires, December 2023 (Batista, Hilty, Lamping)

- 43. Patent- und MarkenFORUM 2023, FORUM Institut für Management, Munich, November 2023 (Lamping)
- 11. Internationale Urheberrechtskonferenz der Initiative Urheberrecht: KI im Fokus, online, November 2023 **(von Lewinski)**

21st annual international conference: Cyberspace, Masaryk University, European Academy of ICT Law, Brno, November 2023 **(Slowinski)**

Generative KI im Urheberrecht – Einordnung, rechtliche Risiken und mögliche Lösungsansätze, Center for Intellectual Property Law, Information and Technology (CIPLITEC), Ludwig-Maximilians-Universität, Munich, November 2023 (Batista, Chen, Masselot, Moscon)

4th International Congress on Agriculture and Food Ethics, Association of Agriculture and Food Ethics (TARGET), Ankara University, November 2023 **(Ediboğlu Sakowsky)**

Roundtable Discussion on U.S. Copyright Office Notice of Inquiry on Copyright and Artificial Intelligence, Berkeley Center for Law & Technology, online, November 2023 (Moscon)

First interWAIQ event, Fundacion Pons, Madrid, November 2023 (González Otero)

IUM-Symposion: Generative K.I. und das Urheberrecht – Eine komplizierte Beziehung, Institut für Urheber- und Medienrecht, Munich, November 2023 **(von Lewinski)**

Enabling Al-aided Drug Discovery and Development: Towards a Holistic Legal and Regulatory Framework, Faculty of Law at Victoria University of Wellington (New Zealand), November 2023 **(Kim)**

Conférence sur les données à caractère personnel, Université Numérique Cheikh Hamidou KANE, Dakar, online, November 2023 **(González Otero)**

Forty-Fourth Session of the Standing Committee on Copyright and Related Rights, World Intellectual Property Organization (WIPO), Geneva, November 2023 **(von Lewinski)**

First meeting of the Ad Hoc Open-ended Working Group on Benefit-sharing from the Use of Digital Sequence Information on Genetic Resources, Conference of the Parties to the Convention on Biological Diversity (CBD COP), Geneva, November 2023 (Batista)

Industriekonferenz 2023, Federal Ministry for Economic Affairs and Climate Action, Berlin, November 2023 (Hoffmann)

The SEP regulation proposal: results of the public consultation and institutional perspectives, Centre for a Digital Society, European University Institute, Florence, online, November 2023 (Hoffmann)

Workshop on Data Governance in Senegal, Université virtuelle du Sénégal, Dakar, online, November 2023 (Hoffmann)

Workshop The development of a regional instrument for the protection of the public interest in patent law, Smart IP for Latin America (SIPLA), Max Planck Institute for Innovation and Competition, Bogotá, November 2023 (Batista, Hilty)

Max Planck Law Annual Conference 2023: Crisis, Max Planck Law, Berlin, October 2023 (Chen, Herrmann, Kestler, Kim, Kunko, Steinhart)

7th Annual Max Planck Law PhD Workshop, Max Planck Law, Berlin, October 2023 **(Chen, Kestler, Steinhart)**

The Nordic Conference on Law and Information Technology 2023: Law, AI and Society – Regulating AI-Based Technology as Transition to a Sustainable, Resilient and Inclusive Future, The University of Lapland, Rovaniemi, October 2023 (Dermawan)

Congreso Internacional: Retos de la Propiedad Industrial e Intelectual ante la IA, Facultad de Derecho de la Universidade da Coruña, A Coruña, October 2023 (González Otero)

What Every Practitioner Needs to Know About the Differences in Collective and Individual Licensing between the EU and in North America, Humboldt-Universität Berlin, Association Littéraire et Artistique Internationale (ALAI) Deutschland, Berlin, October 2023 (von Lewinski)

Inaugural Asian Intellectual Property Scholars Conference 2023, The University of Washington School of Law, Seattle, October 2023 (**Dermawan**)

Seminar Critical Approaches to Legal Comparison, Max Planck Law Initiative Legal Research Methods, online, October 2023 **(Kunko)**

22. Bayreuther Herbstsymposium zum Lebensmittelrecht: Risikovorsorge im Lebensmittelrecht, Forschungsstelle für deutsches und europäisches Lebensmittelrecht, University of Bayreuth, October 2023 (Endrich-Laimböck)

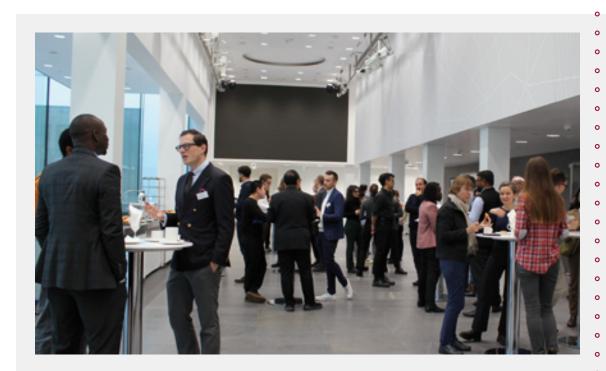
Max Planck PhDnet General Meeting 2023, Max Planck PhDnet, Max Planck Institute for Comparative Public Law and International Law, Heidelberg, online, October 2023 (Steinhart)

Seminar Data spaces – Discovering the building blocks, data.europa.eu, online, October 2023 **(Chen)**

Helsinki IP Summit, IPR University Center, Helsinki, October 2023 (Lamping)

The 5th Workshop on China-EU Innovation and Competition & 20th Anniversary of Tongji IP: Intellectual Property and Competition in the Age of AI, Tongji University, Shanghai, online, October 2023 (Batista, von Lewinski, Straus)

Working Group IV Meeting, United Nations Commission on International Trade Law, Vienna, October 2023 (Hoffmann)



Participants engage in vivid discussions at the Global Data Law Conference in Munich.

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Members of the Institute at the ALAI Congress in Paris in June 2023.

The Council's Informal Thematic Session for External Stakeholder Input under Paragraph 8 of the Ministerial Decision on the TRIPS Agreement, World Trade Organization (WTO) Council for TRIPS, online, September 2023 **(Kim)**

GRUR Jahrestagung 2023, German Association for Intellectual Property Law (GRUR), Mannheim, September 2023 (Batista, Chiettini, Feng, Hilty, Huckschlag, Lu, Slowinski, Steinhart, Wiedemann)

Seminar What is African Law?, Max Planck Law Initiative Law and Africa, online, September 2023 (Kunko)

Was ist ein Pastiche? – Erkenntnisse aus der Rechtspraxis der Mitgliedstaaten und Überlegungen zur Auslegung im europäischen Recht, Association Littéraire et Artistique Internationale (ALAI) Deutschland, Max Planck Institute for Innovation and Competition, Munich, September 2023 (Huckschlag, von Lewinski)

Eighth Session of the WIPO Conversation on IP and Frontier Technologies, World Intellectual Property Organization (WIPO), Geneva, online, September 2023 (Chen, Dermawan, von Lewinski, Militsyna)

Open Science Ambassadors Conference, Max Planck Digital Library, PhDnet, Berlin, September 2023 (Moscon)

WIPO Summer School on IP, World Intellectual Property Organization (WIPO), Nanjing University of Science and Technology, online, September 2023 (von Lewinski)

Workshop Research project on IP, Data, and AI in digital environments: proposals for reform, University of Burgos, online, September 2023 (Moscon)

Artificial Intelligence and Civil Liability: Recent developments in the EU, Brazilian Institute of Competition, Consumption and International Trade Studies (IBRAC), online, September 2023 (Kim)

18th Annual Conference of the EPIP Association: IP, Innovation and Technology: Challenging the Present, Inspiring the Future, European Policy for Intellectual Property (EPIP) Association, Jagiellonian University, Kraków, September 2023 (Barycki, Slowinski)

Doctoral seminar, Ludwig-Maximilians-Universität, Neustift Abbey, Vahrn, September 2023 (**Huckschlag**)

El Rol del Comercio Internacional en la Seguridad Alimentaria Mundial, INTAL Talks from the Institute for the Integration of Latin America and the Caribbean of the Inter American Development Bank, online, September 2023 **(Batista)**

6. Offenes Düsseldorfer Doktorandenseminar im Kartellrecht, University of Düsseldorf, September 2023 (Herrmann)

Workshop Text and Data Mining in Zeiten von KI-Entwicklung und -Training, Initiative Urheberrecht, Berlin, August 2023 (von Lewinski)

Antitrust and the Bounds of Power – European Competition Law – Past, Present & Future, Digital Markets Research Hub, online, August 2023 (Matarazzi)

23rd Intellectual Property Scholars Conference 2023, Benjamin Cardozo Law School, New York City, August 2023 (**Dermawan**)

43rd International Congress on Intellectual Property, Brazilian Intellectual Property Association (ABPI), Rio de Janeiro, August 2023 **(Batista)**

Goals of Antitrust Consumer Welfare v Fairness & Competitive Process – Types of Populism, Digital Markets Research Hub, online, August 2023 (Matarazzi)

IP and Emerging Technologies, IP Academy of Ukraine, World Intellectual Property Organization (WIPO), online, August 2023 (Militsyna)

Generative KI in der Arbeitswelt – Potenziale für die zukünftige Gestaltung, Münchner Kreis, Munich, July 2023 (Chen)

Computers, Privacy and Data Protection (CPDP) LatAm 2023, Fundação Getulio Vargas, Rio de Janeiro, online, July 2023 (Banda, Rodriguez)

Max Planck Climate Conference for a Sustainable Anthropocene, Max Planck Law Initiative Law, Climate Change, and the Environment, Berlin, July 2023 (Barycki, Ediboğlu Sakowsky)

41st ATRIP Congress: The Interface of Intellectual Property Law With Other Legal Disciplines, International Association for the Advancement of Teaching and Research in Intellectual Property (ATRIP), University of Tokyo, July 2023 (Batista, Chiettini, Lamping, Slowinski)

Private Rights and Public Autonomy in a Fragmented World II, University of Cambridge, Ludwig-Maximilians-Universität, Munich, July 2023 (Beneke Ávila, Wiedemann)

Competition law enforcement and consumer protection in digital markets, Competition Promotion and Consumer Protection Committee of the Republic of Uzbekistan, Tashkent, July 2023 (Kim)

18th ASCOLA Conference: Competition as an Institution and Economic Transformations: A Change of Paradigm?, Academic Society for Competition Law (ASCOLA), University of Athens, June 2023 (Herrmann, Hoffmann, Kestler, Wiedemann)

IP Researchers Europe Conference 2023 (IPRE 2023), University of Geneva, World Intellectual Property Organization (WIPO), World Trade Organization (WTO), Geneva, June 2023 (Chiettini, Dermawan, Endrich-Laimböck, Feng, Ferrero Guillén, Militsyna)

Online networking evening ChatGPT und die Zukunft kreativer Textarbeit, Münchner Kreis, online, June 2023 (von Lewinski)

8. Tagung GRUR Junge Wissenschaft – Kolloquium zum Gewerblichen Rechtsschutz, Urheber- und Medienrecht: Plattformen – Grundlagen und Neuordnung des Rechts digitaler Plattformen, German Association for Intellectual Property Law (GRUR), University of Potsdam, June 2023 (Herrmann, Kestler)

Global Data Governance Conference, Centre for a Digital Society, European University Institute, Organisation for Economic Co-operation and Development (OECD), Florence, June 2023 (González Otero)

Copyright, Related Rights and Artificial Intelligence, Association Littéraire et Artistique Internationale (ALAI), Paris, June 2023 (Dagan, von Lewinski, Militsyna)

Workshop Exploring Pathways to the Standardization of Licenses for Data and Machine Learning Models, Global Partnership on Artificial Intelligence (GPAI), Washington, online, June 2023 (**DrexI**) Workshop The Enforcement of Data Protection Law: A Critical Reflection, London School of Economics, June 2023 (Wiedemann)

Should the control of economic power (still) be the main focus of competition policy, Weizenbaum Institute, online, June 2023 (Matarazzi)

EIPIN Conference 2023: Coordination of Intellectual Property Law with the New European Data Law, EIPIN, Max Planck Institute for Innovation and Competition, Munich, June 2023 (Chen, Drexl, Ferrero Guillén, González Otero, Kestler, Kunko, Matarazzi, Moscon, Mustafa, Richter)

EIPIN Doctoral Seminar, EIPIN, Max Planck Institute for Innovation and Competition, Munich, June 2023 (Chen, Drexl, Ferrero Guillén, Herrmann)

Seminar Exploring Content Moderation Challenges in the Metaverse, Chair for the responsible development of the Metaverse, online, June 2023 (Ferrero Guillén)

Seminar The European Digital Acts and the Metaverse: Fit for Purpose?, Chair for the responsible development of the Metaverse, online, June 2023 (Ferrero Guillén)

G-IPTech Centre Inauguration: Global Challenges for a Sustainable Algorithmic Society, Global Intellectual Property and Technology (G-IPTech) Centre, Queen's University Belfast, June 2023 (**Drexl**)

The EWC Burning Issues Forum: TO BOT. OR NOT TO BOT, European Writers Council, Berlin, June 2023 (von Lewinski)

1. Tagung Junges Kartellrecht: Kartellrecht und Zukunftstechnologien, Ludwig-Maximilians-Universität, Munich, June 2023 (Herrmann)

1st Workshop on Genetic Resources, Smart IP for Latin America (SIPLA), Max Planck Institute for Innovation and Competition, Bogotá, June 2023 **(Batista, Hilty)**

Workshop Distinctive Collective Signs, Smart IP for Latin America (SIPLA), Max Planck Institute for Innovation and Competition, Bogotá, June 2023 (Hilty)

Workshop Innovation on sustainable technologies, Smart IP for Latin America (SIPLA), Max Planck Institute for Innovation and Competition, Bogotá, June 2023 (Hilty)

Workshop A regional instrument on copyright, Smart IP for Latin America (SIPLA), Max Planck Institute for Innovation and Competition, São Paulo, May 2023 (Batista, Beneke Ávila, Hilty, Lamping)

Colloquium La rémunération des auteurs et des artistes – Le juste prix dans les contrats d'exploitation en droit de la propriété littéraire et artistique, Nantes Université, May 2023 (von Lewinski) 16th International Conference Computers, Privacy and Data Protection (CPDP), Brussels, May 2023 (Wiedemann)

Colloque international: Démondialisation et re-mondialisation, Association Internationale de Droit Economique (AIDE), European University Institute, Florence, May 2023 (**Drexl**)

Tsinghua – Berkeley Joint IP Scholars' Forum, Center for Law and Technology, University of California, Berkeley, Center for Intellectual Property, Tsinghua University, Beijing, May 2023 (Feng)

III International Legal Forum at the Intellectual Property Office of the Ministry of Justice of the Republic of Uzbekistan, Tashkent, May 2023 **(Kim)**

Patent Law and Policymaking: Principles, Challenges and Strategies, Intellectual Property Office of the Republic of Uzbekistan, Tashkent, May 2023 (Kim)

Symposium Perspectives on Innovation – Towards New Roadmaps for Research, Max Planck Institute for Innovation and Competition, online, May 2023 (numerous participants from the Institute)

Meaning and Legal Interpretation, Max Planck Law Initiative Legal Research Methods, online, May 2023 (Matarazzi)

From Turing to ChatGPT – 70 Years of Artificial Intelligence, Internationales Begegnungszentrum der Wissenschaft (IBZ), Munich, May 2023 (Matarazzi)

DMA and Data-Related Obligations, DG GROW, European Commission, Brussels, online, May 2023 (Hoffmann)

Annual ECS Conference: The Interface Between Copyright and Data Regulation, European Copyright Society (ECS), Leuven, May 2023 (Hilty)

Workshop Competition law and environmental harm by dominant firms, Smart IP for Latin America (SIPLA), Max Planck Institute for Innovation and Competition, University of São Paulo, São Paulo, April 2023 (Batista, Beneke Ávila, Hilty, Lamping)

Exploring Pathways to the Standardization of Licenses for Data and Machine Learning Models, Global Partnership on Artificial Intelligence (GPAI), Duke University, Max Planck Institute for Innovation and Competition, Munich, April 2023 (Banda, Chen, Drexl, González Otero, Herrmann, Hoffmann, Kim, Pauer)

Workshop Trade secrets and test data protection, Smart IP for Latin America (SIPLA), Max Planck Institute for Innovation and Competition, University of São Paulo, São Paulo, April 2023 (Batista, Beneke Ávila, Hilty, Lamping)

Bentham House Conference: Competition Law and Policy in a Data-Driven Economy, University College London, April 2023 (Wiedemann) Smart IP for Latin America Annual Conference 2023: Transferência Regional de Tecnologia e Inovação – O Exemplo da Produção de Energia Renovável, Smart IP for Latin America (SIPLA), Max Planck Institute for Innovation and Competition, University of São Paulo, São Paulo, April 2023 (Batista, Beneke Ávila, Hilty, Lamping)

VI ВСЕУКРАЇНСЬКОЇ НАУКОВО-ПРАКТИЧНОЇ КОНФЕРЕНЦІЇ СТВОРЕННЯ, ОХОРОНА, ЗАХИСТ І КОМЕРЦІАЛІЗАЦІЯ ОБ'ЄКТІВ ПРАВА ІНТЕЛЕКТУАЛЬНОЇ ВЛАСНОСТІ з міжнародною участю Присвячено Міжнародному дню інтелектуальної власності (VI All-Ukrainian Scientific and Practical Conference: Creation, Protection, Enforcement and Commercialization of Intellectual Property Rights Objects with International Participation Dedicated to the International Day of Intellectual Property), National Technical University of Ukraine "Igor Sikorsky Kyiv Polytechnic Institute", Kyiv, online, April 2023 (Kim)

Nach der BGH-Entscheidungen Youtube II und uploaded II und III: Was bleibt von der Störerhaftung?, Association Littéraire et Artistique Internationale (ALAI) Deutschland, online, April 2023 (von Lewinski)

The History of the Future – the DMA & National Competition Laws, Digital Markets Research Hub, online, April 2023 (Matarazzi)

LSE Chillin' Webinar on exclusionary abuses – from Guidance to Guidelines, London School of Economics, Digital Markets Research Hub, online, April 2023 (Matarazzi)

Workshop Flexibilities in patent law: Towards an International Instrument, Smart IP for Latin America (SIPLA), Max Planck Institute for Innovation and Competition, University of São Paulo, São Paulo, April 2023 (Batista, Beneke Ávila, Hilty, Lamping)

Expert Workshop The Future of AMR Policy, Global Strategy Lab, York University, Toronto, April 2023 **(Steinhart)**

2023 Antitrust and Competition Conference: Beyond the Consumer Welfare Standard?, The University of Chicago Booth School of Business, online, April 2023 (Hoffmann)

Evento de Presentación de la Revista de Derecho Administrativo No. 21, Círculo de Derecho Administrativo, online, April 2023 **(Beneke Ávila)**

Craft of Legal Scholarship, Max Planck Law Initiative Legal Research Methods, online, April 2023 (Matarazzi)

Seminar The Role of Health Technology Assessment in Personalised Medicine, Building Links Between Europe and Africa in Personalised Medicine (EU-Africa PerMed), online, April 2023 (Kunko)

30th Annual Intellectual Property Law & Policy Conference, Fordham IP Institute, New York City, April 2023 **(von Lewinski)** The 11th Amendment to the German Competition Act GWB, Digital Markets Research Hub, online, April 2023 (Matarazzi)

VIII Міжнародна науково-практична інтернет-конференція «ІННОВАЦІЙНЕ ПІДПРИЄМНИЦТВО: СТАН ТА ПЕРСПЕКТИВИ РОЗВИТКУ» (VIII International Scientific and Practical Internet Conference: Innovative Entrepreneurship: State and Prospects of Development), Kyiv National Economic University named after Vadym Hetman, online, March 2023 (Kim)

Global Digital Encounter (GDE) No. 26, Fundación para la Investigación sobre el Derecho y la Empresa (Fide), online, March 2023 (Lamping)

Net neutrality and fair sharing in the telecom sector, Centre for a Digital Society, online, March 2023 (Matarazzi)

Roundtable Rebuilding Ukraine: The Case of the Health Sector, Max Planck Institute for Innovation and Competition, Munich, March 2023 (numerous participants from the Institute)

Telecoms drumbeat for the future of connectivity, Politico, online, March 2023 (Matarazzi)

Forty-Third Session of the Standing Committee on Copyright and Related Rights, World Intellectual Property Organization (WIPO), Geneva, March 2023 (von Lewinski)

Fifth IP & Innovation Researchers of Asia (IPIRA) Conference, IP & Innovation Researchers of Asia (IPIRA) Network, Nanyang Technological University, Singapore, online, March 2023 (Barycki, Dermawan, Feng)

Workshop Accelerating Vaccine Production in Africa, University of Rwanda, Kigali, online, March 2023 **(Kim)**

OECD Competition Open Day 2023, Organisation for Economic Co-operation and Development (OECD), Paris, online, February 2023 (Herrmann, Matarazzi)

13. Expertenrunde zur Münchner Sicherheitskonferenz: A New World Order? Why it Matters? The World After the War in Ukraine, MSC (Munich Security Conference) Youth Hub, Munich, February 2023 (Matarazzi)



Strong presence at the GRUR Jahrestagung 2023.

MSC Security and Literature Series 2023, MSC (Munich Security Conference), Munich, February 2023 (Matarazzi)

IUM-Symposion: Open Access und das Urheberrecht – Eine komplizierte Beziehung?, Institut für Urheber- und Medienrecht, Munich, February 2023 (von Lewinski)

Online Symposium Big Tech, Competition & Innovation in the Digital Economy, Weizenbaum Institute, online, February 2023 (Matarazzi)

WhatNext.Law Conference 2023: Living Together in the Cities of the Future and the Metaverse, Nova School of Law, online, February 2023 (Dermawan)

Vektoren der Datenpreisgabe, Bavarian Research Institute for Digital Transformation (BIDT), Technical University of Munich, February 2023 (**Drexl**)

Forty-Sixth Intergovernmental Committee on Intellectual Property and Genetic Resources, Traditional Knowledge and Folklore (IGC), World Intellectual Property Organization (WIPO), Geneva, February 2023 (Batista)

Seminar Competition law in the data economy – how will the evolving legal landscape affect data market?, data. europa.eu, online, January 2023 (Herrmann, Matarazzi)

DB Station case – between Competition & Regulation, Digital Markets Research Hub, online, January 2023 (Matarazzi)

LEAM Konferenz: Wie große KI-Modelle die deutsche Industrie zukünftig revolutionieren könnten, German AI Association, Berlin, January 2023 (Hoffmann)

Workshop Green Innovation, Max Planck Institute for Innovation and Competition, Schloss Ringberg, Kreuth, January 2023 (Lamping, Steinhart)

How to Implement the DMA?, Centre on Regulation in Europe (CERRE), Brussels, online, January 2023 (Herrmann)

2022

Workshop Data Sharing & Climate Action in Brazil, Max Planck Institute for Innovation and Competition, Mackenzie University, São Paulo, December 2022 (Banda, Drexl, González Otero, Hoffmann, Johannsen, Kulhari)

Workshop on the Digital Markets Act: Articulating the Digital Markets Act and Competition Law – Some Thoughts on Enforcement, Radboud University, Tilburg University, online, December 2022 (Herrmann, Matarazzi)

Seminar Personalized Medicine (PM) Ethics and Regulations in Africa – From Principles to Practice, Building Links Between Europe and Africa in Personalised Medicine (EU-Africa PerMed), online, December 2022 **(Kunko)**

How to extract value from health data obtained from the public and private sector?, Medical Faculty, University of Bergen, December 2022 **(Kim)**

Book launch: Rebuilding Ukraine – Principles and Policies, Centre for Economic Policy Research (CEPR), online, December 2022 (Militsyna)

Recent Intellectual Property Developments in the Ukraine, Alumni Association of the Max Planck Institute for Innovation and Competition, online, December 2022 (Militsyna)

Symposium Fragen der Stammzellethik, University of Düsseldorf, December 2022 (Batista)

La Propriété intellectuelle gourmande, University of Toulouse, December 2022 (von Lewinski)

Online Roundtable Facilitating Access to Affordable Medicines During Wartime in Ukraine, Max Planck Institute for Innovation and Competition, online, December 2022 (numerous participants from the Institute)

European Data Summit 2022, Konrad Adenauer Foundation, Berlin, November/December 2022 (Richter)

Inauguración del Observatorio de Propiedad Intelectual en la Universidad Externado de Colombia, Smart IP for Latin America (SIPLA), Max Planck Institute for Innovation and Competition, Universidad del Externado, Bogotá, November 2022 (Batista, Beneke Ávila, Hilty, Lamping)

IUM-Symposion: Die EU-Plattformregulierung – Eine »Verfassung« für digitale Akteure im Werden?, Institut für Urheber- und Medienrecht, Munich, November 2022 (von Lewinski)

Seminar on Protection of Regulatory Data in Life Sciences, Institute of Law Studies at the Polish Academy of Sciences, online, November 2022 **(Kim)**

The Second IP/IT Colloquium and Recreating Europe Conference on Video Games: Accessibility and Cultural Heritage in the Digital Age, University of Szeged, November 2022 **(Dermawan)**

Seminar Autonomous Driving, RAILS, University of Stuttgart, online, November 2022 **(Chen)**

Workshop Compulsory Licensing, Smart IP for Latin America (SIPLA), Max Planck Institute for Innovation and Competition, Buenos Aires, November 2022 (Batista, Beneke Ávila, Hilty, Lamping)

EIPIN International Conference: The interaction of the new European Digital Acts with the European Intellectual Property System, EIPIN, University of Alicante, November 2022 (Drexl, Ferrero Guillén, Matarazzi)

EIPIN Doctoral Seminar, EIPIN, University of Alicante, November 2022 (Drexl, Ferrero Guillén, Matarazzi)

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Об'єднані Наукою: Перспективи Міждисциплінарних Досліджень (United by Science: Prospects for Interdisciplinary Research), Taras Shevchenko National University of Kyiv, online, November 2022 (Militsyna)

Max Planck Law Annual Conference 2022: Solidarity, Max Planck Law, Berlin, November 2022 (Banda)

Doctoral seminar, University of Alicante, online, October 2022 (Ferrero Guillén)

Book presentation and workshop Copyright's Broken Promise – How to Restore the Law's Ability to Promote the Progress of Science, Max Plank Institute for Innovation and Competition, Munich, October 2022 (Militsyna, Moscon)

Aktuelle Fragen des Urheberrechts im Buchsektor, Association Littéraire et Artistique Internationale (ALAI) Deutschland, Spanish Ministry of Education, Vocational Training and Sports, Munich, October 2023 (von Lewinski)

2nd Workshop CRISPR/Cas Technology, Innovation and Regulation, Max Planck Institute for Innovation and Competition, Munich, October 2022 (Batista, Endrich-Laimböck, Hilty, Hofmeister, Kim, Lamping, Slowinski, Steinhart)

Florence Seminar on Standard Essential Patents, European University Institute, Max Planck Institute for Innovation and Competition, Florence, October 2022 (Conde Gallego, Drexl)

GRUR Jahrestagung 2022, German Association for Intellectual Property Law (GRUR), Dresden, online, October 2022 (Batista, Chen, Feng, Hilty, Hoffmann)

Workshop on the Data Act, Tilburg Institute for Law, Technology, and Society (TILT), Tilburg Law and Economics Center (TILEC), online, October 2022 (Chen, Richter)

Doctoral seminar Prof. Hilty: Herrschaft über immaterielle Güter, University of Salamanca, October 2022 **(Steinhart)**

Solutions to AMR from the Social Sciences, INAMRSS, Copenhagen, October 2022 **(Steinhart)**

Seminar Personalized Medicine (PM) Ethics and Regulations in Africa – From Principles to Practice, Building Links Between Europe and Africa in Personalised Medicine (EU-Africa PerMed), online, September 2022 **(Kunko)**

7th Max Planck Symposium for Alumni and Early Career Researchers: The age of information – power, risks, chances, Max Planck Society, Berlin, September 2022 **(Herrmann)**

L'arrêt ESA (2022) de la Cour suprême, Association Littéraire et Artistique Internationale (ALAI) Canada, online, September 2022 **(von Lewinski)**

Nordic/German IP Network Meeting, Stockholm University, September 2022 (Chiettini, Huckschlag)

Private Rights and Public Autonomy in a Fragmented World, University of Cambridge, Ludwig-Maximilians-Universität, Cambridge (UK), September 2022 (Beneke Ávila, Wiedemann)

We Robot 2022, University of Washington, September 2022 **(Herrmann)**

17th Annual Conference of the EPIP Association: Open IP for a better world?, European Policy for Intellectual Property (EPIP) Association, University of Cambridge (UK), online, September 2022 **(Ferrero Guillén)**

Workshop Revised R&D Block Exemption Regulation and Guidelines, European Commission, online, September 2022 (Drexl)

Workshop Data Sharing for Good Health & Well-Being: India's Way Forward to Achieving Sustainable Development Goal 3, Max Planck Institute for Innovation and Competition, National Law School of India University Bengaluru, BML Munjal Law School, Bengaluru, September 2022 (Banda, Drexl, González Otero, Hoffmann, Johannsen, Kulhari)

8th China Internet Rule of Law Conference, Internet Society of China (ISC), Beijing, online, September 2022 **(Chen)**

Roundtable Innovation in Sustainable Technologies, Smart IP for Latin America (SIPLA), Max Planck Institute for Innovation and Competition, Buenos Aires, September 2022 (Batista, Hilty, Lamping)

Workshop Ways for an Appropriate Copyright Regulation in Latin America, Smart IP for Latin America (SIPLA), Max Planck Institute for Innovation and Competition, Curitiba, September 2022 (Batista, Hilty)

International workshop Towards Transparent & Explainable AI in Healthcare, Macquarie Law School, Sydney, online, September 2022 **(Kim)**

Stakeholder dialogue Datenzugangsrechte für die Forschung im Data Act, Federal Ministry of Education and Research, Berlin, August 2022 **(Kim)**

Symposium Künstliche Intelligenz – Maschinelles Lernen und Mustererkennung, Bavarian Academy of Sciences and Humanities, Munich, online, July 2022 **(Chen)**

Sustainability – Changing Paradigms in Innovation and Competition?, Conference of the Max Planck Institute for Innovation and Competition in collaboration with the Institute's Alumni Association, Munich, July 2022 (numerous participants from the Institute)

Congreso internacional: El acceso a las prestaciones sanitarias esenciales en tiempos de pandemia, Universidad Nacional de Educación a Distancia (UNED), Madrid, online, July 2022 (Conde Gallego)

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Carolina Banda, attending the 17th ASCOLA Conference in Porto.

Literature Seminar, Max Planck Institute for Innovation and Competition, Munich, July 2022 (Matarazzi)

Research Atelier AI and IP, Institute for Civil Law, Intellectual Property Media and Data Protection Law (IRGET), TU Dresden, July 2022 (**Dermawan**)

17th ASCOLA Conference: Competition and Innovation in Digital Markets, Academic Society for Competition Law (ASCOLA), Universidade Católica Portuguesa, Porto, July 2022 **(Banda)**

Workshop Shaping the Internet for the Future, Max Planck Institute for Innovation and Competition, Munich, June 2022 (Conde Gallego, Drexl, Johannsen, Kulhari, Matarazzi)

Conference User protection against discrimination on sharing economy platforms, UCLouvain Saint-Louis Bruxelles, Brussels, June 2022 (Wiedemann)

Symposium The Role of Intellectual Property in Times of Radical Change, Max Planck Institute for Innovation and Competition, Munich, June 2022 (numerous participants from the Institute)

1st Colloquium on the Law of the Digital Economy: Harmonizing Digital Contract Law – The Impact of EU Directives 2019/770 and 2019/771 and the Regulation of Online Platforms, University of Ferrara, June 2022 **(Drexl)** International Conference on the Perspectives of the Right to Freedom of Information, National Authority for Data Protection and Freedom of Information Hungary, Budapest, June 2022 (Richter)

The quiet after the storm? The DSM Directive 1 year on, Bird&Bird, online, June 2022 (Moscon)

Reflecting 29 Years of CRISPR/Cas, Centre for Advanced Studies (CAS), Ludwig-Maximilians-Universität, Munich, June 2022 (Batista)

Our Ukrainian colleagues at the Institute present their research, Max Planck Institute for Innovation and Competition, Munich, May 2022 (numerous participants from the Institute)

Conference Common good in law, Faculty of Law and Administration, Jagiellonian University, Kraków, May 2022 (Barycki)

WIPO Symposium on Trade Secrets and Innovation, World Intellectual Property Organization (WIPO), Geneva, online, May 2022 (Drexl, Hoffmann)

Workshop Preliminary findings of the study on the international dimension of the single equitable remuneration, NTT Data, online, May 2022 (von Lewinski)

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Open Data Strategie Workshop, Berlin Senate Administration, online, May 2022 (Richter)

Bad Bots on the Attack – Guidance to Protect Against Online Fraud, Imperva, online, May 2022 (Herrmann)

Torts Law Reform in Asia and Beyond, Chinese University of Hong Kong, online, May 2022 (Kim)

Sitzung des Ausschusses für gewerblichen Rechtsschutz und Urheberrecht, Federation of German Industries (BDI), online, May 2022 (**Drexl**)

Forty-Second Session of the Standing Committee on Copyright and Related Rights, World Intellectual Property Organization (WIPO), Geneva, May 2022 (von Lewinski)

Doctoral seminar, University of Alicante, online, May 2022 (Ferrero Guillén)

IUM-Hybrid-Symposion: E-Lending – Lösungswege für das digitale Verleihen, Institut für Urheber- und Medienrecht, Munich, April 2022 **(von Lewinski)**

Trierer Gespräche zu Recht und Digitalisierung, Institute for Law and Digitization Trier, online, April 2022 (Richter)

29th Annual Intellectual Property Law & Policy Conference, Fordham IP Institute, online, April 2022 **(von Lewinski)**

2022 Antitrust and Competition Conference: Antitrust – What's Next?, The University of Chicago Booth School of Business, online, April 2022 (Hoffmann)

Les conséquences du Brexit en Droit de la Propriété Littéraire et Artistique, Association Française pour la Protection Internationale du Droit d'Auteur (AFPIDA), online, April 2022 **(von Lewinski)**

Standard essential patents: the evolving licensing framework from telecommunications industry to the Internet of Things, European University Institute, Florence, online, April 2022 (Hoffmann)

Workshop Datenzugang in Deutschland und der EU, Humboldt-Universität Berlin, April 2022 (**Drexl**)

CRA and Geradin Partners Conference on Ad Tech and Privacy Issues, Charles River Associates, Geradin Partners, London, online, April 2022 (Kestler)

Seminar O naruszeniach w aspekcie podmiotowym (Infringements in subjective aspect), Faculty of Law and Administration, Jagiellonian University, Kraków, April 2022 (Barycki)

Doctoral seminar Prof. Hilty: Welternährung, Sofia University, April 2022 (Steinhart)

Peer Review Discussion Trade Secrets and Data Sharing Study, European Commission, online, April 2022 (**Drexl**)

Jean Monnet Conference: Protection of Intellectual Property in the Digital Era, EUPROIN Project, Association Henri Capitant Moldova, Chişinău, online, March 2022 (Conde Gallego)

17th Annual Conference of the GCLC: The transformation of EU competition law – Next generation issues, College of Europe, Bruges, online, March 2022 **(Hoffmann)**

Seminar Proportionality and EU Fundamental Rights, Faculty of Law and Administration, Jagiellonian University, Kraków, March 2022 (Barycki)

Workshop Adapting Competition Law to the Socio-Economic Needs of Latin America, Smart IP for Latin America (SIPLA), Max Planck Institute for Innovation and Competition, Buenos Aires, March 2022 (Batista, Beneke Ávila, Carls, Hilty, Lamping)

Workshop Best Practices in Competition Law and Technology Transfer, Smart IP for Latin America (SIPLA), Max Planck Institute for Innovation and Competition, Buenos Aires, March 2022 (Batista, Beneke Ávila, Carls, Hilty, Lamping)

Inauguration of the Max Planck Partner Group and Workshop Shaping Data Sharing Policies in the Agricultural and the Financial Services Sector, Max Planck Institute for Innovation and Competition, Université virtuelle du Sénégal, Dakar, March 2022 (Drexl, González Otero, Hoffmann)

Smart IP for Latin America Annual Conference 2022: Innovación en Energías Sostenibles, Smart IP for Latin America (SIPLA), Max Planck Institute for Innovation and Competition, Ministerio de Ciencia, Tecnología e Innovación de Argentina (MINCYT), Buenos Aires, March 2022 (Batista, Beneke Ávila, Carls, Hilty, Lamping)

The European Commission's Data Act Proposal and its impact on the database sui generis right, Association Littéraire et Artistique Internationale (ALAI) Deutschland, online, March 2022 **(von Lewinski)**

Workshop Patent Flexibilites – Towards a Regional Instrument, Smart IP for Latin America (SIPLA), Max Planck Institute for Innovation and Competition, Buenos Aires, March 2022 (Batista, Beneke Ávila, Carls, Hilty, Lamping)

Workshop Collective Distinctive Signs as Instruments of Sustainable Development, Smart IP for Latin America (SIPLA), Max Planck Institute for Innovation and Competition, Buenos Aires, March 2022 (Batista, Carls, Hilty, Lamping)

Seminar Tajemnica przedsiębiorstwa po nowemu (New approach on trade secrets), Faculty of Law and Administration, Jagiellonian University, Kraków, March 2022 (Barycki)

COMMUNIA Salon 1/2022: The Sui Generis Database Right in the Data Act, COMMUNIA association, March 2022 (Moscon)

8. Göttinger Forum IT-Recht, Göttinger Verein zur Förderung des internationalen und nationalen Medienrechts, online, February 2022 (**Richter**)

OECD Competition Open Day 2022, Organisation for Economic Co-operation and Development (OECD), online, February 2022 (Conde Gallego, Herrmann, Hoffmann, Matarazzi)

Fourth IP & Innovation Researchers of Asia (IPIRA) Conference, IP & Innovation Researchers of Asia (IPIRA) Network, online, February 2022 (Barycki)

IUM-Symposion: Erweiterte Kollektive Lizenzen im Urheberrecht, Institut für Urheber- und Medienrecht, Institute of European Media Law (EMR), online, February 2022 (von Lewinski)

Climate Change Workshop, Max Planck Institute for Innovation and Competition, Munich, February 2022 (Batista, Conde Gallego, González Otero, Hoffmann, Lamping, Slowinski, Steinhart)

TIPE 3D Printing Conference 2022, Women in 3D Printing, online, January 2022 (Ferrero Guillén)

Seminar The role of copyright in the commercialisation of intangible cultural heritage for sustainable livelihoods – Purulia Chau dance and Patachitra scroll painting, British Literary and Artistic Copyright Association (BLACA), online, January 2022 (von Lewinski)

2021

Copyright Law 2030 – The Future of the Creative Ecosystem in Europe, Center for Intellectual Property Law, Information and Technology (CIPLITEC), Ludwig-Maximilians-Universität, University of Luxembourg, online, December 2021 (Barycki, Ferrero Guillén)

The Music Streaming Saga – Dr. Hayleigh Bosher with guest Kewin Brennan MP, Bristows, online, December 2021 **(von Lewinski)**

Reproduktionsfotografie – Der BGH-Fall "Museumsfotos" und die neue Rechtslage nach Umsetzung des Art. 14 DSM-Richtlinie in § 68 UrhG, Association Littéraire et Artistique Internationale (ALAI) Deutschland, online, December 2021 (von Lewinski)

2nd GRUR Expert Round Table: The EU Data Act, German Association for Intellectual Property Law (GRUR), online, December 2021 (**Drexl, Herrmann, Kestler, Richter**)

European Data Summit 2021, Konrad Adenauer Foundation, Berlin, online, December 2021 (González Otero, Hoffmann)

9. internationale Urheberrechtskonferenz der Initiative Urheberrecht: Die Politik von heute ist die Zukunft Europas, Initiative Urheberrecht, online, November 2021 **(von Lewinski)**

Measures to Ensure Access to Patents, IPR University Center, online, November 2021 (Barycki, Ferrero Guillén)

Lanzamiento del libro Los derechos de Propiedad Intelectual y la Libre Competencia, Universidad Externado de Colombia, Bogotá, November 2021 (Beneke Ávila, Hilty)

Symposium Biobanken: Ressource für Wissenschaft, Diagnostik und Therapie, Gemeinschaft Deutscher Kryobanken (GDK), Münster, November 2021 (Batista)

VPP-Herbstfachtagung 2021, Association of Intellectual Property Experts (VPP), Bonn, October 2021 (Lamping)

Desafíos de la gestión tecnológica y la propiedad intelectual como políticas públicas: del laboratorio al territorio, Ministerio de Ciencia, Tecnología e Innovación de Argentina, Buenos Aires, October 2021 **(Beneke Ávila)**

Seoul Copyright Forum 2021, Korea Copyright Commission, online, October 2021 (von Lewinski)

Seminar Non-fungible tokens – a new kind of electronic notice, or the need to redefine the concept of property rights?, Doctoral School of Social Sciences, Jagiellonian University, Kraków, October 2021 (Barycki)

Copyright Law and Machine Learning for AI: Where Are We and Where Are We Going?, United States Copyright Office, United States Patent and Trademark Office (USPTO), online, October 2021 (von Lewinski)

Max Planck Law Annual Conference 2021: What is the future of law?, Max Planck Law, Berlin, October 2021 (Banda)

Seminar Civil education in the community, Doctoral School of Social Sciences, Jagiellonian University, Kraków, October 2021 (Barycki)

Workshop Trade Mark Law and Artificial Intelligence, Maastricht University, University of Oxford, University of Amsterdam, online, October 2021 (Ferrero Guillén)

EIPIN Doctoral Seminar, EIPIN, Maastricht University, October 2021 (Drexl, Ferrero Guillén, Kunko, Mustafa, Rodriguez)

Seminar Mechanisms to Enable Follow-On Innovation, IPR University Center, online, October 2021 (Ferrero Guillén)

IFRRO International Conference 2021: Copyright & Collective Licensing – New Demands in the New Decade, International Federation of Reproduction Rights Organisations (IFRRO), Copyright Clearance Center, online, October 2021 (von Lewinski)

Workshop CRISPR/Cas Technology, Innovation and Regulation, Max Planck Institute for Innovation and Competition, Munich, October 2021 (Batista, Carls, Hilty, Hofmeister, Kim, Lamping, Slowinski, Steinhart)

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Meeting of the GRUR Special Committee Protection of plant breedings, German Association for Intellectual Property Law (GRUR), Hannover, October 2021 **(Batista)**

Copyright, Competition, and Innovation, Association Littéraire et Artistique Internationale (ALAI), Madrid, September 2021 **(von Lewinski)**

16th Annual Conference of the EPIP Association: IP and the Future of Innovation, European Policy for Intellectual Property (EPIP) Association, Spanish National Research Council (CSIC), Madrid, September 2021 (Ferrero Guillén, Muñoz Ferrandis)

EPIP PhD Workshop, European Policy for Intellectual Property (EPIP) Association, Spanish National Research Council (CSIC), Madrid, September 2021 (Ferrero Guillén)

Inauguration de l'Ecole doctorale, Université virtuelle du Sénégal, Dakar, online, August 2021 **(Drexl)**

Expert Round Table Ausschließlichkeitsrechte in der Krise, Centre for Advanced Studies (CAS), Ludwig-Maximilians-Universität, Center for Intellectual Property Law, Information and Technology (CIPLITEC), online, July 2021 (Barycki)

Al and Copyright: What Next in the UK?, UCL Institute of Brand and Innovation Law, UK Intellectual Property Office (UKIPO), online, July 2021 (von Lewinski)

New Directions in the European Union's Innovation Policy?, Conference of the Max Planck Institute for Innovation and Competition in collaboration with the Institute's Alumni Association, Munich, July 2021 (numerous participants from the Institute)

Die neue "Clearingstelle Urheberrecht im Internet" (CUII) zur Rechtsdurchsetzung bei strukturell urheberrechtsverletzenden Webseiten, Association Littéraire et Artistique Internationale (ALAI) Deutschland, online, July 2021 (von Lewinski)

Symposium Patentability of Plants and Animals – Scope for Action and Need for Reform?, Federal Ministry of Justice, online, July 2021 **(Batista)**

16th ASCOLA Conference: Competition and Innovation in Digital Markets, Academic Society for Competition Law (ASCOLA), online, July 2021 (Johannsen, Muñoz Ferrandis, Wiedemann)

Joint IPKat-BLACA-IFIM Rapid Response Event on CJEU YouTube/Cyando Ruling, IPKat, British Literary and Artistic Copyright Association (BLACA), Institute for Intellectual Property and Market Law (IFIM) at Stockholm University, online, July 2021 (von Lewinski)

Impfstoff für alle! Was lässt sich tun?, Max Planck Society, Berlin, July 2021 (Hilty)

Forty-First Session of the Standing Committee on Copyright and Related Rights, World Intellectual Property Organization (WIPO), online, June/July 2021 (von Lewinski)

Seminar Must carry/must offer – w poszukiwaniu ochrony przed sądem powszechnym, Faculty of Law and Administration, Jagiellonian University, Kraków, online, June 2021 (Barycki)

Seminar A "must-carry" obligation for online platforms? Exploring Article 17 of the Copyright in the Digital Single Market Directive in light of the right to freedom of expression, Faculty of Law and Administration, Jagiellonian University, Kraków, online, June 2021 (Barycki)

Der Kommissionsvorschlag für einen Digital Services Act – was bedeutet er für das Urheberrecht?, Association Littéraire et Artistique Internationale (ALAI) Deutschland, online, June 2021 **(von Lewinski)**

Spring Meeting of the Swedish Copyright Society, online, June 2021 (von Lewinski)

EU-Mercosur FTA: Economic Insights and IP Legal Reflections, Max Planck Law Forum Latin America, online, June 2021 (Batista, Barycki)

Vacinas, Patentes e Desenvolvimento, Faculty of Law at Centro Universitário 7 de Setembro, Fortaleza, online, June 2021 (Batista)

Data and Innovation International Summit, Tsinghua University, Beijing, online, June 2021 **(Hoffmann)**

The Antitrust Enforcement Symposium 2021: Challenging Antitrust, University of Oxford, online, June 2021 (Hoffmann)

Final EIPIN IS conference: Vision(s) for Intellectual Property in Europe – The Role of Research, European Intellectual Property Institutes Network Innovation Society (EIPIN IS), Centre for International Intellectual Property Studies (CEIPI), University of Strasbourg, online, May/June 2021 (Conde Gallego)

Seminar Zakres patentu biotechnologicznego (Scope of biotechnology patent), Faculty of Law and Administration, Jagiellonian University, Kraków, online, May 2021 (Barycki)

Seminar Primary and Accessory Liability in EU Copyright Law, Faculty of Law and Administration, Jagiellonian University, Kraków, online, May 2021 (Barycki)

Seminar Czy stopień winy naruszyciela ma znaczenie dla roszczeń pieniężnych w prawie własności intelektualnej? (Does the degree of culpability of the infringer matter for monetary claims in intellectual property law?), Faculty of Law and Administration, Jagiellonian University, Kraków, online, May 2021 (Barycki)

Covid-19 – Patentes y Vacunas, Law Faculty of the University of Buenos Aires, online, May 2021 (Batista)

Seminar Wina a naruszenie patentu (Guilt vs. infringement of a patent), Faculty of Law and Administration, Jagiellonian University, Kraków, online, April 2021 (Barycki)

The Innovation Economics Conference for antitrust lawyers, King's College London, online, April 2021 (Matarazzi)

Seminar Global perspective of trademarks – selected issues related to the protection, commercialization and enforcement, Faculty of Law and Administration, Jagiellonian University, Kraków, online, April 2021 (Barycki)

(re)WIPS5 – Workshop on Intellectual Property Rights, University of Szeqed, online, April 2021 (González Otero)

Presentation of the book "Italia e Germania: L'intesa necessaria (per l'Europa)", Luiss Guido Carli University, online, April 2021 (Matarazzi)

Expert discussion Umsetzung der Datenstrategie der Bundesregierung – Zweites Open-Data-Gesetz und die Einführung des Datennutzungsgesetzes, Konrad Adenauer Foundation, online, April 2021 (Richter)

Seminar U.S. Patent Law, Faculty of Law and Administration, Jagiellonian University, Kraków, online, April 2021 (Barycki)

28th Annual Intellectual Property Law & Policy Conference, Fordham IP Institute, online, April 2021 **(von Lewinski)**

Digitalization of International Trade, United Nations Commission On International Trade Law (UNCITRAL), Ministry of Economic Development of the Russian Federation, International and Comparative Research Center, online, March 2021 (Ferrero Guillén)

Seminar UsedSoft, Ranks, Tom Kabinet i co dalej? «Elektroniczne» wyczerpanie prawa w unijnym i polskim prawie autorskim (UsedSoft, Ranks, Tom Kabinet and what's next? "Electronic" exhaustion of rights in EU and Polish copyright law), Faculty of Law and Administration, Jagiellonian University, Kraków, online, March 2021 (Barycki)

Das EuGH-Urteil vom 9.3.2021 im Fall C-392/19 – VG Bild-Kunst gegen Stiftung Preußischer Kulturbesitz (SPK), Association Littéraire et Artistique Internationale (ALAI) Deutschland, online, March 2021 **(von Lewinski)**

Seminar The social dilemma: come disciplinare le piattaforme digitali?, Luiss Guido Carli University, online, March 2021 (Matarazzi)

Antitrust in a Digital World: Does It Work?, Competition Policy International (CPI), online, March 2021 (Matarazzi)

Seminar Publiczne udostępnianie utworu w środowisku cyfrowym w orzecznictwie TSUE (Making a work available to the public in a digital environment in the jurisprudence of the CJEU), Faculty of Law and Administration, Jagiellonian University, Kraków, online, March 2021 (Barycki)

Digital and Competition #2: Keynote Speech by Thierry Breton & Tipping – Should regulators intervene before or after?, Concurrences, March 2021 (Matarazzi)

Kraftwerk, Hip-Hop, Prince & Warhol – European vs. U.S. Approches to Sound Sampling and Appropriation Art, Association Littéraire et Artistique Internationale (ALAI) Deutschland, Copyright Society of the USA, online, March 2021 (von Lewinski)

Windowing und Covid-19 – Andere Auswertungsfenster im Film?, media:net berlinbrandenburg, online, March 2021 **(von Lewinski)**

Seminar DMA – At the interface of competition and regulation, Concurrences, online, March 2021 (Matarazzi)

Seminar EU Digital Markets: Where do Member States stand?, Concurrences, online, March 2021 (Matarazzi)

Antitrust in the Digital World – What is Next for the Digital Markets Act?, Competition Policy International (CPI), online, February 2021 (Matarazzi)

The Enduring Copyright Legacy of Justice Ruth Bader Ginsburg, United States Copyright Office, online, February 2021 (von Lewinski)

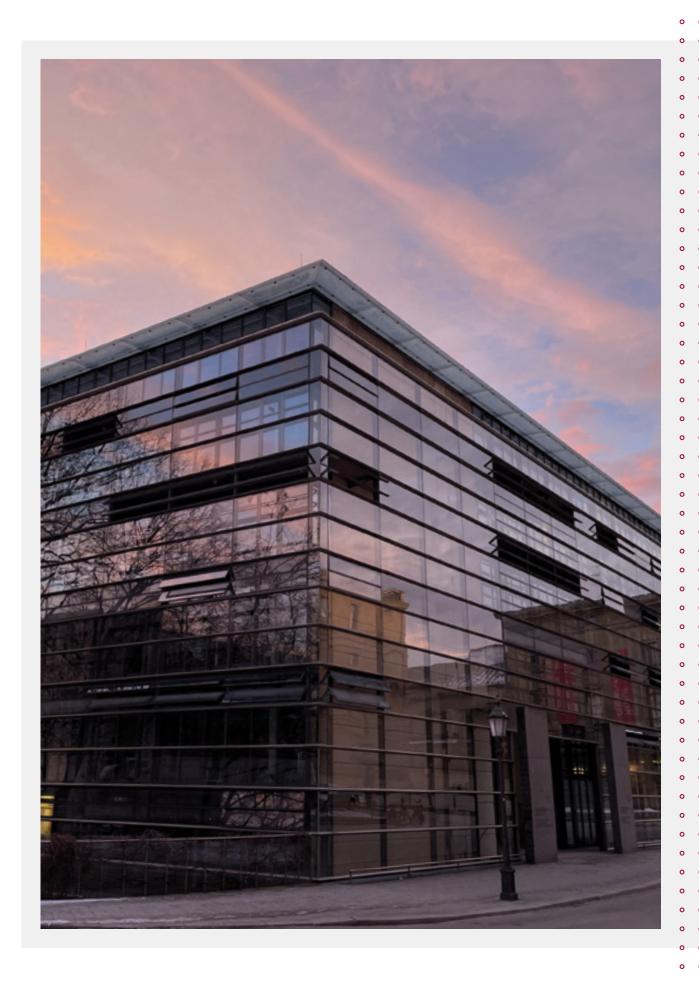
Update on the transposition of Article 17 of the Directive of 17 April 2019, Association Française pour la Protection Internationale du Droit d'Auteur (AFPIDA), online, February 2021 (von Lewinski)

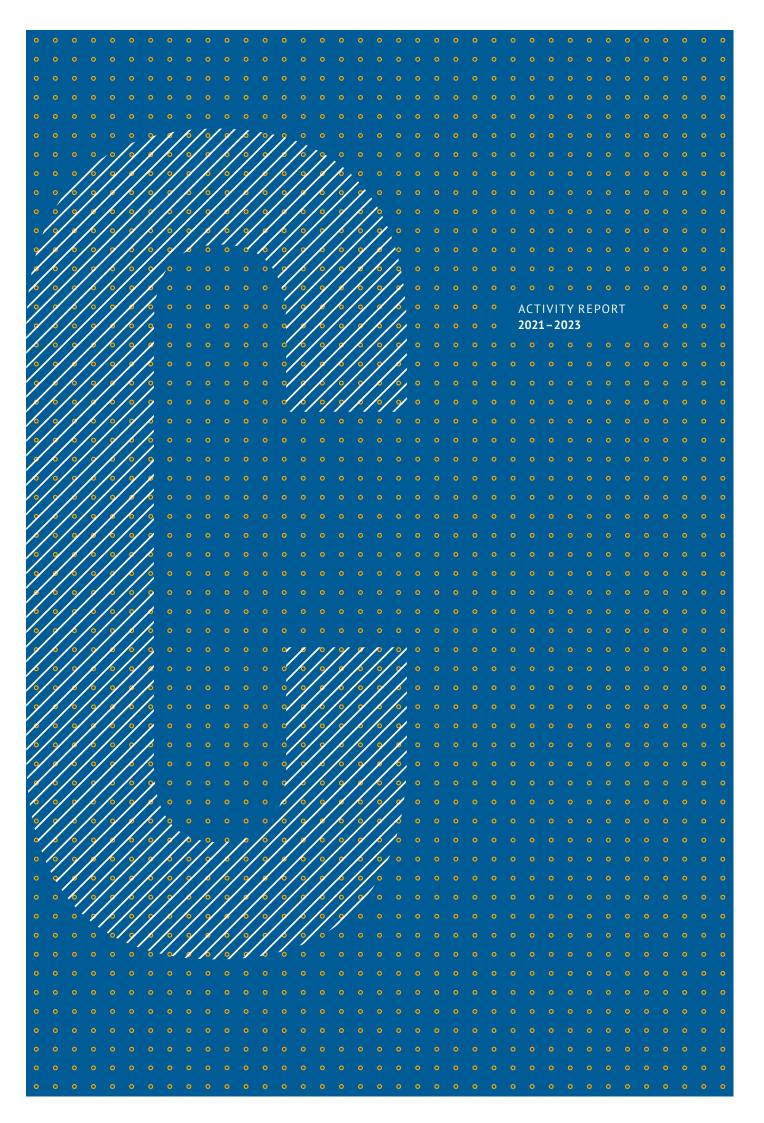
Future and emerging technologies – 4D Printing, European Patent Office (EPO), online, February 2021 (Ferrero Guillén)

OECD Competition Open Day 2021, Organisation for Economic Co-operation and Development (OECD), online, February 2021 (Hoffmann)

Case C-265/19 – victory or blow for performers' rights?, British Literary and Artistic Copyright Association (BLACA), online, January 2021 **(von Lewinski)**

The AI and Data-Led Revolution of Copyright and Its Wider Implications, Fundación para la Investigación sobre el Derecho y la Empresa (Fide), online, January 2021 (von Lewinski)





Innovation and Entrepreneurship Research

I The Economics Department

1 Research Agenda

Research Context

The period spanning from 2021 to 2023 unfolded as a sequence of crises, often of a paradigm-shifting nature. The public health crisis triggered by the global COVID-19 pandemic was followed by military and humanitarian crises, first in Ukraine and then in the Middle East. The former also caused an energy crisis that severely affected Europe. The increasing frequency of extreme weather events made it clear that the consequences of climate change are a permanent backdrop to all other global developments.

Innovation can offer remedies (e.g., mRNA vaccines and the development of renewable technologies) and is often seen as the way to resolve many of these challenges. While we do not develop these critical technologies ourselves, the department's mission is to understand how innovation systems function, and what fosters and hinders innovation.

In times of crisis, empirically sound evidence can be particularly valuable in informing decisions at the state, firm, and individual levels. Since 2017, the department's research has been organized around three pillars: Innovation, Entrepreneurship, and Innovation Motives and Behavior (see Figure "Innovation and Entrepreneurship Research", p. 245). To address pressing questions, we strongly encourage the cross-pollination of ideas between these pillars. Reflecting on the overarching themes that define the department's research contributions, we can identify six broad topics, which we briefly outline in the following section. We also delve into specific projects within these streams to provide more comprehensive insights.

In pursuing these projects, we foster the exchange of ideas within the Institute as well as with external experts both in Germany and internationally. Despite the time-intensive nature of producing reliable empirical evidence, often involving intricate methodologies to identify causal effects, our department's agenda remains agile and responsive to current developments. This adaptability ensures that our results continue to have academic and societal relevance.

Thematic Fields

I. Institutions for Innovation: Understanding Incentives

Studying how the current institutional framework influences innovation is a core question with farreaching implications. Within this stream of research, we consider governmental and market-based incentives for innovation and corporate responses to these incentives.

Among governmental incentives, we study antitrust and taxation policies as well as multiple aspects of the functioning of intellectual property (IP) systems. We document the important role of competition policy and find that increased competition spurs patenting and lowers product prices (C II 2.5, p. 294). The analysis of changes in municipal business tax rates reveals a negative link between profit taxation and R&D spending (see also C II 2.5, p. 294). Revisiting fundamental questions of patent protection, we empirically study if patents block follow-on innovation (C II 1.2, p. 258). Using data on patent invalidation, we uncover that it increases follow-on innovation overall, but the effect varies with innovation value. For low-value innovations, invalidation spurs mostly distant follow-on innovation, while for high-value innovations, it spurs follow-on innovation among close competitors. Additionally, by considering marginal patents of pharmaceutical firms that are filed for strategic reasons, we document that they do not affect meaningful follow-on innovations (C II 2.2, p. 288).

A particular focus is on a critical element of technological innovation: standard-essential patents (SEP). Declaring a patent to be SEP relies on the judgement of the patent holder and thus provides opportunities for strategic misreporting. Researchers in the department have developed a semantics-based method to identify truly standard-essential patents. They are also investigating issues related to disclosure, licensing, and enforcement, and the role of scientific research in standards development (C II 2.1, p. 286; C II 2.9, p. 297). We contribute our insights on the economics of standardization to the Institute's statements on EU policy proposals (see, e.g., the Position Statement of 6 February 2024 on the

European Commission's Proposal for a Regulation on Standard Essential Patents, available at SSRN, https://ssrn.com/abstract=4719023).

Strategic patenting evokes discussions about raising patentability standards. The department's research examines patent quality from different perspectives. First, we study a market-based measure of patent value (as a proxy for quality) based on stock market reactions to international patent disclosures (C II 2.12, p. 299). Second, we scrutinize the process of patent examination by considering changes to claims (CII 2.9, p. 297). In order to ensure the quality of patents and to reduce friction for filing and opposition of patents, the Unitary Patent (UP) system was introduced in 2023. By considering the initial choices of opting in and out of the system on its onset, we detect a high level of uncertainty concerning the functioning of the system with high-value patents remaining outside the system and large heterogeneity across technological areas (C II 1.1. p. 256).

Among market incentives and corporate responses to them, our research covers the market size for the development of pharmaceutical innovation and the global organization of R&D. In biomedical science, we document a limited effect of marketdriven incentives for innovations in basic research as opposed to applied research (C II 2.2, p. 288). Considering the organization of R&D activities among multinational companies (MNCs), market incentives appear to work: larger MNCs offshore innovation to multiple countries and they do so according to the comparative advantage of countries across different technology areas (C II 2.14, p. 300). The distinction between basic and applied research seems to matter again with applied innovation more likely to colocate with production than basic innovation. The department's research also covers less understood corporate innovation strategies such as shelving. In the context of the pharmaceutical industry, shelving refers to the practice of discontinuing projects even after positive clinical results. We are developing an approach to identify shelved innovation and work towards understanding how shelving fits into firm strategy (C II 2.10, p. 298).

- → C II 1.1 · p. 256: To Opt Out or Not Strategic Decisions at the Unified Patent Court
- → C II 1.2 · p. 258: Patents, Freedom to Operate, and Followon Innovation – Evidence from Post-Grant Opposition
- → C II 2.1 · p. 286: Patents and Technical Standards A Semantics-Based Analysis of Essentiality Status, Standardization Governance, and Scientific Foundations
- → C II 2.2 · p. 288: From Scientific Research to Healthcare Markets – Empirical Essays on the Economics of Pharmaceutical Innovation
- → C II 2.5 · p. 294: Corporate Innovation The Role of Scientific Discoveries, Taxation, and Antitrust
- → C II 2.6 · p. 296: Essays on Applications of Machine Learning to Science, Patent, and Economic Data
- → C II 2.12 · p. 299: Essays on the Economics of Digitalization and Innovation
- → C II 2.14 · p. 300: Firms and Innovation: Multinational Strategies, the Net-Zero Transition, and Governmental R&D Support
- → C II 2.9 · p. 297: Essays on the Role of Science in Patents, Patents Quality and Diffusion
- → C II 2.10 · p. 298: Essays on Innovation in the Life Sciences

II. Science as a Social System: Organizing Eureka Effects

Advancing the knowledge frontier is the ultimate goal of science. Understanding how the scientific community (self-)organizes, how it attracts scientific talent, and how it manages to achieve breakthroughs is essential for designing effective organizational and public policies.

The scientific community is largely self-regulating, granting scientists considerable freedom to choose collaborators, research topics, and methodologies. Therefore, community norms and informal institutions deserve special attention. The relationship between advisors and advisees not only shapes the research interests of nascent scientists, but also plays a crucial role in whether and where they will pursue their research careers. Our research has shown that new Ph.D. students tend to start at a better academic location if their advisor is better connected in the field (see Rose and Shekar 2024, doi.org/10.1016/j. labeco.2023.102397). A related study focuses on

the power imbalances within advisor-advisee relationships and shows that the unexpected death of the advisor dramatically reduces the chances that their Ph.D. students will complete their degrees (work in progress, Widmann, p. 248). These findings highlight the need for systematic institutional interventions aimed at mitigating power imbalances.

Historically, science has been a male-dominated occupation. Overcoming persistent gender imbalances is high on the agenda of many scientific organizations, including the Max Planck Society. Some characteristics of the academic environment may discourage female scientists from entering the field or present significant hurdles. With this in mind, we consider whether the scientific community reacts to accusations of sexual harassment towards other scientists (C II 1.12, p. 282). We find that although such misbehavior does not invalidate the findings of the accused and is not related to the quality of the scientific output, the citation rates of the accused scientists' prior work decrease by magnitudes similar to those in cases of scientific misconduct.

The availability of materials and complementary knowledge might critically affect the trajectory of one's research. We document the importance of materials for research using an exogenous shock to the supply of laboratory mice (C II 2.2, p. 288). The affected researchers switched research trajectories but maintained their scientific impact. To consider the role of complementary knowledge, we study the presence of knowledgeable peers for academic success (C II 2.15, p. 300). We examine the restructuring and integration of the East German scientific system into the Western system, which led to the variation in exposure of Eastern scientists to their Western colleagues. Delving into the micro-foundations of scientific collaborations, we establish that perhaps surprisingly mutual liking does not directly lead to better team outcomes (C II 2.4, p. 292).

Finally, we are pursuing ambitious data collection projects, such as the digitization of the catalog of dissertations published at all German institutions of higher education since 1885 (C II 1.11, p. 280). Volunteers support this work within the framework of a citizen science project. It will comprehensively cover a century of German doctoral education, thus giving an account of scientists in Germany, and offers

multiple exciting avenues to address challenging and impactful research questions.

- → C II 1.11 · p. 280: Digitizing Dissertation Data Annual Directories of Publications at German Universities (1885–1987)
- → C II 1.12 · p. 282: Allegations of Sexual Misconduct, Accused Scientists, and Their Research
- → C II 2.2 · p. 288: From Scientific Research to Healthcare Markets – Empirical Essays on the Economics of Pharmaceutical Innovation
- → C II 2.4 · p. 292: Behavioral Foundations of Search, Matching, Teamwork, and Project Evaluation: Preferences and Constraints in Decision-Making
- → C II 2.5 · p. 294: Corporate Innovation The Role of Scientific Discoveries, Taxation, and Antitrust
- → C II 2.7 · p. 296: Essays on Migration and Mobility
- → C II 2.15 · p. 300: Essays on Innovation Economics

III. Mobility and Knowledge Flows: Crossing Borders

Innovation is a process that builds upon existing knowledge and thrives on the cross-pollination of diverse ideas. Our research examines factors that facilitate access to knowledge and enhance its exchange, while also identifying barriers that impede such processes.

The first aspect we investigate is physical mobility. Inventors and scientists bring along new knowledge and perspectives when they move. We use two policy shifts to identify the role of mobility in innovation. First, we consider the expansion of access to the Swiss labor markets for foreign nationals (C II 1.7, p. 269) and, second, the "Muslim travel ban" (C II 2.7, p. 296). With the first project, we document that crossborder workers bring knowledge about patents from their previous location and advance the patenting of the receiving firms, especially in fields where there is an existing advantage over the previous location. In the second project, we aim to understand how limiting the mobility of scientists, e.g., to attend conferences and workshops, affects the utilization of scientific knowledge in patents. Conferences are not only important for scientists to exchange findings. Our research shows that they also constitute an important channel for companies to access knowledge (C II 2.5, p. 294). We establish that participation in highly ranked conferences in computer science positively affects the firm's scientific and inventive activities. Importantly, the more a company invests in active participation in academic conferences, the more it benefits.

Advances in technologies that enable seamless communication across geographies and time zones could decrease the importance of physical proximity and contribute to the exchange of ideas and ultimately, innovation. We study the role of technologies that reduce information and communication costs by considering BITNET, an early version of the Internet, among U.S. universities (C II 1.3, p. 260). Our analysis shows that the introduction of BITNET led to an increase in patenting by university-connected inventors. In particular, it promoted new collaborations and filing patents closely related to science. Using modern fine-grained data, we can go into more detail and study what exactly happens on digital platforms. We consider the role of digital platforms in other contexts as well: a large EU-funded neuroscience project (CII 2.12, p. 299) and an e-learning platform for business education (C II 2.8, p. 297). We document the positive effect of digital platforms on scientists' productivity and explore the crucial factors for sustaining active participation on platforms. In a related large-scale online experiment, we establish that people seek information strategically, i.e., that they avoid asking if that might affect their reputation (C II 2.8, p. 297).

Traditionally, much of our research is conducted using scientific publications and patents, as these are reasonable proxies for new knowledge and the application of knowledge in new inventions. We take an active part in the continuous development of new tools. One example is the development of improved deep learning models to analyze the text of these two data sources (C II 1.6, p. 266). In doing so, we are exploring common data sources in novel ways and crossing the boundaries between text corpora.

- → C II 1.3 · p. 260: ICT, Collaboration, and Innovation Evidence from BITNET
- → C II 1.6 · p. 266: Tracing the Flow of Knowledge from Science to Technology Using Deep Learning
- → C II 1.7 · p. 269: Cross-Border Commuters and Knowledge Diffusion
- → C II 2.5 · p. 294: Corporate Innovation The Role of Scientific Discoveries, Taxation, and Antitrust
- → C II 2.8 · p. 297: Essays on Behavioral Aspects of Knowledge Production, Interpersonal Knowledge Exchange, and Gender Disparities
- → C II 2.7 · p. 296: Essays on Migration and Mobility
- → C II 2.12 · p. 299: Essays on the Economics of Digitalization and Innovation

IV. Finance and Entrepreneurship: Accelerating Innovation

Entrepreneurship is a key driver of innovation. Our research aims at understanding the barriers and success factors for entrepreneurship. We empirically examine various aspects of how entrepreneurial ecosystems impact entrepreneurial success, illustrating their significance beyond the limited, resourcecentric perspective (C II 2.3, p. 290). We extend our focus from high-income countries to middle-income and low-income countries, highlighting the role of entrepreneurship education (C II 2.4, p. 292). Importantly, we document gendered inequality of (business) idea evaluations that translate into constraints in debt financing and disadvantage female entrepreneurship in low-income countries. We also document a potential remedy: this disparity disappears for a team of founders even if the team is all female.

Financing (and the lack thereof) is a critical enabler of entrepreneurship that allows new ideas to enter the market. Our research includes analyses of significant changes in the startup financing landscape that followed the economies' transition towards a market where the most valuable assets are intangible. On the one hand, this transformation is pushing companies to exploit their intangible capital, such as intellectual property rights, to satisfy their financing needs. On the other hand, it urges policymakers to adapt legislation to this transition. Against this backdrop, in the reporting period, the researchers at the department were greatly concerned about several dimensions with regard to financing of innovation, both for established corporations and nascent start-ups. Several projects shed light on one of the following two complementary perspectives: (1) how external financing and financial intermediaries shape firms' innovative performance, and (2) how firms can exploit their innovations to attract external financing. As a natural element of these two dimensions, we either explicitly or implicitly incorporate an assessment of the (market) value of firms' innovation outputs. For example, we revisited and elaborated on an established measure of the patent value for both firms and inventors (C II 2.12, p. 299) and adopted new measurement strategies, e.q., to investigate how firms can leverage their IP for external financing (C II 1.8, p. 272).

Entrepreneurship may serve as an alternative career path for those affected by job loss, e.g., as a consequence of automation. Using U.S. data, we show that individuals in occupations affected by automation are more inclined to establish businesses (C II 1.9, p. 275). However, they tend to be smaller and less innovative. By considering the advancement of Al, we further elaborate on the complex interplay between different types of automation and entrepreneurial tendencies. These findings call for policymakers to consider measures that address the challenges faced by the workers at the risk of being displaced by automation. Governments can effectively promote entrepreneurship through targeted policies. In the example of France, we examine an under-investigated type of support scheme, Jeune Entreprise Innovante (JEI), which benefits young innovative companies through reduced social security contributions for R&D employees (C II 2.14, p. 300).

- → C II 1.8 · p. 272: Intellectual Property as Loan Collateral
- → C II 1.9 · p. 275: When Automation Hits Jobs Entrepreneurship as an Alternative Career Path
- → C II 2.3 · p. 290: Creation and Recycling of Entrepreneurial Resources – Empirical Essays on the Importance of Social Processes in Entrepreneurial Ecosystems
- → C II 2.4 · p. 292: Behavioral Foundations of Search, Matching, Teamwork, and Project Evaluation: Preferences and Constraints in Decision-Making
- → C II 2.12 · p. 299: Essays on the Economics of Digitalization and Innovation
- ightarrow C II 2.14 \cdot p. 300: Firms and Innovation: Multinational Strategies, the Net-Zero Transition, and Governmental R&D Support

V. Automation, AI, and the Future of Work: Navigating Change

The recent advancements in digital technologies, particularly the latest breakthroughs in AI, prompt various questions at both macro- and micro-economic levels. At the macro level, the department's research focuses on market dynamics, examining factors such as the competitive environment, regional disparities, and national and international trade regulations for investments in automation technologies. We establish that increased product market competition can lead

to lower automation investment in less productive firms and higher investment in more productive ones, thereby increasing disparities between firms (C II 2.11, p. 298). A firm's labor market position also affects its automation decisions. We develop a theory and offer supporting empirical evidence from the U.S. and Portugal that firms with high labor market power may over-automate to suppress wages (C II 2.11, p. 298). We also consider individual consequences of automation. We document that people losing their jobs due to automation are more likely to transition to self-employment than those who lose their jobs due to AI (C II 1.9, p. 275). In addition, we observe important ripple effects in other, non-labor-related domains, such as political participation with regions exposed to automation showing a decrease in voter turnout as compared to those exposed to intensified trade with China (C II 1.5, p. 264).

At the micro level, considerable efforts are directed at understanding how human behavior changes when interacting with non-human partners. Specifically, we use the example of chess computers/algorithms to show that AI can serve as a sparring partner and promote learning, thereby training and augmenting human strategic capabilities (C II 1.4, p. 262). We actively engage investigating attitudes toward and reliance on algorithmic decisions (see research profile Chugunova, p. 246). This strand of research closely relates to the ongoing political and legal debate on the regulation of AI and to research on AI in the legal department.

Further examination revolves around the determinants shaping the current form of AI development. We specifically explore the competition between various scientific AI paradigms and the role of graphics processing units (GPUs) as a central hardware enabler of neural networks and neural AI (C II 2.13, p. 299).

The exploration of new technologies goes beyond research and involves practical application and development. Our flagship methodological project Logic Mill employs cutting-edge deep learning techniques to generate numerical representations of documents. It incorporates pre-calculated representations from millions of scientific publications and

patents, which we make accessible to the research community. One example is a project that compares successful and failed grant applications with the body of existing scientific literature to find "unorthodox" submissions (C II 2.6, p. 296).

- → C II 1.4 · p. 262: Training with AI Evidence from Chess Computers
- → C II 1.5 · p. 264: Structural Shocks and Political Participation in the U.S.
- → C II 1.9 · p. 275: When Automation Hits Jobs Entrepreneurship as an Alternative Career Path
- → C II 2.6 · p. 296: Essays on Applications of Machine Learning to Science, Patent, and Economic Data
- → C II 2.11 · p. 298: The Economics of Industrial

 Automation Competition, Labor Market Power, and

 Political Participation
- → C II 2.13 · p. 299: Essays on the Economics of Artificial Intelligence and Innovation

VI. Green Innovation: Challenging the Status Quo

Climate change is one of the most urgent challenges that humanity is facing in this century. To achieve the Net Zero Emission goal by 2050, the amount of greenhouse gases emitted needs to be balanced with an equivalent amount removed from the atmosphere, effectively resulting in net zero total emissions. This will require action in many different areas, from developing and using clean energy sources to replacing fossil fuels, to storing energy, creating advanced carbon capture and storage techniques, to improving energy efficiency and management. The development of new green technologies is crucial for these strategies.

Many questions are still open and society urgently needs robust scientific evidence on the drivers, barriers, and challenges of green innovation. As a first step, we investigate recent patterns of green technology development among the world's top R&D investing firms (C II 2.14, p. 300). We document their undeniable contribution to green patenting, showing that the majority of high-quality green patents filed during

2012 – 2019 originate from these firms. However, despite the urgent need for technology development, we show that the number of high-quality green patents from top R&D investors has been decreasing, and that the share of green patents has been on a decreasing trend in the last few years.

Further, our research aims to understand, inter alia, the role of regulation in providing incentives for green technologies, the contribution of top innovators in green technologies, and the efficiency of the patent system in providing incentives to green innovators to seek protection for their inventions (C II 1.10, p. 278). Our research shows that international environmental agreements, such as the Montreal Protocol, increase the value of "green patents", but do not affect the value of "dirty technologies". Considering the Kigali Amendment to the Montreal Protocol that gradually reduced the consumption and production of hydro-

fluorocarbons, we show that this regulation has resulted in minimal monetary losses while yielding significant private technological gains.

Our results and the current project pipeline underscore the significance of environmental innovation within the ongoing activities of our department. They also reflect the team's enduring commitment to providing cutting-edge research contributions in this field over the long term.

- \rightarrow C II 1.10 · p. 278: Estimating Technological Gains and Losses from Environmental Regulation
- \rightarrow C II 2.14 \cdot p. 300: Firms and Innovation: Multinational Strategies, the Net-Zero Transition, and Governmental R&D Support

Methods

The department's research initiatives use frameworks from economics, mostly industrial and labor economics, and other social sciences to establish a robust theoretical basis for their studies. Our research primarily relies on empirical investigations but also includes the development of theoretical models. A defining characteristic is the application of rigorous empirical techniques that facilitate the most comprehensive analysis of the data at hand. Typically, particular attention is paid to discerning causal connections, which provide a solid foundation for subsequent research and guidance for decisionmakers. This endeavor encompasses a range of methods, including laboratory and field experiments, instrumental variable estimation, difference-indifference strategies, and regression discontinuity approaches, to name but a few.

The advancements in technology are mirrored in the approaches used at the Institute. Since the establishment of the *Logic Mill* project in 2021 and the acquisition of expertise in machine learning, these methods have been used both for classifying and clustering data and for analyzing unstructured data such as text. The expertise has also been used to develop new deep learning models for analyzing patent and scientific document corpora in a project supported by the European Patent Office's Academic Research Programme (ARP).

The experimental laboratory *econlab* was established in 2014 in collaboration with the Max Planck Institute for Tax Law and Public Finance to enable the use of experimental methods in the department's research. During the pandemic, the laboratory's onsite experiments had to be suspended, which led to reevaluation and, as a consequence, a notable shift toward online experiments with larger, often more representative samples. In response to these developments, *econlab* started providing server infrastructure to host online experiments.

Data

The department's empirical studies often rely on extensive datasets. Access to important data resources has been further improved during the 2021–2023 reporting period. In addition to weekly (DOCDB) and semi-annually (PATSTAT) updated patent data, researchers, cooperation partners, and guests of the Institute have access to extensive balance sheet data (Orbis) and startup data (Crunchbase and Dealroom). After Microsoft discontinued its open access database Microsoft Academic Graph in December 2021, a new data platform, called Open Alex, has been used in several projects, along established proprietary data (Web of Science, Scopus).

Economic research at the Max Planck Institute for Innovation and Competition often generates original data, e.g., through surveys or by using big data approaches to mine data from the Internet or other primary sources. One of the department's goals is to combine its data with external data sources to create high-quality datasets that can serve as a unique feature for research.

To the extent possible under data protection and licensing laws, the department provides external researchers with data from its research. Data can be accessed either locally at the Max Planck Institute

for Innovation and Competition or via online data repositories on the Institute's website in connection with open access publications. Other data created by researchers of the department has been made available via public use files, e.g., at the Institute for Employment Research (Institut für Arbeitsmarkt- und Berufsforschung, IAB).

One example is the *Logic Mill* project where numeric representations (created with deep learning models) of millions of patents and scientific publications are made available via a public web endpoint, so that researchers can use it without having to set up the infrastructure to make this possible. *Logic Mill* was released to a large group of external users in October 2023. A recently constructed language model (PaECTER) has now been downloaded more than 400,000 times from the *Hugging Face* platform.

The department's researchers work to ensure that the results achieved at the Institute can easily be replicated. These efforts are supported by a Project and Data Science Officer who provides expertise to sustain the department's work. Licensing and data cooperation management are also consolidated here, as are replication efforts and securing transfer and continuation of knowledge within the Institute.

Networks and Cooperations

The Max Planck Institute for Innovation and Competition is a renowned hub for innovation research both within Germany and on the global stage. It actively fosters the exchange of research ideas and promotes collaborative endeavors.

The Munich Summer Institute (MSI), which was held for the first time in 2016, underwent further evolution between 2021 and 2023. By attracting new organizers from outside of the Munich area, such as Prof. Christian Peukert from HEC Lausanne and Prof. Imke Reimers, Ph.D., from Cornell University, the event solidified its position as an international forum for

innovation research. Despite the disruptions caused by the pandemic, the event continued to thrive, with approximately 200 annual submissions and more than 100 participants each year. To emphasize the role of junior researchers in the development of the field, the Munich Summer Institute has been preceded by a MSI Ph.D. Workshop since 2022. For the MSI Ph.D. Workshop, about ten junior researchers were invited to present their research and received extensive comments from the more senior colleagues. The junior researchers also attended the main program of the MSI to gain exposure to state-of-the-art research in the field (see also C IV 1.1.6, p. 351).

The participation in the Collaborative Research Centre of the German Research Foundation (DFG CRC TRR 190) together with LMU Munich and several research institutions in Berlin additionally amplifies the scientific presence of the Max Planck Institute for Innovation and Competition in Germany.

During the 2021–2023 reporting period, a total of 72 Innovation & Entrepreneurship Seminars were held. The seminar series features international speakers and visitors to the department who present both their ongoing work as well as recent findings. Due to the pandemic and associated travel uncertainties, the seminars took place online until fall 2022, allowing listeners from all over the world to join. This shift broadened the pool of speakers, making it easier for speakers from non-European institutions and those with other restrictions to present. The seminar series transcended its internal audience, regularly attracting external participants. Consequently, when travel restrictions were lifted, in-person seminars continued to be broadcast for an international audience. Additionally, a portion of online talks were retained in order to engage speakers situated in geographically distant locations (see also C IV 1.1.2, p. 345).

The department fostered a welcoming atmosphere for nine visiting researchers during the 2021–2023 reporting period, with stays lasting up to six months. Since spring 2021, four Ukrainian scholars joined the department, making a valuable addition to the group (see also Special "Ukraine", p. 32).

Furthermore, the department maintains close connections with researchers in the field of economics at the Ludwig-Maximilians-Universität (LMU) and Technical University of Munich. Joint initiatives include the TIME Colloquium (Technology, Innovation, Management, and Entrepreneurship) (see C IV 1.1.5., p. 349), the Innovation Seminar, and the Innovation Reading Retreat, all in collaboration with the Chair of Industrial Organization of Prof. Monika Schnitzer, the Chair of Innovation and International Trade of Prof. Claudia Steinwender, and the Institute for the Economics of Innovation of Prof. Fabian Waldinger.

Support of Early Career Researchers

Given the composition of the group, the support of junior scholars is of particular importance. All doctoral students in the department undergo structured training programs at the LMU Munich, with collaboration partners including the Munich Graduate School of Economics (MGSE) at the Faculty of Economics and the Ph.D. program of the Faculty of Business Administration. Doctoral students from the Institute also regularly present at seminars in various LMU institutes.

Our system of Affiliated Research Fellows plays a vital role in providing valuable support to early career researchers within the department. This system offers them a broad, international network to rely upon. The department consistently organizes opportunities for early career researchers to engage with fellow department members through informal brown bag seminars and bi-annual research retreats (see C IV 1.1.1, p. 344). Since 2018, external researchers have

also been invited to the research retreats to help guide the junior researchers. Additionally, we regularly host creative writing workshops to enhance the written presentation of research results.

Early career researchers and in particular Ph.D. students are proactive in shaping the research environment at the Institute. An exceptional example is the self-organized workshop – Research on Innovation, Science, and Entrepreneurship Workshop (RISE) – initiated by Ph.D. students for Ph.D. students. The conference was held for the first time in 2018. Since then, it has become a regular and highly valued event. RISE not only exposes Ph.D. students to their peers' research but also provides them with the experience of evaluating submissions and curating the scientific program. A special feature of the conference is that the papers by junior researchers are discussed by senior scholars thus offering detailed feedback that might be difficult to obtain elsewhere. RISE offers a

forum and a space for forming a network of junior innovation scholars who will shape the knowledge frontier of tomorrow (see also C IV 1.1.3, p. 348).

In addition to supporting early career researchers affiliated with the Institute, we consider it essential to welcome and assist external Ph.D. students working on topics within our group's expertise. Consequently, between 2021 and 2023, our department hosted a

number of guest Ph.D. students from other institutions, including the Vienna University of Economics and Business, and the University of Lausanne. After the lifting of pandemic travel restrictions, several of our junior researchers also embarked on visits to renowned research institutions abroad to gain exposure to diverse research environments (see Special "Young Researchers Abroad", p. 252).

Outreach and Science Communication

Knowledge transfer and public outreach have played an important role in the activities of the Department since its inception. In addition to the active participation of its members in scientific conferences, the department actively engaged in various initiatives aimed at disseminating their research to a broader audience. This multifaceted approach included presentations at events targeting both the general public and practitioners, for example at the European Patent Office (EPO). Furthermore, the department displayed its research in the dynamic medium of podcasts, facilitating the widespread dissemination of the insights. To cater to a scientific audience, the

department organized the Max Planck Innovation and Entrepreneurship Seminar series (see C IV 1.1.2, p. 345), providing a platform for in-depth discussions and knowledge exchange. Moreover, the department's commitment to public outreach is exemplified by a series of "Digitality Fireside Chats" conducted since 2021 (see C IV 1.1.4, p. 348) and continued in 2024. These digital evening events, which are open to the general public, feature enlightening conversations with digital pioneers in Germany, thereby offering insights beyond the academic realm. All attendees can take part in the discussion.

Innovation and Entrepreneurship Research

Research Profile, Fields of Research, Research Methods

II. Entrepreneurship

- antecedents and effects of entrepreneurship
- framework conditions for entrepreneurship
- entrepreneurial finance
- entrepreneurship education
- start-up acceleration processes
- entrepreneurship and gender

I. Innovation

Data Resources

strives to make new data sources available for its own research and to visiting researchers. It also undertakes original data collection efforts and makes data available to the scientific community via its data

Research Profile

Innovation and entrepreneurship are at the root of economic growth and improvements in the quality of life and income. They can also cause major disruptions at the individual and societal level. The department engages in research to explore and analyze the determinants, outcomes, and implications of innovation and entrepreneurship processes from an economics perspective and contributes to the innovation discourse with other disciplines and policymakers.

Research Methods

- experimentsregister and survey databig data and machine learning approacheslarge language models

III. Innovation **Motives and Behavior**

- creativity, innovation, and entrepreneurship
 behavioral effects in

- team and gender einvention processes
 behavioral aspects of technology adoption
 communication and knowledge flows

econlab

making. The objective of the laboratory, field, and online experiments is to test hypotheses about economic behavior and organization processes, to better understand group dynamics and in bottom processes, and to develop a better understanding of the determinants of economic decision-making behavior.

2 Team and Areas of Interest

Senior Research Fellows

Dr. Marina Chugunova

My research interests span the topics of human interaction with technology, digitalization, and gender disparities. My work explores two overarching questions.

First, I examine how interacting with technology affects individual behavior. As technology capabilities advance at a fast pace, it is important to understand what behavioral regularities affect if the technology is adopted and used to its full potential, and what increased technology use means for society beyond expected productivity gains and direct labor market effects (see C II 1.5, p. 264).

Second, my research delves into labor market disparities, specifically the factors that discourage

female talent from pursuing careers in fields traditionally perceived as male-dominated. I examine informal barriers, such as anticipated discrimination stemming from gender stereotypes, as well as obstacles related to knowledge flows and organizational deterrents, including systemic issues such as sexual misconduct (see C II 1.12, p. 282). By providing robust empirical evidence, I aim to inform more effective policy interventions to address gender disparities in the labor market.

I primarily use experimental methods, in both controlled settings and real-world environments, and complement it with the use of survey and observational data to foster the external validity of my findings.

Dr. David Heller

My research interests combine the fields of innovation economics and corporate finance. In this context, I examine both debt and equity financing activities. The former relates to topics such

as the effects of policy-driven changes in firms' financing activities on their patenting activities. The latter is mainly concerned with start-up financing activities, e.g., how venture capital investors affect firms' innovation strategies. In both cases, my work is primarily empirical, relying on large-sample econometric analyses that combine micro-level firm data with bibliographic information on intellectual property rights.

As another common denominator, my research also investigates how firms can leverage their

inventive output to improve their access to finance. As one specific area, I examine the securitization of bank loans with intellectual property rights. This topic is becoming ever more relevant as economies around the world become increasingly rich in intangibles, forcing traditional banking to adapt to these changes. Therefore, I study how firms can use patents, trademarks, and design rights as loan collateral (see C II 1.8, p. 272, for details).

As an overarching goal, my research aims to improve the understanding of the interplay between innovation and financing activities at the firm level. To this end, I place particular emphasis on the managerial and policy implications of my work.

Daehyun Kim, Ph.D.

My research focuses on enhancing our understanding of how technological advancements impact entrepreneurial activity and start-up performance. I explore this through two main research

strands.

The first strand examines the influence of digital platforms and automation technology on individual entrepreneurial activity. Most of my work here is empirical, using a combination of micro-level datasets on individual occupational information and regional data on new firm creation. For example, I have conducted empirical analyses to examine the impact of the introduction of peer-to-peer (P2P) digital marketplaces on the creation of new firms (see C II 1.9, p. 275, for details). Ongoing research explores how the emergence of

automation technologies, such as AI and robotics, is associated with workers' propensity to turn to necessity entrepreneurship as an alternative career path.

The second strand delves into entrepreneurial strategy choices after a prior start-up failure, particularly in the face of technological change. Here, I employ a mixed-methods approach, combining detailed information on individual entrepreneurs and in-depth interviews with entrepreneurs who have experienced business failure. Through this approach, I aim to uncover how entrepreneurs perceive their past failures and how these experiences shape their subsequent start-up strategies, including decisions pertaining to technology adoption and business models.

Dr. Albert Roger

I am an empirical researcher studying

environmental and innovation economics using methods from empirical industrial organization and quasiexperimental approaches. My research agenda is divided into two main areas. The first focuses on the role of technology-related incentives provided by environmental regulation, the second on the role of the patent system in the sustainability transition.

I study the first area from two different perspectives. First, I analyze how green and dirty technologies respond to environmental regulations. Understanding the timing of technological change is particularly important for assessing the impact of environmental regulations. I find that green technologies are positively affected by international

environmental agreements (IEAs). Second, I study the technological gains and losses engendered by environmental regulations (see C II 1.10., p. 278, for details).

To study the role of the patent system in fighting climate change, I focus on how the option to keep inventions secret might affect the sustainability transition. Product and process innovations have different visibilities and propensities to be patented. This difference is particularly relevant for green technologies related to the sustainability transition. Missing the disclosure of a portion of green process inventions could lead to a duplication of innovation efforts, inefficiencies, and delay the sustainability transition. In one research project, we exploit shocks on energy prices to assess the existence and size of this effect.

Michael E. Rose, Ph.D.

I am active in the economics of innovation and science. In particular, much of my research focuses on science itself. I work empirically using large, fine-grained datasets that allow us to

trace scientists and measure their output.

An important part of my agenda is to study the organization of science. One project examines the tension between academic self-organization and the norm of universalism according to which science should be evaluated irrespective of the person who created it (see C II 1.12, p. 282, for details). Another project asks whether minority groups are motivated to enter the sciences when their members achieve the highest academic merits.

In a citizen science project, we are currently digitizing the catalogue of all dissertations from

German universities since 1885 (see C II 1.11, p. 280). This dataset will allow researchers to study many interesting science policy reforms. Examples include the admission of women to universities, or the upgrading of technical schools of higher education to technical universities. We can also relate the formation of scientists to the innovative activity of the German economy.

I am also coordinating a large effort to relate documents from different areas of innovative activity, such as publications and patents, based on textual similarity (see, e.g., C II 1.6, p. 266, for details). This effort has resulted in a research software system that is highly scalable and available to interested academics. We have received a grant from the European Patent Office to develop the underlying models.

Dr. Rainer Widmann

My research focuses on the role of public policy in influencing innovation. I explore several areas: how immigration policies impact cross-border

knowledge transfer; the effect of local income tax rates on the distribution of inventors and entrepreneurial activities; and the influence of government research grants on corporate innovation performance. Currently, I am investigating how German firms near the Swiss border have adapted to a severe shortage of skilled young workers, a consequence of the opening of the Swiss labor market. This research is crucial, especially given the aging of the inventive workforce in developed countries, and can inform policymakers and corporate leaders in the coming decades (see C II 1.7, p. 269, for details).

Another key aspect of my research agenda is the science of science, in particular the power dynamics in scientific training and the norms within the scientific community. I have quantified the dependency of postdocs and graduate students on mentors for research funding, employment continuity, and Ph.D. completion. In addition, I have studied the impact of sexual misconduct allegations on the scientific standing of the accused, paying special attention to how peer networks influence these outcomes (see C II 1.12, p. 282, for details).

In my work, I regularly use administrative data sources and extensive patent and publication databases. I aim to utilize policy reforms and natural experiments whenever possible to establish causal relationships in my research.

Junior Research Fellows

Sebastian Erhardt, M.Sc.

Data Science, Artificial Intelligence, Machine Learning, Natural Language Processing, Economics of Innovation



Carolin Formella, M.Sc.

Migration, Innovation, Development Economics, Gender Economics



Svenja Friess, M.Sc.

Behavioral Foundations of Innovation, Organizational Economics, Inequality



Mainak Ghosh, M.Sc.

Natural Language Processing, Economics of Innovation, Science of Science, Intellectual Property Rights



Elisabeth Hofmeister, M.Sc.

Innovation Economics, Industrial Organization, Competition Economics, Health Economics



Klaus Keller, M.A.

International Trade, Labor Economics, Applied Econometrics, Automation and Artificial Intelligence



Ann-Christin Kreyer, M.Sc.

Economics of Innovation, Industrial Organization, Applied Econometrics, Digitalization, Artificial Intelligence





Cheng Li, M.Sc.

Innovation Diffusion, Innovation Strategy, Complex Networks, Artificial Intelligence, Intellectual Property Rights



Mingpei Li, M.A.

Economics of Innovation, Applied Microeconomics, Industrial Organization



Anna-Sophie Liebender-Luc, M.A.

Digital Innovation, Artificial Intelligence, Machine Learning, Entrepreneurship



Ulrike Morgalla, M.Sc.

Environmental and Resource Economics, Energy Economics, Economics of Innovation, Market Design



Timm Opitz, M.Sc.

Entrepreneurship, Behavioral and Experimental Economics, Behavioral Market Design, Development Economics, Developmental Psychology



Cristina Rujan, M.Sc.

Economics of Innovation, Intellectual Property Rights, Firm Innovation Strategies, Green Innovation, Innovation Policy



Kathrin Wernsdorf, M.Sc.

Economics of Innovation, Economics of Science, Digitalization, Labor Mobility

250

Field of Research

Innovation

Entrepreneurship

Innovation Motives and Behavior



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SPECIAL

Young Researchers Abroad

he period between 2021 and 2023 was characterized both by the complete halt of international travels and the reorganization of scientific exchange, as well as by the eagerness to reconnect in the aftermath of the COVID-19 pandemic. The Department strongly believes in the importance of the exchange of ideas. Both Junior and Senior Research Fellows have taken the opportunity to visit some of the most prestigious and influential research groups in the field.

For 2-6 months, more advanced Junior Research Fellows were part of research groups at Harvard University, Boston University, University of Toronto, and UC Berkeley. The benefits of these longer international stays extended beyond the academic realm, enabling them to build professional networks in the post-pandemic era and to be exposed to diverse research environments characterized by distinct visions and approaches. These opportunities were particularly valuable for Ph.D. students whose in-person exchanges

had been severely disrupted by the pandemic, affecting potential collaborations and meaningful scientific exchanges. Junior researchers derived fresh perspectives by incorporating feedback from senior researchers at host institutions and from peers. This experience was instrumental in helping them make informed decisions about their future career paths and opened doors to new career opportunities.

For Senior Research Fellows, visits to other institutions proved equally important as a means of developing their networks, establishing collaborative authorships, and disseminating their research findings prior to formal publication. Senior researchers embarked on visits to renowned institutions such as Boston University and UC San Diego, strengthening partnerships and sharing knowledge on an international scale.

Moreover, the ripple effect of these inter-institutional visits extended beyond the individual researchers involved to benefit others within the department.





Aaron Defort with peers at UC Berkeley.

Junior Research Fellows

Svenja Friess, M.Sc.

Location Harvard University, Laboratory for

Innovation Science at Harvard (LISH)

Academic host Prof. Karim R. Lakhani, Ph.D.

Period of time January – June 2022

Purpose of the stay Individual visit due to topical fit with

the research group, collaboration on a data source, feedback on projects, and inspiration for a job market paper in the greater Boston research community

Timm Opitz, M.Sc.

Location University of Toronto, Rotman School

of Management

Academic host Prof. Nicola Lacetera, Ph.D.

Period of time March – June 2022

Purpose of the stay Individual visit due to topical overlap

with Nicola Lacetera, other members of the Rotman School, as well as members of other departments (e.g., Economics) at the University of Toronto

Klaus Keller, M.A.

Location Boston University, Technology & Policy

Research Initiative (TPRI)

Academic host James Bessen (Executive Director, TPRI)

Period of time April – May 2022

Purpose of the stay To initiate a new dissertation project

on labor market competition and technological change, exploring novel data from online job postings in the U.S.; interactions with senior researchers in the field of labor market studies on automation (James Bessen,

Pascual Restrepo)

Aaron Merlin Defort, MiM

Location University of California, Berkeley,

UC Berkeley School of Information

Academic host Prof. Coye Cheshire, Ph.D.

Period of time January – April 2023

Purpose of the stay Gaining expertise on social processes

to inform two research projects

Elisabeth Hofmeister, M.Sc.

Location Boston University, Questrom School

of Business

Academic host Prof. Jeffrey Furman, Ph.D.

Period of time September – December 2023

Purpose of the stay Academic exchange with experts in the

field and learning about the U.S.-style

Ph.D. program

Senior Research Fellows

Dr. Marina Chugunova

Location UC San Diego, Rady School of

Management

Academic host Prof. Uri Gneezy, Ph.D.
Period of time January – March 2023

Purpose of the stay Presentation of research work,

exchange with the behavioral research

community, and networking

Dr. David Heller

Location Boston University, Questrom School

of Business

Academic host Prof. Timothy Simcoe, Ph.D.

Period of time April – May 2023

Purpose of the stay Presentation of research work, in-person

coauthor meetings, and networking

Academically, I have great memories of attending the lively lunch seminars Harvard University where cutting-edge work in progress at the research frontier was presented and discussed by leading scholars in my field. Personally, I cherish the memory of participating in a charity "Polar Plunge" into the Atlantic Ocean at Revere Beach in February to raise funds for the Special Olympics Team of Massachusetts." (Svenja Friess)

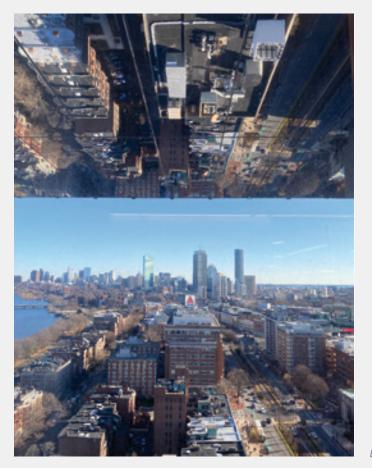


"Polar Plunge" – Fundraising at Revere Beach in February.





Svenja Friess in front of the Baker Library at Harvard Business School.



Continued to the city's status as a biotech hub, paired with its vibrant yet somewhat homely small-town feel, makes me want to return in the future." (Elisabeth Hofmeister)

BU Questrom School of Business

Breathtaking view in Boston.

of any major city in the world. Arriving in Toronto in March 2022 meant being there for the first face-to-face Ph.D. student lunch in more than two years, being there for the first in-person conference at the Rotman School since the onset of the pandemic, and being there for the first personal interactions of faculty and students. These memories of a scientific community coming together again and welcoming me from day one will always be special to me." (Timm Opitz)





Timm Opitz in front of the Rotman School of Management in Toronto.



Meeting room with a view at UC San Diego.





Klaus Keller at Boston University.



II Projects

1 Selected Research Projects

1.1

To Opt Out or Not - Strategic Decisions at the Unified Patent Court

The new Unified Patent Court (UPC) in Europe allows patent owners access to centralized enforcement, albeit at the risk of centralized invalidation. Moreover, patent owners will enjoy a large cost reduction for new unitary patents (UPs). With the introduction of the UPC/UP system in 2023, owners of existing European patents and patent applications could opt out of the new court system during a three-month time window. We derive a set of hypotheses and combine data on the opt-out decisions with a rich set of patent and owner characteristics to test them.

The design of patent systems is one of the most influential levers that policymakers can use in promoting incentives for innovation. In setting design parameters such as fees and by determining processes and standards for examination, invalidation, and enforcement, policymakers must be aware of the delicate balance between the rights and opportunities of patent holders and those of rivals who may become subject to enforcement.

The recent reform of the patent system in Europe is presumably the most important one in the more than five decades since the European Patent Office began accepting patent applications. Ideas for European patents with "unitary effect" (i.e., a legally uniform intellectual property right, including unified institutions to handle infringement issues) were discussed in European academic and policy circles as early as the 1970s.

After decades of more or less productive negotiations on the legal, institutional, and financial design choices underlying the reform, the European Union voted in favor of the Unitary Patent Package (UPP) in 2012. This package contains three elements: (i) a regulation creating a European patent with unitary effect, the Unitary Patent (UP), (ii) a language regime (essentially that of the EPO), and (iii) an agreement among EU countries to establish a single and specialized patent jurisdiction, the UPC. The new system goes considerably beyond the level of harmonization created with the European Patent Office (EPO) in the 1970s, as UPs are patents with unitary effect and are valid in the 17 countries that have adopted

the reform. These include Austria, Belgium, Bulgaria, Denmark, Estonia, Finland, France, Germany, Italy, Latvia, Lithuania, Luxembourg, Malta, the Netherlands, Portugal, Slovenia, and Sweden. More states may accede to the system later on.

Unitary Patents (UPs) will be granted and maintained at the EPO. Renewal fees and administrative costs will be substantially lower than under the current EPO system with bundles of national patents. Instead of around €29,000 to renew a typical patent in the participating member states, a UP will cost less than €5,000 in renewal fees over the first ten years. The cost reduction is even more pronounced for cases where patent holders obtain patent protection for more than ten years or in multiple EPC countries.

UPs are subject to the jurisdiction of the new Unified Patent Court. The UPC consists of a Court of First Instance, a Court of Appeal, and a Registry, with provisions for a Patent Mediation and Arbitration Centre to facilitate settlements. With the new court system, annulment and injunctions can now be obtained centrally for all 17 UPC countries. Previously, European patents had to be litigated separately in each designated country. For patent owners, this means that they can enforce their UP in one court, saving the costs of enforcement in the national systems. However, they also face the likelihood that a patent may be centrally invalidated in one proceeding with effect in all UPCA countries.

Patents granted by the EPO and subsequently validated in EPC member states also fall under the jurisdiction of the UPC. During the so-called "sunrise period" from March to May of 2023, patent owners and applicants at the European Patent Office were eligible to opt out which would exempt them from the jurisdiction of the UPC. About 1.5 million patent rights and pending applications were eligible for an opt-out from UPC jurisdiction. While a UP cannot be opted out of the UPC regime, the notification and registration of an optout for a pending EPO patent application will result in the opt-out being applied to the corresponding European patent upon grant. Thus, patent applications for which an opt-out is declared not only avoid the jurisdiction of the UPC, but also forego becoming a UP and thus the option of lower renewal costs under the UPC Agreement.

We collected data on the opt-out decisions made during the "sunrise period" through the UPC's Application Programming Interface (API). This data is far superior to survey information as it reflects actual business decisions with real profit implications. The data gives us the first reliable impression of firms' reactions to the new court system. Owners of existing

European patents had to decide for or against the UPC via an opt-out. They faced no changes in renewal or administrative fees. Their decisions were entirely confined to the choice of the court system. For pending patent applications, the opt-out excluded the option of becoming unitary patents once granted.

Consistent with our theoretical reasoning, we find that patents already granted by the EPO are opted out at a much higher rate than pending applications. Moreover, we find evidence of strategic delay – some patent owners delayed their grant dates until June 2023 in order to secure unitary effect for them. We also find that valuable patents have a much higher incidence of opting out of the UPC. We argue that this reflects the current high level of uncertainty – patent

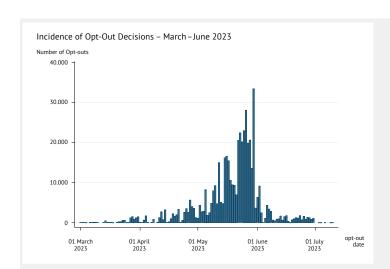


Figure 1

During the so-called "Sunrise Period" from 1 March to 30 May 2023, owners of patents granted by the EPO and of pending applications were eligible for opting out of the jurisdiction by the newly formed Unified Patent Court. Patents and applications that were opted out would remain under national jurisdiction. Out of 970,075 granted patents 41.2 percent were opted out, among 507,012 pending applications the opt-out rate was 17.8 percent.

owners find it difficult to predict how infringement and annulment proceedings will be conducted and whether the UPC will apply an owner-friendly or more critical perspective to patents. The fact that patents with supplementary protection certificates (SPCs) are also opted out in more than 80% of all cases reflects that such patents tend to be of high value, and that original pharmaceutical patent owners would presumably prefer not to face a centralized annulment procedure. The analysis also reveals considerable heterogeneity across technological areas, even after considering the heterogeneity of the patent value. Owners of granted patents and patent filings in the chemical and pharmaceutical sectors are significantly more likely to avoid the UPC jurisdiction than owners of IP rights in the information technology sector.

Project Lead
Project Team Member
Research Objective

Prof. Dietmar Harhoff, Ph.D. Sebastian Erhardt, M.Sc.

Analyzing strategic decisions of patent owners under the new Unitary Patent System in the European Union

Patents, Freedom to Operate, and Follow-on Innovation – Evidence from Post-Grant Opposition

Do patents block follow-on innovation? This question has long divided economists. Some argue that broad patents block access to foundational knowledge, hindering further technological progress. Others counter that the prospect of patent protection provides important incentives to invest in R&D. In this study, we provide empirical evidence to reconcile these opposing views. Leveraging unique data on European patents challenged post-grant, we uncover how the effect of patent invalidation on follow-on innovation critically depends on the value of the underlying innovation. Does patent policy face an impossible trade-off between stimulating breakthrough inventions and enabling cumulative innovation? Our findings suggest it may not.

Motivation

Economic theory offers two reasons why patents may inhibit follow-on innovation. First, high transaction costs could prevent licensing agreements that give follow-on innovators freedom to operate (FTO). Uncertainty and information asymmetries between the patentee and potential licensees make it costly to reach an agreement. If excessive, these transaction costs can erode the potential joint gains from licensing an original innovation, causing bargaining breakdown. Second, patent holders may be unwilling to license if it erodes their competitive advantage – a phenomenon called "rent dissipation". Licensing shrinks patent holders' monopolistic profits, while expanding those of new competitors in the product market.

We develop a theoretical model formalizing how these obstacles to licensing vary with the value of the original innovation. The model predicts that patent invalidation has a U-shaped effect on follow-on innovation along the value distribution of original innovations. The effect is driven by transaction costs for low-value innovations but rent dissipation for high-value innovations. Intuitively, owners have little incentive to license out low-value patents absent subsidies. But they may also be reluctant to license out high-value patents to competitors. For innovations of more moderate value, gains from trade outweigh frictions.

Empirical Setting, Data, and Strategy

To test the model's predictions, we analyze a sample of over 38,000 European patents that were opposed – legally challenged by third parties – after being granted by the European Patent Office (EPO) between

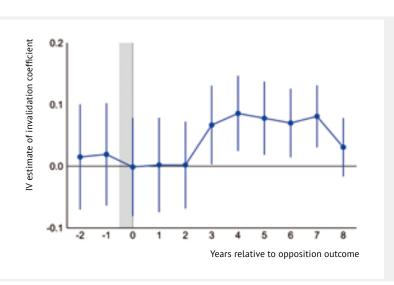
1993 and 2013. Compared to patent litigation, opposition provides a low-cost venue for validity challenges, giving us substantial variation in the value of challenged innovations. At the EPO, any third party can initiate an opposition within nine months of grant, which is then heard by a panel of patent examiners. The process takes around three years and costs 10 to 50 times less than litigation.

To establish a causal effect of patent invalidation on follow-on innovation, measured by subsequent patent citations, we instrument the opposition outcome using random variation in whether the original patent examiner is on the panel deciding the validity challenge. Economic theory suggests patent holders have greater incentive to defend more valuable patents. Since more valuable patents are also less likely to be invalidated, this creates an upward bias of the estimated invalidation effect. The examiner's presence on the panel exogenously reduces the chances of invalidation but is unrelated to followon innovation. Our instrumental variable approach hence addresses potential bias from correlations between patent value, invalidation risk, and follow-on innovation.

Results

We find patent invalidation increases follow-on innovation overall. However, consistent with our model, the effect varies with innovation value. It follows a U-shape along the value distribution, driven by low-value patents at one end and high-value patents at the other. For low-value innovations, invalidation mostly spurs distant follow-on innovation, suggesting licensing failure due to transaction costs. For high-value innovations, invalidation increases follow-on innovation among close competitors, indicating

Figure 1
The causal effect of patent invalidation on citations in the years around the opposition outcome



licensing failure due to rent dissipation. Hence, different obstacles to licensing underlie the blocking effect at either end of the value spectrum. At the same time, patents on innovations of moderate value have little blocking effect.

Implications

This study extends our understanding of the invalidation effect in patents, confirming its positive impact on citations and introducing nuanced perspectives on its underlying reasons. The study reveals that the impact of patent invalidation on follow-on innovation varies with the patent's value.

This distinction is crucial, suggesting that the blockage of innovation in high-value patents might not solely be due to market frictions, but could also be a strategic alignment with the patent system's goals of fostering initial investment incentives. Furthermore, our findings underscore the complexities firms encounter in managing patent landscapes for their R&D endeavors. The research emphasizes the importance of strategic collaboration between R&D and legal departments, advocating for proactive approaches in identifying and resolving patent conflicts. This strategy could enable more effective exploitation of patent invalidation opportunities, safeguarding returns on R&D investments.

Project Team Members Prof. Dr. Fabian Gaessler

Prof. Dietmar Harhoff, Ph.D.

Dr. Stefan Sorg

External Project Team Member Prof. Georg von Graevenitz, Ph.D. **Partner Institution** Queen Mary University of London

Research Objective Studying the effect of patents on cumulative innovation



Publication

Gaessler, Fabian; Harhoff, Dietmar; Sorg, Stefan; von Graevenitz, Georg (2024). Patents, Freedom to Operate, and Follow-on Innovation: Evidence from Post-Grant Opposition, CRC TRR 190 Rationality and Competition Discussion Paper, No. 494, and *Management Science*, forthcoming.

ICT, Collaboration, and Innovation – Evidence from BITNET

Policymakers across the globe strive to enhance economic growth by finding newways of boosting innovation. According to modern economic theories, cumulative innovation is key. Thus, information and communication technologies (ICT) could spur the innovation process. In particular, the COVID-19 pandemic has shifted much of knowledge production online, strengthening the crucial role of ICT. But does access to technologies that reduce the costs of information and communication really increase innovation? Our results suggest that it does. Exploiting the staggered adoption of BITNET at U.S. universities, we show an increase in patenting by university-connected inventors. This effect is driven by newly arising collaborations and holds only for patents closely related to science. In contrast, we find no effect on patents unrelated to science, nor on corporate inventors not connected to universities. This suggests that ICT facilitates innovation processes allowing for the translation of scientific insights into innovation.

Motivation

Modern economic theories highlight the role of cumulative innovation for national economic prosperity. Thus, many policymakers perceive ICT, which facilitates collaboration and knowledge exchange, as a tool to boost regional development and innovation. For that reason, governments across the world spend significant economic resources on extending ICT access.

But does access to ICT actually increase local innovation? Answering this question is not straightforward. It is far from obvious that there should be strong effects of ICT on innovation. On the one hand, ICT gives inventors easier access to a wider range of ideas and potential collaborators, which can potentially lead to new inventions. On the other hand, ICT may have no effect at all because information relevant for inventions is difficult to codify, because people are reluctant to share valuable information, or because collaboration is costly.

Empirical Setting, Data, and Strategy

To assess whether and how access to ICT affects local innovation, this study exploits the staggered adoption of BITNET, an early version of the Internet, among U.S. universities between 1981 and 1990. BITNET greatly facilitated the exchange of knowledge by reducing the cost of written communication, as it allowed written communication via e-mail, real-time messaging, and featured e-mail lists and discussion groups. We combine the data on BITNET adoption dates with patent data and focus on patents assigned to universities (university patents) as only university affiliates had access to BITNET.

To estimate the effect of BITNET introduction on local patenting, we use a difference-in-difference

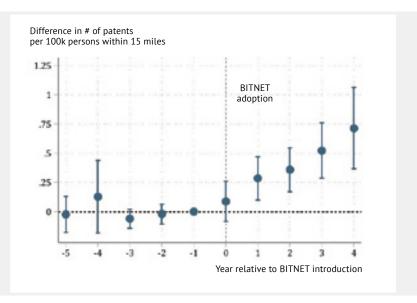
specification. We compare the change in the number of university patents in a region before and after the local university adopts BITNET to the changes in the number of university patents around universities not yet connected to BITNET. Thus, we compare the change in innovative activity around treated universities with the change in not-yet-treated universities that eventually adopt BITNET later.

Results

Our results show a sizeable increase in patent quantity for treated universities relative to control universities. However, this has to be weighed against a decrease in patent quality of the average patent. Consistent with the idea that ICT can facilitate communication and improve the transmission of knowledge that is otherwise unavailable locally, we find that the impact is entirely driven by universities in non-urban areas. After BITNET adoption, universities also use more prior art from universities that are already connected to BITNET.

In additional analyses, we provide evidence that collaboration among new inventor teams is the mechanism behind our effects. New inventor teams, i.e., those that had not yet collaborated prior to the adoption of BITNET, increase their patenting most. We also find that the effect is driven by patents that are closely related to science, i.e., patents that either directly cite research articles or that cite other patents that directly cite research articles. In contrast, patents that are not closely related to science are not affected by the adoption of BITNET. In line with the transmission of scientific information as the mechanism behind our result, we show that the excess patents induced by ICT use words that are either completely new (i.e., used for the first time in a U.S. patent) or are new in the region around the university. Patents that do not

Figure 1 The effects of BITNET on local patenting relative to the connection date



contain words in either of these two categories again show no change after BITNET adoption.

While patent quantity increases, this positive effect must be traded off against a decrease in patent quality of the average patent. Patents become longer, use more figures, and are more similar to already existing patents. Thus, the marginal patents induced by BITNET may be less novel than the average patent, which is closely related to science.

Implications

Many observers have argued that ICT facilitates the exchange of knowledge, which in turn improves productivity and inventive activity. While there is some evidence that shows a research-enhancing role of information technology in academic research, evidence on the impact of these technologies on innovation and patenting is scarce. This study reveals that access to ICT increases local inventive activity. ICT makes knowledge more widely available, independent of location, and thus seems to benefit especially nonurban regions. It also leads to new collaborations. Finally, we show that ICT-induced patents are closely connected to science. Thus, BITNET seems to have facilitated the translation of scientific insights into innovation by inducing productive collaborations. Nevertheless, it is important to weigh this increase in patent quantity against a decrease in the novelty of the marginal patent. Policymakers should keep this potential trade-off in mind.

Project Team Member Kathrin Wernsdorf, M.Sc.

External Project Team Members Prof. Dr. Markus Nagler (FAU Erlangen-Nuremberg)

Prof. Dr. Martin Watzinger (University of Münster)

This project examines the impact of information and **Research Objective**

communication technology on local innovation.



Publication

Wernsdorf, Kathrin; Nagler, Markus; Watzinger, Martin (2022). ICT, Collaboration, and Innovation: Evidence from BITNET, Journal of Public Economics, 211 (July), 104678.

Training with AI – Evidence from Chess Computers

Can training with artificial intelligence (AI) improve human decision-making in complex strategic interactions? This study examines whether chess computers – an early incarnation of artificial intelligence – have helped human players significantly improve their game. While artificial intelligence can increasingly perform complex cognitive tasks independently, its potential to train and augment human strategic capabilities has remained unexplored. Using novel data on over 20,000 chess players and granular information on over 500,000 tournament games, we provide compelling empirical evidence that access to chess computers in the 1970s and 1980s led to measurable performance improvements for human players. But human players do not really learn the same when they rely on artificial rather than human training partners.

Motivation

Complex strategic interactions are ubiquitous, be it in competition, negotiations, or auctions. However, gathering experience in interactive settings is challenging, as opportunities are often scarce and mistakes are costly due to the stakes involved. In this study, we argue that Al-backed computer simulations can provide artificial training partners to help decision-makers learn complex strategic interactions experientially. They constitute scalable and responsive substitutes for scarce human training partners. However, we also argue that a key limitation of AI systems is that they do not make errors like boundedly rational humans. Thus, training with Al may be an imperfect substitute, failing to sufficiently expose trainees to recognizing and exploiting momentary "blunders" in strategic interactions.

Empirical Setting, Data, and Strategy

We test our theoretical predictions by examining whether early chess computers helped human players improve their game by serving as artificial training partners in a simulated strategic environment. The setting is opportune as it allows a direct link between the first widespread real-world application of artificial intelligence (chess computers) and a prime example of complex strategic interaction (chess). The context of chess allows us to leverage two natural experiments in the form of the staggered diffusion of chess computers, which were first commercially introduced in Western Europe in 1977, but were not available in the Soviet Union until 1989 due to trade restrictions. Using a difference-in-differences framework, we

compare the performance of over 20,000 players in more than 500,000 recorded tournament games between 1970 and 2000.

Results

We find that access to chess computers significantly improved players' performance. Supporting the theorized "training partner" mechanism, players who ex ante had fewer opportunities to train with human opponents benefited the most from access to chess computers. Moreover, the effect on performance is stronger for weaker players, suggesting that chess computers helped reduce skill inequality. We also find that artificial training partners were not a perfect substitute for human training. Intriguingly, players with access to chess computers are found to be significantly less able to exploit blunders made by human opponents. This is likely because consistent Al systems do not make idiosyncratic – "human" – mistakes. Identifying and leveraging such mistakes remains to be best learned through human interaction. In sum, the emergence of chess computers gave human players a scalable new way to gain experience, but the learning outcomes differed from training exclusively with human partners.

Implications

In this study, we illustrate Al's potential to help decision-makers learn. Using chess computers as the earliest commercial incarnation of AI, we show that AI can substitute for scarce training partners, allowing experiential learning of complex strategic interactions in competitive environments. At the same time, such

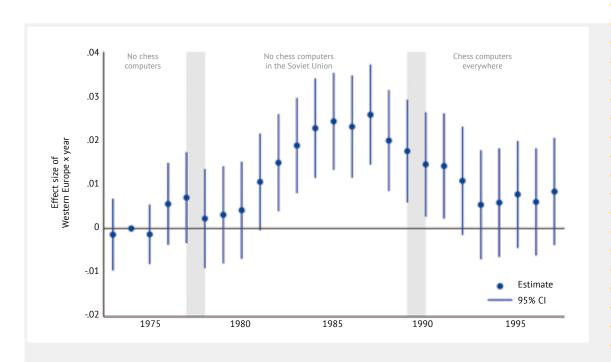


Figure 1Event study: The effect of region (Western Europe) on chess performance (Elo rating).
Source: This figure plots the point estimates and 95% confidence intervals of the effect of Western Europe × Year on Elo rating.

perfectly rational artificial training partners may limit learning precisely in the ways needed to interact with boundedly rational human opponents. That said, as AI systems continue to advance, artificial training partners may soon provide training opportunities for strategic interactions in settings less confined than

chess, such as managerial decision-making or salary negotiations. More broadly, the findings of this study inform research on the organization of learning, the strategic role of AI, and the dynamics and evolution of competitive advantage.

Project Team Member Prof. Dr. Fabian Gaessler

External Project Team Member Prof. Henning Piezunka, Ph.D. (INSEAD,

Fontainebleau)

Research Objective Studying the potential of AI to help humans learn



Publication

Gaessler, Fabian; Piezunka, Henning (2023). Training with AI: Evidence from Chess Computers, *Strategic Management Journal*, 44 (11), 2724–2750.

Structural Shocks and Political Participation in the U.S.

How do recent structural shifts in the economy, driven by automation and import competition, affect political participation in democracies? This study examines the local impact of industrial robots and rising imports from China on voter turnout in U.S. federal elections. Using data for over 3,200 U.S. counties from 2000 to 2016, we provide compelling evidence that political participation declines in counties with greater exposure to industrial robots. Although the negative income effect of both shocks is comparable, we find that the exposure to rising import competition does not reduce voter turnout. A survey experiment reveals that divergent beliefs about the effectiveness of government intervention drive this contrast. Our study highlights the role of beliefs in the political economy of technological change.

Motivation

Structural changes such as globalization and automation can have significant distributional effects, causing substantial income declines for affected groups with far-reaching societal implications. Political decisions, frequently influenced by electoral outcomes, can significantly shape the course and consequences of these structural changes. However, we argue that structural changes could undermine democracy's empowering function by affecting political participation, which is crucial for aligning government policies with the public interest and maintaining the legitimacy of democracy. In contrast to temporary income shocks, structural changes warrant closer attention due to their potential to create enduring cycles of inadequate political representation and misaligned public policy, potentially neglecting or exacerbating the challenges faced by adversely affected citizens.

Empirical Setting, Data, and Strategy

We create two indicators to assess how U.S. local labor markets are impacted by structural changes. We map industry-level trends in industrial robot usage and Chinese imports in the U.S., respectively, to the varying industry structure of employment in over 720 continental U.S. commuting zones. To control for confounding factors in the U.S. economy, we adopt an instrumental variable approach. It utilizes increases in robot usage and Chinese imports in other high-income countries, coupled with lagged industry employment shares in U.S. commuting zones, as exogenous and relevant instruments. We cover the years 2000 to 2016, a period marked by a significant rise in robot usage in the U.S. and a surge in Chinese imports following China's accession to the World Trade Organization. We assess how exposure to these factors in commuting zones influenced long-term trends in county-level voter turnout for both presidential elections and elections for the House of Representatives over two 8-year cycles. The chosen reference years – 2000, 2008, and 2016 – coincide with pivotal presidential elections, each following the tenure of two-term incumbents (Bill Clinton, George W. Bush, and Barack Obama) and setting long-term political trajectories.

Results

In line with existing research, we find that both industrial robots and Chinese import competition are associated with lower employment growth and reduced average household income in U.S. local labor markets. Our main analysis reveals a notable negative effect of industrial robots on county-level voter turnout in federal elections. Specifically, a one standard deviation increase in robot exposure reduced the voter turnout at presidential elections by 1 percentage point, which corresponds to approximately 13 fewer voters per thousand workers. Extrapolating from the average rise in the U.S. robot stock over an 8-year period, this equates to a reduction in presidential election turnout of about 1 million voters. Conversely, while Chinese import exposure does not significantly impact presidential election turnout, it is associated with increased turnout in elections to the House of Representatives. Supplementary analysis using individual-level data from the General Social Survey corroborates that reduced voter turnout at presidential elections occurs mostly among individuals most exposed to automation.

To discern the mechanisms driving the differential voter turnout effects, we also conduct an online survey experiment focusing on potential motivations for election absenteeism. Although automation and import competition are deemed equally important,

Figure 1
Geographical variation in U.S. commuting-zone exposure to robots (following Acemoglu and Restrepo 2020) and Chinese imports (following Autor et al. 2019) between 2000–2015. Differences in geographical exposure to the two structural shocks allow identifying their effect on political participation.

respondents view layoffs due to automation as more inevitable and beyond federal government intervention than those due to import competition. Contrary to the belief that lower voter turnout arises from widespread political disenchantment, respondents exposed to an automation scenario in the experiment were more likely to believe that the automation receives insufficient political attention.

Implications

This study adds a novel perspective to the literature on voter turnout by analyzing the specific sources of income shocks, reconciling previous contradictory findings. We observe that regions negatively impacted by structural changes may exhibit divergent voter turnout responses depending on the perceived origin of the labor market shock. For instance, competition from China, linked to U.S. trade policy, often prompts grievance voting, while the perceived inevitability of automation, which is seen as beyond government control, may lead to political resignation and lower voter turnout. These results highlight the need for increased public and political attention to the labor market effects of technological change.

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Project Team Members Dr. Marina Chugunova

Klaus Keller, M.A.

External Project Team Member Prof. Sampsa Samila, Ph.D. (IESE Business School,

University of Navarra)

Research Objective Assessing the regional effects of automation and

trade on voter turnout



Publication

Chugunova, Marina; Keller, Klaus; Samila, Sampsa (2021). Structural Shocks and Political Participation in the US, Max Planck Institute for Innovation & Competition Research Paper, No. 21-22.

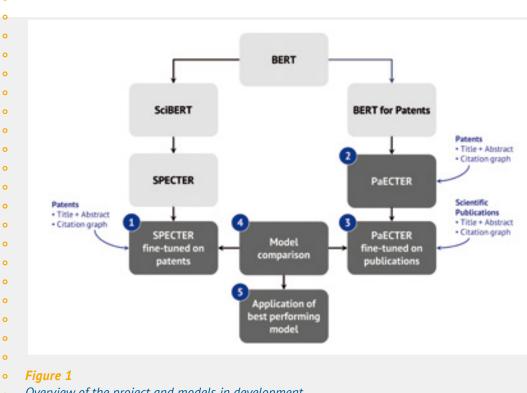
Tracing the Flow of Knowledge from Science to Technology Using **Deep Learning**

Domain-specific language models have become an important tool in the social sciences. They transform text into data points, which can then be used for further analysis. However, these models are usually generated for one specific purpose, e.g., a model trained on scientific publications has learned different features than a model trained on patents. We develop a textual relatedness model for both the scientific and patent domains, optimized for similarity comparisons. During training, we use citations as a proxy for semantic similarity. Once the model is trained, citations are no longer required, and the model relies only on the text of the new documents to identify similarities. Throughout the project, we employ different strategies to build and train the models. After a thorough comparison, we select the best performing model for real-world applications.

Tracing Knowledge Flows

Tracing knowledge flows, for instance, from science to technology, holds significant importance for policymakers and stakeholders within the intellectual property system. However, there are often limitations when it comes to tracing these flows across different domains. Currently, citations from patents to other patents or to non-patent literature are used as indicators for these flows. Yet, this approach has limitations, as these links are not exhaustive and plagued by strategic considerations. Consequently, relying solely on citations to trace the diffusion of knowledge from science to emerging technologies is insufficient.

Researchers frequently rely on the citation graph of scientific publications and patent data by manually matching documents between these distinct corpora. While some recent approaches utilize textual similarity between two corpora to measure knowledge flows, there is currently no systematic approach to linking scientific publications to patents using semantic approaches.



Overview of the project and models in development

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Machine Learning Models

We use transformer models to develop a document-level encoder. The model can generate numerical representations of textual documents, which contain the semantic and syntactic information of the underlying text. Based on the distance between these document representations, we can identify and link similar documents efficiently and on a large scale.

We combine different patent datasets and scientific publications to go beyond citation graphs towards a more precise assessment of knowledge flows. Our solution builds on the pre-trained variants of the BERT language model (Devlin et al. 2019), such as SPECTER (Cohan et al. 2021), and BERT for Patents (Srebrovic and Yonamine 2020), which we fine-tune on patents and scientific publications to learn the similarity between them.

In our project, we construct three models as illustrated in Figure 1. We develop one model that originates from the scientific domain and fine-tune the existing

SPECTER model on patent data. Originating from the patent domain, we use BERT for Patents and fine-tune it by adding the citation information. This creates a model similar to SPECTER, which we call PaECTER. The PaECTER model will in turn be fine-tuned on scientific publications. In the end, we will have two models that are trained on both document corpora and we will select the best performing model for real-world applications.

Data and Training

For training, we use the standard scientific publication dataset that was used to train SPECTER. For the patent dataset, we curate our own selection of relevant patents. Our training dataset comprises

300,000 English-language patent families, including applications filed with the European Patent Office (EPO) from 1985 to 2022. Our specific emphasis on EPO patents is driven by two key considerations. First, examiners add citations to these patents, reducing the strategic bias often associated with citations by inventors or patent lawyers. Second, EPO patent citations are classified with respect to their relationship to the filed patent (Webb et al. 2005) — both features are not present in the U.S. system.

To teach the model the notion of similarity, we select and combine training data triplets: a focal document, a similar document, and a non-similar document. A similar document (positive) has a confirmed citation, while a non-similar one (negative) is not cited (easy negative) or not cited directly (hard negative). This is illustrated in Figure 2. We incorporate additional criteria such as citation categories and CPC classes during the selection process. The training aims to maximize the difference between similar and dissimilar samples in the dataset.

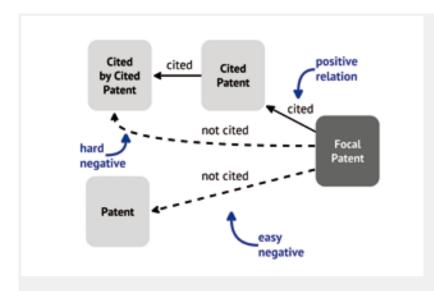


Figure 2Overview of types of citations used for the construction of the patent dataset

Results

Initial results show that our models outperform the current models and are more capable of capturing the essence of the different types of documents. The comparison is currently being made on a small test dataset; the true test will come once we apply the model to a much larger one. Our objective extends identifying similar documents within beyond thousands; we aim to do so within a vast universe of millions of patents and publications. Given that the original SPECTER model already performs well in our Logic Mill project without being fine-tuned, we are confident that our models will be a substantial improvement. With that, we can build an entire knowledge landscape to trace the significance of fundamental research to emerging technologies. Our analysis allows for the development of better innovation policies and plays an essential role in the substantive examination processes conducted by patent offices.

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External Funding EPO ARP (European Patent Office, Academic

Research Programme 2021)

Research Objective Create a cross-corpus language model by training it

on scientific publications and patents



Publications

Ghosh, Mainak; Erhardt, Sebastian; Rose, Michael E.; Buunk, Erik; Harhoff, Dietmar (2024). PaECTER: Patent-Level Representation Learning Using Citation-Informed Transformers, arXiv preprint 2402.19411. Erhardt, Sebastian; Ghosh, Mainak; Buunk, Erik; Rose, Michael E.; Harhoff, Dietmar (2022). Logic Mill – A Knowledge Navigation System, arXiv preprint 2301.00200.

Cross-Border Commuters and Knowledge Diffusion

Patents disclose knowledge, but this disclosure is often insufficient to put the knowledge into practice and use it for cumulative innovation. Firms rely on workers possessing tacit knowledge or specific skills to effectively build on the ideas of others. In this study, we examine the effects of Swiss firms' expanded access to the German labor market on the diffusion of knowledge developed in Germany to Switzerland. We investigate the impact of a reform implemented in 2002 that lifted the restrictions Swiss firms previously faced in hiring German cross-border commuters. We find that after the reform, Swiss firms are more likely to cite and file patents that are textually similar to German patents that originated within a short commuting distance to the Swiss border. The effects are stronger for patented inventions at intermediate technological distances and are concentrated in fields where Switzerland is closer to the knowledge frontier than the neighboring German regions.

Motivation

Patents disclose knowledge; however, this disclosure alone is often not sufficient for the knowledge to be put into practice and used by others for cumulative innovation. This is due to several factors: firstly, certain aspects of knowledge remain tacit and are not explicitly documented; secondly, specific skills are necessary to effectively apply certain components of knowledge; and thirdly, some knowledge may not immediately appear valuable or applicable to potential users. Labor markets help overcome this problem by enabling firms to search for and hire individuals who possess the necessary tacit knowledge or skills required, or who identify previously unacknowledged technological opportunities. In this study, we examine the impact of the expansion of Swiss firms' access to the German labor market on the diffusion of knowledge developed in Germany to Switzerland.

Empirical Setting and Strategy

We investigate the effects of the Agreement on the Free Movement of Persons (AFMP), which – starting in 2002 – lifted the restrictions on Swiss firms hiring EU workers. We leverage the reform's initial phase, during which the first group of workers to whom Swiss firms had easier access were cross-border commuters, foreigners who commuted to work in Switzerland from their residences in neighboring countries. We focus on German cross-border workers around the Swiss-German border, which separates two of Europe's most patenting-intensive regions.

Our analysis is based on a difference-in-differences strategy. We identify German inventions that were patented before the AFMP introduction in locations within close commuting distance to the German-Swiss border in the state of Baden-Württemberg. We then track their diffusion in the inventions of Swiss firms before and after the AFMP introduction. Next, we compare them with other German patents that were also developed in Baden-Württemberg, but in locations too distant from the border to allow for cross-border commuting. By focusing on cohorts of patents filed before the reform was enacted, we can control for time-invariant technical characteristics that influence diffusion and thereby isolate the effects attributed to the AFMP introduction.

We employ two distinct measures to gauge diffusion. First, we use the number of citations German patents received from Swiss patents, a commonly used diffusion measure in the literature. Second, we track the number of new Swiss patents that are textually similar to German patents. We infer similarity by comparing either the abstracts or the full technical description of the patents. In total, our dataset includes 65,787 patents filed in Baden-Württemberg between 1990 and 2000, and 147,491 patents filed in Switzerland between 1990 and 2015.

Findings

Our findings indicate that citations by Swiss firms to patents originating from the German border region increase by about 53.7% following the removal of restrictions on Swiss firms hiring German cross-

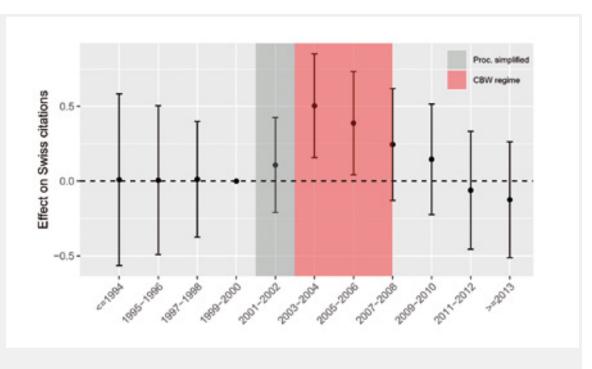


Figure 1 Figure 1: Event study: The effect of the AFMP on Swiss citations. Notes: This figure illustrates the approximate percent change in citations by Swiss firms to patents from the Baden-Württemberg border region versus citations to patents from the non-border region, using 1999–2000 as the baseline. The sample comprises all patents filed in Baden-Württemberg between 1990 and 2000. The vertical bars indicate 95% confidence intervals.

border commuters. The number of patents filed by Swiss firms with similar abstracts to patents from the German border region increases by about 7.6%. Using full text similarity, the number of similar patents filed by Swiss firms increases by about 25.7%.

In addition, we examine whether access to the labor market influences the direction of cumulative innovation by tracking the knowledge diffusion effects through the technological distance between the original German inventions and the opportunities for subsequent follow-on work. We find an inverted U-shaped relationship in the dependence of the knowledge diffusion effect on technology distance. The effects are strongest for cumulative innovations at intermediate distances that introduce at least one new field of application relative to the original

invention, but also share at least one common field of application with the original invention.

Finally, we examine whether the knowledge diffusion effects are more pronounced in fields where Baden-Württemberg was closer to the knowledge frontier than Switzerland before the reform, or in fields where Switzerland held a position closer to the knowledge frontier, as measured by the relative citation lag from patents to scientific articles. Knowledge diffusion effects are pronounced in technical fields where Switzerland is closer to the knowledge frontier than Baden-Württemberg. In fields where Baden-Württemberg is closer to the frontier, the effects are absent. This suggests that the absorptive capacity in fields where Swiss firms excelled enabled them to better exploit the knowledge brought in by cross-border workers.

Implications

Our study provides substantial new evidence on the role of labor markets in knowledge diffusion. In our design, labor movements are triggered by an exogenous legal change in hiring permissions, which allows us to distinguish this effect from changes in firms' research focus as an explanation of hiring decisions, and from changes in confounding factors, such as transportation networks, which correlate with both knowledge diffusion and labor mobility.

For firms, their choices regarding the labor markets in which they operate affect their access to locally produced knowledge. The knowledge flows quantified in our study contribute to the agglomeration benefits of innovative hubs with thick, cohesive labor markets. Moreover, our study highlights the unique role of the employment contract as a facilitator of knowledge transfer. Firms may find it difficult to replicate this level of knowledge transfer through alternative contractual arrangements, such as consulting agreements or collaborations.

Policies that facilitate the integration of geographically segmented labor markets, such as the AFMP, affect how knowledge is diffused and likely the direction of cumulative innovation. Subsequent inventions that deviate in scope from the original invention may rely disproportionately on knowledge transfer through the labor market. In our setting, the integration of the Swiss labor market with that of Baden-Württemberg appears to have been beneficial for cumulative innovation in areas of knowledge in which Switzerland excelled.

Project Team Member Research Objective

Dr. Rainer Widmann **External Project Team Member** Dr. Gabriele Cristelli (Stanford University) Assessing the importance of labor markets for firms' capacity to build on external knowledge



Intellectual Property as Loan Collateral

The evolution towards an increasingly intangible economy leads to financing gaps worldwide, especially for bank-dependent small firms. However, once protected by intellectual property (IP) rights, intangible capital becomes a fungible asset. Leveraging a unique data source, this study sheds light on previously unexplored dimensions of the role of IP assets as loan collateral by analyzing all major commercial IP rights: trademarks, patents, and design rights. In a quasi-natural experiment, we show that IP rights can be an integral part of loan agreements. We find that pledgeability depends on specific IP characteristics rather than the IP type, with redeployability and cash flow attribution being the key determinants of IP asset pledgeability across IP assets. From a managerial perspective, these findings suggest that IP collateralization is a promising strategy that widens firms' financing opportunities, especially for intangible-rich and financially constrained firms.

Motivation

The ability to obtain external financing affects firm-level investments and growth. Debt financing is a key source to fund investments, especially for small private firms. Yet, over the past decades, economies have become increasingly knowledge-intensive, with direct implications for debt financing. In fact, the dominance of intangible assets complicates the securitization of bank loans and eventually causes financing gaps, most severely for those firms most dependent on external debt financing, i.e., small and medium-sized enterprises (SMEs). While the rise of intangibles can be considered a cause for the secular stagnation in bank lending, it may also be a solution. Once protected by an intellectual property (IP) right, intangibles gain

a certain degree of tangibility, enabling their use in financing activities. Most directly, IP rights can be used as loan collateral for debt financing.

However, many unresolved questions regarding IP collateralization impede an assessment of its potential to solve financing issues. A priori, it remains unclear whether IP assets are an essential component of loan agreements at all; who deploys IP-backed loans; and what firm-level and IP-level characteristics determine the use of (different) IP assets. This study provides new insights into these central questions by analyzing an exhaustive set of firms that use all major types of industrial property rights as loan collateral: trademarks, patents, and design rights. To identify the relevance of IP assets as a collateral component,

amongst others, we examine a major policy reform as a quasinatural experimental setting, which introduced exogenous variation in the collateral value of tangible assets that could be pledged alongside IP assets.

Data and Descriptive Evidence

analyses based Our are previously unexploited administrative data from France. This setup is advantageous because legal requirements in France stipulate consistent registration of any IP pledge. We combine information on IP pledges with detailed trademark

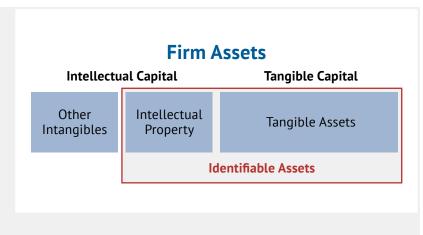


Figure 1Different asset categories indicating identifiable (i.e., bankable) assets

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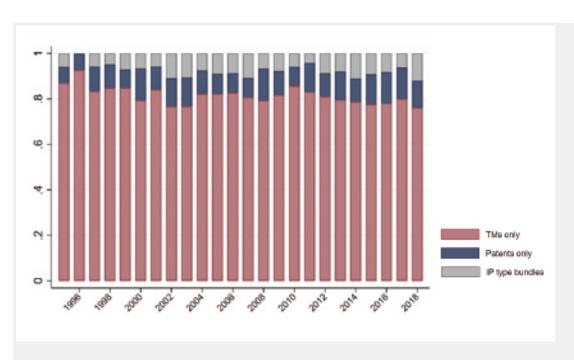


Figure 2
The graph shows the composition of IP-backed loans, distinguishing loans by the type of IP asset used as collateral.

and design data from the French IP Office (INPI), patent data from PATSTAT, and firm-level financial data from Orbis. Our unique dataset covers all trademarks, patents, or design rights used as loan collateral in France from 1995 to 2018.

The data emphasizes the potential of IP assets as loan collateral for firms dispersed across various sectors and geographic locations within France. These firms generally feature low asset tangibility, limiting their ability to deploy traditional tangible collateral. Borrowers are predominantly well-established private firms, i.e., 79% of the firms using IP as collateral are private SMEs. Trademarks are the most commonly pledged type of IP asset, which is consistent with the frequency of trademark use relative to other types of IP, but in contrast to the strong focus on patents in the prior literature.

Main Findings

The main firm-level analyses reveal that IP collateral can be a decisive component in loan agreements for a wide range of intangible-rich borrowers. To show this, we first establish as a baseline that IP collateralization disproportionally increases firms' long-term debtto-asset ratios relative to a matched sample of nonpledging firms. Based on this, we find that the positive effects on debt financing are strongest for small and private but well-established firms, firms with a high dependence on external financing, and that they are associated with higher growth rates in assets and employment. We then carve out the importance of IP assets in respective loans by examining the systematic use of other (tangible) assets and IP collateral as an omitted factor that biases the effects of IP loans on firm-level outcomes. We address this issue through a series of tests. First, we show that our main findings are stable across different levels of asset tangibility, including those with close to zero tangible assets. Second, we exploit plausibly exogenous variation in the collateral value of non-IP collateral. Specifically, we use a major legislative change in 2006, Ordonnance n° 2006-346 du 23 mars 2006 relative aux sûretés, as a legal shock that raised the availability of alternative collateral for firms with higher levels of tangible assets. These results confirm that the positive effect of IP collateral on debt is robust to changes in the

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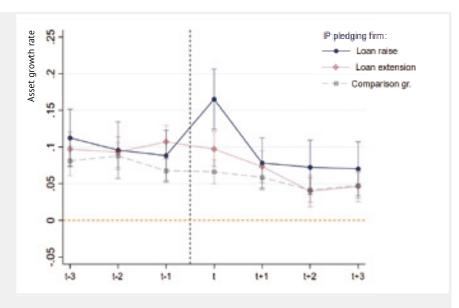


Figure 3
The graph plots the average year-to-year asset growth rates of sample firms. It distinguishes between firms that pledge IP collateral and increase debt ratios (loan raise), firms that do not increase debt ratios (loan renewal), and the matched control group of non-pledging firms (comparison group).

availability of alternative collateral, highlighting the relevance of IP collateral, particularly for intangible-rich firms.

To provide a more complete picture of the potential of IP collateral, we assess specific IP-level characteristics as determinants for pledgeability. IP assets with higher redeployability and closer links to firms' cash flows are more likely to be used as collateral, both within and across firms. IP assets with limited standalone capacity, such as design rights, are typically pledged

together with other assets. These results suggest that IP pledgeability does not depend on the specific IP type but rather on IP characteristics.

Implications

Overall, this paper discloses new dimensions of debt financing and emphasizes the economic potential of IP pledges, especially for small, intangible-rich firms. From a policy perspective, the results suggest that fostering IP collateralization benefits precisely those firms that have suffered from deteriorating borrowing conditions (i.e., small private firms). It would be beneficial to facilitate IP redeployability and to allow standardized valuation

methods to estimate expected cash flows and IP value more reliably. From a managerial perspective, the results provide guidance for managers to consider their intangible capital as a means to secure external financing. This aspect is essential in light of recent economic developments. As such, the findings encourage companies to consider different IP types for collateralization to improve their financing opportunities and highlight the potential of strategically managing IP for debt financing.

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Research Objective Analyzing the role of intellectual property

as collateral in loan agreements





Publication

Ciaramella, Laurie; Heller, David; Leitzinger, Leo (2023). Intellectual Property as Loan Collateral. Available at SSRN: https://ssrn.com/abstract=4260877 or http://dx.doi.org/10.2139/ssrn.4260877

When Automation Hits Jobs – Entrepreneurship as an Alternative Career Path

This study explores the relationship between workplace exposure to automation technologies, notably industrial robots and artificial intelligence (AI), and the inclination toward entrepreneurship. Our findings reveal that individuals in occupations vulnerable to automation are more likely to establish smaller, often less innovative businesses. Specifically, exposure to industrial robots correlates with a shift toward smaller-scale entrepreneurship. However, this trend does not hold for AI exposure, indicating a complex interplay between different types of automation and entrepreneurial tendencies. The study also highlights gender disparities, revealing that women are less likely to pursue entrepreneurship in the face of increasing automation. Additionally, the COVID-19 pandemic appears to have accelerated this shift, coinciding with a surge in the adoption of automation technology. These insights point to the necessity for policy measures to support individuals transitioning from conventional employment to entrepreneurial roles in an automation-driven economic landscape.

Motivation

The rapid integration of robotics and AI in businesses, enhancing productivity and economic potential, also raises challenges, including the risk of job displacement due to automation (Acemoglu and Restrepo 2020, Brynjolfsson and McAfee 2012, Frey and Osborne 2017). The unprecedented speed of labor market changes driven by automation makes its impact on job adaptation speculative. Interestingly, roles demanding high skill levels, once considered safe from automation, are now pivoting toward entrepreneurship as a defense against job insecurity (Fossen and Sorgner 2021). This indicates entrepreneurship as a potential, but underexplored response to automation and job displacement. Our study examines the link between automation risks and entrepreneurial initiative, focusing on how the effect varies by gender and in different contexts, such as those prompted by the COVID-19 pandemic.

Data and Measurements

In our study, we utilized data from the Current Population Survey (CPS) from January 2015 to September 2023 to investigate the entrepreneurial trends among workers. We focused on individuals aged 18–64 employed in private companies, narrowing our analysis to approximately 2,296,191 observations involving 731,078 unique individuals. Our objective was to track their transition to entrepreneurial roles in the month following the CPS survey. To evaluate the level of exposure to automation across various occupations, we applied methodologies developed by Frey and Osborne (2017), Webb (2019), and Felten et

al. (2021). These studies provided insights into how different occupations are exposed to automation technologies, such as industrial robotics and Al technologies.

Results

Our study revealed distinct trends in automation and career changes. Workers exposed to industrial robots showed a higher likelihood to become unemployed and to transition to unincorporated self-employment, but not to incorporated entrepreneurship. In contrast, those in Al-intensive occupations faced lower unemployment risks and were less inclined towards unincorporated self-employment, with no significant move to incorporated entrepreneurship. In addition, gender differences emerged, with women being less likely than men to pursue unincorporated entrepreneurship in the face of automation risks. Notably, the shift towards entrepreneurship was more evident during the early stages of the COVID-19 pandemic, when firms increasingly turned to automation.

Implications

This research holds significant implications for policymakers. The adoption of automation technology has the potential to widen economic disparities. While automation brings operational efficiencies to the economy, a substantial portion of workers, primarily those engaged in routine tasks and holding lower educational qualifications, have borne the brunt of this labor market transformation. Given the strong trend toward automation, it is likely that these

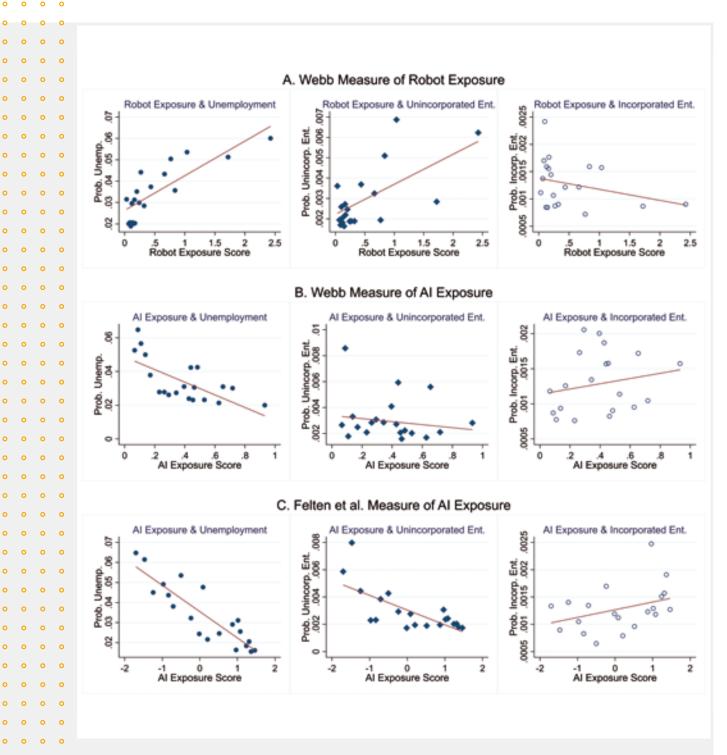


Figure 1
Relationship between automation technology exposure measures and labor mobility

workers will continue to face limited occupational opportunities. As our study indicates, many of them may turn to unincorporated self-employment, which unfortunately carries a higher risk of failure than incorporated self-employment. In light of this, policymakers need to consider measures that address the unique challenges faced by these workers. This may entail developing programs and policies that provide education, training opportunities, and initiatives that promote entrepreneurship and self-employment as viable alternative career paths to ensure a more equitable and sustainable economic future.

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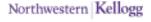
Northwestern University)

Research Objective Analysis of the relationship between workplace

exposure to automation technologies/AI and the

inclination toward entrepreneurship





Estimating Technological Gains and Losses from Environmental Regulation

Is uncertainty about the impact of future environmental policies holding back the implementation of more ambitious climate regulations? Estimating the technological costs and benefits of implementing environmental policies could help us reduce the uncertainty about future policies and expedite the sustainability transition. This study aims to quantify the technological costs and benefits from an environmental regulation, employing a novel method to study the impact of an international environmental agreement (IEA). The focus is on the Kigali Amendment to the Montreal Protocol, signed in 2016, which targets the phasing down and out of hydrofluorocarbons (HFCs) – greenhouse gases with a very high global warming potential. Using a self-constructed dataset of patents citing regulated (dirty) chemicals and their clean substitutes as well as other similar patents not citing them, the study exploits the differences in patent renewal behavior between these three groups to estimate two structural models. This estimation allows to compute the aggregated average private monetary gains and losses due to the environmental regulation. The IEA engendered little technology-related losses while producing substantial gains.

Motivation

Climate change is a global and urgent problem, and IEAs are a key regulatory instrument used to address it. However, the uncertain consequences related to IEAs make them prone to lengthy negotiations. Therefore, quantifying their impact on technological change could reduce uncertainty and ease the path for future agreements. In this project, I develop a method to estimate the technological gains and losses engendered by an environmental regulation in form of patent rights. I build a patent renewal model with exogenous environmental regulation, where the probability of being regulated increases over time while the patent holder is myopic to it. I implement this method to estimate the technological impact of an IEA - the Kigali Amendment to the Montreal Protocol – and run counterfactual estimations on the timing of the impact.

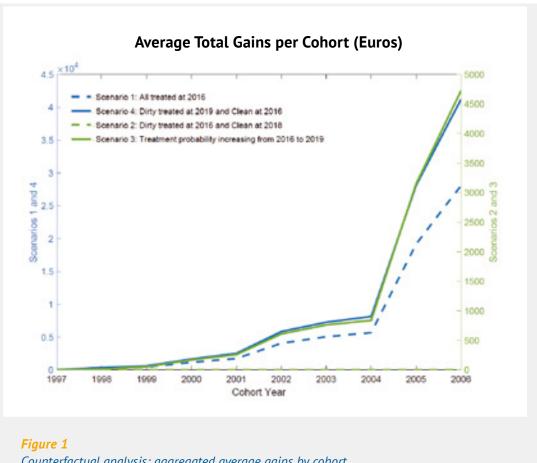
Empirical Setting, Data, and Strategy

The study builds upon a unique self-constructed dataset of European patents from the refrigeration sector renewed in Germany and applied for between 1997 and 2006. I use technical refrigeration standards to identify dirty substances with refrigeration properties regulated under the Kigali Amendment and their clean substitutes. I then identify all patents citing these substances as well as similar patents not citing them. Finally, in order to estimate the technological gains and losses, I first construct three comparable sets of data for clean, dirty, and similar non-affected

technologies. To do so, I perform an exact matching on technology class and year. Then, I estimate the structural parameters for the control group patents, by performing an estimation of the patent renewal model without environmental regulation. Next, I perform a second structural estimation with the treatment group patents (clean and dirty), estimating deviations from the synthetic control group estimates computed in the first structural estimation. Finally, I perform counterfactuals on the timing of the shock to patent value in order to assess whether the main effect is contemporaneous with the Amendment, delayed in time, and asymmetric between clean and dirty technologies.

Results

I find that the Kigali Amendment engendered little monetary losses while producing substantial private technological gains. In particular, I find that the most recent technologies gather the largest gains. This result is particularly interesting if we want to understand the incentives underlying IEAs. The evidence on which these results are built focuses on the valuation of existing technologies over time, proxied by patent renewals. A limitation of this approach is that it does not directly capture the newly created technologies due to IEAs. It only captures the influence of new technologies through their impact on the renewal decision for clean and dirty patents. Therefore, the scope of this method is limited to approximating the monetary impact of an environmental regulation on pre-existing technologies.



Counterfactual analysis: aggregated average gains by cohort

Implications

The goal of this study is to assess the private technology-linked incentives related to an IEA prior to its signature, i.e., how environmental regulation would affect the value of already existing technological assets. This approach can help us shed further light on the drivers of IEAs. The findings, which underscore that technological gains outweigh technological losses, support the rationale for self-enforcing agreements proposed by Barrett (1994). Of course, to have a complete picture on the technology side, one would also have to consider the creation of new clean and dirty technologies with and without the IEA.

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Project Lead Research Objective Dr. Albert Roger

The goal of this study is to quantify technological costs and benefits from environmental regulation.

Digitizing Dissertation Data: Annual Directories of Publications at German Universities (1885–1987)

In a citizen science project, we are digitizing the catalogue of dissertations and habilitation theses ("Habilitations-schriften") published at all German institutions of higher education between 1885 and 1987. It comprehensively covers a century of German doctoral education and contains information on the degree holder, the faculty granting the degree, and the title of the thesis. This allows us to identify the flow of new German-trained scientists by year, their initial research topics, and in many cases their socio-economic backgrounds. The data enables research studies on a broad set of issues, such as discrimination against female researchers, the evolution of technical universities, the doctoral training in engineering disciplines, migration, and socio-economic background of scientists.

Motivation

Around 1900, Germany was a leader in both scientific advancement and technological exploitation. For example, of the 45 Nobel Prizes in chemistry up to 1950, 18 were awarded to German scholars. For 16 of them we find entries on their dissertations in the catalogue at the heart of the project. In terms of transfer and exploitation, the German chemical industry dominated the sector until the First World War. This constellation of simultaneous scientific and technological leadership has only been held by the United States since about 1970. The data currently being collected will help to understand such patterns of dominance as well as other issues, and it will inform debates about science policies and the development of science and innovation systems.

Breslau 1891-91 45 IV. Medizinische Fakultüt Bach, Joseph [Assist nzarzt am Wenzel-Hancke'schen se in Breslau]: Klinischer Beitrag zur traumatischen Breslau, Druck v. L. Freund, 1892; 30 S., 1 Bl. 8. Med. Fak., Inaug-Dies. v. 23. Juli 1892 Vorname Beruf Herkunft. Arbeitsstätte Klinischer Beitrag zur traumatischen Hy Titel Bresley, Druck v. L. Freund, 1892 hdr., 1892; 30 5., 1 84. 8 Seitenzahl Schriftentyp 23. Julii 1892 Sonstiges Breslau, Med. Fak, Inaug-Diss. v. to. Mai 1810

Figure 1The proof-reading interface

Currently, there is no comprehensive compilation of German dissertation theses for the time period from 1885 to 1969. This is a serious impediment for researchers in many disciplines. Our project will fill this data gap. From an economics perspective, the focus on Imperial Germany has additional desirable effects. The administrative and political landscape of the time provides many causal research designs. This is due to the pronounced federalism, different institutional settings and background, the competition between the (largely autonomous) German states, but also the political pressure from the largest member state, Prussia.

Current Status

The dataset is being compiled with the help of volunteers in a citizen science project. Since December 2021, the Institute has been cooperating with the German Association for Computer Genealogy (CompGen) to record the annual directories of publications at German universities and higher education institutions. The directories were published between 1885 and 1987, first by the Royal Library in Berlin and later by the German Library in Leipzig, and comprise 103 volumes. After that, the directories were discontinued in this form. A digital continuation failed.

Volunteers proofread digitized catalogue entries via a dedicated interface that displays the original scan and sort information found in the catalogue. In January 2023, we began working on the volume for 1904/05.

Additional data and classifications further enhance the value of the catalogue. These include identifiers for relevant bibliometric databases, the catalogue of the German National Library, and the Germanlanguage Wikipedia. It is necessary to assign academic

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fields to the dissertations, since this information cannot be inferred from the doctor-granting faculty. To this end, we employ supervised machine learning. More specifically, we are currently experimenting with a German-language specific transformer model, a member of the recent BERT (Bidirectional Encoder Representations from Transformers) family.

The data compiled in this project will be opened to researchers of all disciplines and policymakers alike. It contributes to the Open Data/Open Access mission of the Max Planck Society.

Research Projects

In the course of the data collection, several promising plans for research projects have emerged. One project will relate to the construction of special physics institutes in the late 19th century. New buildings were needed to accommodate a growing number of medical students, but also to provide specialized equipment to showcase new phenomena. The project will ask to what extent doctoral students in physics, some of whom went on to pursue an engineering education

or became inventors, benefited from these specialized facilities. The research design exploits the fact that the start and duration of the construction were often idiosyncratic and typically the result of political pressure, and not necessarily desired by the universities themselves. Relevant to the research design is also the fact that the buildings all followed the same layout, pioneered by the University of Strasbourg in 1873. This allows us to employ a staggered difference-in-difference design. Overall, this study will improve our understanding of the effect of scientific training of engineers on local patenting outcomes. Another project will study the effect of scientific training for engineers at the institutional level. Until 1899, the 12 institutions of higher technical education (Technische Hochschulen, THs) in Germany conferred diplomas in a limited number of engineering subjects, but no doctoral degrees. In 1899, Kaiser Wilhelm II surprisingly granted the TH Berlin the right to confer the title of Doktor-Ingenieur (Dr.-Ing.) on the occasion of the institution's centennial. Soon thereafter, all other THs in Prussia were granted the same right. All other German states followed suit until 1901. In our project, we will describe the emergence and growth of this new group of doctorates and their contribution to patenting and technical progress.

Finally, the data is also of significant interest to scholars in other disciplines. Sociologists might be interested the socio-economic backgrounds of doctoral candidates in different disciplines; historians might want to study the growing importance of dissertations. A few studies in different disciplines have engaged with this data, but an easier and vastly more comprehensive access will likely induce more research.

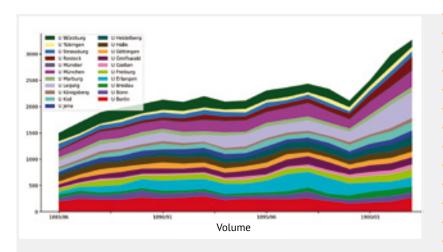


Figure 2
Number of new dissertations by university

Project Lead
Project Partner
Research Objective

Michael E. Rose, Ph.D. Verein für Computergenealogie e.V. (CompGen) Digitization of a unique historic dataset to study innovation in Germany around 1900



Allegations of Sexual Misconduct, Accused Scientists, and Their Research

Does the scientific community sanction sexual misconduct? While scientific work should be judged regardless of who created it (Merton's Norm of Universalism), the scientific community should also encourage "good citizenship" to promote an inclusive environment. Using a sample of scientists accused of sexual misconduct at U.S. universities, we find that their prior work is cited less after allegations surface. The effect weakens with increasing distance in the coauthorship network, indicating that researchers learn about the allegations through their peers. Among the closest peers, male authors react more strongly, suggesting that they feel a greater need to disassociate themselves from the accused. In male-dominated fields, the effects on citations appear to be muted. Accused scientists are more likely to leave academic research, to move to non-university institutions, and to publish less. Our results raise a number of ethical questions that the scientific community will need to answer going forward.

Motivation

In science, the goal is to produce knowledge. To guide this process, science strives to adhere to a set of principles known as the "Mertonian Norms" (Merton 1973). Among others, the norm of universalism posits that ideas are evaluated on their own merit, regardless of who created them. Yet at the same time, science is also a social system, and the community of scientists relies on additional norms to create an inclusive environment. In this study, we seek to answer the question of whether the scientific community sanctions not only "bad science", but also "bad citizenship". We study the effect of sexual misconduct allegations on the scientific impact of the accused scientists' prior body of work, their publication output, and their employment, providing the first systematic empirical evidence on the consequences of sexual misconduct allegations for the accused.

Data

We construct a dataset of 212 scientists at researchintensive universities in the United States, across
all disciplines, against whom allegations of sexual
misconduct were made public between 1998 and
2019. We require that the cases be disclosed in a
newspaper article, in a university investigation, or in
a court report, and that there be some action taken in
response to the allegations that substantiates them
(the accused was found guilty or admitted guilt, left
the position – was fired, resigned, retired, died – or
settled). By virtue of its construction, our sample
focuses on incidents involving well-published senior
researchers and on incidents that are well covered by
newspaper media.

We connect accused scientists to their publication profiles in the bibliographic database Scopus and track citations to their prior publications over time to detect changes in the citing behavior of other researchers after the allegations became public. We compare the citation trajectories of their articles to other articles in the same journal issue, which capture the counterfactual outcomes in the absence of allegations. We further examine how adjustments in the citing behavior of other researchers depend on their own distance in the coauthorship network from the accused, their gender, and the gender ratio of their research field.

Results

We document an overall decline in citations to the prior work of the accused scientist driven by researchers who are close to the accused in the network of coauthors (distance 1 or 2, i.e., coauthors or coauthors of coauthors), while researchers who are more distant do not appear to respond at all. Gender differences in citing behavior are limited to authors closest to the accused in the network, where male authors reduce their citations by about twice as much as their female counterparts. This pattern is in line with male coauthors of the accused actively trying to disassociate themselves from the accused. Peer networks appear to play an important role in disseminating the awareness of allegations: citation responses decrease sharply with distance in the coauthorship network. The finding that distant authors do not respond further suggests that other news sources play a negligible role in spreading this information.

Figure 1

Panel A shows citation losses per year for articles published before the outcome year, compared to the control group. The construction of this graph is based on the methodology of Borusyak et al. (2021); the pre-treatment coefficients measure the change relative to the reference periods t<-4, while the post-treatment coefficients measure the change relative to the reference periods t<0.

Panel B shows average yearly citation losses after the outcome year when counting only citations by first authors of the specified gender.

Panel C shows citation losses when counting only citations by authors of the specified distance in the coauthorship network, and by first authors of the specified gender. E.g., articles at distance d=1 comprise coauthors of the accused.

Panel D presents citation losses for articles that are published in fields with a female author-share of below 20% in the year 2000 (Engineering, Energy, Physics and Astronomy, Computer Science, Mathematics, Economics, Decision Science, Earth and Planetary Science, Materials Science, Chemical Engineering) and for articles in all other fields. In all panels, we track citations until 2021.

The decline in citations appears to be muted for articles that are published in fields with a low proportion of female authors. When we differentiate by the gender of the citing author, we find that within both male-dominated and non-male-dominated fields, male and female citing authors appear to behave similarly. This observation suggests that if field-based disparities exist, they may be attributed to factors that impact male and female authors similarly, such as the prevailing climate and culture within the field.

In addition, we aggregate information at the scientist level and examine changes in publication output, collaborations, and affiliations. We match accused scientists to a set of observationally similar control scientists based on, among other characteristics, field, academic age, publications, and coauthors. We find that accused scientists publish less, leave academic research at higher rates, and are more likely to move to non-university research institutions after allegations become public. We find a decrease in collaboration with others, which does not appear to be

gender specific and is largely explained by the overall decrease in publication output, as the average number of coauthors per published paper does not decrease.

Implications

Our findings raise a number of ethical questions that highlight the tension between advancing knowledge and advancing science as a social institution. Is the decline in citations to the perpetrator's body of prior work an undue distortion of the scientific process or an appropriate penalty? Does society lose scientific output when it excludes or penalizes perpetrators? Are the documented career consequences adequate, also taking into account their possible deterrence effect?

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Project Team Member Dr. Marina Chugunova

Dr. Michael E. Rose Dr. Rainer Widmann

Research ObjectiveThis project aims to empirically study the

consequences of allegations of sexual misconduct for the accused scientists.



Publication

Widmann, Rainer; Rose, Michael E.; Chugunova, Marina (2022). Allegations of Sexual Misconduct, Accused Scientists, and Their Research, Max Planck Institute for Innovation & Competition Research Paper, No. 22-18.



A welcoming atmosphere at the Institute.

2 Doctoral Dissertations

Selected Completed Dissertations

2.1

Patents and Technical Standards – A Semantics-Based Analysis of Essentiality Status, Standardization Governance, and Scientific Foundations

This dissertation focuses on standard-essential patents (SEPs), exploring issues related to disclosure, licensing, enforcement, and the influence of scientific research in standards development. Chapter 1 introduces a semantics-based approach for assessing SEPs, aiming to improve transparency in the SEP declaration process. Chapter 2 scrutinizes the economic incentives of a patent policy revision at IEEE-SA, examining its impact on patent filings, technology development, and standard-setting involvement. Chapter 3 investigates the contribution of science to technical standards development, providing insights into research trends and their relevance for standards-related patents. Overall, the dissertation provides insights for policymakers, practitioners, and academics by shedding light on the interplay between patents and standards.

Technical standards have become a critical element of technological innovation and have received increasing attention in academia, industry, and policy in recent years. A key responsibility of standard-setting organizations (SSOs) is to coordinate the development of standards. They provide open platforms for the participants in standard setting and govern the processes through various institutional rules and regulations. One of their main objectives is to balance the interests of technology providers and public use. In many cases, technology developers use patent rights to protect their standardized technologies. Patented inventions that are part of a standard are necessarily infringed whenever the standard is implemented. Such patents are referred to as standard-essential patents (SEPs) and often have high strategic and commercial value. This dissertation provides novel insights into the disclosure of SEPs, their licensing and enforcement, and into the scientific knowledge sources of the inventions incorporated in standards.

Truly Standard-Essential Patents?

The process by which SEPs are disclosed relies on the judgement of patent holders, leading to uncertainty in standard setting due to the peculiarities of SSO policy. To improve transparency, this chapter proposes a semantics-based method and offers a detailed explanation of the procedure and validation results for approximating standard essentiality.

In an empirical application, the method assesses the share of true SEPs in firms' patent portfolios for mobile telecommunication standards. Remarkable firm-level differences emerge. Interestingly, SEPs declared by upstream firms are less likely to be truly essential compared to downstream firms, signaling higher incentives for technology developers to inflate the size of their SEP portfolios.

The chapter's contributions span academia and practice, introducing an algorithmic method for standard essentiality approximation. The semantics-based tool, characterized by scalability, objectivity, and replicability, simplifies essentiality measurement across diverse technical standards. In contrast to prior approaches that rely on face value or costly expert assessments, this method allows seamless application to large SEP declaration sets. It opens avenues for empirical research on standardization, patents, and firm strategy. Such insights may further help to evaluate the effectiveness of current SSO policies in mitigating patent-related frictions in standard setting and implementation.

Standard Setting, Patents, and Innovation

The second chapter scrutinizes the economic incentives within standards development, focusing on the 2015 revision of IEEE-SA's patent policy. The revision restricted patent enforcement by SEP holders

and proposed calculating royalties at the level of the smallest saleable component. Concerns arose regarding reduced royalties, which could potentially diminish incentives for standards contributions.

This chapter reveals significant consequences of the reform. First, there has been a decline in patent filings related to Wi-Fi standards, particularly among upstream firms and policy opponents. Second, the examination of Wi-Fi follow-on patents shows a substantial decrease in citations after the policy change, notably affecting upstream firms and opponents. Further analyses explore technical contributions to standard setting and firms' participation in Wi-Fi conferences. The results suggest that the engagement by opponents and upstream firms decreased after the policy change, in contrast to proponents and downstream firms.

This chapter contributes to an improved understanding of SSO patent policies, thus guiding fair regulations for technology providers and implementers, emphasizing innovation incentives, and addressing the complex interplay between patenting and standard setting.

The Contribution of Science to Standards

The third chapter considers the relationship between science, technology development, and technical

standards. It explores how research contributes to standardized technologies and presents a conceptual framework with hypotheses that consider geographical, temporal, and technological dimensions.

The empirical analysis reveals a significant decline in the role of corporate research in standards development, dropping from 50% in 1980 to around 15% in 2015. The dominance of the U.S., Japan, and China is evident, with China rapidly catching up. University-related patents are less relevant for standards, while corporate research plays a dominant role. Proximity to university science benefits innovators, while reliance on other corporate scientific sources yields lower standards relevance, possibly due to delayed disclosure. The analysis also uncovers a positive relationship between applied research and standards relevance of patents, alongside an inverted-U relationship between the technological distance to the scientific frontier and standards relevance.

This chapter highlights the role of science for commercially valuable technical applications and provides an economic rationale and empirical evidence for the telecommunications industry. It also makes a methodological contribution by presenting a novel approach for studying the relationship between science and technical standards.



Dr. Lorenz Brachtendorf

Funding Max Pla

Max Planck Institute for Innovation and Competition

Publications

Brachtendorf, Lorenz; Gaessler, Fabian; Harhoff, Dietmar (2023). Truly Standard-Essential Patents? A Semantics-Based Analysis, *Journal of Economics & Management Strategy*, 32 (1), 132–157.

Brachtendorf, Lorenz (2021). Patents and Technical Standards: A Semantics-Based Analysis of Essentiality Status, Standardization Governance and Scientific Foundations. Dissertation, Ludwig-Maximilians-Universität München.

From Scientific Research to Healthcare Markets: Empirical Essays on the Economics of Pharmaceutical Innovation

Improving health is a fundamental goal of modern societies. New pharmaceutical treatments have contributed significantly to progress in public health and life expectancy (Lichtenberg 2019). However, the development of new drugs is a costly endeavor. Therefore, how to effectively and efficiently promote biomedical science and pharmaceutical innovation is a first-order economic and policy concern. This dissertation sheds light on three stimuli for biomedical science and pharmaceutical innovation.

The development of new pharmaceutical treatments depends critically on the interplay between markets and public interventions. Governments can address market failures either by lowering the private cost of innovation, so-called push policies, or by increasing the private return on innovation, so-called pull policies (Kyle 2020). However, it is not clear ex ante which of these policies are effective and efficient, leaving an empirical question to be answered. This dissertation uses quasi-experiments and novel publication, patent, and drug data to study the determinants of biomedical science and pharmaceutical innovation.

Fire and Mice: The Effect of Supply Shocks on Basic Science

The first chapter investigates the functioning of markets for research tools. While research tools are central to scientific and technological progress, upfront investments and uncertainties create switching costs that scientists face when adopting new research tools (Klemperer 1987). This has important implications due to path dependency - new tools may fail to diffuse widely while old tools remain dominant. To explore whether the existence of these frictions undermines the functioning of research tool markets, this study investigates the consequences of a negative supply shock on the use of research tools and the production of scientific knowledge. To this end, it leverages a natural experiment and exploits the 1989 Morrell Park fire at the world's largest mice breeding facility: the Jackson Laboratory (JAX). The fire killed approximately 400,000 mice and caused a substantial but temporary supply shortage in certain mice strains. The study found that the fire-induced supply shortage had long-lasting consequences on the use of mice strains. The use of affected JAX mice strains declined relative to both spared JAX strains and strains provided by other suppliers. In contrast, the adoption of spared JAX strains appears to increase gradually in the period after the JAX reconstruction. These effects are explained by mice with higher prefire switching costs. These findings underscore the importance of institutional interventions to steer the trajectories of research tool markets.

Marketing Authorization and Strategic Patenting

The second chapter investigates how marketing authorization affects strategic patenting. Patents are designed to incentivize innovation. However, pharmaceutical firms often extend the period of market exclusivity with secondary patents on marginally beneficial improvements to delay generic entry and allow the originator to earn supra-competitive profits (Budish et al. 2015). Such behaviors have prompted discussions about raising patentability standards. This study examines whether pharmaceutical firms move away from filing strategic patents once the focal drug gains marketing authorization, and the disclosed trialrelated information becomes novelty-threatening prior art. It constructs novel patent-drug dyadic data and leverages unique European drug patenting and marketing contexts. Using an event study methodology, the study exploits plausibly exogenous variation in the length of time from patent filing to drug approval. First, the study illustrates that drugs with early and late marketing authorization share similar ex ante patent and drug characteristics. Second, it supports the hypothesis that strategic patenting behavior decreases substantially after marketing authorization. In contrast, meaningful follow-on innovation remains unaffected. Third, it shows that these effects are likely driven by obstacles in the enforceability of marginal patents filed after approval. The results suggest that post-marketing increases in patentability standards

are welfare-enhancing, given examiners' and firms' self-adjustments. Moreover, the study highlights the importance of better data provision to patent examiners to increase the quality of follow-on inventions.

Market Size and Research

Finally, the third chapter sheds light on demanddriven incentives in basic science. Prior literature has established a link between changes in market size and pharmaceutical innovation. However, these studies almost universally refer to the traditional rubric of "development" activities, such as clinical trials or new drug approvals, as opposed to "research", such as biomedical science. If it exists, the broader link between market pull incentives and scientific research remains elusive. However, if upstream research is not responsive to these changes, the types of scientific discoveries that flow into future drug development may be disconnected from downstream demand. To this end, this study draws on a major policy intervention in the context of U.S. drug prescriptions: the introduction of Medicare Part D in 2003, which substantially increased the demand for drugs particularly relevant for the elderly in the U.S. (Blume-Kohout and Sood 2013). Exploiting this quasiexperimental variation in market size, the study finds no evidence of a relationship between market size and biomedical science in the decade following the implementation of Medicare Part D. However, it finds limited support for a response by corporate scientists conducting applied research. This finding suggests that policymakers may want to complement market expansions with incentives for early-stage research, particularly for scientific research.

In summary, this dissertation may contribute to the design of effective and efficient public policies that help stimulate R&D activities, foster the development of new pharmaceutical treatments, and ultimately improve public health.

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18 March 2021 1 July 2021

Max Planck Institute for Innovation and Competition

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Creation and Recycling of Entrepreneurial Resources: Empirical Essays on the Importance of Social Processes in Entrepreneurial Ecosystems

Entrepreneurs need resources to succeed. This dissertation explores the dynamics of resource acquisition within Entrepreneurial Ecosystems (EEs). Building on the process theory of entrepreneurial ecosystems (Spigel and Harrison 2018), it investigates individual-level behavior and the influence of structural ecosystem dynamics on this behavior. The thesis evaluates two central questions posed by social process theory: how are new resources added to EEs, and what institutional arrangements support the recycling of entrepreneurial resources? Answers to these questions are crucial for understanding the dynamics of EEs because ecosystem development depends on such resources. The thesis finds that new resources are added by entrepreneurship education and non-entrepreneurial actors, and that a common EE identity and acquisitions support the recycling of entrepreneurial resources.

In four independent chapters, the thesis exploits various data sets and methods to empirically investigate these two questions. It sheds light on how resources are created, how they enter EEs, and how resources are recycled in EEs to remain productive for entrepreneurship in the respective EE.

Entrepreneurship Education: The Origin of Entrepreneurial Success

Chapter 1 evaluates the impact of students' participation in an entrepreneurship education program on their subsequent entrepreneurial activity. Using a regression-discontinuity design, it compares the career decisions of program participants with those of the best applicants who were not accepted into the program. We find that participation in the program increases both entrepreneurship rates and start-up success. The effect on entrepreneurship rates is visible for several years after the program. The overall effect is mainly driven by participants who co-found with other participants. Even if program participants do not become entrepreneurs, they are more likely to choose entrepreneurship-related careers. These results contribute to the understanding of how entrepreneurship education can contribute to entrepreneurial ecosystems, highlighting social capital formation as an important driver.

Non-Instrumental Support: The Role of Women for Start-up Success

Chapter 2 explores the role of women in founders' networks and their potential impact on venture success.

Drawing on the literature on gender and networking, the study analyzes the role of 951 significant startup supporters drawn from a self-collected dataset covering the support networks of 251 founders. The study finds that female supporters are more likely to come from the founders' personal networks, provide non-instrumental support, maintain frequent contact, and are less likely to be shareholders than their male counterparts. Nevertheless, they are perceived to be equally important to venture success as men. These findings highlight the importance of women's noninstrumental support in entrepreneurship. Thus, this study contributes to a more holistic understanding of the determinants of entrepreneurial success and emphasizes the need to recognize and harness the unique contributions of female supporters in entrepreneurial ecosystems.

Ecosystem Identity: The Foundation of Giving Back and Paying-It-Forward

Chapter 3 examines how supportive behavior is influenced by identification with different ingroups in EEs. It uses data from a randomized messaging experiment across 109 EEs, highlighting different identification conditions. Results show higher response rates among entrepreneurs in the "ecosystem" condition, which emphasizes an ecosystem identity. We find no indications that the size or success of an ecosystem influences a shared identity in ecosystems. The research highlights the importance of in-group identification in resource acquisition, and its implications for EEs and resource transfer dynamics.

Entrepreneurial Recycling: The Effects of Successful Exits on Ecosystem Development

Chapter 4 investigates the impact of different types of successful start-up exits on the development of EEs. Using a panel data analysis covering 45 European cities over 20 years, the study examines how acquisitions and initial public offerings (IPOs) influence subsequent individual investment activity and new venture creation. The results reveal that acquisitions have a significant and positive impact on investment activity and new venture creation in the following years. In contrast, IPOs have smaller and only marginally significant effects. These findings provide nuanced insights into how resource recycling occurs within EEs after exit events and contribute to our understanding of the evolutionary nature of entrepreneurial ecosystems. The study underscores the importance of exit routes and their distinctive role in fostering new entrepreneurship and regional development.

Contribution to the Literature on Entrepreneurship

This dissertation provides insights into various aspects of the social processes that underlie the creation and recycling of entrepreneurial resources. It makes theoretical and methodological contributions to the literature on entrepreneurship and entrepreneurial ecosystems. Firstly, by emphasizing the centrality of EE processes for entrepreneurship, it calls for entrepreneurship research in general to consider

the processes of underlying EEs. Secondly, it offers insights into gender differences in entrepreneurship, stressing the importance of entrepreneurial networks, and how women participate in them differently than men. The thesis then empirically explores the creation and recycling of entrepreneurial resources, extending the process theory of EEs. It shows that social processes such as identification, roles, and networks are essential for the creation, transfer, and recycling of resources. It then broadens the view of how entrepreneurial resources are created, looking in particular at education and non-entrepreneurial actors. Finally, it provides insights into the role of supportive culture in EEs and adds nuance to the recycling processes after exit events.

In conclusion, this dissertation provides a holistic view of entrepreneurial ecosystems, examining both the micro-level interactions and macro-level impacts shaping their development. By addressing the research questions in a structured and interconnected manner, the thesis adds to our understanding of how social processes facilitate the creation, acquisition, and recycling of resources within entrepreneurial ecosystems.

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Publication

Fröhlich, Michael; Weik, Stefan; Defort, Aaron Merlin; Welpe, Isabell Melanie (2023). Impact of Entrepreneurship Education Programs at University: Quasi-Experimental Evidence, *Academy of Management Proceedings*, 2023 (1), 10321.

Behavioral Foundations of Search, Matching, Teamwork, and Project Evaluation: Preferences and Constraints in Decision-Making

Understanding how people make decisions is key for designing economic policies. This dissertation offers new insights into the behavioral foundations of consumer choice, teamwork, and entrepreneurial finance by illustrating the role of preferences and constraints in decision-making. I investigate what makes consumers search inefficiently, why people match with whom, when teams collaborate effectively, and what prevents female entrepreneurs from succeeding. I use experimental techniques to study these policy-relevant questions that have been difficult to answer using traditional econometric strategies. Through studying preferences and constraints in decision-making, I identify concrete mechanisms that can be turned into solutions to practical problems. More broadly, these generalizable mechanisms provide insights into the behavioral foundations of different stages of innovation processes, science, and entrepreneurship.

Time Pressure and Regret in Sequential Search

Perceptions of urgency and regret are common to many sequential search processes. Online marketplaces such as flight booking sites are one example of this. By highlighting how many people are looking for similar flights, or that fares are only guaranteed for a limited time, they create a sense of urgency to make a decision now, and play on future feelings of regret if one does not buy on the spot.

We theorize that regret and time pressure cause inefficiently short searches. We use a pre-registered laboratory experiment to test our predictions. By manipulating whether or not information on post-purchase price realizations is available, we experimentally vary whether participants can feel regret about stopping the search too early. Theoretically, the anticipation of regret when stopping too early prolongs the search. In addition, we analyze how perceived urgency affects search.

We find that anticipated regret has no effect on search behavior. Urgency reduces decision times, but only very inexperienced decision-makers buy earlier under time pressure. With this, we contribute to policy debates on pressure selling and highlight that consumer protection policies against sales tactics that rush consumers into making a decision may be especially helpful for inexperienced consumers.

Everyone Likes to Be Liked: Experimental Evidence from Matching Markets

We often prefer to interact with those who also want to interact with us. Job applicants want to be the firstchoice candidate, schools want to attract students who want them most, and singles want to date someone who is genuinely interested in them. We say that individuals who prefer to be matched with a partner who wants to be matched with them have reciprocal preferences. Such preferences are particularly relevant in matching markets, where participants not only choose their partner, but must be chosen as well. We provide an existence-proof for reciprocal preferences and analyze their effect on the stability of matching markets through a laboratory experiment.

In the experiment, participants form two-person teams for a cooperative task through a centralized matching mechanism. In one experimental condition, participants learn how they were ranked by their potential partners, while they do not in the other. We hypothesize that participants prefer a partner who ranks them favorably. Therefore, participants would change their preference order after learning how others ranked them, leading to instability in the matching market.

We provide evidence that reciprocal preferences exist, significantly decrease the stability in matching markets, and are driven by both belief-based and preference-based motives. By understanding why matching markets may fail to achieve their objective, our results help design matching markets more effectively.

Interpersonal Preferences and Team Performance

Teams are an integral part of solving complex non-routine tasks within modern organizations. Therefore, it is crucial to understand what makes a team effective. I hypothesize that interpersonal preferences play an important role in team success, and experimentally test whether teams perform better when members like each other.

The experiment consists of a team formation process and a complex team task. During the team formation process, participants indicate how much they like their potential partners. I analyze their behavior in the complex task under two information structures. In only one of them do participants learn how much their partner likes them. I investigate whether performance in the non-routine task differs depending on how much team partners like each other, and analyze different underlying channels.

I find that interpersonal preferences matter for performance in complex problem solving. While teams in which partners like each other perform similarly to those in which partners dislike each other, teams in which one partner likes the other more (dissimilar liking) perform best. This is caused by changes in collaborative behavior upon learning about the partner's preferences. Ex ante, participants expect to be most successful in teams where partners like each other. This has important implications for team formation and performance in firms as well as for the organization of teams of scientists and inventors.

Gendered Access to Entrepreneurial Finance

Many businesses in the developing world rarely grow beyond subsistence size. In this project, we address a major constraint to successful entrepreneurship: the lack of financial resources. This is particularly relevant for women, who are less likely to have the necessary funding to start a business, face challenges in attracting external equity, and have more pronounced constraints on debt financing.

We focus on mechanisms of gender bias on the supply side of finance. Specifically, we analyze whether loan officers' assessment of a start-up's future performance depends on the entrepreneurs' gender and the team composition. Our pre-registered lab-in-the-field experiment combines real-life data on start-up business performance with experimental measures of loan officers' assessment of start-up business ideas in Uganda.

We find a sizable gender bias for businesses of individual entrepreneurs, but no similar gender bias for teams of two entrepreneurs. For individuals, loan officers invest less in businesses of female entrepreneurs and are less likely to select a female entrepreneur's business as the best one among those they evaluate. In contrast, we do not observe a similar gender bias when evaluating teams of two entrepreneurs. We highlight that the formation of entrepreneurial teams changes perceptions about the business and the entrepreneur, which in turn can facilitate access to finance.



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Publications

Klimm, Felix; Kocher, Martin G.; Opitz, Timm; Schudy, Simeon Andreas (2023). Time Pressure and Regret in Sequential Search, *Journal of Economic Behavior & Organization*, 206, 406-424.

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Corporate Innovation: The Role of Scientific Discoveries, Taxation, and Antitrust

Corporate research activities have played a pivotal role in shaping the landscape of science and technology. Since the emergence of the first corporate research laboratories in the late 19th century to the present era dominated by technological giants, there has been a continuous trajectory of groundbreaking research and development (R&D), relentlessly expanding the frontiers of human knowledge and capability. However, the success of these corporate endeavors is deeply intertwined with and relies on societal institutions. In an effort to bridge the gap between private returns and societal benefits, and to cultivate a fertile ground for innovation, governments have established various supporting frameworks, including intellectual property protection, national science systems, and antitrust regulations. In four chapters, this thesis sheds light on a selection of governmental policies, the resulting opportunities and challenges for corporate innovation, and how firms rise to meet them.

Corporate innovation thrives in the context of a multitude of institutions providing innovation incentives. This thesis touches on a selection, investigating the role of scientific discoveries, taxation, and antitrust.

Science Quality and the Value of Inventions

Chapter 1 explores the relevance of high-quality science for innovation. Despite decades of research, the relationship between the quality of science and the value of inventions has remained unclear. This chapter presents the result of a large-scale matching exercise between 4.8 million patent families and 43 million publication records, and finds a strong positive relationship between the quality of scientific contributions referenced in patents and the value of the respective inventions. Patents are ranked by the quality of the science to which they are linked. Strikingly, high-rank patents are twice as valuable as low-rank patents, which in turn are about as valuable as patents without direct science link. This core result is robust for various science quality and patent value measures. The effect of science quality on patent value remains relevant even when science is linked indirectly through other patents. The findings imply that what is considered "excellent" within the science sector also leads to outstanding outcomes in the technological or commercial realm.

Like Stars: How Firms Learn at Scientific Conferences

Chapter 2 further explores corporate knowledge access strategies and shows that scientific conferences provide a direct access channel for the most innovative companies to embed themselves into scientific

communities and learn from knowledge to which they are exposed. In computer science specifically, conference papers and sponsor information provide a "paper trail" of firms' activities at conferences. We build a unique dataset of almost all relevant conference series in computer science since 1996 and find more than 5,000 firms appearing as conference sponsors or as scientists' affiliations – particularly in highly ranked conferences. To show that exposure impacts firms' behavior, the empirical analysis exploits direct flights as an instrumental variable for the participation of scientists in conferences where a firm participates. The participation in the same conferences has positive effects on knowledge diffusion to the firm's scientific and inventive activities. The effects are remarkably stronger the larger the firm's investments, suggesting that investments in intense and active participation are required – for example to gain reputation, show reciprocity, and set off effective knowledge sharing interactions.

Profit Taxation, R&D Spending, and Innovation

Chapter 3 analyzes the effect of the German local business tax on corporate R&D and patent applications. Understanding the effect of taxation on innovation allows to better design offsetting governmental intervention, such as direct R&D support. Relying on data for R&D-active plants in Germany over the period 1995–2007, this chapter exploits around 7,300 changes in the local municipal business tax rate. Applying event study and difference-in-differences designs, it finds a negative and statistically significant effect of an increase in profit taxation on R&D spending with an implied long-run elasticity of -1.25. Reductions in R&D are particularly strong among more

credit-constrained plants but homogeneous across the firm size distribution. Along with the reduction in R&D spending, higher taxes trigger lagged negative effects on the number of filed patents.

Competition and Innovation: The Breakup of IG Farben

Chapter 4 investigates the breakup of the leading German chemical company, IG Farben, following World War II. The breakup significantly changed the structure of product markets and technology space, and tracing effects on innovation provides important insights on the interplay of competition and innovation. Theoretically, a breakup may increase or decrease innovation. For the breakup target, the split-up may induce the successors to innovate more as new products now attract sales from competitors in place of selfcannibalization. On the other hand, a larger firm may innovate more efficiently, for example by internalizing technology spillovers or by deploying innovations over a larger set of sales. Further, the wider sector may be affected by the breakup through technology spillovers, decreased entry barriers, or product market competition. However, as market structure is also influenced by innovation, and changes in competition are typically the result of strategic decisions by market actors, concerns about endogeneity usually obstruct

the empirical evaluation of the competition-innovation relationship. This challenge can be overcome in the case of the IG Farben breakup, as it was unexpected before the war, executed by external actors (the Allied powers) based on political economy considerations rather than antitrust analysis, and largely followed a geographical structure. For an analysis of innovation, the chapter relies on newly digitized data on granted German patents between 1920 and 1965. The intensity of the breakup, as measured by the concentration change caused by splitting IG Farben's technologylevel prewar patent portfolio, varied widely across innovation space. In technology areas with large concentration reduction, patenting strongly increased, driven by non-IG firms. Quality measures derived from patent full-texts indicate that the propensity to patent - possibly resulting in lower average quality - does not cause the increase in patenting. For a product market perspective, the chapter turns to fine-grained product-level information on suppliers and prices. This data suggests that the breakup induced long-run product-level competition between the IG successors. In affected product areas, additional suppliers entered and prices declined. Overall, the results of this chapter suggest that the breakup had large positive effects, which underscores the important role of a strong competition policy.



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Publications

Poege, Felix; Harhoff, Dietmar; Gaessler, Fabian; Baruffaldi, Stefano (2019). Science Quality and the Value of Inventions, *Science Advances*, 5 (12), eaay7323.

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Short Reports on Selected Ongoing Dissertations

2.6

Essays on Applications of Machine Learning to Science, Patent, and Economic Data



Sebastian Erhardt, M.Sc.

This dissertation studies knowledge flows with the help of advanced machine learning models and analyzes the impact of the new European Unitary Patent system on patenting decision-making within organizations.

The first essay asks whether we can detect research projects that go against established wisdom, question traditional results, and use novel approaches. We analyze grant application data from the Volkswagen Foundation, Germany's largest private research funding organization. Our approach tries to compare "unorthodox" grant applications with the spectrum of existing scientific literature. A key tool in our analysis is Logic Mill, a knowledge navigation system developed

during this dissertation. This scalable and openly accessible software system identifies semantically similar patents and scientific publications using advanced Natural Language Processing.

The second essay addresses the question of whether we can detect and trace knowledge flows from scientific publications to patents and vice versa. Our approach uses specialized machine learning models that can indicate similarities in patent-paper pairs. These models are trained and evaluated on custom-crafted datasets (see C II 1.6, p. 266).

The third essay analyzes the impact of the newly created Unitary Patent system on the decision-making of patenting organizations. This new European patent system is a historic step for innovation as it gives patent owners access to centralized enforcement, albeit with the risk of centralized invalidation (see C II 1.1, p. 256).

2.7 **Essays on Migration and Mobility**



Carolin Formella, M.Sc.

This dissertation sheds light on different aspects of innovation intertwined with migration.

The first essay investigates the influence of migration

barriers on the utilization of scientific knowledge in patents, leveraging the so-called "Muslim travel ban" as an exogenous shock to the mobility of scientists of Iranian origin. First, we establish a direct impact of the travel ban on Iranian computer scientists residing outside the U.S., evidenced by a decline in visas issued and a substantial reduction in conference participation for this group. Moving forward, our analysis aims to compare U.S. patent citations between pre-ban scientific publications by scientists

of Iranian origin and their non-Iranian counterparts within a difference-in-differences framework.

The second essay explores how social norms, stigmas, and taboos prevent women from accessing health innovations for menstruation, especially in refugee camps. Many women rely on inadequate materials such as old cloth, leaves or paper tissues to manage their menstrual flow. This has not only implications for these women's well-being, in particular health, but also their socio-economic activities during their periods. The adoption of innovative, more hygienic health technologies such as menstrual underwear remains often low due to social norms, stigmas, and taboos. We plan to run a field experiment with over 700 women in refugee camps in Africa and elicit whether joint group discussions between men and women, which are designed to break the silence about menstruation, increase the adoption of new technologies.

Essays on Behavioral Aspects of Knowledge Production, Interpersonal Knowledge Exchange, and Gender Disparities



Svenja Friess, M.Sc.

While innovations and smooth knowledge flows are key drivers in the success of organizations, the persisting frictions surrounding them are understudied. This dissertation uses experimental and

empirical methods to comprehend underlying behavioral factors impacting the sourcing, transmission, and generation of knowledge in non-standard samples of white-collar professionals. A partial focus lies on gender disparities, given women's continued underrepresentation in innovative knowledge work.

The first essay investigates the impact of reputational concerns on knowledge sourcing behavior in a large-scale online experiment. Results show a sizable and inefficient decline in knowledge sourcing when

visible to a bonus-awarding manager, despite the fact that managers do not interpret knowledge sourcing negatively. This documents a potential misconception hindering knowledge flows for men and women alike.

The second essay leverages quasi-random variation in early peer interactions from a novel, global data source of professionals to analyze peers' impact on continued engagement and persistence on an online knowledge exchange platform. It contributes to research on how digital interactions can be designed and governed to create value.

The third essay uses an online experiment to study the role of competitive and male-dominated environments for gender gaps in creative ideation output. This approach allows to overcome endogeneity and selection issues inherent to observational settings and to examine mechanisms.

2.9

Essays on the Role of Science in Patents, Patent Quality, and Diffusion



Mainak Ghosh, M.Sc.

Patents and technological standards play a pivotal role in the advancement of technology. Firms actively invest in emerging technologies and contribute to the expansion of the technology

frontier. Patent offices are tasked with awarding patents of high quality in order to limit uncertainty surrounding such exclusion rights. This dissertation studies firms' behavior in emerging technologies, the efficacy of patent protection, and the role of science in the development of technological standards.

The first essay explores the landscape of patents related to artificial intelligence in the pharmaceutical industry, spanning European nations, China, and the USA. In light of any potential disparities in patenting activity across these regions, this project investigates

the behavior and strategies of firms contributing to such variation.

As patents are an innovation protection mechanism, the second essay reflects on the long-standing debate on the quality of such protection. It measures, in particular, the examination quality of patents retrospectively and analyzes the extent and kind of changes in patent claims introduced by examiners.

The last essay studies how scientific knowledge becomes the foundation of patented technologies that are essential for standards. Although the use of citations is the de facto way to measure such origins, citations are often too sparse for tracing the knowledge that flows into standards. Therefore, this project uses machine learning to determine the similarity between scientific articles and standard-essential patents (SEPs), thus revealing the role of science in technological standards.

Essays on Innovation in the Life Sciences



Elisabeth Hofmeister, M.Sc.

The productivity of research and development (R&D) has consistently received attention from both policymakers and firms alike. This holds especially true in the pharmaceutical industry,

where projects have traditionally low success rates. Yet, not all discontinued pharmaceutical projects are scientific failures – some projects are halted even with positive clinical results. Despite the consequences for firms and social welfare, the distinction between scientific failures and so-called shelved innovation is not routinely applied empirically.

With a newly constructed dataset linking clinical trials to publications and through natural language processing, I am able to distinguish between scientific

failures and shelved innovation in the pharmaceutical industry. In the first two essays of the dissertation, I aim to explore how shelving fits into firm strategy: what are the reasons for shelving and how do firms utilize shelved projects?

New research tools such as CRISPR-Cas have been hailed as a future driver of productivity in the life sciences. In a third essay, I aim to explore barriers to translating research with CRISPR-Cas into commercialization. Inherent in its newness is the uncertainty of how to regulate the technology and whether to do so at all. The variation of regulation between jurisdictions raises questions regarding product development and the competitiveness of firms. I intend to address these issues in the context of CRISPR-Cas in plant breeding, adding to the evidence on the influence of external factors on R&D productivity.

2.11

The Economics of Industrial Automation – Competition, Labor Market Power, and Political Participation



Klaus Keller, M.A.

In an era of rapid advances in robotics and AI, it is crucial to understand the factors driving firms' adoption of automation technologies and their societal repercussions. This dissertation provides

new insights into firm-level automation dynamics and the political consequences of technological job loss.

The first chapter examines how product market competition affects automation investments of manufacturing exporters. Exploiting a tariff liberalization, the study reveals that increased competition may result in lower automation investments in less productive firms and higher investments by more productive firms, thereby increasing disparities between firms.

The second chapter explores automation in imperfect labor markets, presenting a theoretical model and empirical evidence that local labor markets exposed to industrial robots exhibit larger reductions in both employment and wages at higher levels of employer concentration.

The third chapter provides micro-evidence on the link between employers' wage-setting power and automation investments. Estimating wage markdowns at manufacturing firms, I find that firms with greater labor market power invest more in machinery and are more likely to use robots.

The final chapter shows that areas with greater exposure to industrial robots have reduced voter turnout in U.S. federal elections, a trend not observed in counties facing import competition. Survey experiment results point to differences in voters' beliefs about the government's ability to manage technological change compared to import competition.

Essays on the Economics of Digitalization and Innovation



Ann-Christin Kreyer, M.Sc.

This dissertation studies new phenomena in digitalization and patent systems, including the evaluation of a major life science digitalization project and the examination of patent value in an international framework.

The first essay studies the impact of the European Union's Human Brain Project (HBP), a ten-year project (2013–2023) to build a community and digital infrastructure to support neuroscience, computing, and brain-related medicine. We construct novel data and use difference-in-difference and natural language processing for analysis. We find increased diverse participation, especially among junior faculty.

HBP engagement leads to increased productivity, expanded coauthor networks, more citations, and a higher likelihood of publishing in top neuroscience journals. Neurotech fields (neuroscience and CS/AI) see heightened productivity, mainly led by junior scholars.

The second essay explores short and medium-term stock market reactions to information on patents. Using a firm-level approach, we connect international patent disclosures to stock market responses for U.S. companies (1980–2022). Our findings indicate strong stock price reactions to initial international disclosures and to information about the quality of an invention. Employing a hedonic decomposition of patent value, we estimate individual patent values and provide a dataset with value estimates for over 2 million patent families at first disclosure.

2.13

Essays on the Economics of Artificial Intelligence and Innovation



Anna-Sophie Liebender-Luc, M.A.

With the field of AI evolving at an unprecedented pace, many countries are attempting to acquire and diffuse new knowledge. In many areas, AI systems have become

essential elements of sector-specific innovation, such as in the medicine, automotive, chemistry, and biotechnology sectors, and many more. Despite these efforts, the implications of this technological success story are poorly understood.

The first essay of the dissertation seeks to contribute to explaining the development and emergence of Al research and innovation across regions worldwide, focusing on three important elements: scientific paradigms, enabling technologies, and diffusion processes.

Scientific paradigms refer to the presence of multiple schools of thought. Enabling technologies play a critical role in the development of AI by providing the necessary hardware and software infrastructure to run and scale AI algorithms and models. In particular, Graphics Processing Units (GPUs) have played a major role in the development of deep learning. Diffusion processes set in once an attractive new technology has been found and demonstrated to work well. To understand the diffusion of knowledge in the field of AI, it is necessary to consider the interplay between regional specialization towards different paradigms, the command of enabling technologies, and the regional endowment with critical human capital.

Firms and Innovation: Multinational Strategies, the Net-Zero Transition, and Governmental R&D Support



Cristina Rujan, M.Sc.

Firm innovation is pivotal for sustained economic growth, fostering market competitiveness and contributing to technology development. Understanding its drivers is key to addressing current

global challenges such as climate change, healthcare, and digital transformation. This dissertation sheds light on various aspects of firm innovation: multinational firms' innovation offshoring, recent greentech trends among top R&D investors, and the effectiveness of governmental R&D support for young innovative companies.

Chapter 1 analyzes how German multinational companies (MNCs) organize global production and innovation. Our findings suggest that larger MNCs offshore innovation to multiple countries, with and without affiliates. They do so according to countries' comparative advantage in different technology areas, with applied innovation more likely to be co-located with production than basic innovation.

Chapter 2 highlights the important role of top R&D investors in the development of green technologies. A decline in both the number and share of high-quality green patents originating from these firms can be observed since 2012. This raises concerns given the urgency for green solutions required by the 2050 netzero goal.

Chapter 3 analyzes the effectiveness of a French R&D support scheme for young innovative companies. Since 2004, such firms can benefit from reduced social security contributions for R&D employees. We show that beneficiaries are more successful relative to comparable young firms, as they are more likely to survive, to be acquired, and to develop patentable technologies.

2.15

Essays on Innovation Economics



Kathrin Wernsdorf, M.Sc.

Countries across the world attempt to increase the wellbeing of their populations by fostering economic growth. Innovation, as one of the boosters of regional development, has thus received

growing attention from policymakers. This dissertation focuses on one of the key drivers of innovation, namely access to information. Chapters 1 and 2 look at active knowledge absorption; passive, non-scientific knowledge absorption is addressed in chapter 3.

Chapter 1 investigates the effect of reducing the cost of access to knowledge on local inventive activity. Exploiting the introduction of BITNET, an early version of the Internet, we show that university patenting increased after the adoption of BITNET at the expense

of patent quality. Further results show that BITNET seems to have facilitated the translation of scientific insights to innovation by inducing new, productive collaborations (see C II 1.3, p. 260).

Chapter 2 examines the role of knowledge embodied in people. A new dataset has been created that captures the movement of scientists during the German reunification process. This data is used to study whether domestic scientists transition more successfully when they are also surrounded by peers other than their domestically trained colleagues.

Chapter 3 turns to passive knowledge absorption via television. We exploit differential access to West German TV programs by East German inventors, and attempt to understand whether TV access impacts inventive activity, and if so, how the direction and intensity of innovation is influenced.



Congratulations incoming.

3 Scientific Policy Advice

The Institute's Economics Department provides scientific policy advice in various capacities. In addition to Dietmar Harhoff's memberships in a number of advisory boards and scientific committees (see Part C III 7, p. 341), the main contributions in the reporting period include: the expert reports of the Scientific Advisory Board at the German Federal Ministry for Economic Affairs and Climate Action (see C II 3.1), his work on the Supervisory Board of the German Agency for Disruptive Innovation (SPRIND) (see C II 3.2), the Founding Commission of DATI (see C II 3.3), the Bavarian Al Council (see C II 3.4), and the expert report for the Leopoldina (see C II 3.5). During the 2021–2023 reporting period, Dietmar Harhoff also completed activities that had already begun in previous reporting periods: as part of the Federal Chancellor's Dialog on Innovation (see C II 3.6), the Lower Saxony 2030 Future Commission (see C II 3.7), and within the framework of a study of the Bavarian Research Institute for Digital Transformation (bidt) (see C II 3.8).

3.1 Scientific Advisory Board at the German Federal Ministry for Economic Affairs and Climate Action (BMWK)

Since 2004, Dietmar Harhoff has been a member of the Scientific Advisory Board at the German Federal Ministry for Economics and Technology (BMWi), now the Federal Ministry for Economic Affairs and Climate Action. The Scientific Advisory Board provides the Federal Minister with independent advice on all aspects of economic policy.

Expert Report on Better Equipment for the German Armed Forces

On 25 July 2023, the Scientific Advisory Board at the BMWK published a report on the topic "Bundeswehr besser ausrüsten – aber wie?", co-authored by Dietmar Harhoff.

The Bundeswehr has a special funding allocation of €100 billion at its disposal. Despite this, the procurement of urgently needed weapons systems is progressing slowly. The Advisory Board examines obstacles in the procurement process. It recommends a clear separation of tasks between the government and parliament and makes concrete proposals on how

the procurement process can be further simplified and accelerated. The upcoming modernization of the Bundeswehr should be used to experiment with facilitating the procurement procedure and to tap into the innovation potential of military research and development, with subsequent follow-on civilian applications.

The Federal Republic of Germany has so far been reluctant to promote military research – for historical reasons that are quite understandable. However, technical superiority is of decisive importance for deterrence. For this reason, greater use should be made of innovative procurement instruments and the strict separation between the civilian and military sectors should be relaxed, particularly in the area of basic research.

The report is joint work of Professor Dr. Dr. h.c. Christoph Engel (Director at the Max Planck Institute for Research on Collective Goods and Professor of Law at the University of Osnabrück), Professor Dietmar Harhoff, Ph.D. (Director at the Max Planck Institute of Innovation and Competition and Professor for Entrepreneurship and Innovation at the LMU Munich),

Professor Dr. Axel Ockenfels (Director at the Max Planck Institute for Research on Collective Goods and Professor of Economics at the University of Cologne), Professor Dr. Dr. h.c. Klaus M. Schmidt (Professor of Economics at the LMU Munich), and Professor Achim

Wambach, Ph.D. (President of the ZEW – Leibniz Centre for European Economic Research Mannheim and Professor of Economics at the University of Mannheim).



Expert Report on the Future of Work in the Digital Transformation

On 28 April 2022, the Scientific Advisory Board at the BMWK published a report on the topic "Die Zukunft der Arbeit in der digitalen Transformation", co-authored by Dietmar Harhoff.

The experts draw attention to the fact that we are currently undergoing several transformations: the transformation towards ecological sustainability and climate neutrality, and advancing digitalization. In this report, the Advisory Board looks at the upheavals to be expected as a result of the digital transformation, their impact on the future of work, and on how the state can respond to the anticipated challenges.

The digital transformation is in full swing. It will have a significant impact on the German labor market in the coming years. In many areas, technological progress will lead to an improvement in welfare and make work easier. In some areas, though, it will displace jobs. Yet, the Advisory Board sees no reason

for concern with respect to technology-driven mass unemployment. The demographic development taking place at the same time and the general realization that technological change does not merely replace human work, but has always led to a change in existing employment opportunities and the creation of new ones, speak against this. In addition, Germany has an institutional structure that has in the past helped it to cope comparatively well with major structural upheavals in the labor market.

However, the experts identify two central problem areas that could arise in the course of the digital transformation on the German labor market: (1) qualification and regional mismatch, and (2) rising wage and income inequality. The Federal Government should proactively and creatively address these challenges and set the course accordingly.

The report is joint work of Professor Dr. Jens Südekum (Professor for International Economics at the Düsseldorf Institute for Competition Economics (DICE) at Heinrich Heine University), Professor Dr. Felix Bierbrauer (Professor for Public Economics and Center

for Macroeconomic Research (CMR) at the University of Cologne), Professor Dr. Dr. h.c. Christoph Engel (Director at the Max Planck Institute for Research on Collective Goods and Professor of Law at the University of Osnabrück), Professor Dietmar Harhoff, Ph.D. (Director at the Max Planck Institute of Innovation and Competition and Professor for Entrepreneurship and Innovation at the LMU Munich), Professor Dr. Günter

Knieps (Emeritus Professor of Economic Policy and Director of the Department of Network Economics, Competition Economics and Transport Science at the University of Freiburg), Professor Dr. Dr. h.c. Klaus M. Schmidt (Professor of Economics at the LMU Munich), and Professor Dr. Ludger Wößmann (Director of the ifo Center for the Economics of Education and Professor of Economics at LMU Munich).



3.2 SPRIND

The German Federal Government aims to foster pioneering research with a wide range of application possibilities. The German Agency for Disruptive Innovation (SPRIND) has been established to promote innovations with radically new technologies and a great potential to change the market with new products, services, and value chains.

It is critical for the success of the agency that it has exceptional autonomy.

SPRIN-D

In 2019, Dietmar Harhoff was appointed chair of the commission for the establishment of the new agency. He is now continuing his work as a member of the SPRIND Supervisory Board and has advocated that SPRIND be given the freedom it needs to operate successfully.

On 26 July 2023, the Federal Cabinet passed the SPRIND Freedom Act, aimed at improving the framework conditions for the agency. With the Freedom Act, SPRIND is finally getting the working conditions that were already planned in 2016. This creates new opportunities, including the relaxation of specialist supervision.

The new funding instruments are important. SPRIND can now invest directly, long before venture capitalists take an interest in risky

projects. It can also provide research grants and subsidies. Originally, SPRIND was to limit itself to setting up subsidiaries of the Federal Government. This quickly turned out to be an unsuitable structure, which almost caused the demise of some projects.



Members of the SPRIND Supervisory Board with Berit Dannenberg (left), SPRIND Commercial Managing Director, and SPRIND Director Rafael Laguna de la Vera (right). Photo: SPRIND.

Many innovators rejected this structure because it forced them to hand over all of their intellectual property and submit to requirements such as the prohibition of preferential treatment.

The SPRIND Supervisory Board consists of up to ten persons. They represent the German Federal Government as a 100% shareholder and bring expertise from science and business to this deliberative body.

The members of the Supervisory Board are: Mario Brandenburg (German Federal Ministry of Education and Research) Dr. Franziska Brantner (German Federal Ministry for Economic Affairs and Climate Action)
Prof. Dietmar Harhoff, Ph.D. (Max Planck Institute for Innovation and Competition)
Ronja Kemmer (Deutscher Bundestag)
Dr. Gesine Osieka (German Federal Ministry of Finance)
Dr. h.c. Susanne Klatten (SKion GmbH)
Remy A. Lazarovici (Celonis SE)
Dr.-Ing. E. h. Peter Leibinger (Shareholder of TRUMPF SE + Co KG and Chairman of the Supervisory Board of Leibinger SE)
Holger Mann (Deutscher Bundestag)
Prof. Dr. Birgitta Wolff (University of Wuppertal)





SPRIND podcast with Dietmar Harhoff.

3.3 Founding Commission of the German Agency for Transfer and Innovation

The German Agency for Transfer and Innovation (DATI) is set to break new ground in the fostering of transfer and innovation. The aim is to bring research results into application and to society more quickly and effectively, and to unleash new innovation potential throughout Germany. Dietmar Harhoff was appointed a member of the DATI founding commission by Federal Minister of Research and Education Bettina Stark-Watzinger at the beginning of October 2023.

The DATI Founding Commission, which convened for its constituent meeting in Berlin on 9 October 2023, has the task of developing proposals for the location and leadership of DATI. It is also tasked with making recommendations on the content and procedural aspects of establishing and expanding DATI. The committee consists of 16 experts from science, industry, associations, start-ups, the federal states, the international sector, and the Parliament.

Dr. Stefan Groß-Selbeck (BCG X, Boston Consulting Group) has assumed the chairmanship of the founding commission. Further members of the DATI founding commission are: Prof. Dr. Dr. h.c. Uschi Backes-Gellner (University of Zurich), Prof. Dr. Jörg Bagdahn (Anhalt

University of Applied Sciences), Dr. Anna Christmann, MdB, Dr. Achim Dercks (German Chamber of Industry and Commerce), Andrea Frank (Stifterverband), Prof. Dr. Holger Hanselka (Fraunhofer Society), Thomas Jarzombek, MdB, Prof. Dr. Kira Kastell (University of Applied Sciences Hamm), Prof. Dr. Andreas Pinkwart (TU Dresden), Prof. Dr. Birgitt Riegraf (University of Paderborn), Ye-One Rhie, MdB, Prof. Dr. Stephan Seiter, MdB, Prof. Dr. Anja Steinbeck (Heinrich Heine University Düsseldorf), and Philipp von der Wippel (Project Together).

On 21 December 2023, the Federal Ministry of Education and Research (BMBF) chose Erfurt as the headquarters of DATI because the location decision was essential for its foundation. The decision was preceded by an intensive exchange with the DATI Founding Commission regarding suitable locations. In particular, questions of embedding the agency in a lively environment for transfer and innovation, its accessibility, and its attractiveness for talent were weighed up. The decisive factor was Erfurt's integration into a strong and dynamic scientific region with a central location in Germany.

3.4 Bayarian Al Council

To strengthen research in the field of artificial intelligence, a statewide AI network has been extended across Bavaria as part of the HighTech Agenda Bavaria. The Bavarian AI Council, which provides expert advice, reflects a balanced spectrum of representatives with different research backgrounds from Bavarian universities, universities of applied sciences, and non-university research institutions as well as from the industry. The 21 Bavarian-based members of the AI Council were appointed by the Ministries of Science, Economic Affairs, and Digital Affairs. Its members set impulses for baiosphere activities and advise the Bavarian State Government on AI topics.

As a member of the Bavarian AI Council since 2020, Dietmar Harhoff leads the project group "AI for Climate Protection". An initial project, in cooperation with the Center for Digital Management and Technology (CDTM) of the Technical University and LMU Munich, was successfully completed in 2022 – the Trend Report on "Tackling Climate Change in the AI Era".

Tackling Climate Change in the Era of Artificial Intelligence

Climate change is one of the biggest challenges of our time, confronting us with cascading effects if no action is taken now. How can we cope with climate change with the support of AI solutions?

Using AI in sectors such as agriculture, energy, and transportation can lead to economic benefits while reducing greenhouse gas emissions. How can this technology be leveraged to create tangible impact and pursue a transformation that creates opportunities for all? How can ethical and trustworthy AI systems be developed without a large carbon footprint? The CDTM Trend Report looks into these questions and provides an understanding of the potential of Al for tackling climate change in the next 20 years. It describes trends (political and legal, economic, social and environmental, technological, as well as business models) that explain the current and upcoming challenges of climate change. It identifies potential future scenarios, and innovates new business models, ensuring a balance between sustainability, technology, and future prosperity.

The report was developed within the framework of the trend seminar at the CDTM, where 25 young innovative students from interdisciplinary backgrounds conducted holistic trend research over seven weeks on a specific, future-oriented topic. In the initial phase, a comprehensive trend analysis was prepared, the scenario phase was then used to develop four future scenarios, and in the ideation phase, five future-proof digital business models were elaborated.



Dietmar Harhoff and Bavarian Minister of State for Digital Affairs Judith Gerlach.

Photo: baiosphere - the bavarian ai network

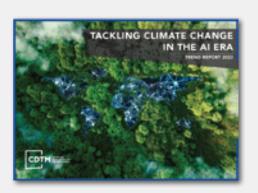
In their work, the students were supervised, among others, by Anna-Sophie Liebender-Luc, who is now a Junior Research Fellow and Doctoral Student at the Institute.

Dietmar Harhoff presented the Trend Report to Judith Gerlach, Bavarian Minister of State for Digital Affairs, at Al.BAY2023, the 1st International Al Conference of the Bavarian Al Network baiosphere, held at the Deutsches Museum in Munich on 23 February 2023.

Publication



 $\label{lem:https://www.cdtm.de/wp-content/uploads/2023/02/Trend-Report_Spring-2022_Tackling_Climate_Change_Al_compressed.pdf-zukunft-der-arbeit-in-der-digitalen transformation.pdf$



3.5 Leopoldina Statement on the Economic Consequences of the COVID-19 Pandemic

The German National Academy of Sciences Leopoldina provides independent, science-based policy advice on matters relevant to society. To this end, the Academy develops interdisciplinary statements based on scientific findings. In these publications, options for action are outlined. The experts who prepare the statements work on a voluntary and impartial basis. Dietmar Harhoff has been an elected member of the Leopoldina since 2010.

In December 2021, the Leopoldina published a statement on the economic consequences of the COVID-19 pandemic. The pandemic has brought about new medium- and long-term challenges in Germany that will need to be addressed by economic and social policy. It has also exposed existing problems where action is needed.

The scientists recommended courses of action in four areas: structural change and prerequisites for sustainable economic growth; inequality and distribution; capacity of government organizations at national and international levels; and sustainability of public finances.

The first aspect of economic policy addressed in the statement are ways to overcome the medium- and long-term impact of the pandemic on the economy.

The second aspect addressed by the working group are measures to counteract the complex medium- and long-term consequences of the pandemic on wealth distribution and the persistence of social inequality. These proposals relate to education and professional development, the promotion of gender equality and the structure of the social welfare system.

The third chapter of the statement is dedicated to potential for improvement in connection with government capacity. The working group suggested setting up an independent non-political committee once the worst of the crisis had passed. This committee would be charged with identifying the causes of possible shortcomings in government response to the crisis – at all federal levels all the way through to the international level – and putting forward reform recommendations.

Finally, the working group proposed a fourth aspect of economic policy to be addressed after the pandemic – namely, how to guarantee and strengthen the sustainability of public finances at national and European levels, so that in the event of another major crisis, the necessary support can again be provided to avoid the worst effects.



3.6 Dialog on Innovation of the Federal Chancellor (Steering Committee)

From 2010 to 2021, Dietmar Harhoff was a Member of the Dialog on Innovation by the German Chancellor Angela Merkel. The Dialog on Innovation between the Federal Government – represented by the Federal Chancellor, the Federal Research Minister, the Federal Minister for Economic Affairs, the Federal Finance Minister, and the Head of the Federal Chancellery – and representatives from industry and science served as an independent expert advisory council to the Federal Government on all aspects of innovation and innovation policy.

The fifth Dialog on Innovation of the 19th legislative period took place on 20 January 2021. The discussion focused on the question of how resilience in supply chains and value creation networks can be increased and anchored in the long term. One focus was on the healthcare sector and the automotive industry. Overall, the members of the Dialog on Innovation agreed that resilience should not be equated with the pursuit of

economic self-sufficiency, but rather requires close European and international cooperation in many areas. Furthermore, current developments in two innovation policy initiatives launched by the German government as a result of the Dialog on Innovation were discussed. Rafael Laguna de la Vera, Founding Director, reported on the work of the German Federal Agency for Disruptive Innovation (SPRIND). The Chairmen of the Quantum Computing Expert Council, Prof. Dr. Stefan Filipp and Dr. Peter Leibinger, presented the Quantum Computing Roadmap developed by the Expert Council.

The sixth and final Innovation Dialog of the 19th legislative period and the last under Angela Merkel's chancellorship took place on 2 September 2021. The discussion focused on approaches for the further development of innovation policy and its instruments as well as for strengthening innovation ecosystems based on the key future fields of technology for Germany.



Dialog on Innovation with German Chancellor Angela Merkel.

Photo: Bundesregierung/Jochen Ecke

3.7 Commission Lower Saxony 2030

On behalf of the state government of Lower Saxony, a team of experts chaired by Dietmar Harhoff developed options for action on how the federal state can respond to current major societal challenges to set the course for future developments. The Commission Lower Saxony 2030 submitted the final report with its recommendations to the government of Lower Saxony in March 2021.

The commission of eleven renowned scientists had taken up its work as an independent and autonomous body of experts in 2019 to develop recommendations for the future. The highly interdisciplinary panel identified five areas in which the state faces particular challenges, but that also affect other states and countries: (1) demographic developments, (2) climate change, (3) globalization, (4) digitalization, and (5) the preservation of social cohesion. Ten fields of action were examined alongside these challenges, within which general

development trends as well as opportunities and risks for the state were identified.

These fields of action comprise the topics (1) demography and generations, (2) immigration and diversity, (3) work, employment, and upskilling, (4) health and care, (5) landscape, energy, and climate change, (6) agricultural and food economy, (7) mobility, (8) research and innovation, (9) high-tech strategy, robotics, and AI, and (10) digitalization.

Finally, the commission presented particularly relevant options for action and core recommendations. These are intended to help ensure that the state can fully exploit its potential for a future-proof, successful development, and will be economically, socially, and ecologically sustainable in 2030.

Dietmar Harhoff presented the report to Minister President of Lower Saxony Stephan Weil on 25 March 2021.



3.8 Study on Increased Digitalization as a Result of the COVID-19 Pandemic (bidt)

bidt

As an institute within the Bavarian Academy of Sciences and Humanities (BAdW), the Bavarian Research Institute for Digital Transformation (bidt) contributes to a better understanding of the developments and challenges in digital transformation. It thereby

provides the foundations to responsibly shape society's digital future, oriented towards the common good.

From 2019 until 2021, Dietmar Harhoff was a member of the Board of Directors of bidt. He co-authored

several studies on the prevalence and acceptance of remote working in Germany. Digitalization is an essential prerequisite for new flexible working models and mobile forms of work. During the COVID-19 crisis, this suddenly gained importance in the public debate.

In 2021, Dietmar Harhoff co-authored a study on increased digitalization as a result of the pandemic. With the Occupational Health and Safety Ordinance coming into force on 27 January 2021, companies were required to offer remote working as much as possible. With the third wave of surveys on remote working in Germany, bidt examined the current prevalence of

home office work in Germany and the effects of this regulation.

The representative short survey was conducted from 4 to 8 February 2021 – shortly after the new regulation

came into force. Using Google Surveys, 1,564 adult working Internet users in Germany were surveyed. The survey complemented the two bidt survey waves previously conducted from 27 to 29 March 2020 and from 12 to 15 June 2020, which allowed for

an analysis of the prevalence and acceptance of home office work over time.

The results showed that a clear majority of adult working Internet users believed in the effect of the Occupational Health and Safety Ordinance. The regulation showed a rapid impact, with around 34% of the employees surveyed reporting that employers had expanded options for remote working following the ordinance. The use of working from home was higher than ever with around half of all adult working Internet users being in their office at home at least from time to time.

Publication Digitalisierung durch Corons? https://www.bidt.digital/publikation/digitalisierung-durch-corona-homeoffice-im-februar-2021/



III Publications, Presentations, Doctoral Dissertations, and Other Academic Activities

1 Publications

1.1 Publications by Members of the Department

In order to avoid multiple reporting of identical publications due to co-authorship, the publications of the department are no longer sorted by person as in previous reports, but by publication category. Publications by Affiliated Research Fellows of the department are only included if published in a series edited by the Institute or if the publications are based on previous research conducted at the Institute. We include work that was initiated during employment periods at the Institute (e.g., during doctoral training or postdoctoral research employment) or that has been derived by External Research Affiliates from work undertaken with authors from the department.

Articles in Refereed Journals

(in reverse chronological order)

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Widmann, Rainer (2023). The Behavioral Additionality of Government Research Grants, International Journal of Industrial Organization, forthcoming.

Gaessler, Fabian; Harhoff, Dietmar; Sorg, Stefan; Graevenitz, Georg von (2023). Patents, Freedom to Operate, and Followon Innovation: Evidence from Post-Grant Opposition, Management Science, forthcoming.

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Hoisl, Karin; Kongsted, Hans Christian; Mariani, Myriam (2023). Lost Marie Curies: Parental Impact on the Probability of Becoming an Inventor, Management Science, 69 (3), 1714–1738.

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Klimm, Felix; Kocher, Martin G.; **Opitz, Timm;** Schudy, Simeon Andreas (2023). Time Pressure and Regret in Sequential Search, Journal of Economic Behavior & Organization, 206 (February), 406–424.

Clicking against the Clock - How Time Pressure and Regret Influence Our Behavior in Online Shopping



In a Game Changer podcast episode, Timm Opitz explains how time pressure and regret can influence our search behavior in the world of online shopping. He sheds light on his research project titled "Time Pressure and Regret in Sequential Search", which investigates the impact of

urgency and regret on optimal search behavior by conducting experiments in a controlled environment.

In the podcast, he also shares some strategies we can use to overcome the influence of urgency and regret in our shopping behavior.

Perceived urgency and regret are common in many sequential search processes. Sellers often pressure buyers in the search of the best offer, in terms of both time and potential regret of foregoing unique purchasing opportunities. Theoretically, these strategies lead to anticipated and experienced regret, which systematically affect search behavior and thereby distort the optimal search. In addition, urgency may alter decision-making processes and thus the salience of regret.

To understand the empirical relevance of these aspects, Timm Opitz and his coauthors study the causal effects of regret, urgency, and their interaction on search behavior in an experiment. Empirically, they find that anticipated regret does not affect search behavior either with or without time pressure, while experienced regret leads to systematic adjustments in search length. Urgency reduces decision times and perceived decision quality, but does not generally alter search length. Only very inexperienced customers buy earlier under pressure. Thus, consumer protection measures against pressure selling tactics can help inexperienced consumers in particular.



To the podcast:

https://tws-gamechanger.libsyn.com/clicking-against-the-clock-how-time-pressure-and-regret-influence-our-behaviour-in-online-shopping-with-timm-opitz

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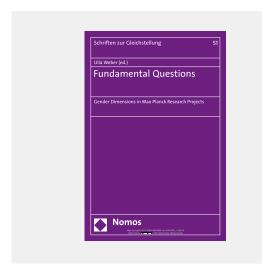
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When Humans Interact with Non-Human Agents

Rapid advancements in technology and automation call for a deep understanding of how human behavior changes when humans interact with technology-powered agents in place of human-to-human exchanges. It is important to take such changes in human behavior into account when creating a legal and policy framework to regulate automation. Marina Chugunova's yearbook report on a review of interdisciplinary findings in this field has been selected for the Highlights 2022 of the Max Planck Society.



Link: https://www.mpg.de/20483230/yearbook-highlights-2022.pdf

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Widmann, Rainer (2023). The Behavioral Additionality of Government Research Grants, CRC TRR 190 Discussion Paper, No. 417.

Heursen, Lea; **Friess, Svenja; Chugunova, Marina** (2023). Reputational Concerns and Advice-Seeking at Work, Max Planck Institute for Innovation & Competition Research Paper, No. 23-17, and CRC TRR 190 Discussion Paper, No. 447.

Feng, Josh; **Higgins, Matthew John;** Patel, Elena (2023). Pediatric Drug Adherence and Parental Attention: Evidence from Comprehensive Claims Data, NBER Working Paper 30968.

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Ciaramella, Laurie; Heller, David; Leitzinger, Leo (2023). Intellectual Property as Loan Collateral. Available at SSRN: https://ssrn.com/abstract=4260877.

Fons-Rosen, Christian; Pu, Zhaoxin (2023). The Transmission of Sectoral Shocks Across the Innovation Network, Max Planck Institute for Innovation & Competition Research Paper, No. 23-08, and CEPR Discussion Paper, No. 17960.

Opitz, Timm; Schwaiger, Christoph (2023). Reciprocal Preferences in Matching Markets, Max Planck Institute for Innovation & Competition Research Paper, No. 23-06, and CRC TRR 190 Discussion Paper, No. 388.

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Opitz, Timm; Schwaiger, Christoph (2023). Everyone Likes to Be Liked: Experimental Evidence from Matching Markets, CRC TRR 190 Discussion Paper No. 366.

2022

Erhardt, Sebastian; Ghosh, Mainak; Buunk, Erik; Rose, Michael; Harhoff, Dietmar (2022). Logic Mill – A Knowledge Navigation System, arXiv preprint 2301.00200.

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Sele, Daniela; **Chugunova, Marina** (2022). Putting a Human in the Loop: Increasing Uptake, but Decreasing Accuracy of Automated Decision-Making, Max Planck Institute for Innovation & Competition Research Paper, No. 22-20, and CRC TRR 190 Discussion Paper, No. 438.

Gill, Andrej; **Heller, David** (2022). Leveraging Intellectual Property: The Value of Harmonized Enforcement Regimes. Available at SSRN: https://ssrn.com/abstract=4278423.

Heller, David; Leitzinger, David; Walz, Uwe (2022). Intellectual Property as Business Loan Collateral: A Taxonomy on Institutional and Economic Determinants. Available at SSRN: https://ssrn.com/abstract=4264910.

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Laksa-Timinska, Ilze; Laschowski, Brokoslaw; Lattu, Annina; Maci, Megi; Mäkinen-Rostedt, Katri; Maryl, Maciej; Meerbeek, Marten van; Morin, Olivier; Mosienko, Valentina; Palou Vilar, Vilar; Pauw, Karen De; Pelepets, Marina; Reinfelds, Matiss; **Rujan, Cristina;** Santybayeva, Zhanna; Skatova, Anya; Vita, Martin; Weaver, Ieva; Wnuk, Magdalena (2022). #ScienceForUkraine: an Initiative to Support the Ukrainian Academic Community. "3 Months since Russia's Invasion in Ukraine", February 26 – May 31, Max Planck Institute for Innovation & Competition Research Paper, No. 22-13.

Kreyer, Ann-Christin; Wang, Lucy Xiaolu (2022). Collaborating Neuroscience Online: The Case of the Human Brain Project Forum, Max Planck Institute for Innovation & Competition Research Paper, No. 22-10.

Mickeler, Maren; Khashabi, Pooyan; **Kleine, Marco**; Kretschmer, Tobias (2022). The Perks of Being Unknown: Implied Costs of Knowledge Seeking on Organizational Platforms, Max Planck Institute for Innovation & Competition Research Paper, No. 19-17.

Wang, Lucy Xiaolu; Wilson, Nicholas (2022). U.S. State Approaches to Cannabis Licensing, Max Planck Institute for Innovation & Competition Research Paper, No. 22-09.

Kim, Daria; Hilty, Reto M.; **Hofmeister, Elisabeth**; Slowinski, Peter R.; Steinhart, Miriam (2022). CRISPR/Cas Technology and Innovation: Mapping Patent Law Issues, Max Planck Institute for Innovation & Competition Research Paper, No. 22-06.

Chugunova, Marina; Luhan, Wolfgang J. (2022). Ruled by Robots: Preference for Algorithmic Decision Makers and Perceptions of Their Choices, Max Planck Institute for Innovation & Competition Research Paper, No. 22-04, and CRC TRR 190 Discussion Paper, No. 439.

Fritz, Cornelius; De Nicola, Giacomo; Kevork, Sevag; **Harhoff, Dietmar;** Kauermann, Göran (2022). Modelling the Large and Dynamically Growing Bipartite Network of German Patents and Inventors, arXiv preprint 2201.09744.

Chugunova, Marina; Danilov, Anastasia (2022). Use of Digital Technologies for HR Management in Germany: Survey Evidence, Max Planck Institute for Innovation & Competition Research Paper, No. 22-02.

Lehnert, Patrick; Pfister, Curdin; **Harhoff, Dietmar;** Backes-Gellner, Uschi (2022). Innovation Effects and Knowledge Complementarities in a Diverse Research Landscape, Economics of Education Working Paper Series, No. 0164. Zürich: Universität Zürich, IBW – Institut für Betriebswirtschaftslehre.

2021

Duch-Brown, Nestor; Gomez-Herrera, Estrella; **Mueller-Langer, Frank**; Tolan, Songül (2021). Market Power and Artificial Intelligence Work on Online Labour Markets, Max Planck Institute for Innovation and Competition Research Paper Series, No. 22-01.

Lichter, Andreas; Loeffler, Max; Isphording, Ingo E.; Nguyen, Thu-Van; **Poege, Felix;** Siegloch, Sebastian (2021). Profit Taxation, R&D Spending, and Innovation, IZA Discussion Paper, No. 14830, ZEW – Centre for European Economic Research Discussion Paper, No. 21-080, and CEPR Discussion Paper, No. 16702.

Mueller-Langer, Frank; Gomez-Herrera, Estrella (2021). Mobility Restrictions and the Substitution between On-Site and Remote Work: Empirical Evidence from a European Online Labour Market, Max Planck Institute for Innovation & Competition Research Paper, No. 21-26.

Chugunova, Marina; Keller, Klaus; Samila, Sampsa (2021). Structural Shocks and Political Participation in the US, Max Planck Institute for Innovation & Competition Research Paper, No. 21-22, and CRC TRR 190 Discussion Paper, No. 418.

Potts, Jason; Torrance, Andrew W.; **Harhoff, Dietmar;** Hippel, Eric A. van (2021). Social Welfare Gains from Innovation Commons: Theory, Evidence, and Policy Implications. Available at SSRN: https://ssrn.com/abstract=3915997.

Baruffaldi, Stefano Horst; Gaessler, Fabian (2021). The Returns to Physical Capital in Knowledge Production: Evidence from Lab Disasters, Max Planck Institute for Innovation & Competition Research Paper, No. 21-19.

Widmann, Rainer (2021). Immigrant Inventors and Local Income Taxes: Evidence from Swiss Municipalities, Max Planck Institute for Innovation & Competition Research Paper, No. 21-17.

Byrski, Dennis; Gaessler, Fabian; Higgins, Matthew John (2021). Market Size and Research: Evidence from the Pharmaceutical Industry, Max Planck Institute for Innovation & Competition Research Paper, No. 21-16.

Kleine, Marco (2021). No eureka! Incentives Hurt Creative Breakthrough Irrespective of the Incentives' Frame, Max Planck Institute for Innovation & Competition Research Paper, No. 21-15.

Wang, Lucy Xiaolu (2021). The Complementarity of Drug Monitoring Programs and Health IT for Reducing Opioid-Related Mortality and Morbidity, Max Planck Institute for Innovation & Competition Research Paper, No. 21-14.

Epstein, Jordan; Nicholson, Sean; **Wang, Lucy Xiaolu**; Hempstead, Katherine; Asin, Sam (2021). The Secret Menu in Health Care: A Market for Imaging in California, Max Planck Institute for Innovation & Competition Research Paper, No. 21-05.

Aggarwal, Mayank; Chakrabarti, Anindya S.; Chatterjee, Chirantan; **Higgins, Matthew John** (2021). Research and Market Structure: Evidence from an Antibiotic-Resistant Pathogenic Outbreak, NBER Working Paper 28840.

1.2 Series

1.2.1 Co-edited Series

Franke, Nikolaus; Harhoff, Dietmar; Henkel, Joachim; Häussler, Carolin (Eds.)

Innovation und Entrepreneurship. Wiesbaden: Springer Gabler.

Published in this series:



Wittenstein Daniel (2022). Managing Digital Transformation: Evidence from Hidden Champions and Measurement Approaches. Wiesbaden: Springer Gabler.

Vetter, Michael (2021). Acquisitions and Open Source Software Development. Wiesbaden: Springer Gabler.

1.2.2 Series of the Institute

→ see Series of the Institute, p. 169 of this report.

1.3 Journals

1.3.1 Memberships in Editorial Boards

Harhoff, Dietmar

Applied Economics Quarterly, Berlin: Duncker & Humblot.

European Management Review, Oxford: Wiley-Blackwell.

Review of Managerial Science, Berlin, Heidelberg u.a.: Springer.

Research Policy, Amsterdam: Elsevier.

1.3.2 Journals of the Institute

see Journals of the Institute, p. 168 of this report.

2 Presentations

Brachtendorf, Lorenz (until 09/2021)

Approximating the Standard-Essentiality of Patents – A Semantics-Based Analysis, European Patent Office Academic Research Programme (EPO ARP) Workshop, online, 19 January 2021

Buunk, Erik

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Logic Mill/Tracing the Flow of Knowledge, Research Seminar, Max Planck Institute for Innovation and Competition, Schloss Ringberg, 19 September 2023

Research Project Management, Research Seminar, Max Planck Institute for Innovation and Competition, Schloss Ringberg, 18 September 2023

Tracing the Flow of Knowledge, European Patent Office Academic Research Programme (EPO ARP) Workshop, online, 12 July 2023

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Project and Data Science Officer Erik Buunk and Junior Research Fellow Mainak Ghosh presenting the project "Tracing the Flow of Knowledge from Science to Technology". Under the European Patent Office's Academic Research Programme, a research group of the department has received a major grant for the project that seeks to harness the semantic similarity between patents and scientific publications using the latest advances in machine learning.

Start-up Data, Research Seminar, Max Planck Institute for Innovation and Competition, Frauenwörth/Chiemsee, 2 March 2023

2022

Start-up Data Project and GDPR, Research Seminar, Max Planck Institute for Innovation and Competition, Bernried, 6 September 2022

New Data Sources, Research Seminar, Max Planck Institute for Innovation and Competition, Ohlstadt, 13 April 2022

2021

Logic Mill, Research Seminar, Max Planck Institute for Innovation and Competition, Schloss Ringberg, 2 December 2021

Data Room Reproducibility, Research Seminar, Max Planck Institute for Innovation and Competition, Schloss Ringberg, 1 December 2021

Tools and Resources for Reproducibility, Research Seminar, Max Planck Institute for Innovation and Competition, IHK Akademie Feldkirchen-Westerham, 1 October 2021

Logic Mill, Research Seminar, Max Planck Institute for Innovation and Competition, IHK Akademie Feldkirchen-Westerham, 30 September 2021

Information and Data Management at MPI-IC: Human Research Data in Practice, Max Planck Digital Library, online, 27 July 2021

Replicability, Research Seminar, Max Planck Institute for Innovation and Competition, online, 26 March 2021

Byrski, Dennis (until 09/2021)

2021

Market Size and Research: Evidence from the Pharmaceutical Industry, DRUID21 Conference, Copenhagen Business School, Copenhagen, 18 October 2021

Market Size and Research: Evidence from the Pharmaceutical Industry, 16th Annual Conference of the European Policy for Intellectual Property Association (EPIP), Madrid, 10 September 2021

Market Size and Research: Evidence from the Pharmaceutical Industry, Behavioral & Empirical Work in Progress (BEWIP) Seminar, TUM School of Management, Munich, 1 July 2021

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Chugunova, Marina

Allegations of Sexual Misconduct Accused Scientists and Their Research, Research Seminar, University of Massachusetts Amherst, online, 3 November 2023

Allegations of Sexual Misconduct Accused Scientists and Their Research, CESifo Area Conference on Behavioral Economics, Munich, 14 October 2023

Putting a Human in the Loop: Increasing Uptake, but Decreasing Accuracy of Automated Decision-Making, Economic Science Association (ESA) World Meeting, Lyon, 27 June 2023

Putting a Human in the Loop: Increasing Uptake, but Decreasing Accuracy of Automated Decision-Making, Workshop, Interactions of Humans and Algorithms, TU Berlin, 9 June 2023

Reputational Concerns and Advice-Seeking at Work, Workshop, Gender in Adaptive Design, Karlsruhe Institute of Technology (KIT), Karlsruhe, 6 June 2023

Allegations of Sexual Misconduct Accused Scientists and Their Research, Research Seminar, Rady School of Management, San Diego, 28 February 2023

Allegations of Sexual Misconduct Accused Scientists and Their Research, Research Seminar, Anderson School of Management, Los Angeles, 8 February 2023

2022

Putting a Human in the Loop: Increasing Uptake, but Decreasing Accuracy of Automated Decision-Making, 2nd Decision Making for Others Conference (DMfO), University of Portsmouth, 27 November 2022

Allegations of Sexual Misconduct, Accused Scientists, and Their Research, 2nd Berlin Workshop on Empirical Public Economics: Gender Economics, FU Berlin, 4 October 2022

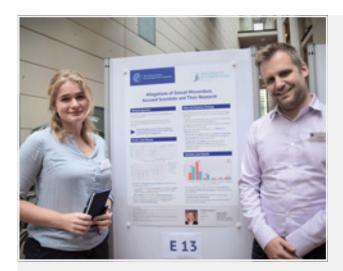
Putting a Human in the Loop: Increasing Uptake, but Decreasing Accuracy of Automated Decision-Making, Workshop, Algorithms & Economic Behavior, TU Hamburg, 30 September 2022

Ruled by Robots: Preference for Algorithmic Decision Makers and Perceptions of Their Choices, Workshop, Algorithms & Economic Behavior, TU Hamburg, 29 September 2022

Ruled by Robots: Preference for Algorithmic Decision Makers and Perceptions of Their Choices, Economic Science Association (ESA) World Meeting, Boston/Cambridge MA, 15 June 2022

2021

Sexual Misconduct Allegations: Do You Separate the Researcher from His Research? Innovation Workshop, Ludwig-Maximilians-Universität (LMU) Munich, online, 29 November 2021



Marina Chugunova and Rainer Widmann presenting their project "Allegations of Sexual Misconduct, Accused Scientists, and Their Research" to the Board of Trustees in July 2023. They consider whether the scientific community reacts to accusations of sexual harassment towards other scientists (C II 1.12, p. 282). They find that although such misbehavior does not invalidate the findings of the accused and is not related to the quality of the scientific output, the citation rates of the accused scientists' prior work decrease by magnitudes similar to those in cases of scientific misconduct. The results raise a number of ethical questions that the scientific community will need to answer going forward.

Sexual Misconduct Allegations: Do You Separate the Researcher from His Research? Behavioral and Experimental Economics Brown Bag Seminar, University of Gothenburg, online, 26 November 2021

Automation, Trade and Political Participation: Evidence from U.S. Local Labor Markets, 48th European Association for Research in Industrial Economics (EARIE) Annual Conference, Bergen, online, 28 August 2021

Sexual Misconduct Allegations: Do You Separate the Researcher from His Research? Brown Bag Seminar, Erasmus University Rotterdam, online, 10 June 2021

Sexual Misconduct Allegations: Do You Separate the Researcher from His Research? Research Seminar, University of Portsmouth, online, 26 May 2021

Defort, Aaron Merlin

2023

Shared Identity in Entrepreneurial Ecosystems – Experimental Evidence, Eesley Lab Group, Stanford University, Stanford CA, 7 April 2023

2022

How Do Different Forms of Exits Fuel Entrepreneurial Ecosystems? Longitudinal Evidence of Entrepreneurial Recycling in Cities, International Conference for Innovation and Entrepreneurship (Innodays), Casablanca, 5 November 2022

Entrepreneurial Ecosystems, Doctoral Seminar, Center for Digital Technology and Management (CDTM), Munich, 26 November 2021

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Entrepreneurial Ecosystems, Doctoral Seminar, Center for Digital Technology and Management (CDTM), Munich, 26 November 2021

Entrepreneurial Ecosystems, Research Seminar, Max Planck Institute for Innovation and Competition, IHK Akademie Feldkirchen-Westerham, 29 September 2021

Investors as Keystones Species in Entrepreneurial Ecosystems, Babson College Entrepreneurship Research Conference (BCERC), online, 11 June 2021 Entrepreneurial Ecosystems, Research Meeting, Entrepreneurship Section, Utrecht University School of Economics (U.S.E.), online, 10 June 2021

Entrepreneurial Ecosystems, Doctoral Seminar, Center for Digital Technology and Management (CDTM), online, 7 May 2021

Social Capital in Entrepreneurial Ecosystems, Research Seminar, Max Planck Institute for Innovation and Competition, online, 26 March 2021

Erhardt, Sebastian

2023

Logic Mill – A Knowledge Navigation System, 2nd CESifo/ifo Junior Workshop on Big Data, Munich, 7 December 2023

Logic Mill – A Knowledge Navigation System, Innovation Information Initiative Technical Working Group Meeting, National Bureau of Economic Research (NBER), sCambridge MA, 2 December 2023

2022

Logic Mill, Munich Summer Institute, Munich, 9 June 2022

Tracing the Flow of Knowledge from Science to Technology Using Deep Learning, European Patent Office Academic Research Programme (EPO ARP) Workshop, Munich, 8 April 2022



Sebastian Erhardt invites the members of the Board of Trustees to an Extended Reality (XR) experience. His project aims to use state-of-the-art technology – a virtual reality headset – to visualize patent portfolios in 3-dimensional space.

Friess, Svenja

2023

Unpacking Gender Gaps in Creative Performance – Experimental Evidence on the Role of Competition and Male-majority Environments, Behavioral Brown Bag Seminar, Ludwig-Maximilians-Universität (LMU) Munich, 25 October 2023

Harnessing the Power of Interactive Peers – Evidence form Online Learning Environments on Engagement and Performance, Research Seminar, Max Planck Institute for Innovation and Competition, Schloss Ringberg, 19 September 2023

Where Does the Gender Innovation Gap Arise? Idea Gen(d)eration, Selection, or Evaluation, 1st Organizational Economics Summer Symposium (OESS), Ohlstadt, 12 July 2023

Peer Effects of Social Interactions in Online Education, OrgEcon Lunch Seminar, Chair for Organizational Economics, Ludwig-Maximilians-Universität (LMU) Munich, 16 June 2023

Advice Seeking at Work: Stereotypes and Reputation Concerns, Research Seminar, Leibniz Centre for European Economic Research (ZEW), Amsterdam, 22 May 2023

Advice Seeking at Work: Stereotypes and Reputation Concerns, Research Seminar, Center for Research in Economics and Statistics (CREST), Palaiseau, 24 April 2023

Advice Seeking at Work: Stereotypes and Reputation Concerns, 25th Colloquium for Personnel Economics (COPE), Amsterdam, 23 March 2023

Where Does the Gender Innovation Gap Arise? Idea Gen(d)eration, Selection, or Evaluation, Research Seminar, Max Planck Institute for Innovation and Competition, Frauenwörth/Chiemsee, 27 February 2023

2022

When Does Diversity in Peer Interactions Help Online Learning? 5th Annual Strategy Science Conference, New York City, 11 June 2022

Can It Ever Hurt to Ask? Advice and Gender, Economic Science Association (ESA) World Meeting, Boston/Cambridge MA, 16 June 2022

Can It Ever Hurt to Ask? Advice and Gender, Lunchtime Seminar, Chair for Organizational Economics, Ludwig-Maximilians-Universität (LMU) Munich, 24 June 2022

Advice at Work: Reputation Concerns and Stereotypes, 2nd Berlin Workshop on Empirical Public Economics: Gender Economics, FU Berlin, 5 October 2022

Advice at Work: Reputation Concerns and Stereotypes, Behavioral Brown Bag Seminar, Ludwig-Maximilians-Universität (LMU) Munich, 8 December 2022

Advice at Work: Reputation Concerns and Stereotypes, Research on Innovation, Science and Entrepreneurship Workshop (RISE5), Munich, 20 December 2022

2021

Digital Peer Interactions and Knowledge Transfers – Evidence from Online Business Education, OrgEcon Lunch Seminar, Chair for Organizational Economics, Ludwig-Maximilians-Universität (LMU) Munich, 10 December 2021

Advice and Gender – First Pilot Data Evidence, Research Seminar, Max Planck Institute for Innovation and Competition, IHK Akademie Feldkirchen-Westerham, 1 October 2021

Digital Peer Interactions and Knowledge Transfers – First Empirical Evidence and Paths Forward, LMU Applied Microeconomics Summer Seminar, Ohlstadt, 25 June 2021

Digital Peer Interactions and Knowledge Transfers – First Empirical Evidence, Research Seminar, Max Planck Institute for Innovation and Competition, online, 24 March 2021

Gaessler, Fabian (until 9/2022)

Physical Capital in Knowledge Production: Evidence from Lab Disasters, 22nd Annual University of Utah Winter Strategy Conference, Park City UT, 28 January 2022

2021

Truly Standard-Essential Patents? A Semantics-Based Analysis, Roundtable "Mechanisms, Governance, and Policy Impact of SEP Determination Approaches", Northwestern Pritzker School of Law, online, 7 December 2021

Physical Capital in Knowledge Production: Evidence from Lab Disasters, IP and Innovation Seminar, online, 26 November 2021

Physical Capital in Knowledge Production: Evidence from Lab Disasters, HEC Lausanne, 17 November 2021

Physical Capital in Knowledge Production: Evidence from Lab Disasters, IE Business School, Madrid, 16 November 2021

Where AI is a Game Changer – Evidence from Chess Computers, Universidad Carlos III, Madrid, online, 4 November 2021

Physical Capital in Knowledge Production: Evidence from Lab Disasters, Universitat Pompeu Fabra, Barcelona, 26 October 2021

Fire and Mice: The Effect of Supply Shocks on Research Tool Adoption, DRUID21 Conference, Copenhagen Business School, Copenhagen, 19 October 2021

Physical Capital in Knowledge Production: Evidence from Lab Disasters, European Strategy, Entrepreneurship and Innovation Faculty Workshop, Esade/ Ramon Llull University, Barcelona, 1 October 2021

Patents, Freedom to Operate, and Follow-on Innovation: Evidence from Post-Grant Opposition, 16th Annual Conference of the European Policy for Intellectual Property Association (EPIP), Madrid, 9 September 2021 Truly Standard-Essential Patents? A Semantics-Based Analysis, MaCCI Annual Conference, Mannheim Centre for Competition and Innovation, online, 12 March 2021

Ghosh, Mainak

2023

Patent Quality – Measurement and Analysis, Research Seminar, Max Planck Institute for Innovation and Competition, Schloss Ringberg, 19 September 2023

Patent Quality – Measurement and Analysis, Research Seminar, Max Planck Institute for Innovation and Competition, Frauenwörth/Chiemsee, 27 February 2023

2022

Logic Mill, Summer School on Data and Algorithms for Science, Technology & Innovation Studies, KU Leuven, 23 September 2022

Logic Mill, Research Seminar, Max Planck Institute for Innovation and Competition, Bernried, 6 September 2022

Logic Mill and Hierarchical Embedding, Research Seminar, Max Planck Institute for Innovation and Competition, Ohlstadt, 12 April 2022

2021

Logic Mill: Patent Embedding, Research Seminar, Max Planck Institute for Innovation and Competition, Schloss Ringberg, 1 December 2021

Logic Mill: Automation of Patent Full-Text Collection, Research Seminar, Max Planck Institute for Innovation and Competition, IHK Akademie Feldkirchen-Westerham, 1 October 2021

Logic Mill – Citation Prediction / Automation and Mental Health Platform Design: Field Experiment Plan, Research Seminar, Max Planck Institute for Innovation and Competition, online, 23 March 2021

Harhoff, Dietmar

2023

Zeitenwende – Militärische Forschung als Innovationstreiber? Meeting of the acatech Economics and Innovation Research Working Group, Munich, 23 November 2023

Navigating the Jagged Technological Frontier, 20th Annual Roundtable for Engineering, Entrepreneurship Research (REER) Conference, Georgia Tech Scheller College of Business, Atlanta, 3 November 2023

Logic Mill – Applications of Machine Learning to Patents, Publications, and Other Text Corpora, Academy of Management, AMJ Paper Development Workshop, Harvard Business School, Boston MA, 6 October 2023

Financial Market Reactions to International Patent Disclosures and Grants, 18th Annual Conference of the European Policy for Intellectual Property Association (EPIP), Krakow, 12 September 2023

Innovationskultur und Sciencepreneurship, Unipreneurs Award Ceremony, Stifterverband, Berlin, 6 September 2023

Logic Mill – Applications of Machine Learning to Patents, Publications, and Other Text Corpora, AoM Doctoral Consortium on Patent Data, 83rd Annual Meeting of the Academy of Management (AoM 2023), Boston MA, 5 August 2023

Next Steps in the Funding of a Science of Science and Innovation, The Funding of Science and Innovation Workshop, Politecnico di Milano, Milan, 30 June 2023

Transformation ermöglichen – Wohlstand sichern: Was muss Innovations- und Forschungspolitik leisten? Ceremonial lecture at the farewell of Dr. Georg Licht, Alumni Day of the Leibniz Centre for European Economic Research (ZEW), Mannheim, 16 June 2023

Patents, Licensing and Technology Markets, REGIS Summer School on Science, Technology and Innovation, Sant' Anna School of Advanced Studies, Pisa, 5 June 2023

Innovation und Wettbewerbsfähigkeit: Wie Digitalisierung Chancen für Wohlstand schafft, ÖAW-Statistik Austria Lectures, Austrian Academy of Sciences, Statistik Austria, Vienna, 9 May 2023

Searching for Bright Lights, National Academies of Science and Engineering Meeting on Science, Technology, and Economic Policy Experimentation in Federal Funding, Washington DC, online, 14 March 2023

Künstliche Intelligenz – Entwicklung, Anwendung, Strategien, Presentation for the Management Board of Westenergie AG, Essen, online, 10 March 2023

Innovation – Die nächste Welle, Munich Network Forum, Munich, 2 March 2023

KI zur Lösung sozialer und ökologischer Herausforderungen, Bavarian International Conference on AI (AI.BAY 2023), Bavarian AI Council, Munich, 23 February 2023

Forschungs- und Innovationspolitik – Handlungsoptionen für Bayern, Retreat of the CSU Parliamentary Group, Kloster Banz, 16 January 2023

2022

Weitblick, Tiefgang, Leichtigkeit – wie lässt sich heute Innovation in der Praxis gestalten? TECHFORUM 2022, Stiftung Familienunternehmen, Munich Urban Colab, Munich, 24 November 2022

Approximating the Standard Essentiality of Patents – A Semantics-Based Approach (License of Right System in Germany), 19th Shanghai International Intellectual Property Forum, Shanghai, online, 19 November 2022

Boundary Conditions for Medical Innovation Start-ups, Future Medicine Science Match 2022, Turning Research into Health: Building an Ecosystem for Innovation, Berlin Institute of Health (BIH), Charité, Congress Center, Berlin, 8 November 2022

Financial Market Reactions to International Patent Disclosures and Grants, 9th ZEW/MaCCI Conference on the Economics of Innovation and Patenting (INNOPAT), Leibniz Centre for European Economic Research (ZEW), Mannheim, 3 November 2022

Nach welchen Regeln spielen Unternehmen und Universitäten bei Innovationen und Transfer, 14th Opinion Leader Meeting, German Society of Internal Medicine (DGIM), Schloss Hohenkammer, 28 October 2022

Innovationen im Unternehmenssektor – Aktuelle Trends und Herausforderungen, KfW, Frankfurt a.M., 19 October 2022

Building a Global Ethical Framework for AI, Bucharest Conference on the UNESCO Recommendation on the Ethics of AI, Politehnica University of Bucharest, Bucharest, 4 October 2022

Text Similarity – From Application to Machinery and Back, Symposium, German Scientific Commission Technology, Innovation and Entrepreneurship (WK TIE) of the German Academic Association for Business Research (VHB), University of Kassel, Kassel, 8 September 2022

Digitalisierung – wo steht Deutschland? Von der Digitalisierungswüste zur Digitalisierungsoase: Perspektiven für die Region Starnberg/Ammersee, Akademie für Politische Bildung, Tutzing, 13 July 2022

Breakthrough Innovations, CURIOUS2022 Future Insight Conference, MerckGroup, Darmstadt, 12 July 2022

Technologie-Transfer, 73th Annual Meeting of the Max Planck Society, Berlin, 23 June 2022

Innovationspolitik in Deutschland – Status Quo und Optionen, IAO Führungskräftetagung, Fraunhofer Institute for Industrial Engineering (Fraunhofer IAO), Blaubeuren, 12 May 2022

Financial Market Reactions to International Patent Disclosures and Grants, Swiss Leading House Lecture, University of Zurich, 26 April 2022

Studie zur Wissenschaftlichen Forschungsproduktivität, Merck Podcast: Future Talk, online, 11 March 2022 Digitalisierung in Deutschland – Lehren aus der Corona-Krise, Series "Impuls um Elf", Ministry for Children, Youth, Family, Equality, Refugees and Integration of the State of North Rhine-Westphalia, Düsseldorf, online, 25 January 2022

2021

Wie kann aus Spitzenforschung Innovation werden? Parliamentary Evening, State Representation of Rhineland-Palatinate, Berlin, 10 November 2021

The Future of Society – National Ambitions and Strategies, Web Forum Series "The Digital Transformation", German Institute for Japanese Studies (DIJ), online, 21 October 2021

From Incremental to Disruptive Innovation, tesa SE, Norderstedt, 20 October 2021

Measuring Patent Value, Wuhan Summer School, Wuhan University, online, 18 October 2021

Deutschland vor der Bundestagswahl: Wie ist Deutschland für die Zukunft aufgestellt in Bezug auf Wirtschaft und Gesellschaft? Interview, Public Broadcasting Belgium, Munich, 17 September 2021

COVID-19: Lessons for the Future of Intellectual Property, 16th Annual Conference of the European Policy for Intellectual Property Association (EPIP), Madrid, hybrid, 8 September 2021

Gründerpreis 2021, Interview, ZDF Documentary "Start-ups in Germany", Munich, 1 September 2021

Digital Transformation in Production for Sustainable Growth, G20 Multi-stakeholder Forum on "Digital Transformation in Production for Sustainable Growth", Triest, online, 23 June 2021

Welches (Tech-)Curriculum für Staat und Verwaltung braucht Deutschland? Handelsblatt GovTech Gipfel 2021, online, 10 June 2021



A Parliamentary Evening on the topic of cutting-edge research on 10 November 2021 in Berlin focused on how to transfer excellent research into innovation. Prof. Dietmar Harhoff, Ph.D., Dr. Denis Alt (State Secretary in the Rhineland-Palatinate Ministry of Science and Health), and Prof. Dr.-Ing. Anke Kaysser-Pyzalla (Chairwoman of the Executive Board of the German Aerospace Center DLR) were on the panel for the discussion. The evening was moderated by the journalist Dr. Jan-Martin Wiarda.

Photo: Bettina Ausserhofe

Cumulative Innovation, Tongji University, Shanghai, online, 7 June 2021

Innovationen zum Durchbruch verhelfen – Mit der Innovationsagentur D.Innova in eine nachhaltige Zukunft, Public Expert Talk, Parliamentary Group Bündnis 90/Die Grünen, online, 4 June 2021

Die Digitalstrategie des Landes NRW, Expert Interview, Ministry of Economic Affairs, Innovation, Digitalization and Energy of the State of North Rhine-Westphalia, online, 1 June 2021

Best Practices in Tech Transfer – Comparing Ecosystems and Resources, German Consulate General San Francisco, online, 20 April 2021

Developing and Applying AI: Core and Non-Core AI, International Conference on AI in Work, Innovation, Productivity & Skills, OECD, online, 5 February 2021

Approximating the Standard Essentiality of Patents – A Semantics-Based Analysis, European Patent Office Academic Research Programme (EPO ARP) Workshop, online, 19 January 2021

Heller, David

2023

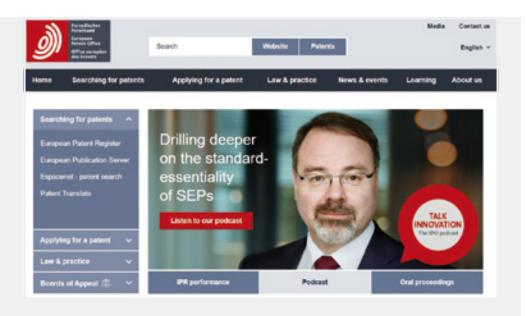
The Marginal Income per Patent and the Mobility of Inventive Labor, Innovation Seminar, Ludwig-Maximilians-Universität (LMU) Munich, 13 November 2023

The Rise of Early-Stage Financing in the U.S. and Startup Performance, 5th International ZEW Conference on the Dynamics of Entrepreneurship (CoDE), Leibniz Centre for European Economic Research (ZEW), Mannheim, 13 October 2023

The Rise of Early-Stage Financing in the U.S. and Start-up Performance, 26th Annual Interdisciplinary Conference on Entrepreneurship, Innovation and SMEs (G-Forum), TU Darmstadt, 28 September 2023

The Rise of Early-Stage Financing in the U.S. and Start-up Performance, 25th Annual Meeting of the German Scientific Commission Technology, Innovation and Entrepreneurship (TIE), Goethe University Frankfurt, Frankfurt a. M., 21 September 2023

The Rise of Early-Stage Financing in the U.S. and Start-up Performance, 7th Entrepreneurial Finance Association Conference (ENTFIN), University of Antwerp, 7 July 2023



Technical standards are key to securing the interoperability of devices such as smart phones and computers, and are often claimed in standard-essential patents (SEPs). But how can be verified whether a patent really pertains to a technical standard as claimed? In an EPO Podcast episode, Dietmar Harhoff proposes a method based on semantic analysis to shed some light on the standard-essentiality of patent portfolios.



Hear the EPO Podcast – Talk Innovation with Dietmar Harhoff https://www.youtube.com/watch?v=ktDJTwV3wwq

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Intellectual Property as Loan Collateral, BSE Summer Forum, Barcelona School of Economics, 20 June 2023

The Formal Granting of Intellectual Property and External Financing, Strategy & Innovation Seminar, Questrom School of Business, Boston University, Boston MA, 15 May 2023

The Formal Granting of Intellectual Property and External Financing, Strategy Seminar, David Eccles School of Business, University of Utah, 26 April 2023

The Formal Granting of Intellectual Property and External Financing, TPRI Brown Bag Seminar, Boston University, Boston MA, 22 February 2023

The Formal Granting of Intellectual Property and External Financing, Workshop on Behavioral, Digital, and Financial Economics, Hirschegg (Austria), 3 February 2023

The Formal Granting of Intellectual Property and External Financing, Behavioral & Empirical Work in Progress (BEWIP) Seminar, TUM School of Management, Munich, 17 January 2023

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Intellectual Property as Loan Collateral, 8th Paris Financial Management Conference (PFMC-2022), Paris, 19 December 2022

Intellectual Property as Loan Collateral, 20th Paris December Finance Meeting, Paris, 15 December 2022

The Formal Granting of Intellectual Property Rights and External Financing, Innovation Seminar, Ludwig-Maximilians-Universität (LMU) Munich, 5 December 2022

The Labor Economics of Inventing: Estimating the Marginal Income per Patent, 9th ZEW/MaCCI Conference on the Economics of Innovation and Patenting (INNOPAT), Leibniz Centre for European Economic Research (ZEW), Mannheim, 3 November 2022

Intellectual Property as Loan Collateral: Evidence from France, 28th Annual Meeting of the German Finance Association (DGF), Philipps-Universität Marburg, 30 October 2022

Intellectual Property as Loan Collateral: Evidence from France, 17th Annual Conference of the European Policy for Intellectual Property Association (EPIP), Cambridge University, Cambridge, UK, 15 September 2022

Intellectual Property as Loan Collateral: Evidence from France, TIME Colloquium, Institute for Strategy, Technology and Organization (ISTO), Ludwig-Maximilians-Universität (LMU) Munich, 13 July 2022

Intellectual Property as Loan Collateral: Evidence from France, 15th International Risk Management Conference (IRMC2022), The Risk Banking and Finance Society, Bari, 4 July 2022

Intellectual Property as Loan Collateral, Seminar, Department of Business and Management Science, Norwegian School of Economics, Bergen, 10 March 2022 Intellectual Property as Loan Collateral, Finance Brown Bag Seminar, Goethe University Frankfurt, 12 January 2022

2021

Enabler, Accelerator, or Extractor? Venture Capitalists and Firm Patenting, Johannes Gutenberg University Mainz, online, 15 December 2021

Small and Vulnerable? Financial Constraints During the Financial Crisis, 11th RCEA Money Macro and Finance Conference, online, 27 July 2021

Hofmeister, Elisabeth (since 10/2021) 2023

Shelved Innovation – Evidence from the Pharmaceutical Industry, Strategy & Innovation Seminar, Questrom School of Business, Boston University, Boston MA, 30 November 2023

Quantification of Shelved Pharma Projects, Research Seminar, Max Planck Institute for Innovation and Competition, Frauenwörth/Chiemsee, 27 February 2023

2022

Shelving in Pharma, Research Seminar, Max Planck Institute for Innovation and Competition, Bernried, 5 September 2022

Einblicke in forschende Unternehmen durch die Betrachtung von Schubladen-Projekten, Symposium "Wissenschaftsforschung im Fokus – Potentiale und neue Perspektiven", Volkswagen Stiftung, Hannover, 6 July 2022

Creating a Pool of Shelved Pharmaceutical Projects and Related Questions, Research Seminar, Max Planck Institute for Innovation and Competition, Ohlstadt, 11 April 2022

Keller, Klaus

2023

Monopsony and Automation, Research Seminar, Max Planck Institute for Innovation and Competition, Schloss Ringberg, 19 September 2023

Robotizing to Compete – Evidence from Portuguese Manufacturing Exporters, TIME Colloquium, TU Munich, 13 July 2023

Robotizing to Compete – Evidence from Portuguese Manufacturing Exporters, 12th Retreat of the Collaborative Research Center "Rationality and Competition" CRC TRR 190, Schwanenwerder, 9 May 2023

Robotizing to Compete – Evidence from Portuguese Manufacturing Exporters, 21th Annual GEP/CEPR Postgraduate Conference, University of Nottingham, 28 April 2023

Monopsony and Automation, Research Seminar, Max Planck Institute for Innovation and Competition, Frauenwörth/ Chiemsee, 28 February 2023 Monopsony and Automation, Innovation Seminar, Ludwig-Maximilians-Universität (LMU) Munich, 6 February 2023

2022

Monopsony, Automation and Labor Markets, Research Seminar, Max Planck Institute for Innovation and Competition, Bernried, 13 September 2022

Robotizing to Compete – Evidence from the Eastern European Enlargement, Munich International Economics Retreat, ifo Institute for Economic Research, Munich, 14 July 2022

Robotizing to Compete – Evidence from the Eastern European Enlargement, Technology & Policy Research Initiative (TPRI), Boston University, online, 23 March 2022

Robots, China and Polls: Structural Shocks and Political Participation, Future of Work Conference, University of New Brunswick, online, 24 February 2022

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Robotizing to Compete – Evidence from the EU Enlargement, LMU International Trade Retreat, Munich, 2 November 2021

Robots, China and Polls – Structural Shocks and Political Participation in the U.S., DRUID21 Conference, Copenhagen Business School, Copenhagen, 18 October 2021

Robots, China and Polls – Structural Shocks and Political Participation in the U.S., 9th Retreat of the Collaborative Research Center "Rationality and Competition" CRC TRR 190, Ohlstadt, 13 October 2021

Automation and Foreign Competition – Evidence from Portuguese Firms, Research Seminar, Max Planck Institute for Innovation and Competition, IHK Akademie Feldkirchen-Westerham, 29 September 2021

Automation and Foreign Competition – Evidence from Portuguese Firms, Innovation Seminar, Ludwig-Maximilians-Universität (LMU) Munich, online, 19 April 2021

Automation and Foreign Competition – Evidence from Portuguese Firms, Research Seminar, Max Planck Institute for Innovation and Competition, online, 24 March 2021

Kim, Daehyun (since 5/2023)

How Digital Platforms Unintentionally Foster Entrepreneurial Activities: The Case of the Staggered Entry of Craigslist, 5th International ZEW Conference on the Dynamics of Entrepreneurship (CoDE), Leibniz Centre for European Economic Research (ZEW), Mannheim, 13 October 2023

Anti-Labor Environments and Employee Entrepreneurship: Evidence from Right-To-Work Laws, 83rd Annual Meeting of the Academy of Management (AoM 2023), Boston MA, 7 August 2023

How Digital Platforms Unintentionally Foster Entrepreneurial Activities: The Case of the Staggered Entry of Craigslist, DRUID23 Conference, NOVA School of Business and Economics, Lisbon, 12 June 2023



Ann-Christin Kreyer presenting at the 6th WIPO-Tongji International Intellectual Property Forum, IP-Driven Innovation and Entrepreneurship, Shanghai, in June 2023.

Kleine, Marco (until 1/2022)

2021

Under the Radar: User Anonymity in the Design of Organizational Platforms, CDSB Mannheim Area Seminar, Center for Doctoral Studies in Business (CDBS), University of Mannheim, online, 10 March 2021

Subsidized R&D Collaboration: The Causal Effect of Innovation Vouchers on Innovation Performance, U.S.E. Seminar, Utrecht University School of Economics, online, 2 February 2021

Kreyer, Ann-Christin

2023

Megaprojects, Digital Platforms, and Productivity: Evidence from the Human Brain Project, Research on Innovation, Science and Entrepreneurship Workshop (RISE6), Munich, 18 December 2023

Megaprojects, Digital Platforms, and Productivity: Evidence from the Human Brain Project / Financial Market Reactions to International Patent Disclosures and Grants, Research Seminar, Max Planck Institute for Innovation and Competition, Schloss Ringberg, 19 September 2023

Megaprojects, Digital Platforms, and Productivity: Evidence from the Human Brain Project, 18th Annual Conference of the European Policy for Intellectual Property Association (EPIP), Krakow, 13 September 2023

Financial Market Reactions to International Patent Disclosures and Grants, The 6th WIPO-Tongji International Intellectual Property Forum, IP-Driven Innovation and Entrepreneurship, Shanghai, 26 June 2023

Megaprojects, Digital Platforms, and Productivity: Evidence from the Human Brain Project / Financial Market Reactions to International Patent Disclosures and Grants, Research Seminar, Max Planck Institute for Innovation and Competition, Frauenwörth/Chiemsee, 28 February 2023

2022

Collaborating Neuroscience Online: The Case of the Human Brain Project / Financial Market Reactions to International Patent Disclosures and Grants, Research Seminar, Max Planck Institute for Innovation and Competition, 7 September 2022

Collaborating Neuroscience Online: The Case of the Human Brain Project Forum, 82nd Annual Meeting of the Academy of Management (AoM 2022), Seattle, online, 8 August 2022

Financial Market Reactions to International Patent Disclosures and Grants, Innovation Seminar, Ludwig-Maximilians-Universität (LMU) Munich, 30 May 2022

Financial Market Reactions to International Patent Disclosures and Grants, Research Seminar, Max Planck Institute for Innovation and Competition, Ohlstadt, 11 April 2022 Collaborating Neuroscience Online: The Case of the Human Brain Project Forum, Conference on Health IT and Analytics (CHITA), Washington DC, online, 5 March 2022

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Collaborating Neuroscience Online: The Case of the Human Brain Project, Research Seminar, Max Planck Institute for Innovation and Competition, Schloss Ringberg, online, 1 December 2021

Stock Market Based Patent Values – Replicating the KPSS-Values, Research Seminar, Max Planck Institute for Innovation and Competition, IHK Akademie Feldkirchen-Westerham, 30 September 2021

Collaborating Neuroscience Online: The Case of the Human Brain Project, EPIP 2021 Ph.D. Workshop, 16th Annual Conference of the European Policy for Intellectual Property Association (EPIP), Madrid, online, 8 August 2021

Collaborating Neuroscience Online: The Case of the Human Brain Project / Stock Market Based Patent Values – Replicating the KPSS-Values, Research Seminar, Max Planck Institute for Innovation and Competition, online, 25 March 2021

Li, Mingpei (since 8/2022)

2023

How Does the Labor Mobility Barrier Impact Corporate Science? Evidence from the Inevitable Disclosure Doctrine, Research Seminar, Max Planck Institute for Innovation and Competition, Schloss Ringberg, 18 September 2023

Effect of Measurements of Car Safety on Innovation, Research Seminar, Max Planck Institute for Innovation and Competition, Frauenwörth/Chiemsee, 28 February 2023

Green Directed Technological Change and Green Innovation: Investment in Green Technologies, Green Innovation Seminar, Max Planck Institute for Innovation and Competition, Schloss Ringberg, 13 January 2023

Lutsenko, Anastasiia (since 3/2022)

2023

Ukrainian Science in War and Postwar Time, Rebuild Ukraine: Ukraine Science Diaspore Forum, IHK Frankfurt am Main, Frankfurt a. M., 9 November 2023

Resilience of Science Systems: Empirical Evidence from Ukraine, Technology Transfer Seminar, Kyiv Academic University, NAS of Ukraine, Kyiv, online, 6 October 2023

Regional Innovation Systems Resilience: Evidence from NAS of Ukraine: From Theory to Practice, Research Seminar, Max Planck Institute for Innovation and Competition, Schloss Ringberg, 20 September 2023

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Anna-Sophie Liebender-Luc (and next generation) presenting her research on Graphics Processing Units (GPUs) as enabling technology for the successful deployment of deep learning networks to the Board of Trustees on 3 July 2023. She investigates what role GPU-related expertise and underlying scientific paradigms play in driving the dynamics of AI research and innovation.

Resilience of Innovation Systems: Evidence from Ukraine, Continuous Innovation Network (CINet) Conference Doctoral Workshop, Johannes Kepler University (JKU) Linz, 15 September 2023

Regional Innovation System Resilience: Evidence from NAS of Ukraine, 14th International Conference "Challenges of Europe" Ph.D. Workshop, Bol, Island Brač, Croatia, 19 May 2023

Потреби українських вчених під час війни, які вони? [The Needs of Ukrainian Researchers During the War, What Are They?], UA Science Reload, Інноваційне Підприємництво: Стан та Перспективи Розвитку [Innovative Entrepreneurship: State and Prospects of Development], Kyiv, 31 March 2023

Regional Innovation Systems Resilience: Evidence from NAS of Ukraine, Kyiv Academic University Scientific Seminar, Kyiv, online, 7 March 2023

Regional Innovation Systems Resilience: Evidence from NAS of Ukraine, Research Seminar, Max Planck Institute for Innovation and Competition, Frauenwörth/Chiemsee, 28 February 2023

2022

Academ.City Project – Presentation of the Results of the Berlin-Adlershof Project, Academ.City Innovation Park Kick-Off Meeting, Kyiv, online, 21 December 2022

UA Science Reload: Ukrainian Scientists Support Project – Report on Two Waves of Data Collection, The 35th Conference of Deans of Graduate Schools Related to International Cooperation and Development, University of Tokyo, online, 5 December 2022

Resilience and Regional Development: Problems and Perspectives, Kyiv Academic University, online, 24 November 2022

Resilience and Regional Development: Problems and Perspectives, Kyiv Academic University, online, 17 November 2022

Innovation System Resilience: Concept Review, VIA University College, online, 22 September 2022

Innovation System Resilience: Concept Review, Kyiv Academic University, online, 23 June 2022

UA Science Reload: Ukrainian Scientists Support Project – Report on the First Wave of Data Collection, "100 Days of Ukrainian Science Reload", online, 20 June 2022

Innovation Ecosystems as the Instruments in Developing Resilient Democracy: The Ukrainian Case, SIIB 2022: Research in Turbulent Times – New Thinking, The British Academy of Management, 6 April 2022

Opitz, Timm

2023

Gendered Access to Finance, Advances with Field Experiments Conference 2023, The University of Chicago, Chicago IL, 21 October 2023

Everyone Likes to be Liked – Experimental Evidence from Matching Markets, Matching Market Design: Strategy – Proofness and Beyond, Workshop, Berlin Social Science Center (WZB), Berlin, 14 July 2023

Reciprocal Preferences in Non-Routine Teamwork, Behavioral Brown Bag Seminar, Ludwig-Maximilians-Universität (LMU) Munich, 6 July 2023

Gender Specific Project Evaluation and Access to Finance, Micro Workshop, Ludwig-Maximilians-Universität (LMU) Munich, 16 May 2023

Financial Discrimination and Access to Finance, Research Seminar, Max Planck Institute for Innovation and Competition, Frauenwörth/Chiemsee, 28 February 2023

2022

Everyone Likes to be Liked – Experimental Evidence from Matching Markets, TIME Colloquium, TU Munich, 9 December 2022

Everyone Likes to be Liked – Experimental Evidence from Matching Markets, Research Seminar, University of Massachusetts Amherst, online, 28 October 2022

Identifying and Teaching High-Growth Entrepreneurship: Evidence from Academies for University Students in Uganda, VfS Jahrestagung 2022, Annual Congress of the German Economic Association (Verein für Socialpolitik), Basel, 14 September 2022

Everyone Likes to be Liked – Experimental Evidence from Matching Markets, Research Seminar, Max Planck Institute for Innovation and Competition, Bernried, 6 September 2022

Identifying and Teaching High-Growth Entrepreneurship: Evidence from Academies for University Students in Uganda, 2022 NOVAFRICA Conference on Economic Development, Lisbon, 23 June 2022

Reciprocal Preferences in Matching Markets, Behavioral Brown Bag Seminar, Ludwig-Maximilians-Universität (LMU) Munich, 9 June 2022

Identifying and Teaching High-Growth Entrepreneurship: Evidence from Academies for University Students in Uganda, Research Seminar, University of Toronto, 27 May 2022

2021

Identifying and Teaching High-Growth Entrepreneurship: Evidence From Academies for University Students in Uganda, Research on Innovation, Science and Entrepreneurship Workshop (RISE4), Munich, online, 6 December 2021

Identifying and Teaching High-Growth Entrepreneurship: Evidence From Academies for University Students in Uganda, MGSE Colloquium 2021, Munich Graduate School of Economics, Munich, 8 October 2021

Identifying and Teaching High-Growth Entrepreneurship: Evidence From Academies for University Students in Uganda, Research Seminar, Max Planck Institute for Innovation and Competition, IHK Akademie Feldkirchen-Westerham, 29 September 2021

Time Pressure and Regret in Sequential Search, VfS Jahrestagung 2021, Annual Congress of the German Economic Association (Verein für Socialpolitik), Regensburg, online, 28 September 2021

Reciprocating Preferences in Two-sided Matching, Economic Science Association (ESA) World Meeting, ESA 2021 Global Online Around-the-Clock Conference, online, 9 July 2021

Identifying and Teaching High-Growth Entrepreneurship: Evidence From Academies for University Students in Uganda, Nordic Conference in Development Economics (NCDE), Bergen, online, 15 June 2021 Supporting Behavioral Change: Motivated Beliefs in Preventative Health Investments, Research Seminar, Max Planck Institute for Innovation and Competition, online, 24 March 2021

Poege, Felix (until 9/2021)

Competition and Innovation: The Breakup of IG Farben, Innovation Workshop, Ludwig-Maximilians-Universität (LMU) Munich, online, 13 December, 2021

Competition and Innovation: The Breakup of IG Farben, 81st Annual Meeting of the Economic History Association, Tucson AZ, USA, 31 October 2021

Competition and Innovation: The Breakup of IG Farben, TPRI Brown Bag Seminar, Boston University, Boston MA, 13 October 2021

Competition and Innovation: The Breakup of IG Farben, Annual Congress of the German Economic Association (Verein für Socialpolitik), Regensburg, online, 28 September 2021

Competition and Innovation: The Breakup of IG Farben, EPFL Virtual Innovation Seminar, École Polytechnique Fédérale de Lausanne, online, 28 September 2021

Competition and Innovation: The Breakup of IG Farben, 48th European Association for Research in Industrial Economics (EARIE) Annual Conference, Bergen, online, 28 August 2021

Competition and Innovation: The Breakup of IG Farben, Behavioral & Empirical Work in Progress (BEWIP) Seminar, TUM School of Management, online, 29 June 2021

Competition and Innovation: The Breakup of IG Farben, DICE Brown Bag Seminar, Düsseldorf Institute for Competition Economics (DICE), University of Düsseldorf, online, 16 June 2021

Competition and Innovation: The Breakup of IG Farben, Evidence-Based Economics & CRC TRR 190 (EBE/CRC) Summer School 2021: Applied Microeconomics – Topics and Methods, online, 27 May 2021

Competition and Innovation: The Breakup of IG Farben, 8th Retreat of the Collaborative Research Center "Rationality and Competition" CRC TRR 190, Schwanenwerder, online, 10 May 2021

Roger, Albert (since 11/2022) 2023

Estimating Technological Gains and Losses from Environmental Regulation, 25th Annual Meeting of the German Scientific Commission Technology, Innovation and Entrepreneurship (TIE), Goethe University Frankfurt, Frankfurt a. M., 21 September 2023

Estimating Technological Gains and Losses from Environmental Regulation, Max Planck Climate Conference for a Sustainable Anthropocene, Harnack House, Berlin, 11 July 2023

Estimating Technological Gains and Losses from Environmental Regulation, TIME Colloquium, Institute for Strategy, Technology and Organization (ISTO), Ludwig-Maximilians-Universität (LMU) Munich, 1 June 2023

International Environmental Agreements, and the Timing and Direction of Technological Change: Evidence from the Kigali Amendment, Workshop, The Role of Public Research and Innovation Measures on Mitigating Climate Change, Kiel Institute for the World Economy (IfW), Kiel, 11 May 2023

The Economics of Competition and Innovation under Environmental Regulation, Sustainable Development – Young Researchers in Action, Heidelberg University, Heidelberg, 22 March 2023

The Economics of Competition and Innovation under Environmental Regulation, Green Innovation Meeting, Max Planck Institute for Innovation and Competition, Munich, 30 January 2023

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International Environmental Agreements and the Timing and Direction of Technological Change: Evidence from the Kigali Amendment, 9th ZEW/MaCCI Conference on the Economics of Innovation and Patenting (INNOPAT), Leibniz Centre for European Economic Research (ZEW), Mannheim, 3 November 2022



Junior Research Fellows Elisabeth Hofmeister and Cristina Rujan at the Board of Trustees meeting on 4 July 2022. Cristina presented her project "Multinational Firms and Global Innovation" live from Milan, Italy, where she was also presenting her research at the 6th Geography of Innovation Conference (GEOINNO 2022).

Rose, Michael

2023

Nobelwomen: Status and Gender Balance in Science, Junior Seminar at ECON, Copenhagen Business School, Copenhagen, 30 October 2023

2022

Trump, Iran, and Science, Seminar on Statistics and Econometrics, Kiel University, Kiel, 24 November 2022

The Long-Term Role Model Effect of Prizes on Female Scientists, Staff Seminar, Kiel Institute for the World Economy (IfW), Kiel, 22 November 2022

The Long-Term Role Model Effect of Prizes on Female Scientists, TUM Economics Research Wiesn 2022, Munich, 26 September 2022

Finding Control Groups for Academics with Sosia, DFG Workshop, The Economics and Organisation of Science, Heilbronn, 18 May 2022

The Long-Term Role Model Effect of Prizes on Female Scientists, Research Seminar, University of Granada, 8 March 2022

2021

The Long-Term Role Model Effect of Prizes to Female Scientists, ifo Institute for Economic Research, Munich, 21 June 2021

Discussants, University of Luxembourg, 19 January 2021

Rujan, Cristina

2023

Green Patenting of Top R&D Investors, Research Seminar, Max Planck Institute for Innovation and Competition, Frauenwörth/Chiemsee, Schloss Ringberg, 20 September 2023

Young Innovative Companies, Research Seminar, Max Planck Institute for Innovation and Competition, Frauenwörth/Chiemsee, 28 February 2023

Green Innovation Policies, Green Innovation Seminar, Max Planck Institute for Innovation and Competition, Schloss Ringberg, 13 January 2023

2022

Multinational Firms and Global Innovation, 17th Annual Conference of the European Policy for Intellectual Property Association (EPIP), Cambridge University, Cambridge, UK, 16 September 2022

Young Innovative Companies, Research Seminar, Max Planck Institute for Innovation and Competition, Bernried, 6 September 2022

Multinational Firms and Global Innovation, 49th European Association for Research in Industrial Economics (EARIE) Annual Conference, University of Vienna, 25 August 2022 Young Innovative Companies, Innovation Workshop, Ludwig-Maximilians-Universität (LMU) Munich, 18 July 2022

Multinational Firms and Global Innovation, 6th Geography of Innovation Conference (GEOINNO2022), Bocconi University, Milan, 5 July 2022

Multinational Firms and Global Innovation, 20th Bavarian Micro Day – 2022 Summer, FAU Erlangen-Nürnberg, Nuremberg, 24 June 2022

Multinational Firms and Global Innovation, 20th Annual GEP/CEPR Postgraduate Conference, University of Nottingham, online, 30 April 2022

Multinational Firms and Global Innovation, Research Seminar, Max Planck Institute for Innovation and Competition, Ohlstadt, 12 April 2022

Cumulative Innovation and Spillovers, Advanced Seminar Economics & Policy: Economics of Innovation, Department of Economics & Policy, TUM School of Management, online, 20 January 2022

Multinational Firms and Global Innovation, TIME Colloquium, TIME Colloquium, Institute for Strategy, Technology and Organization (ISTO), Ludwig-Maximilians-Universität (LMU) Munich, online, 13 January 2022

2021

Young Innovative Companies, Research Seminar, Max Planck Institute for Innovation and Competition, Schloss Ringberg, 2 December 2021

Delving into Green Innovation, Research Seminar, Max Planck Institute for Innovation and Competition, IHK Akademie Feldkirchen-Westerham, 29 September 2021

Multinational Firms and Global Innovation, International Workshop for Early Career Economists: Shaping Globalization – Economic Consequences and Policy Responses, JGU Mainz, online, 10 June 2021

Taxation and Markets for Technology, Research Seminar, Max Planck Institute for Innovation and Competition, online, 24 March 2021

Wang, Lucy Xiaolu (until 9/2021)

Medicines Patent Pool and HIV Drug Cocktail Diffusion and Innovation, 81st Annual Meeting of the Academy of Management (AoM 2021), online, 3 August 2021

Is Grass Greener in the Gray Zone? Innovation in the Cannabis Market, Behavioral & Empirical Work in Progress (BEWIP) Seminar, TUM School of Management, online, 20 July 2021

Global Drug Diffusion and Innovation with the Medicines Patent Pool / Procurement Institutions and Essential Drug Supply in Low and Middle-Income Countries, 14th International Health Economics Association (iHEA) World Congress, online, 13 July 2021 Procurement Institutions and Essential Drug Supply in Low and Middle-Income Countries, Intellectual Property & Innovation Ph.D. Seminar, Université de Lausanne, online, 9 July 2021

Procurement Institutions and Essential Drug Supply in Low and Middle-Income Countries, TIME Colloquium, Max Planck Institute for Innovation and Competition, online, 24 June 2021

Is Grass Greener in the Gray Zone? Innovation in the Cannabis Market / Procurement Institutions and Essential Drug Supply in Low and Middle-Income Countries, 10th Annual Conference of the American Society of Health Economists (ASHEcon 2021), online, 23 June 2021

Global Drug Diffusion and Innovation with the Medicines Patent Pool, 10th Annual Conference of the American Society of Health Economists (ASHEcon 2021), online, 21 June 2021

Procurement Institutions and Essential Drug Supply in Low and Middle-Income Countries / Global Drug Diffusion and Innovation with the Medicines Patent Pool, Industry Studies Association Annual Conference (ISA 2021), online, 4 June 2021

Global Drug Diffusion and Innovation with the Medicines Patent Pool, 25th Spring Meeting of Young Economists (SMYE 2021), University of Bologna, online, 17 June 2021

Is Grass Greener in the Gray Zone? Innovation in the Cannabis Market, Innovation Workshop, Ludwig-Maximilians-Universität (LMU) Munich, online, 14 June 2021

Global Drug Diffusion and Innovation with the Medicines Patent Pool, Shanghai International College of Intellectual Property (SICIP), online, 13 May 2021

Global Drug Diffusion and Innovation with the Medicines Patent Pool, 19th Annual International Industrial Organization Conference (IIOC), online, 1 May 2021

Is Grass Greener in the Gray Zone? Innovation and Entrepreneurship in the Cannabis Market, Research Seminar, Max Planck Institute for Innovation and Competition, online, 26 March 2021

Global Drug Diffusion and Innovation with the Medicines Patent Pool, MaCCI Annual Conference, Mannheim Centre for Competition and Innovation, online, 12 March 2021

Global Drug Diffusion and Innovation with the Medicines Patent Pool, Mailman School of Public Health, Columbia University, online, 17 February 2021

Wernsdorf, Kathrin (since 10/2021) 2023

(Un)Successful Integration into a New Science System? The Case of East Germany / Learning by Watching: How TV Affects Innovation Activity, Research Seminar, Max Planck Institute for Innovation and Competition, Schloss Ringberg, 18 September 2023

(Un)Successful Integration into a New Science System? The Case of East Germany, Research Seminar, Max Planck Institute for Innovation and Competition, Frauenwörth/ Chiemsee, 27 February 2023

2022

(Un)Successful Integration into a New Science System? The Case of East Germany, Innovation Workshop, Ludwig-Maximilians-Universität (LMU) Munich, online, 24 January 2022

2021

(Un)Successful Integration into a New Science System? The Case of East Germany, Research Seminar, Max Planck Institute for Innovation and Competition, IHK Akademie Feldkirchen-Westerham, 29 September 2021

ICT, Collaboration, and Science-Based Innovation: Evidence from BITNET, VfS Jahrestagung 2021, Annual Congress of the German Economic Association (Verein für Socialpolitik), Regensburg, online, 27 September 2021

ICT, Collaboration, and Science-Based Innovation: Evidence from BITNET, 48th European Association for Research in Industrial Economics (EARIE) Annual Conference, Bergen, online, 27 August 2021

ICT, Collaboration, and Science-Based Innovation: Evidence from BITNET, Bavarian Young Economists' Meeting, online, 2 July 2021

(Un)Successful Integration into a New Science System? The Case of East Germany, Research Seminar, Max Planck Institute for Innovation and Competition, online, 23 March 2021

ICT, Collaboration, and Science-Based Innovation: Evidence from BITNET, 14th RGS Doctoral Conference in Economics, Ruhr Graduate School in Economics (RGS Econ), Essen, online, 3 March 2021

ICT, Collaboration, and Science-Based Innovation: Evidence from BITNET, Behavioral & Empirical Work in Progress (BEWIP) Seminar, TUM School of Management, online, 16 February 2021

Downstream Demand and Upstream Innovation: Progress in the German Watch Industry, Innovation Workshop, Ludwig-Maximilians-Universität (LMU) Munich, online, 1 February 2021

Widmann, Rainer

2023

Cross-Border Commuters and Knowledge Diffusion, Economics Research Seminar, Johannes Kepler University, Linz, 22 November 2023

Sexual Misconduct Allegations, Accused Scientists, and Their Research, DEM Lunch Seminar, Department of Economics and Management (DEM), University of Luxembourg, Luxembourg, 25 October 2023

Relationship-Specific Risks in Scientific Training and Advisors' Hold-up Power, 16th Workshop on the Organisation, Economics and Policy of Science, Munich, 13 April 2023

Sexual Misconduct Allegations, Accused Scientists, and Their Research, Allied Social Science Association (ASSA) Annual Meeting, New Orleans, 8 January 2023

2022

Open Border Policy and Knowledge Diffusion, 4th NOeG WU Winter Workshop, Nationalökonomische Gesellschaft, WU Vienna University of Economics and Business, Vienna, 22 December 2022

Allegations of Sexual Misconduct, Accused Scientists, and Their Research, Seminar, Ohio State University, Columbus OH, 18 November 2022

Open Border Policy and Knowledge Diffusion, 9th ZEW/MaCCI Conference on the Economics of Innovation and Patenting (INNOPAT), Leibniz Centre for European Economic Research (ZEW), Mannheim, 3 November 2022

Open Border Policy and Knowledge Diffusion, 4th Swiss Workshop on Local Public Finance and Regional Economics, University of Bern, 21 October 2022

Open Border Policy and Knowledge Diffusion, 6th Geography of Innovation Conference (GEOINNO2022), Bocconi University, Milan, 4 July 022

Open Border Policy and Knowledge Diffusion, TIME Colloquium, TU Munich, online, 3 February 2022

2021

Open Border Policy and Knowledge Diffusion, DRUID21 Conference, Copenhagen Business School, Copenhagen, 19 October 2021

Sexual Misconduct: Do You Separate the Researcher from His Research? 9th Retreat of the Collaborative Research Center "Rationality and Competition" CRC TRR 190, Ohlstadt. 13 October 2021

3 Supervised Doctoral Dissertations

3.1 Completed Doctoral Dissertations

2023

Aaron Merlin Defort: Creation and Recycling of Entrepreneurial Resources: Empirical Essays on the Importance of Social Processes in Entrepreneurial

Ecosystems

First Supervisor: Prof. Dietmar Harhoff, Ph.D.
Second Supervisor: Prof. Dr. Jörg Claussen

(LMU Munich)

Date of Submission: 18 September 2023 Date of Approval: 31 January 2024

Timm Opitz: Behavioral Foundations of Search, Matching, Teamwork, and Project Evaluation: Preferences and

Constraints in Decision-Making

First Supervisor: Prof. Dietmar Harhoff, Ph.D.
Second Supervisor: Prof. Dr. Florian Englmaier

(LMU Munich)

Date of Submission: 18 September 2023 Date of Examination: 22 January 2024

2021

Lorenz Brachtendorf: Patents and Technical Standards – A Semantics-Based Analysis of Essentiality Status, Standardization Governance, and Scientific Foundations

First Supervisor: Prof. Dietmar Harhoff, Ph.D. Second Supervisor: Prof. Dr. Tobias Kretschmer

(LMU Munich)

Date of Submission: 12 March 2021 Date of Approval: 14 July 2021

Dennis Byrski: From Scientific Research to Healthcare Markets – Empirical Essays on the Economics of Pharmaceutical Innovation

First Supervisor: Prof. Dietmar Harhoff, Ph.D.
Second Supervisor: Prof. Dr. Monika Schnitzer

(LMU Munich)

Date of Submission: 12 March 2021 Date of Examination: 01 July 2021



Dennis Byrski, proudly presenting his decorated doctoral cap, with his supervisors Dietmar Harhoff and Monika Schnitzer.

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Felix Poege interprets the clues in the decoration of his doctoral cap, referring to his doctoral thesis on "Corporate Innovation – The Role of Scientific Discoveries, Taxation, and Antitrust", for which he was awarded the Otto Hahn Medal of the Max Planck Society.

Felix Poege: Corporate Innovation – The Role of Scientific

Discoveries, Taxation, and Antitrust

First Supervisor: Prof. Dietmar Harhoff, Ph.D.
Second Supervisor: Prof. Fabian Waldinger, Ph.D.

(LMU Munich)

Date of Submission: 12 March 2021 Date of Examination: 07 July 2021

Daniel Wittenstein: Managing Digital Transformation – Evidence from Hidden Champions and Measurement Approaches

First Supervisor: Prof. Dietmar Harhoff, Ph.D.

Second Supervisor: Prof. Dr. Thomas Hess (LMU Munich)

Date of Submission: 18 September 2020 Date of Approval: 03 February 2021

Publication: Wittenstein, Daniel (2022). Managing

Digital Transformation: Evidence from Hidden Champions and Measurement Approaches. Wiesbaden: Springer

Gabler.

3.2 Ongoing Doctoral Dissertations

Sebastian Erhardt: Essays on Applications of Machine Learning to Science, Patent, and Economic Data

Carolin Formella: Essays on Migration and Mobility

Svenja Friess: Essays on Behavioral Aspects of Knowledge Production, Interpersonal Knowledge Exchange, and Gender Disparities

Mainak Ghosh: Essays on the Role of Science in Patents, Patent Quality, and Diffusion

Elisabeth Hofmeister: Essays on Innovation in the Life Sciences

Klaus Keller: The Economics of Industrial Automation – Competition, Labor Market Power, and Political Participation

Ann-Christin Kreyer: Essays on the Economics of

Digitalization and Innovation

Cheng Li: Essays on the Foundations of Innovation Systems

Mingpei Li: Essays on Doctoral Student Careers and Publication Output

Anna-Sophie Liebender-Luc: Essays on the Economics of Digitalization and Innovation

Anastasiia Lutsenko: Regional Innovation System Resilience in Developing Countries: A Case Study Of Ukraine

Ulrike Morgalla: Essays on Green Innovation and the Energy Transition

Cristina Rujan: Firms and Innovation: Multinational Strategies, the Net-Zero Transition, and Governmental R&D Support

Kathrin Wernsdorf: Essays on Innovation Economics



Junior Research Fellow Svenja Friess on 4 July 2022, ready to present her dissertation project to the Board of Trustees.

4 Cooperation in Further Doctoral Procedures

4.1 Second Evaluation

2023

Jonathan Federle: Essays in Financial Economics and

Macro Finance

First Supervisor: Prof. Dr. Markus Glaser

(LMU Munich)

Second Supervisor: Prof. Dietmar Harhoff, Ph.D.

Date of Submission: 18 September 2023 Date of Approval: 31 January 2024

4.2 Cooperation in Doctoral Procedure Abroad

2022

Valentin Lignau: Wind of Change: On the Use of Patents

in the Wind Power Industry

First Supervisor: Prof. Dr. Marc Baudry

(Université Paris Nanterre)

Second Supervisor: Prof. Dietmar Harhoff, Ph.D.

Date of Submission: 24 November 2022 Date of Examination: 08 February 2023

5 Teaching Activities

Dennis Byrski (Teaching Assistant) Ludwig-Maximilians-Universität (LMU) Munich Case Study Course in Innovation and Strategy

Aaron Merlin Defort (Teaching Assistant) Center for Digital Technology and Management (CDTM) FOM University of Applied Sciences

Entrepreneurial Negotiations; Design Thinking and Ideation; Entrepreneurship Laboratory; Design Thinking and Business Model Innovation; Trend Seminar: Ideation Workshop

Carolin Formella (Teaching Assistant) Ludwig-Maximilians-Universität (LMU) Munich *Honors Program in Economics; Migration Economics*

Svenja Friess (Teaching Assistant) Ludwiq-Maximilians-Universität (LMU) Munich

Microeconomics 1; Diversity and Discrimination in Organizations: Insights from Empirical Research

Fabian Gaessler

Munich Intellectual Property Law Center (MIPLC) Center for International Intellectual Property Studies (CEIPI) (University of Strasbourg)

Introduction to Economics; Future of Patent Litigation in Europe: Setting the Scene

Dietmar Harhoff

Ludwig-Maximilians-Universität (LMU) Munich

Reading and Research Seminar "Innovation and Entrepreneurship"

David Heller

Goethe Business School (Goethe University Frankfurt)

Management Control Systems

Marco Kleine

Munich Intellectual Property Law Center (MIPLC) Ludwig-Maximilians-Universität (LMU) Munich Valuation of Intangible Assets; General Economics

Michael E. Rose

University of Zurich ifo Institute for Economic Research Kiel Institute for the World Economy (IfW) TU Munich

Python Programming and Machine Learning for Education and Personnel Economists; Python Programming and Machine Learning for Economists; Python for Machine Learning

Kathrin Wernsdorf (Teaching Assistant) Ludwig-Maximilians-Universität (LMU) Munich

Wettbewerbs- und Handelspolitik in einer globalisierten Welt; Multinationale Unternehmen

Rainer Widmann

TU Munich

Economics of Innovation

6 Honors, Prizes, Awards, Appointments and Placements

2023

Marina Chugunova received a Gender Mobility Grant by the German Research Foundation (DFG) CRC TRR 190 "Rationality and Competition".

Sebastian Erhardt and Dietmar Harhoff were granted 81.000 € by the Volkswagen Foundation for their research project "Radical Ideas, Unorthodox Research – Exploring Science off the Beaten Path".

2022

Together with Ksenia Keplinger (Max Planck Institute for Intelligent Systems), **Marina Chugunova** received a research grant by the European Academy of Management (EURAM) for the project "Better Together or Better Apart: The Use of Artificial Intelligence, Human Intelligence and Human-in-the-Loop Systems in HR Screening."

Aaron Merlin Defort received a Best Paper Award at the International Conference for Innovation and Entrepreneurship (Innodays), Casablanca.

Sebastian Erhardt, Mainak Ghosh, Michael E. Rose, Erik Buunk, and Dietmar Harhoff received an EPO Academic Research Program (EPO ARP) grant by the European Patent Office for the project "Tracing the Flow of Knowledge from Science to Technology Using Deep Learning".

David Heller received the first prize of the "Excellence in Teaching" Award 2022 as the best teaching course of the Goethe Business School in the summer semester 2022. He also won the first prize for the best course of the Faculty of Economics at Goethe University Frankfurt in the Master of Finance module.

Anastasiia Lutsenko received the Women Leadership Award granted by Reutlingen University. She also won the Choice of the Audience Award granted by Reutlingen University.

Anastasiia Lutsenko received a DAAD Scholarship for the GESIS Summer School in Survey Methodology.

Felix Poege was awarded the Otto Hahn Medal by the Max Planck Society for his doctoral dissertation in recognition of his outstanding scientific achievements.

Albert Roger received the LGF (Landesgraduiertenförderung) Completion Grant from the Graduate Academy of the Heidelberg University 2022.

Albert Roger received the "Umweltpreis der Viktor und Sigrid Dulger Stiftung" (Environmental Award of the Viktor and Sigrid Dulger Foundation).

2021

Svenja Friess was granted the Scholarship for Doctoral Studies in the U.S. by the Fulbright Germany Commission for a research stay at Harvard University.

Lucy Xiaolu Wang received two grants (\$2,500 and \$1,000) from the Institute for Humane Studies to fund two related projects: 1) "Entrepreneurship in the Cannabis Market: Diversity and Inclusion in an Evolving Ecosystem" and 2) "Is Grass Greener in the Gray Zone? Legalization and Innovation in the Cannabis Market".

Lucy Xiaolu Wang received the Best Paper Proceedings Designation for the paper "Medicines Patent Pool and HIV Drug Cocktail Diffusion and Innovation" from the Academy of Management Technology and Innovation Management (TIM) Division.

Kathrin Wernsdorf was selected to participate in the NBER Digitization Tutorial, supported by the Alfred P. Sloan Foundation.

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Felix Poege was awarded the Otto Hahn Medal for Young Scientists of the Max Planck Society for his dissertation on "Corporate Innovation – The Role of Scientific Discoveries, Taxation and Antitrust", which makes important contributions to the analysis of innovation processes, in particular the impact of competition on innovation outcomes.

In four essays, Felix Poege answers pressing research questions and examines how the quality of scientific contributions, corporate taxation, corporate participation in scientific conferences, and industry structure affect innovation outcomes. In his most comprehensive essay, he looks at the breakup of IG Farben after World War II and its impact on competition and innovation in the chemical sector. Poege concludes that the politically motivated breakup led to a substantial increase in competition, which was reflected in lower prices for a large number of chemical products and in an increase in patenting activities by the companies affected by the breakup. For the current debate on the effects of mergers on competition and innovation, this historical study provides important evidence and implies that mergers can harm both competition and innovation.

The Max Planck Society has been awarding the prize for outstanding scientific achievements, named after the "father of nuclear chemistry" Otto Emil Hahn (1879–1968), since 1978. The prize is endowed with 7,500 euros and is intended to motivate young talented scientists to pursue a research career. Felix Poege was presented the Otto Hahn Medal during the Annual Meeting of the Max Planck Society on 22 June 2022 in Berlin.

In 2021, he became a Postdoctoral Associate at the Technology & Policy Research Initiative (TPRI) at Boston University. Since 2023, he is Assistant Professor at the Department of Management and Technology at Bocconi University.



Felix Poege at the 73rd Annual Meeting of the Max Planck Society on 22 June 2022 together with (left) Ulman Lindenberger, former Vice President of the Human Sciences Section of the Max Planck Society, and (right) Ulrich Becker, former Section Chair of the Human Sciences Section.



Felix Poege celebrating his Otto Hahn Medal.

Appointments and Placements

Prof. Dr. Stefano H. Baruffaldi, Associate Professor, Tenure Track, Politecnico di Milano (since 2022)

Prof. Dr. Laura Bechtold, Professor for Technology Assessment and Cultural Management, Technische Hochschule Ingolstadt (since 2022)

Prof. Dr. Nadine Chochoiek, Head of the Coordination Office for Entrepreneurship & Technology Transfer in the Presidential Division, Director of the Entrepreneurship Program "founders@unibw", University of the Bundeswehr Munich (2020 – 2023); Professor for Innovation and Entrepreneurship, Munich Business School (since 2023)

Prof. Dr. Fabian Gaessler, Assistant Professor, Tenure Track, Department of Economics and Business, Universidad Pompeu Fabra; Affiliated Professor, Barcelona School of Economics (since 2022)

Prof. Dr. Marco Kleine, Assistant Professor, Tenure Track, Faculty of Economics and Business, University of Groningen (since 2022)

Prof. Dr. Felix Poege, Postdoctoral Associate, Technology & Policy Research Initiative, Boston University (2021 – 2023); Assistant Professor, Tenure Track, Bocconi University (since 2023)

Dr. Alexander Suyer, Research Coordinator, Max Planck Institute for Innovation and Competition (since 2021)

Prof. Lucy Xiaolu Wang, Ph.D., Assistant Professor, Tenure Track, Department of Resource Economics, University of Massachusetts Amherst (since 2021)



Fabian Gaessler at Pompeu Fabra University in Barcelona.

On 15 September 2022, Fabian Gaessler joined the Faculty of Economics and Business of the Pompeu Fabra University in Barcelona as Assistant Professor (tenure track). His research and teaching focus on innovation and strategy. He works at the intersection of innovation and strategic management with particular focus on intellectual property rights, knowledge production, and technology strategy.

Until September 2022, Fabian Gaessler has been working as a Senior Research Fellow at the Max Planck Institute for Innovation and Competition in the department "Innovation and Entrepreneurship Research". Having joined the Institute already as a doctoral student, he was

a member of the research team since the establishment of the economics department in 2013. In 2017, he was awarded the Otto Hahn Medal for his thesis "Enforcing and Trading Patents – Evidence for Europe".

In 2018 and 2019, Fabian Gaessler served as an interim Professor of Technology Management at the Technical University of Munich. In 2022, he became member of the advisory board of the "T!Raum" funding initiative of the German Federal Ministry of Education and Research. He continues to be closely associated with the Max Planck Institute for Innovation and Competition as an Affiliated Research Fellow.

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7 Memberships in Scholarly Societies and Committee Work of the Scientific Member

Dietmar Harhoff is elected member of the German Academy of Science and Engineering (acatech, since 2008), the German National Academy of Sciences Leopoldina (since 2010), and the Bavarian Academy of Sciences and Humanities (BAdW, since 2015).

He is a member of various academic associations: American Economic Association (AEA); European Economic Association (EEA); European Policy for Intellectual Property (EPIP) Association; Verband der Hochschullehrer für Betriebswirtschaftslehre e.V. (VHB); Verein für Socialpolitik (VfS).

Advisory Activities to Public Organizations

Member of the Expert Group for the Implementation of UNESCO's Recommendation on the Ethics of Artificial Intelligence (since 2021)

Member of the Bavarian Al Council, advising the Bavarian Al Agency (since 2020)

Chair of the Commission Lower Saxony 2030 (Kommission Niedersachsen 2030) (2019 – 2021)

Member of the Supervisory Board of the German Federal Agency for Disruptive Innovation (SPRIND) (since 2020)

Chair of the Advisory Board of Young Entrepreneurs in Science (YES) (since 2019)

Member of the Scientific Committee of the Innovation Growth Lab (IGL), based at Nesta/UK (since 2018)

Member of the Scientific Adivsory Board – Research Data and Service Center (RDSC) at Deutsche Bundesbank (since 2016)

Member of the Advisory Board, Stiftung Neue Verantwortung (since 2014)

Member of the Dialog on Innovation by the German Chancellor Angela Merkel (2010 – 2021)

Member of the Scientific Advisory Board at the German Federal Ministry for Economics and Technology (BMWi) (since 2004), now Federal Ministry for Economic Affairs and Climate Action (BMWK) Services to the Scientific Community

Member of the Board of the Center for Ethics and Philosophy in Practice (ZEPP) at the Ludwig-Maximilians-Universität (LMU) Munich (since 2021)

Member of the Working Group Artificial Intelligence of the Max Planck Society's Ethics Council (since 2019)

Member of the Board of Directors of the Bavarian Research Institute for Digital Transformation (bidt) at the Bavarian Academy of Sciences and Humanities (2019 – 2021)

Member of the Kuratorium of the German Academy of Science and Engineering (acatech) (since 2019)

Member of the Strategiekreis Max Planck Innovation (Transfer of Technology) (since 2016)

Member of the Jury for the Technology Transfer Award of the Deutsche Physikalische Gesellschaft (DPG) (2015 – 2023)

Member of the Advisory Group on Research Policy (Forschungspolitischer Beratungskreis) of the President of the Max Planck Society (2015 – 2023)

Member of the Kuratorium, the Steering Committee, Chair of the Investment Advisory Board of VolkswagenStiftung (2012 – 2022)



Dietmar Harhoff as a member of the Scientific Advisory Board at the German Federal Ministry for Economic Affairs and Climate Action (BMWK).

Photo: BMWK/Jan Reichel.

8 Projects with External Funding

See also Part E VIII 3 Haushalt – Wesentliche Förderzuwendungen und Drittmittelprojekte (Budget – Significant Grants and Projects with External Funding), p. 412 of this report.

Dietmar Harhoff, Marina Chugunova, Marco Kleine, Rainer Widmann, Timm Opitz, Klaus Keller

DFG (German Research Foundation) project within the Collaborative Research Center Transregio 190 "Rationality and Competition (SFB/TRR 190)", together with Prof. Dr. Monika Schnitzer (LMU Munich)

Dietmar Harhoff, Michael E. Rose, Sebastian Erhardt, Mainak Ghosh, Erik Buunk, Cheng Li

European Patent Office Academic Research Program (EPO ARP), "Tracing the Flow of Knowledge from Science to Technology Using Deep Learning"

Marina Chugunova, Svenja Friess

Diligentia Foundation, "Can It Ever Hurt to Ask? Advice and Gender", together with Lea Heursen (HU Berlin)

Marina Chugunova

Diligentia Foundation, "Do Women Shy Away From Working in Male-Dominated Fields – The Role of Non-Transparent Institutions" together with Eva Ranehill (University of Gothenburg) and Anna Sandberg (SOFI Stockholm University)

Dimche Risteski

German Federal Ministry for Economic Affairs and Climate Action, Projektträger Jülich (PtJ), EXIST start-up grant, BlokLite UA – Business Analytics for the Blockchain

Sebastian Erhardt, Dietmar Harhoff

VolkswagenStiftung, "Radical Ideas, Unorthodox Research – Exploring Science off the Beaten Path"



IV Events

1 Events of the Department

See also B IV 1, Events of the Institute, p. 216 ff.

1.1 Event Series

1.1.1 Research Seminar

Twice a year, the economics department organizes research retreats for doctoral students and postdocs in the department. Since 2018, external scholars have been invited to participate in these seminars to provide guidance to doctoral students. Due to the COVID-19 pandemic, the research seminar in spring 2021 took place online. In order to compensate for this and to offer sufficient opportunity for personal exchange on the research topics, an additional research seminar was organized in winter 2021.

Research Seminar Fall 2023,

Schloss Ringberg, 18 - 20 September 2023

Research Seminar Spring 2023,

Frauenwörth/Chiemsee, 27 February – 2 March 2023

Research Seminar Fall 2022,

Bernried, 5 - 7 September 2022

Research Seminar Spring 2022,

Ohlstadt, 11 - 14 April 2022

Research Seminar Winter 2021,

Schloss Ringberg, 1 - 4 December 2021

Research Seminar Fall 2021,

IHK Akademie Feldkirchen-Westerham, 29 September – 1 October 2021

Research Seminar Spring 2021,

online, 23 - 26 March 2021



At the research retreat of the economics department in Frauenwörth at Lake Chiemsee in March 2023.

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1.1.2 Max Planck Innovation & Entrepreneurship Seminar with Guest Lectures

The Max Planck Innovation & Entrepreneurship Seminar Series of the economics department, formerly the Brown Bag Seminar, was launched shortly after its formation in 2013. It is now a well-established institution in the Munich research landscape and beyond. The seminars usually take place on a weekly basis and are open to external researchers and students. Over 250 quest lectures have taken place since the seminar series was set up, of which 72 were held in the reporting period. Due to the COVID-19 pandemic and associated travel uncertainties, the seminars took place online until fall 2022, allowing listeners from all over the world to join. When travel restrictions were lifted, in-person seminars continued to be broadcast for an international audience. Additionally, some online talks were retained in order to engage speakers situated in geographically distant locations.

→ To the seminar website with registration option to the invitation mailing list:

https://www.ip.mpg.de/en/research/innovationand-entrepreneurship-research/innovationentrepreneurship-seminar.html

2023

Tim Simcoe, Boston University, Learning When to Quit – An Empirical Model of Experimentation in Standards Development, 13 December 2023

Benedict Probst, ETH Zurich, Net-Zero Innovation and Entrepreneurship Lab – Accelerating the Transition Towards a Net-Zero Emissions Economy, 6 December 2023 (internal seminar)

Sören Auer, TIB/Leibniz University Hannover, Facilitating Transfer and Innovation by Organizing Scientific Contributions in a Knowledge Graph, 29 November 2023

Maximilian Todtenhaupt, NHH/Leibniz University Hannover, Are Domestic Workers Affected by Foreign Tax Changes?, 15 November 2023

Emilio Zagheni, Max Planck Institute for Demographic Research, Global Migration of Scholars – Trends, Patterns with Economic Development, and Gender Inequalities, 8 November 2023

Katrin Hussinger, Université du Luxembourg, Estimating the Hidden Population of Misconducting Authors in Medical Sciences, 2 November 2023

Shreekanth Mahendiran, University of Lausanne, Silence of the Lambs – The Effects of Misconduct on Entrepreneurial Venture Outcomes, 25 October 2023

Iuliia Gernego and Tetiana Shkoda, Kyiv National Economic University, Start-up Role in Post-war Rebuilding of the Ukrainian Economy/Innovative Entrepreneurship in Turbulent Times of War in Ukraine, 19 October 2023 (internal seminar)

Michaël Bikard, INSEAD, Standing on the Shoulders of (Male) Giants – Gender Inequality and the Technological Impact of Scientific Ideas, 18 October 2023

Luke Rhee, UC Irvine, Borrowing Networks for Innovation – The Role of Attention for Secondhand Brokerage, 4 October 2023

Özge Öner, University of Cambridge, Co-ethnic Commuters, Information Dissemination, and the Labor Market Integration of Immigrants, 27 September 2023

Sadao Nagaoka, Tokyo Keizai University, Language Barriers and the Speed of Knowledge Diffusion, 12 September 2023 (internal seminar)

Christian Sternitzke, Sternitzke Ventures, Privacy vs. Health? The EU General Data Protection Regulation and Its Impact on Clinical Research, 6 September 2023

Reddi Rayalu Kotha, Singapore Management University, How Does War Story Sharing by Successful Entrepreneurs Shape Entrepreneurship Training? Evidence from a Field Experiment, 26 July 2023

Tatiana Rosá, Pontificia Universidad Católica de Chile, Cooperation and Competition – The Case of Innovation in the Telecommunications Sector, 12 July 2023

Marc J. Lerchenmüller, University of Mannheim, The Effect of Mentor Gender on the Evaluation of Protégés' Work, 5 July 2023

Kieu-Trang Nguyen, Northwestern University, Trust and Innovation within the Firm – Evidence from Matched CEO-Firm Data, 28 June 2023

Xia Yu, Huazhong University of Science & Technology (HUST) Wuhan, Technology Transfer in China and New Technologies, 27 June 2023

Kevin Bauer, University of Mannheim, Please Take Over – Xai, Delegation of Authority, and Domain Knowledge, 14 June 2023

Erin Hengel, London School of Economics, Gender and the Time Cost of Peer Review, 7 June 2023 (online)

Ryan Riordan, LMU Munich, Carbon Liquidity, 31 May 2023

Anne Sophie Lassen, CBS, The Lost Ester Boserups – The Impact of Parenthood on Academic Careers, 26 April 2023

Gabriel Cavalli, University of Toronto, How Scientific Organizations Adapt to Novel Methodological Advances – The Impact of AlphaFold V1, 19 April 2023

John P. Walsh, Georgia Tech, What Share of Patents Is Commercialized?, 12 April 2023

Ali Aslan Gümüşay, LMU Munich, A Research Potpourri – Innovative Templates, Circular Forms of Organizing, and Futures, 22 March 2023

Enrico De Monte, Leibniz Centre for European Economic Research (ZEW), High Growth Firms in Germany and Business Dynamism, 15 March 2023

Sophie Quach, WU Vienna University of Economics and Business, User Innovators' Fairness Perceptions When Firms Commercialize Freely Revealed User Innovations, 15 February 2023

Jörn Block, Trier University, Trademarks and Patents as Indicators of Social and Environmental Innovation, 7 February 2023

Ilja Kantorovich, EPFL, Consumer Privacy and Value of Consumer Data, 1 February 2023

Lia Sheer, Tel Aviv University, The Effect of Public Science on Corporate R&D, 25 January 2023

2022

Sebastian Goerg, TU Munich, Motivated Belief Updating and Rationalization of Information, 14 December 2022

Joseph Staudt, U.S. Census Bureau, Faculty Entrepreneurship and the Gender Earnings Gap, 7 December 2022

Mike Teodorescu, University of Washington, Closing the Gender Gap in Patenting – Evidence from a Randomized Control Trial at the USPTO, 30 November 2022 (online)

Jeffrey A. Lefstin, UC Hastings, Invention and Discovery, 9 November 2022

Paul Momtaz, TU Munich, The Brokered Market for Patents, 2 November 2022

Wes Greenblatt, MIT Sloan School of Management, Does Grant Peer Review Penalize Scientific Risk Taking? Evidence from the NIH, 26 October 2022 (online)

Ran Zhuo, Harvard University, Exploit or Explore? An Empirical Study of Resource Allocation in Scientific Labs, 19 October 2022 (online)

Nur Ahmad, Massachusetts Institute of Technology (MIT), The Big Reveal – Tight Labor Market and Firm-level Disclosure Strategy in Artificial Intelligence Research, 27 July 2022

Dennis Verhoeven, Bocconi University, Efficient Industrial Policy for Innovation – Standing on the Shoulders of Hidden Giants, 27 July 2022

Lorenzo Ductor, Universidad de Granada, Why Are Connections to Editorial Board Members of Economics Journals Valuable?, 6 July 2022

Nilam Kaushik, Indian Institute of Management Bangalore (IIMB), Disambiguating Effects of Knowledge versus
Demographic "Diversity" in the Innovation Process – Field
Experimental Evidence from a Collaborative Product
Development Platform, 22 June 2022 (online)

Martin Kretschmer, University of Glasgow, Copyright, the Digital Services Act, and the New Wave of Platform Regulation – A UK Perspective, 15 June 2022

Kevin Boudreau, Northeastern University, Gender Differences in Responses to Competitive Organization? Field Experimental Evidence on Differences Across Fields from a Product Development Platform, 1 June 2022 (online)

Jacquelyn Pless, Massachusetts Institute of Technology (MIT), Innovation for Social Progress – When Imperfect Appropriability Meets "Incorrect" Prices, 11 May 2022 (online)

Patrick Lehnert, University of Zurich, Proxying Economic Activity with Daytime Satellite Imagery – Filling Data Gaps Across Time and Space, 4 May 2022 (online)

Andrea Mina, Sant'Anna School of Advanced Studies, Pisa, The Direction of Technical Change in AI and the Trajectory Effects of Government Funding, 27 April 2022 (online)

Astrid Marinoni, Georgia Tech, Who Gains from Creative Destruction? Evidence from High-Quality Entrepreneurship in the United States, 5 April 2022 (online)

Claudia Steinwender, LMU Munich, Omnia Juncta in Uno – Foreign Powers and Trademark Protection in Shanghai's Concession Era, 30 March 2022 (online)

Josh Feng, University of Utah, Social Push and the Direction of Innovation, 23 March 2022 (online)

Thomas Schaper, TU Munich, Online Repositories, Search Costs and Cumulative Innovation, 23 February 2022 (online)

Laurina Zhang, Boston University, Salary Transparency, Gender Pay Inequality, and Organizational Outcomes – Evidence from Canadian Universities, 16 February 2022 (online)

2021

Lee Fleming, UC Berkeley, Start-ups, Unicorns, and the Local Supply of Inventors, 15 December 2021 (online)

Cindy Lopes-Bento, KU Leuven, Satisfied or Money Back – Should Policy Keep Educating PhD Holders despite Market Frictions?, 24 November 2021 (online)

Anika Stephan-Korus, BMW & HES Fribourg, Members or Mavericks? Organizational Identification Dynamics during Secret Innovation Projects, 17 November 2021 (online)

Annamaria Conti, HEC Lausanne, Beefing It up for Your Investor? Open Sourcing and Start-up Funding – Evidence from Github, 10 November 2021 (online)

@ivind Nilsen, Norwegian School of Economics, When Patents Matter, 3 November 2021 (online)

Elie Sung, HEC Paris, Sharpen Your Sword – The Reaction of Branded Pharmaceutical Firms to the Threat of Generic Entry, 27 November 2021 (online)

Yukiko Murakami, Waseda University, Current Status and Research Subjects of International Industry-Academia Collaborative Research, 20 November 2021 (online)

Johanna Schnier, Kühne Logistics University, The Sky is the Limit – The Bias Against Large Projects, 15 November 2021 (online)

Jeffrey McCullough, University of Michigan, The Role of Telemedicine During the COVID19 Pandemic, 14 November 2021 (online)

Dirk Bergemann, Yale University, Selling Impressions, 30 November 2021 (online)

Britta Glennon, University of Pennsylvania & NBER, The Gender Gap in Scientific Credit, 16 June 2021 (online)

Giada Di Stefano, Bocconi University, Burying the Hatchet? How Competition Affects the Performance Benefits of Diversity, 26 May 2021 (online)

Otto Toivanen, Aalto University, Welfare Effects of R&D Policies, 19 May 2021 (online)

Lisa Larrimore Ouellette, Stanford Law School, Valuing the Vaccine, 12 May 2021 (online)

Ina Ganguli, University of Massachusetts Amherst, Biased Beliefs and Entry into Scientific Careers, 5 May 2021 (online)

Petra Moser, NYU Stern, Women in Science – Lessons from the Baby Boom, 28 April 2021 (online)

Stefan Wagner, ESMT Berlin, Mapping Markush Patents, 31 March 2021 (online)

Erik Hornung, University of Cologne, Flow of Ideas – Economic Societies and the Rise of Useful Knowledge, 17 March 2021 (online)

Georg Graetz, Uppsala University, Individual Consequences of Occupational Decline, 24 February 2021 (online)

Ivan Png, National University of Singapore, Automation, Job Design, and Productivity – Field Evidence, 17 February 2021 (online)

Nan Jia, USC Marshall, Can Artificial Intelligence Substitute or Complement Managers? Divergent Outcomes for Transformational and Transactional Managers in a Field Experiment, 10 February 2021 (online)

The keynote speaker Catherine Tucker (MIT & NBER) and the organizing team of the RISE 4 Workshop 2021, which had to be held online due to the pandemic.



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1.1.3 RISE Workshop

The "Research in Innovation, Science and Entrepreneurship Workshop" (RISE) is an annual workshop for early career researchers that has been organized by doctoral students and postdocs from the economics department since 2018. It gives young researchers the opportunity to present their work, receive feedback from experienced researchers, and network and exchange ideas with peers from other research

institutions. The workshop now has around 50 international participants from up to 30 universities around the globe. After two years of being held online due to the COVID-19 pandemic, the 2022 and 2023 workshops finally took place again in person in Munich.

→ More information and the programs for the events at: https://www.ip.mpg.de/en/research/innovation-andentrepreneurship-research/rise-workshop.html

RISE 6 Workshop, 18/19 December 2023 Keynote Speaker: Ina Ganguli (University of Massachusetts Amherst)

RISE 5 Workshop, 19/20 December 2022 Keynote Speaker: Robert Seamans (NYU Stern School of Business)

RISE 4 Workshop, 6/7 December 2021 (online) Keynote Speaker: Catherine Tucker (MIT & NBER)



Participants of the RISE 5 Workshop.

1.1.4 Max Planck Digitality Fireside Chat

The Max Planck Digitality Fireside Chat is a new informal event format for in-depth talks and discussions on digitality and digital transformation. The aim is to allow for an exchange between researchers and digital pioneers who have come forward with new concepts, proposals and ideas, and are actively shaping digitalization. The Digitality Fireside Chat series exemplifies the department's commitment to public outreach. The digital evening events are open to the general public. All attendees can take part in the discussion. Depending on the topic, the Fireside Chats are conducted in German or English. The Max Planck Digitality Fireside Chats were introduced in 2021 and continue in 2024.

Digitality Fireside Chat #3: Digitale Souveränität – Europas Zukunft ist offen, online (in German), 16 March 2021

Rafael Laguna de la Vera (Director), SPRIND – Federal Agency for Disruptive Innovation (Joint event with the Bavarian Research Institute for Digital Transformation – bidt) **Digitality Fireside Chat #2: Europe – Digitally Colonized**, online (in English), 23 February 2021

Dr. Richard Weber (Managing Director), BurdaForward – digital media house of the future

Digitality Fireside Chat #1: Innovative Plattformen für Stadtentwicklung, online (in German), 19 January 2021

Prof. Dr. habil. Thomas Klie (EH Freiburg), Professor of Law and Administration, Gerontology; Head of the Center for Civil Society Development (zze) in Freiburg and Berlin as well as of AGP Social Research; BmBF-funded research project SoNaTe (Soziale Nachbarschaft und Technik).

Bernd Mutter (City of Freiburg im Breisgau), Digitalization Officer of the Smart City Freiburg im Breisgau and Department for Digital and IT (DIGIT).



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1.1.5 TIME Colloquium

The TIME Colloquium is a joint research seminar of the Institute's economics department with the Institute for Strategy, Technology and Organization (ISTO) at Ludwig-Maximilians-Universität (LMU) and the Institute for Technology and Innovation Management (TIM) at the Technical University of Munich. The colloquium covers topics from the fields of technology and innovation management, and entrepreneurship (TIME). The participating institutions take turns organizing the meetings. At each meeting, two scientists present research results, which are then discussed. The Max Planck Institute for Innovation and Competition hosted, participated in the main organization, or contributed a presentation or discussion to the following events:

2023

TIME Colloquium, Max Planck Institute for Innovation and Competition, 14 December 2023

Boundary-Spanning Technology Search, Product Component Reuse, and New Product Innovation: Evidence from the Smartphone Industry

Presenter: Kyung Yul Lee (TUM)

Discussant: Mingpei Li (Max Planck Institute for Innovation

and Competition)

How Complementarities between Technology, Environmental Compliance, and Management Practices Drive Firm Productivity: Evidence from German Firms

Presenter: Elisa Gerten (ISTO) Discussant: Pietro Fantini (TUM)

TIME Colloquium, TIM, TUM, 13 July 2023

Robotizing to Compete? Evidence from Portuguese Manufacturing Exporters

Presenter: Klaus Keller (Max Planck Institute for Innovation

and Competition)
Discussant: Joy Wu (ISTO)

Valuation Asymmetry between Licensors and Licensees of Algorithms

Presenter: Joy Wu (ISTO)

Discussant: Sebastian Erhardt (Max Planck Institute for

Innovation and Competition)

TIME Colloquium, ISTO, LMU Munich, 1 June 2023

Estimating Technological Gains and Losses from Environmental Regulation

Presenter: Albert Roger (Max Planck Institute for Innovation

and Competition)

Discussant: Kyung Yul Lee (TUM)

The Locus of Value Capture

Presenter: Adrian Goettfried (TUM) Discussant: Katerina Dubovska (ISTO)

TIME Colloquium, Max Planck Institute for Innovation and Competition, 19 January 2023

The Role of an Open Source Software Compliance Certification in the Software Supply Chain – Insights from a Conjoint Experiment

Presenter: Juliane Wissel (TUM) Discussant: Ambre Nicolle (ISTO) First-Party Complements in Platform Markets: The Role of

Competition

Presenter: Alexey Rusakov (ISTO) Discussant: Adrian Göttfried (TUM)

2022

TIME Colloquium, ISTO, LMU Munich, 8 December 2022

The Perks of Being Unknown: Implied Costs of Knowledge Seeking on Organizational Platforms

Presenter: Maren Mickeler (ISTO)

Discussant: Carolin Formella (Max Planck Institute for

Innovation and Competition)

Everyone Likes to Be Liked: Experimental Evidence from

Matching Markets

Presenter: Timm Opitz (Max Planck Institute for Innovation

and Competition)

Discussant: Gresa Latifi (TUM)

TIME Colloquium, ISTO, LMU Munich, 13 July 2022

Intellectual Property as Loan Collateral

Presenter: David Heller (Max Planck Institute for Innovation

and Competition)

Discussant: Annabelle Haché Harter (TUM)

Technology Governance as Selection Criterion: The Case of

Smart Cities

Presenter: Lucia Baur (TUM) Discussant: Safia Bouacha (ISTO)

TIME Colloquium, Max Planck Institute for Innovation and Competition, online, 28 April 2022

Do VCs Help to Overcome Information Asymmetry due to Cultural Distance in Potential Acquisitions

Presenter: Gresa Latifi (TUM) Discussant: Giulia Solinas (ISTO)

TIME Colloquium, TIM, TUM, online, 3 February 2022

Tough Bargains: When Cooperation Is More Competitive than Competition

Presenter: Joachim Henkel (TUM)

Discussant: Timm Opitz (Max Planck Institute for Innovation

and Competition)

Open-Border Policy and Knowledge Diffusion

Presenter: Rainer Widmann (Max Planck Institute for

Innovation and Competition)
Discussant: Georg Windisch (TUM)

TIME Colloquium, ISTO, LMU Munich, hybrid event, 13 January 2022

Multinational Firms and Global Innovation

Presenter: Cristina Rujan (Max Planck Institute for

Innovation and Competition)

Discussant: Alexey Rusakov (LMU Munich School of

Management)

Competition for Attention on Information Platforms: The

Case of Local News Outlets

Presenter: Tim Meyer (LMU Munich School of Management)

Discussant: Lucia Baur (TUM)

2021

TIME Colloquium, ISTO, LMU Munich, online, 15 July 2021

Privacy-Seeking Behavior in the Personal Data Market

Presenter: Joy Wu (ISTO)

Discussant: Dennis Byrski (Max Planck Institute for

Innovation and Competition)

Performance-Related CEO Dismissal and Innovation

Performance

Presenter: Ali Samei (TUM) Discussant: Tim Meyer (ISTO)

TIME Colloquium, Max Planck Institute for Innovation and

Competition, online, 24 June 2021

Competition and Innovation: The Breakup of IG Farben Presenter: Felix Poege (Max Planck Institute for Innovation

and Competition)

Discussant: Sebastian Geiger (ISTO)

Procurement Institutions and Essential Drug Supply in Low-

and Middle-Income Countries

Presenter: Lucy Xiaolu Wang (Max Planck Institute for

Innovation and Competition)
Discussant: Sonja Förster (TUM)

TIME Colloquium, TIM, TUM, online, 21 January 2021

Innovation under Regulatory Uncertainty and the Role of

Expectations: Evidence from the U.S. Drone Market

Presenter: Virginia Herbst (TUM)

Discussant: Lucy Xiaolu Wang (Max Planck Institute for

Innovation and Competition)

There and Back Again: Disruptive Transitions in Dyadic

Role Relationships

Presenter: Maren Mickeler (LMU ISTO) Discussant: Daniel Obermeier (TUM)

1.1.6 Munich Summer Institute (MSI)



The Munich Summer Institute (MSI) has been organized jointly with the Center for Law & Economics at ETH Zurich, the Institute for Technology and Innovation Management (TIM) at TU Munich and the Institute for Strategy, Technology and Organization (ISTO) at Ludwig-Maximilians-Universität (LMU) since 2016. In 2023, the organizers were joined by Christian Peukert (HEC Lausanne) and Imke Reimers (Northeastern University). The aim of the MSI is to promote international exchange among researchers and to raise Munich's international profile as a research location. Around 120 attendants experience three days of interdisciplinary research comprising three keynote lectures, up to 17 plenary presentations, and a daily poster session, including a poster slam. Since 2022, the MSI is preceded by the MSI Ph.D. Workshop. After the cancellation of the MSI 2020 due to the COVID-19 pandemic, the Munich Summer Institute 2021 was held online.

7th Munich Summer Institute, Bavarian Academy of Sciences and Humanities, 24 – 26 May 2023 (preceded by the 2nd MSI Ph.D. Workshop on 23 May 2023)

Keynote Speakers:

Nigel Melville (University of Michigan)
Jana Gallus (University of California at Los Angeles)
David Schwartz (Northwestern University)

Presenters and discussants in alphabetical order:

Thomas Åstebro (HEC Paris)
Egbert Amoncio (University of Frankfurt)
Matej Bajgar (Charles University)
Stefano H. Baruffaldi (University of Bath)
Anahid Bauer (Institut Mines-Telecom Business School)
Xiaoshu Bei (University of Colorado Boulder)
Christopher Buccafusco (Duke University)
Sofie Cairo (Harvard University)
Sam (Ruiqing) Cao (Stockholm School of Economics)
Marina Chugunova (Max Planck Institute for Innovation and Competition)
Shu Deng (UT Dallas)
Claudia Doblinger (TU Munich)
Anil Doshi (UCL School of Management)

Claudia Doblinger (10 Munich)
Anil Doshi (UCL School of Management)
Brian Flanagan (Maynooth University)
Florian Englmaier (LMU Munich)
Mohsen Foroughifar (University of Toronto)
Jana Gallus (UCLA)
Jesús García-Romanos (University Carlos III of Madrid)

Miguel Godinho de Matos (Católica Lisbon)
Shane Greenstein (Harvard University)

Carl-Christian Groh (University of Mannheim)

Daniel Gross (Duke University)

Dietmar Harhoff (Max Planck Institute for Innovation and Competition)

Katharina Hartinger (University of Mainz)

Kimia Heidary (Universiteit Leiden)

David Heller (Max Planck Institute for Innovation and Competition)

James Hicks (Columbia University)

Martina Iori (Scuola Superiore Sant'Anna Pisa)

Christian Kagerl (Institute for Employment Research of the

German Federal Employment Agency) Franziska Kaiser (HEC Lausanne)

Katja Kisseleva (Frankfurt School of Finance and

Management)

Madhav Kumar (MIT)

Robin Mamrak (LMU Munich)

Maximilian Mähr (University of Mannheim)

Tim Meyer (University of St. Gallen)

Frank Müller-Langer (University of the Bundeswehr Munich)

Nicholas Pairolero (U.S. Patent and Trademark Office)

Lorenzo Palladini (University of Luxembourg)

Neus Palomeras (University Carlos III of Madrid)

Christian Peukert (HEC Lausanne)

Imke Reimers (Northeastern University)

Jesús García-Romanos (University Carlos III of Madrid)

Thomas Schaper (TU Munich)

David Schwartz (Northwestern University)

Sepehr Shahshahani (Fordham University)

Martin Spann (LMU Munich)

Claudia Steinwender (LMU Munich)

Neil Thompson (MIT)

Markus Trunschke (ZEW Mannheim)

Siddarth Vedula (TU Munich)

Philipp Lucas Wähler (University of Warwick)

Joel Waldfogel (University of Minnesota)

Lucy Xiaolu Wang (UMass Amherst)

Rainer Widmann (Max Planck Institute for Innovation and

Competition)

Joy Wu (LMU Munich)

6th Munich Summer Institute, Bavarian Academy of Sciences and Humanities, 8 – 10 June 2022 (preceded by the 1st MSI Ph.D. Workshop on 7 June 2022)

Keynote Speakers:

Hanna Halaburda (New York University) Nicola Lacetera (University of Toronto) Melissa Wasserman (University of Texas at Austin)

Presenters and discussants in alphabetical order:

Nihan Akhan (EUI) Thomas Åstebro (HEC Paris) Benjamin Balsmeier (University of Luxembourg) Michail Batikas (Rennes School of Business) Stefan Bechtold (ETH Zurich) Mathias Beck (ETH Zurich) Johannes Bersch (ZEW Mannheim) Fabio Bertolotti (LSE)

Jacopo Bregolin (University of Liverpool) Bernard Chao (University of Denver)

Ankur Chavda (HEC Paris) Avinash Collis (UT Austin)

Annamaria Conti (University of Lausanne)

Anil Doshi (UCL)

Sebastian Erhardt (Max Planck Institute for Innovation and

Competition)

Atiye Cansu Erol (Penn LDI)

Eserhan Eser (University of Chicago)

Matthias Fahn (JKU Linz) Marita Freimane (KU Leuven) Alexandra Gibbon (HHU Düsseldorf) Ricard Gil (Queen's University)

Estrella Gomez-Herrera (University of Balearic Islands)

Jordana Goodman (Boston University)
Matthew J. Higgins (University of Utah)
Kerstin Hötte (Oxford University)
Karin Hoisl (University of Mannheim)
Katrin Hussinger (University of Luxembourg)

Yanwan Ji (University of Warwick)
Yuxi Jin (Goethe University Frankfurt)

Lukas Jürgensmeier (Goethe University Frankfurt)

Hyo Kang (USC Marshall) Jennifer Kao (UCLA)

Helge Klapper (Erasmus University) Martin Kretschmer (University of Glasgow) Spyridon Lagaras (University of Pittsburgh)

Filippo Lancieri (ETH Zurich)

John Liddicoat (University of Cambridge) Johannes Loh (BI Norwegian Business School)

Gabriel Manso (University of Brasilia) Théo Marquis (Université Paris-Saclay)

Matt Marx (Cornell University) Tim Meyer (LMU Munich) Milan Miric (USC Marshall)

Dominik Naeher (University of Göttingen)

Markus Nagler (University of Erlangen-Nuremberg)

Daniel Obermeier (TU Munich)

Lorenzo Palladini (University of Luxembourg)
Imke Reimers (Northeastern University)
Cesare Righi (Universitat Pompeu Fabra)
Laura Rosendahl Huber (Erasmus University)
Matthias Sahli (WIPO/University of Neuchâtel)
Tim Schweisfurth (University of Twente)
Siddhartha Sharma (Indiana University)

Tal Shoshani (USC Marshall)
Swagatam Sinha (ETH Zurich)
Christopher Sprigman (NYU)
Max Thon (University of Cologne)
Lucy Xiaolu Wang (UMass Amherst)
Melissa Wasserman (UT Austin)
Martin Watzinger (Universität Münster)

Rainer Widmann (Max Planck Institute for Innovation and

Competition)

Margaritha Windisch (ETH Zurich)

Joy Wu (LMU Munich)

Erina Ytsma (Carnegie Mellon University)

Amit Zac (ETH Zurich)

Online, 7 - 9 June 2021

Keynote Speakers:

Pierre Regibeau (European Commission)

Christopher Sprigman (NYU) Reinhilde Veugelers (KU Leuven)

Presenters and discussants in alphabetical order:

Luis Aguiar (University of Zurich)

Liudmila Alekseeva (IESE Business School)

Thomas Åstebro (HEC Paris) Stefan Bechtold (ETH Zurich) Marius Berger (ZEW Mannheim) Felix Bracht (KU Leuven)

Qingqing Chen (University of Pennsylvania)

Jörg Claussen (LMU Munich/Copenhagen Business School)

Annamaria Conti (University of Lausanne)

Alex Cuntz (World Intellectual Property Organization)

Victoria Fast (University of Passau)

Marek Giebel (Copenhagen Business School) Tom Grad (Copenhagen Business School)

Dietmar Harhoff (Max Planck Institute for Innovation

and Competition)

David Heller (Max Planck Institute for Innovation and

Competition)

Manuel Hermosilla (Johns Hopkins University)
Marit Hinnosaar (University of Nottingham/Collegio

Carlo Alberto)

Karin Hoisl (University of Mannheim) Yun Hou (National University of Singapore) Katrin Hussinger (University of Luxembourg) Hyo Kang (University of Southern California)

Jennifer Kao (UCLA Anderson)

Jin-Hyuk Kim (University of Colorado at Boulder)

Bastian Krieger (ZEW Mannheim)
Benjamin Leyden (Cornell University)
Thomas Lu (National Sun Yat-sen University)
Karlo Lukic (Goethe University Frankfurt)
Jean-Marie Meier (University of Texas at Dallas)

Tim Meyer (LMU Munich) Frank Nagle (Harvard University)

Markus Nagler (University of Erlangen-Nuremberg) Elio Nimier-David (CREST – ENSAE-Ecole Polytechnique) Felix Poege (Max Planck Institute for Innovation and

Competition)

Martin Quinn (Universidade Católica Portuguesa)

Cesare Righi (Universitat Pompeu Fabra)

Heesang Ryu (ESSEC)

Lorien Sabatino (Polytechnic University of Turin)

Henry Sauermann (ESMT Berlin) Mike Schuster (University of Georgia) Mumtaz Shah (University of Peshawar) Siddhartha Sharma (Indiana University) Markus Simeth (Copenhagen Business School) Jason Sockin (University of Pennsylvania) Sebastian Steffen (MIT Sloan) Isamar Troncoso (University of Southern California) Simone Vannuccini (University of Sussex) Dennis Verhoeven (Bocconi/KU Leuven/LSE) Terwase Viashima (IESE Business School) Michael Ward (University of Texas at Arlington)
Martin Watzinger (LMU Munich)
Joy Wu (LMU Munich)
Zhe Xue (Cornell University)
Dainis Zegners (Rotterdam School of Management)
Yabo Zhao (University of Texas at Dallas)



Participants of the 7th Munich Summer Institute at the Bavarian Academy of Sciences in May 2023.

1.2 Further Events

"Innovation and Entrepreneurship Research" – 10 Years Economics Department at the Institute, Anniversary Event, Munich, 10 November 2023

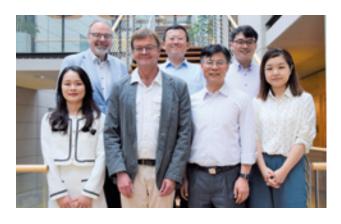
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See Event Report, p. 356

Delegation Visit from SICIP (Shanghai International College of Intellectual Property, Tongji University) Munich, 13 July 2023

Dr. Xinmiao Yu, Associate Professor and Executive Dean Dr. Jianwei Dang, Associate Professor and Deputy Dean Dr. Xia Liu, Assistant Dean

Dr. Chunming Xu, Vice Chairman of the Shanghai Intellectual Property Society and Professor at SICIP Prof. Dr. Peter Ganea, German Co-Director, Sino-German International Economic Law Institute Zhou Lanxuanjie, Doctoral Student at Tongji University



Dietmar Harhoff with the delegates from SICIP on 13 July 2023.

TQ Pin Factory Visit

Gut Delling, Inning am Ammersee, and Durach, 23 June 2023

In the spirit of the NBER Pin Factory Visits – company visits conducted by the National Bureau of Economic Research since the mid-1990s to promote field research in economics and make site visits an important part of empirical research – the team of the economics department visited several sites of the TQ Group on 23 June 2023. The idea of pin factory visits goes back to Adam Smith, who at the end of the 18th century used the production of pins to illustrate the increase in productivity through the division of labor. As one of the largest technology service providers and electronics specialists in Germany, TQ is highly innovative in the field of electronic products and services and active in the fields of E²MS (Electronic Engineering Manufacturing Services), embedded systems, drives, robotics, automation, medical applications as well as aviation and avionics.



TQ Pin Factory Visit on 23 June 2023.

Max.P Salon #9 with Robert Schlögl: Go Green – Chances and Challenges of Regenerative Energies Munich, 5 May 2023

On 5 May 2023, the Institute hosted the 9th Max.P Salon. Robert Schlögl, President of the Alexander von Humboldt Foundation, spoke to members of the Max Planck Foundation about the chances and challenges of regenerative energies, making an impassioned plea for rapid, large-scale action to reduce CO2 emissions.

The Max.P Salon is a Salon of Science founded in 2020 by members of the Board of Trustees of the Max Planck Foundation. The Max Planck Foundation, established in 2006, is a private and non-profit funding association that exclusively supports the Max Planck Society and its institutes, and makes its funds available for excellent, innovative, and pioneering projects and research endeavors. It is one of the largest science-funding foundations in Germany.



Robert Schlögl, President of the Alexander von Humboldt Foundation, Director Emeritus at the Fritz Haber Institute of the Max Planck Society, Berlin, and at the Max Planck Institute for Chemical Energy Conversion, Mülheim an der Ruhr.

16th Workshop on the Organisation, Economics and Policy of Scientific Research (WOEPSR)

Munich, 13/14 April 2023

On 13 and 14 April 2023, the Institute hosted the annual "Workshop on the Organisation, Economics and Policy of Scientific Research" (WOEPSR) jointly organized with the Technical University of Munich (TUM). The annual workshop, which was originally launched by BRICK/Collegio Carlo Alberto, Turin, is now also held at other important research locations such as the Centre for Research on Entrepreneurship and Innovation at the University of Bath (2018), the GREThA at the Université de Bordeaux-CNRS (2019) and the KU Leuven (2022). In 2020, the Institute already hosted the 14th WOEPSR. Highlight of the 16th Workshop 2023 was the panel discussion on "Al and Science". In honor of the late Paul A. David, an outstanding researcher in the economics of scientific progress, the first WOEPSR Award for Young Researchers was presented during a memorial session.



Participants of WOEPSR 2023.

→ More information and the program of the event at: https://www.ip.mpg.de/en/research/innovation-and-entrepreneurship-research/woepsr2023.html

"Green Innovation" Seminar

Schloss Ringberg, 13/14 January 2023

Interdisciplinary seminar on green innovation, with literature sessions in economics and law, covering a review and outlook, special topics as human capital, technology & society, and green entrepreneurship. The literature review sessions were followed by presentations of ongoing and foreseen projects as well as pitch and brainstorming sessions.

Workshop "Radikale Innovationen"

Schloss Ringberg, 11 - 13 January 2023

Workshop on radical innovation with participants of the economics department and as external participants:
Dr. Isabel Canu (Green European Tech Fund and Founder/Managing Director of respin)

Dr. Jano Costard (Head of Challenges, Federal Agency of Disruptive Innovation SPRIND)

Prof. Dr. Carolin Häussler (Commission of Experts for Research and Innovation and Chair of Organisation, Technology Management and Entrepreneurship at the University of Passau)

Dr.-Ing. habil. Jens Holtmannspötter (University of the Bundeswehr Munich)

Rafael Laguna de la Vera (Director, Federal Agency of Disruptive Innovation SPRIND)

Norbert Vetter (Innovationslabor System Soldat, Bundeswehr)

1st Alumni Meeting of the Department Innovation and Entrepreneurship Research

Munich, 6 May 2022

Dr. h.c. Thomas Sattelberger, Parliamentary State Secretary at the German Federal Ministry of Education and Research, spoke on "New Perspectives in Research and Innovation Policy", which gave rise to a stimulating discussion about the new German Agency for Transfer and Innovation (DATI) and the Federal Agency for Disruptive Innovation (SPRIND).



Dr. h.c. Thomas Sattelberger, Parliamentary State Secretary at the German Federal Ministry of Education and Research, was guest speaker at the 1st Alumni Meeting of the Department Innovation and Entrepreneurship Research.

The economics department was also active in the following events organized by and with our Ukrainian guest researchers (see also Special Ukraine, p. 32, and part B IV 1.1, p. 217):

Roundtable – Rebuilding Ukraine: The Case of the Health Sector, Munich, hybrid event, 21 March 2023

Roundtable – Facilitating Access to Affordable Medicines during Wartime in Ukraine, online, 1 December 2022

Ukrainian Scholars at the Institute Present Their Projects, Munich, hybrid event, 30 May 2022

"Innovation and Entrepreneurship Research" – 10 Years Economics Department at the Institute

On 10 November 2023, more than 80 participants, including 26 Alumni, Alumnae, and Affiliated Research Fellows, gathered to celebrate and honor the tenth anniversary of the Economics Department at the Institute. Dietmar Harhoff was appointed Director at the former Max Planck Institute for Intellectual Property and Competition Law in 2013.

The program of the anniversary event traced the development of the department for "Innovation and Entrepreneurship Research" and the interdisciplinarity at the Institute. After introductory words by Prof. Dietmar Harhoff, Ph.D., a panel discussion was held to reflect on a decade of progress in the research field and the department. The panel discussion was moderated by Dr. Zhaoxin Pu (DataGuard), who herself completed her doctorate at the Institute in 2020, and currently works for a company specializing in data protection, information security, and compliance.



Dietmar Harhoff with the historic event bell.

Prof. Dr. Fabian Gaessler, now Assistant Professor at the Universitat Pompeu Fabra in Barcelona, showed in his contribution how research at the interface of management, economics, law, and computer science, leads to a "crosspollination", so to speak, with an input of doctoral students from various institutions and a throughput of postdocs from renowned research institutions (EPFL, Cornell University, ZEW, KAIST, Northwestern University, Mines Paris Tech, University of Cape Town, Goethe University and many more). This qualifies them for positions in various sectors and has led the former Research Fellows to industry, start-ups and spin-offs (octimine technologies), or to EPO, bidt, and other research institutions (e.g., KU Leuven, Erasmus University, Politecnico di Milano, Bocconi University, University of Groningen, Ingolstadt University of Technology, Bundeswehr University).

Prof. Laura Rosendahl Huber, Ph.D., who is now an Assistant Professor at the Rotterdam School of Management and is, inter alia, conducting research on gender differences, portrayed the development of the department into an increasingly diverse and international team in her presentation of photos and memories.



Laura Rosendahl Huber sharing a look back to the beginnings of the department in 2013.

Prof. Bronwyn Hall, Ph.D., Emerita Professor at the University of California Berkeley, and Affiliated Research fellow of the department, examined the department's publication figures and noted a constantly growing publication output.

Dr. Matthias Lamping, Senior Research Fellow, gave an entertaining account of the expectations of the legal colleagues that were associated with the establishment of an economics department. It quickly became apparent that interdisciplinarity cannot be established at the push of a button, but that ideas on common research questions grow together through continuous dialogue.

Dr. Alexander Suyer, also a former doctoral student of Dietmar Harhoff and now Research Coordinator at the Institute, started with the Institute's Mission Statement to reflect on Dietmar Harhoff's many years of engagement in evidence-based policy advice at the national and federal state level.

In his speech, **Prof. Dr. Josef Drexl** expressed in particular appreciation for the colleague, scientist, and person Dietmar Harhoff.

Very refreshing and impressive were the subsequent "elevator pitches", short presentations by young researchers from both the economics and law departments of the Institute, which ranged from core innovation and patent research to gender issues in innovation and entrepreneur-

ship, digital markets, platforms and artificial intelligence to green tech, and showed that the young scientists have grown and settled in interdisciplinary exchange.



In an interactive memory lane game, the Junior Research Fellows Ann-Christin Kreyer and Timm Opitz then presented surprising, interesting, and amusing facts and figures that required the knowledge and judgment of those present.

A special surprise was presented at the end of the afternoon event: In a video greeting, the Federal Minister of Education and Research Bettina Stark-Watziger honored the ten-year anniversary of the department for "Innovation and Entrepreneurship Research" as well as Dietmar Harhoff personally as a "particularly influential voice for innovation and competition" who was and is heard by policymakers.



German Federal Minister of Education and Research Bettina Stark-Watzinger.



Video Greeting (in German) of the Federal Minister of Education and Research Bettina Stark-Watzinger:

https://www.ip.mpg.de/video/ JubilaeumHarhoff_FHD.mp4 At the subsequent reception in the Institute's Grand Hall, attendees were invited to step into the time machine, and look at the project posters from the first poster session in 2013, which were set up in order to trace the significant changes and developments of the last ten years in terms of both subject matters and persons.

At the evening dinner event, which was dedicated to the exchange between the Alumni and Alumnae of the economics department and the current team, Dietmar Harhoff was thanked by his team with a special gift based on the idea and initiative of Senior Research Fellow Dr. Marina Chugunova, who researches human-machine interactions: an image generated by artificial intelligence fed with prompts from the team. The fact that humans are still indispensable for achieving outstanding creative results was demonstrated by the commitment of Sebastian Erhardt, also known as "SebGPT", who gave the result an extra boost. Special thanks for her commitment and creativity in organizing the event went to Junior Research Fellow Svenja Friess.



A special gift: AI-generated image based on prompts from department members with memories of the past years.

2 Participation in Conferences, Congresses, and Symposiums

2023

Research on Innovation, Science and Entrepreneurship Workshop (RISE6), Munich, 18/19 December 2023 (Chugunova, Erhardt, Friess, Ghosh, Harhoff, Heller, Hofmeister, Kreyer, Roger, Rose, Widmann)

2nd CESifo/ifo Junior Workshop on Big Data, Munich, 7/8 December 2023 **(Erhardt)**

NBER Innovation Information Initiative Technical Working Group Meeting, Cambridge MA, 1/2 December 2023 (Buunk, Erhardt, Ghosh)

Hanns-Martin-Schleyer Kongress, V. Interdisziplinärer Kongress Junge Wissenschaft und Praxis: Qualität und Effizienz ein Widerspruch? – Zur Zukunft exzellenter medizinischer Versorgung in wirtschaftlich herausfordernden Zeiten, Berlin, 28/29 November 2023 (Formella)

3. Gesundheitswirtschaftlicher Roundtable, Friedrich-Naumann-Stiftung für die Freiheit, Berlin, 16 November 2023 (Harhoff)

Rebuild Ukraine: Ukraine Science Diaspora Forum, IHK Frankfurt am Main, Frankfurt a. M., 9 November 2023 (Lutsenko)

20th Annual Roundtable for Engineering, Entrepreneurship Research (REER) Conference, Georgia Tech Scheller College of Business, Atlanta, 3/4 November 2023 (Harhoff)

Advances with Field Experiments Conference 2023, The University of Chicago, Chicago IL, 21/22 October 2023 (Opitz)

CEMIR Junior Economist Workshop on Migration Research, ifo Institute for Economic Research, Munich, 18/19 October 2023 **(Formella)**

CESifo Area Conference on Behavioral Economics, Munich, 13/14 October 2023 **(Chugunova, Morgalla)**

5th International ZEW Conference on the Dynamics of Entrepreneurship (CoDE), Leibniz Centre for European Economic Research (ZEW), Mannheim, 12/13 October 2023 (Heller, Kim)

13th Retreat of the Collaborative Research Center "Rationality and Competition" CRC TRR 190, Ohlstadt, 11 – 13 October 2023 (Harhoff)

Academy of Management, AMJ Paper Development Workshop, Harvard Business School, Boston MA, 4 October 2023 **(Harhoff)**

German American Conference, Transatlantic Collaboration in the Sciences, Harvard Kennedy School, Cambridge MA, 3 – 7 October 2023 (Harhoff)

26th Annual Interdisciplinary Conference on Entrepreneurship, Innovation and SMEs (G-Forum), TU Darmstadt, 27 – 29 September 2023 **(Heller)**

Annual Strategy Meeting, Max Planck Institute for Innovation and Competition, IHK Akademie Feldkirchen-Westerham, 25/26 September 2023 (numerous participants from the Institute)

25th Annual Meeting of the German Scientific Commission Technology, Innovation and Entrepreneurship (TIE), Goethe University Frankfurt, Frankfurt a. M., 21/22 September 2023 (Heller, Roger)

Research Seminar Fall 2023, Department Innovation and Entrepreneurship Research, Schloss Ringberg, 18 – 20 September 2023 (numerous participants from the Department)

Artificial Intelligence and the Economy, Joint Conference, Hertie School, IZA, Kiel Institute, Sciences Po, Berlin, 15/16 September 2023 **(Chugunova)**

24th International Continuous Innovation Network (CINet) Conference "Taking Care of Our Future: Foresight and Innovation for a Sustainable World", Johannes Kepler University (JKU) Linz, 17 – 19 September 2023 **(Lutsenko)**

Continuous Innovation Network (CINet) Conference Doctoral Workshop, Johannes Kepler University (JKU) Linz, 15/16 September 2023 **(Lutsenko)**

18th Annual Conference of the European Policy for Intellectual Property Association (EPIP), Krakow, 11 – 13 September 2023 **(Harhoff, Kreyer)**

8th Summer School on Data and Algorithms for Science, Technology and Innovation (ST&I) Studies, Barcelona, 6 – 8 September 2023 **(Cheng Li)** 83rd Annual Meeting of the Academy of Management (AoM 2023), Boston MA, 4 – 9 August 2023 **(Harhoff, Kim, Rose)**

Market Shaping for Pandemic Preparedness, German Federal Agency for Disruptive Innovation (SPRIND), Leipzig, 25/26 July 2023 (Hofmeister)

CESifo Summer School "Decision Making in Firms – Big Data & Management Practices", Venice, 21/22 July 2023 (Friess)

NBER Summer Institute, Boston MA, 17 – 22 July 2023 (Harhoff)

Matching Market Design: Strategy – Proofness and Beyond, Workshop, Berlin Social Science Center (WZB), Berlin, 14 July 2023 (Opitz)

Max Planck Climate Conference for a Sustainable Anthropocene, Harnack Haus, Berlin, 11/12 July 2023 (Harhoff, Roger)

European Patent Office Academic Research Programme (EPO ARP) Workshop, online, 11/12 July 2023 (Buunk, Erhardt, Ghosh, Heller)

1st Organizational Economics Summer Symposium (OESS), Ohlstadt, 9 – 14 July 2023 **(Friess)**

7th Entrepreneurial Finance Association Conference (ENTFIN), University of Antwerp, 6/7 July 2023 **(Heller)**

The Funding of Science and Innovation, Workshop, Politecnico di Milano, 29/30 June 2023 **(Erhardt, Harhoff)**

Economic Science Association (ESA) World Meeting, Lyon, 26 – 29 June 2023 (**Chugunova**)

The 6th WIPO-Tongji International Intellectual Property Forum, IP-Driven Innovation and Entrepreneurship, Shanghai, 26 – 28 June 2023 **(Kreyer)**

BSE Summer Forum, Barcelona School of Economics, 20 June 2023 (Heller)

Ceremonial Symposium at the farewell of Dr. Georg Licht, Alumni Day of the Leibniz Centre for European Economic Research (ZEW), Mannheim, 16 June 2023 (Harhoff, Roger)

DRUID23 Conference, Nova School of Business and Economics, Lisbon, 10 – 12 June 2023 **(Kim)**

Workshop "Interactions of Humans and Algorithms", TU Berlin, 8/9 June 2023 (Chugunova)

Workshop "Gender in Adaptive Design", Karlsruhe Institute of Technology (KIT), Karlsruhe, 5/6 June 2023 (Chugunova)

REGIS Summer School on Science, Technology and Innovation, Sant'Anna School of Advanced Studies, Pisa, 5 – 7 June 2023 (Harhoff)

Munich Summer Institute (MSI), Munich, 24 – 26 May 2023 (Buunk, Chugunova, Formella, Harhoff, Heller, Kreyer, Lutsenko, Roger, Widmann)

14th International Conference "Challenges of Europe" (with Ph.D. Workshop), Bol, Island Brač, Croatia, 17 – 19 May 2023 **(Lutsenko)**

The Role of Public Research and Innovation Measures on Mitigating Climate Change, Workshop, Kiel Institute for the World Economy (IfW), Kiel, 11/12 May 2023 (Roger)

 $12^{\rm th}$ Retreat of the Collaborative Research Center "Rationality and Competition" CRC TRR 190, Schwanenwerder, 8-10 May 2023 **(Keller)**

ÖAW-Statistik Austria Lectures, Austrian Academy of Sciences, Statistik Austria, Vienna, 9 May 2023 (Harhoff)



Interdisciplinary get-together of economics and legal researchers at the EPIP Conference in Krakow in September 2023.

(f.l.t.r.) Junior Research Fellow Ann-Christin Kreyer, Affiliated Research Fellow Prof. Dr. Stefano Baruffaldi, Prof. Dietmar Harhoff, Ph.D., Junior Research Fellow Peter R. Slowinski, Affiliated Research Fellow Prof. Dr. Dr. h.c. Annette Kur, Doctoral Student Michał Barycki.

DFG Workshop "Patente und Pandemie", German Research Foundation, Frauenwörth/Chiemsee, 3 – 5 May 2023 (Harhoff)

21th Annual GEP/CEPR Postgraduate Conference, University of Nottingham, 27/28 April 2023 **(Keller)**

16th Workshop on the Organisation, Economics and Policy of Scientific Research (WOEPSR), Munich, 13/14 April 2023 (Chugunova, Formella, Harhoff, Hofmeister, Roger, Rose, Widmann)

UAScience.reload, Інноваційне Підприємництво: Стан та Перспективи Розвитку [Innovative Entrepreneurship: State and Prospects of Development], Kyiv, 31 March 2023 (Lutsenko)

4Investors Day 2023, Max Planck Innovation, Munich, 29 March 2023 (Harhoff)

MaCCI Annual Conference, Mannheim Centre for Competition and Innovation, ZEW, Mannheim, 23/24 March 2023 (Roger)

25th Colloquium for Personnel Economics (COPE), Amsterdam, 23/24 March 2023 (Friess)

Sustainable Development – Young Researchers in Action, Heidelberg University, Heidelberg, 22 March 2023 (Roger)

Experimentation in Federal Funding, Conference, National Academies of Sciences (NAS), Washington D.C., 14/15 March 2023, online (Harhoff) CESifo Area Conference on Energy and Climate Economics, CESifo, Munich, 10/11 March 2023 (Roger)

Munich Network Forum, Munich, 2 March 2023 (Harhoff)

Research Seminar Spring 2023, Department Innovation and Entrepreneurship Research, Frauenwörth/Chiemsee, 27 February – 2 March 2023 (numerous participants from the Department)

Bavarian International Conference on AI (AI.BAY 2023), Bavarian AI Council, Munich, 23/24 February 2023 (Harhoff)

Workshop on Behavioral, Digital, and Financial Economics, Hirschegg (Austria), 3 February 2023 (Heller)

Workshop "Antimicrobial Agents", Leopoldina, Halle (Saale), 17/18 January 2023 (Harhoff)

Retreat of the CSU Parliamentary Group, Kloster Banz, 16 January 2023 (Harhoff)

Green Innovation Seminar, Max Planck Institute for Innovation and Competition, Schloss Ringberg, 13/14 January 2023 (Harhoff, Hofmeister, Mingpei Li, Roger, Rujan)

Workshop "Radikale Innovationen", Department Innovation and Entrepreneurship Research and external participants, Schloss Ringberg, 11 – 13 January 2023 (Erhardt, Harhoff, Heller, Hofmeister, Kreyer, Roger)

Allied Social Science Association (ASSA) Annual Meeting, New Orleans LA, 6 – 8 January 2023 (**Chugunova, Harhoff, Rose, Widmann**)



Annual Strategy Meeting of the Institute at the IHK Akademie Feldkirchen-Westerham in September 2023.

2022

4th NOeG WU Winter Workshop, Nationalökonomische Gesellschaft, WU Vienna University of Economics and Business, Vienna, 20 – 22 December 2022 **(Widmann)**

8th Paris Financial Management Conference (PFMC-2022), Paris, 19 – 21 December 2022 **(Heller)**

Australian Summer School in Dynamic Structural Econometrics (DSE), Australian National University, Canberra, online, 13 – 19 December 2022 (Roger)

Research on Innovation, Science and Entrepreneurship Workshop (RISE5), Munich, 19/20 December 2022 (Buunk, Chugunova, Erhardt, Friess, Gaessler, Ghosh, Harhoff, Hofmeister, Keller, Roger)

20th Paris December Finance Meeting, Paris, 15 December 2022 **(Heller)**

The 35th Conference of Deans of Graduate Schools Related to International Cooperation and Development, University of Tokyo, online, 5 December 2022 **(Lutsenko)**

NBER Innovation Information Initiative Technical Working Group Meeting, Boston MA, 2/3 December 2022 (Brachtendorf, Gaessler, Harhoff)

2nd Decision Making for Others Conference (DMfO), University of Portsmouth, 26 – 28 November 2022 (Chugunova)

TechForum 2022, Stiftung Familienunternehmen, Munich, 24 November 2022 (Harhoff)

19th Shanghai International Intellectual Property Forum, Shanghai, online, 19 November 2022 **(Harhoff)**

Bayerischer Digitalgipfel "Markt. Wirtschaft. Digital", Bavarian State Ministry for Digital Affairs, Nuremberg, 17 November 2022 (Harhoff)

Intellectual Property and U.S. Movie Finance, WIPO, Geneva, 15 November 2022 (Heller)

International Conference for Innovation and Entrepreneurship (Innodays), Casablanca, 5 – 7 November 2022 (**Defort**)

9th ZEW/MaCCI Conference on the Economics of Innovation and Patenting (INNOPAT), Leibniz Centre for European Economic Research (ZEW), Mannheim, 3/4 November 2022 (Gaessler, Harhoff, Heller, Roger, Widmann)

14th Opinion Leader Meeting, German Society of Internal Medicine (DGIM), Schloss Hohenkammer, 28/29 October 2022 (Harhoff)

4th Swiss Workshop on Local Public Finance and Regional Economics, University of Bern, 21 October 2022 **(Widmann)**

Predictive People Analytics (PPA) Summit 2022: The Power of Data for HR, Munich, 13 October 2022 (Friess)

13. Deutscher Maschinenbau Gipfel "Zukunft produzieren", Berlin, 11/12 October 2022 **(Harhoff)**

Authors' Conference "The New Role of the State for Transformative Innovation", Schloss Herrenhausen, Hannover, 9 – 11 October 2022 (Harhoff)

11th Retreat of the Collaborative Research Center "Rationality and Competition" CRC TRR 190, Tutzing, 5 – 7 October 2022 **(Chugunova, Harhoff)**

2nd Berlin Workshop on Empirical Public Economics: Gender Economics, FU Berlin, 4/5 October 2022 **(Chugunova, Friess)**

Building a Global Ethical Framework for AI, Bucharest Conference on the UNESCO Recommendation on the Ethics of AI, Politehnica University of Bucharest, 4 October 2022 (Harhoff)

28th Annual Meeting of the German Finance Association (DGF), Philipps-Universität Marburg, 29 September – 1 October 2022 **(Heller)**

Workshop "Algorithms & Economic Behavior", TU Hamburg, 29/30 September 2022 (Chugunova)

7th Summer School on Data and Algorithms for Science, Technology and Innovation (ST&I) Studies, KU Leuven, 21 – 23 September 2022 **(Ghosh)**

Annual Strategy Meeting, Max Planck Institute for Innovation and Competition, Grassau, 22/23 September 2022 (numerous participants from the Institute)

17th Annual Conference of the European Policy for Intellectual Property Association (EPIP), Cambridge University, Cambridge, UK, 14 – 16 September 2022 **(Heller, Rujan)**

Forschungsdatenmanagement in der Max-Planck-Gesellschaft (5. FDM Workshop), Max Planck Digital Library, online, 13/14 September 2022 (Buunk)

VfS Jahrestagung 2022, Annual Congress of the German Economic Association (Verein für Socialpolitik), Basel, 11 – 14 September 2022 (Opitz)

Joint CEPR Conferences Incentive, Management & Organization (IMO) and Entrepreneurship (ENT), Munich, 8/9 September 2022 **(Friess)**

Symposium, German Scientific Commission Technology, Innovation and Entrepreneurship (WK TIE) of the German Academic Association for Business Research (VHB), Kassel, 8 September 2022 (Harhoff) Research Seminar Fall 2022, Department Innovation and Entrepreneurship Research, Bernried, 5 – 7 September 2022 (numerous participants from the Department)

49th European Association for Research in Industrial Economics (EARIE) Annual Conference, University of Vienna, 25 – 27 August 2022 **(Rujan)**

82nd Annual Meeting of the Academy of Management (AoM 2022), Seattle, online, 5 – 9 August 2022 **(Friess, Harhoff, Kreyer)**

NBER Summer Institute, Boston MA, 16 – 22 July 2022 (Harhoff)

Sustainability – Changing Paradigms in Innovation and Competition? Conference of the Max Planck Institute for Innovation and Competition in collaboration with the MPI Alumni Association, Munich, 15 July 2022 (Harhoff)

Munich International Economics Retreat, ifo Institute for Economic Research, Munich, 14 July 2022 (Keller)

CURIOUS2022 Future Insight Conference, Darmstadt, 12 July 2022 (Harhoff)

Symposium "Wissenschaftsforschung im Fokus – Potentiale und Neue Perspektiven", VolkswagenStiftung, Hannover, 6/7 July 2022 (Harhoff, Hofmeister)

6th Solomon Lew Conference on Behavioral Economics, Tel Aviv, 5/6 July 2022 **(Chugunova)**

6th Geography of Innovation Conference (GEOINNO2022), Bocconi University, Milan, 4 – 6 July 2022 **(Rujan, Widmann)**

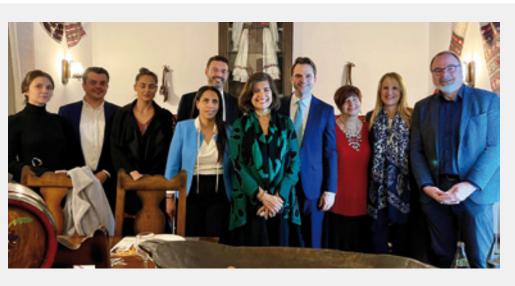
15th International Risk Management Conference (IRMC2022), The Risk Banking and Finance Society, Bari, 4/5 July 2022 **(Heller)**

Shaping the Internet for the Future, Workshop on Net Neutrality, Munich, 24/25 June 2022 (Erhardt)

Bavarian Micro Day – 2022 Summer, FAU Erlangen-Nuremberg, 24 June 2022 **(Rujan)**

73rd Annual Meeting of the Max Planck Society, Berlin, 23 June 2022 **(Harhoff)**

2022 NOVAFRICA Conference on Economic Development, Lisbon, 22/23 June 2022 (Opitz)



On 4 October 2022, Dietmar Harhoff, member of the UNESCO High-Level Expert Group (HLEG) on the Implementation of the AI Recommendation since December 2021, participated as an expert in the conference on "Building a Global Ethical Framework for AI: The UNESCO Recommendation on the Ethics of AI" in Bucharest, which addressed the guidelines on the design, development, and use of AI systems adopted in November 2021. The conference focused on the need to promote diversity and inclusiveness, and on how to move from principles to practice to assess the ethical impact of Artificial Intelligence on society.

Photo: Participants of the UNESCO conference in Bucharest. Center: Gabriela Ramos, Assistant Director-General for the Social and Human Sciences of UNESCO, with Sebastian-Ioan Burduja, Romanian Minister of Research, Innovation and Digitalization. Right: Dietmar Harhoff and Mariagrazia Squicciarini, Chief of Executive Office, Social and Human Sciences Sector at UNESCO.

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Internationaler Förderkongress "Junge Wissenschaft und Wirtschaft", Hanns Martin Schleyer-Stiftung & ifo Institute for Economic Research, Munich, 15/16 June 2022 (Keller)

Economic Science Association (ESA) World Meeting, Boston/Cambridge MA, 13 – 16 June 2022 (Chugunova, Friess)

Symposium "The Role of Intellectual Property in Times of Radical Change", Max Planck Institute for Innovation and Competition, Haus der Bayerischen Wirtschaft, Munich, 13/14 June 2022 (Harhoff)

5th Annual Strategy Science Conference, New York City, 10/11 June 2022 (Friess)

Munich Summer Institute (MSI), Munich, 8 – 10 June 2022 (Chugunova, Erhardt, Ghosh, Harhoff, Heller, Hofmeister, Kreyer, Roger, Rujan)

Teams and Organizations, Workshop, CESifo, Munich, 1/2 June 2022 (Chugunova)

The Economics and Organisation of Science, DFG Workshop, Heilbronn, 18 – 20 May 2022 (Rose)

Columbia/Wharton Management, Analytics, and Data Conference (MAD), New York City, 13/14 May 2022 (Friess)

IAO Führungskräftetagung, Fraunhofer Institute for Industrial Engineering (Fraunhofer IAO), Blaubeuren, 12 May 2022 (Harhoff)

20th Annual GEP/CEPR Postgraduate Conference, University of Nottingham, online, 28 – 30 April 2022 (Rujan)

Research Seminar Spring 2022, Department Innovation and Entrepreneurship Research, Ohlstadt, 11 – 14 April 2022 (numerous participants from the Department)

European Patent Office Academic Research Programme (EPO ARP), Kick-off Workshop, Munich, 8 April 2022 (Erhardt)

SIIB 2022: Research in Turbulent Times – New Thinking, The British Academy of Management, 6 April 2022 (Lutsenko)

Symposium "Need-based Justice", Final Conference, DFG FOR 2104, 22 March 2022 (Chugunova)

12th Annual Conference on Health IT and Analytics (CHITA), Washington DC, 4/5 March 2022 **(Kreyer)**

Future of Work Conference, International Centre for Economic Analysis, University of New Brunswick, online, 24/25 February 2022 (Chuqunova, Keller)

22nd Annual University of Utah Winter Strategy Conference, Park City UT, 28 January 2022 **(Gaessler)**



Dietmar Harhoff at the CURIOUS2022 Future Insight Conference in July 2022.

Photo: Julian Huke.

2021

Roundtable "Mechanisms, Governance, and Policy Impact of SEP Determination Approaches", Northwestern Pritzker School of Law, online, 7 December 2021 (Gaessler)

Research on Innovation, Science and Entrepreneurship Workshop (RISE4), Munich, online, 6/7 December 2021 (Chugunova, Friess, Harhoff, Heller, Hofmeister, Keller, Kreyer, Opitz, Poege, Rujan, Wernsdorf)

NBER Innovation Information Initiative Technical Working Group Meeting, Boston MA, 3/4 December 2021 **(Poege)**

Research Seminar Winter 2021, Department Innovation and Entrepreneurship Research, Schloss Ringberg, 1 – 4 December 2021 (numerous participants from the **Department**)

CESifo Area Conference on the Economics of Digitization, online, 19/20 November 2021 (Chugunova)

The Interaction between Humans and Machines in the Age of Artificial Intelligence, Symposium, Münchner Kreis, online, 17 November 2021 **(Chugunova)**

"Aus Präzision wird Innovation", Joint event of Johannes Gutenberg University Mainz with its PRISMA+ Cluster of Excellence, German U15, and the Representation of the State of Rhineland-Palatinate to the Federal Government, Berlin, hybrid event, 10 November 2021 (Harhoff)

OECD Review of Innovation Policy: Germany, online, 4 November 2021 (Harhoff)

81st Annual Meeting of the Economic History Association, Tucson AZ, 29 – 31 October 2021 **(Poege)**

CESifo Area Conference on Behavioral Economics, online, 29/30 October 2023 (Chugunova)

Open Science Days 2021, Max Planck Digital Library, online, 19/20 October 2021 (Buunk)

DRUID21 Conference, Copenhagen Business School, Copenhagen, 18 – 20 October 2021 (Byrski, Gaessler, Keller, Widmann)

Digitale Transformation gestalten – verantwortungsvoll, souverän, europäisch, bidt Conference 2021, Bavarian Research Institute for Digital Transformation (bidt), Munich, hybrid event, 13/14 October 2021 (Harhoff)

 8^{th} OECD Forum on Green Finance and Investment 2021, online, 11 - 14 October 2021 (Rujan)

9th Retreat of the Collaborative Research Center "Rationality and Competition" CRC TRR 190, Ohlstadt, 11 – 13 October 2021 (Chugunova, Harhoff, Keller, Widmann)

TechForum 2021, Unternehmer TUM, Munich, 8 October 2021 (Harhoff)

Innovation Summit, The Future of German Competitiveness: How German Institutions Navigate Disruption, INNOSIGHT, Berlin, 6/7 October 2021 **(Harhoff)**

Research Seminar Fall 2021, Department Innovation and Entrepreneurship Research, IHK Akademie Feldkirchen-Westerham, 29 September – 1 October 2021 (numerous participants from the Department)

VfS Jahrestagung 2021, Annual Congress of the German Economic Association (Verein für Socialpolitik), Regensburg, online, 26 – 29 September 2021 (Harhoff, Opitz, Poege, Wernsdorf)

Annual Strategy Meeting, Max Planck Institute for Innovation and Competition, Munich, 27/28 September 2021 (numerous participants from the Institute)

NBER Economics of Artificial Intelligence Conference, online, 23/24 September 2021 (Keller)

OpenDP Community Meeting, Harvard IQSS, online, 22 – 24 September 2021 (Buunk)

16th Annual Conference of the European Policy for Intellectual Property Association (EPIP), Madrid, hybrid event, 8 – 10 September 2021 (Byrski, Gaessler, Harhoff, Heller, Kreyer, Rujan)

Innovation Dialogue of the Federal Government, Federal Chancellery, Berlin, 2 September 2021 (Harhoff)

48th European Association for Research in Industrial Economics (EARIE) Annual Conference, Bergen, online, 27/28 August 2021 (Chugunova, Harhoff, Poege, Wernsdorf)

14th Annual Conference on Innovation Economics, USPTO/Kellog, online, 20 August 2021 (Harhoff, Heller)

81st Annual Meeting of the Academy of Management (AoM 2021), online, 30 July – 3 August 2021 (Gaessler, Wang)

IP Days Conference 2021, TPRI/Boston University, online, 29/30 July 2021 (Poege)

11th RCEA Money Macro and Finance Conference, online, 27 July 2021 (Heller)

NBER Summer Institute, Cambridge MA, 22/23 July 2021 (Harhoff)

14th International Health Economics Association (iHEA) World Congress, online, 13 July 2021 **(Wang)**

Economic Science Association (ESA) World Meeting, ESA 2021 Global Online Around-the-Clock Conference, online, 7 – 9 July 2021 **(Opitz)**

China Insight, Digital Forum for China Competence, "What's Next for Our Cooperation with China?" – Partnership in Challenging Times, Max Planck Society, online, 2 July 2021 (Harhoff)

Bavarian Young Economists' Meeting, online, 30 June – 2 July 2021 (Keller, Wernsdorf)

G20 Multi-Stakeholder Forum "Digital Transformation in Production for Sustainable Growth", online, 23 June 2021 (Harhoff)

10th Annual Conference of the American Society of Health Economists (ASHEcon 2021), online, 21 – 23 June 2021 (Wang)

25th Spring Meeting of Young Economists (SMYE 2021), University of Bologna, online, 17 – 19 June 2021 **(Wang)**

Nordic Conference in Development Economics (NCDE), Bergen, online, 15/16 June 2021 (Opitz)

Kongress für Hochschul-Innovation – Kernelemente eines zukunftsfähigen Hochschulsystems: Wie organisieren wir in Zukunft Schnittstellen zwischen Wissenschaft, Wirtschaft und Gesellschaft? Bavarian State Ministry of Science and the Arts, Stifterverband, Heinz Nixdorf Foundation, Munich, hybrid event, 14 June 2021 (Harhoff)

Babson College Entrepreneurship Research Conference (BCERC), online, 10/11 June 2021 (Defort)

International Workshop for Early Career Economists: Shaping Globalization – Economic Consequences and Policy Responses, JGU Mainz, online, 10/11 June 2021 (Rujan)

19th ZEW Conference on the Economics of Information and Communication Technologies, online, 10/11 Juni 2021 **(Wernsdorf)**

Handelsblatt GovTech Gipfel, online, 10 June 2021 (Harhoff)

The Economics of Creative Destruction: A Festschrift Symposium in Honor of Philippe Aghion and Peter Howitt, online, 9 – 11 June 2021 **(Chugunova)**

Munich Summer Institute (MSI), Munich, online, 7 – 9 June 2021 (Harhoff, Heller, Keller, Poege, Rujan)

Public expert discussion "Innovationen zum Durchbruch verhelfen – Mit der Innovationsagentur D. Innova in eine nachhaltige Zukunft", Bundestag Parliamentary Group Bündnis 90/Die Grünen, online, 4 June 2021 **(Harhoff)**

Industry Studies Association Annual Conference (ISA 2021), online, 2 – 4 June 2021 (Wang)

Research Data Management & Infrastructures in the Humanities, Workshop, Max Planck Digital Library, online, 1 June 2021 **(Buunk)**

Expert discussion on the further development of the NRW digital strategy, Ministry of Economic Affairs, Innovation, Digitalization, and Energy of the State of North Rhine-Westphalia (NRW), online, 1 June 2021 (Harhoff)

Evidence-Based Economics & CRC TRR 190 (EBE/CRC) Summer School 2021: Applied Microeconomics – Topics and Methods, online, 26/27 May 2021 **(Poege)**

8th Retreat of the Collaborative Research Center "Rationality and Competition" CRC TRR 190, Schwanenwerder, online, 10/11 May 2021 (Poege)

NASEM Innovation, Global Value Chains, and Globalization Measurement, Workshop, National Academies of Sciences, online, 5 – 7 May 2021 (Rujan)

Forschungsdatenmanagement in der Max-Planck-Gesellschaft (4. FDM Workshop), Max Planck Digital Library, online, 5 – 6 May 2021 (Buunk)

19th Annual International Industrial Organization Conference (IIOC), online, 30 April – 2 May 2021 **(Wang)** INSEAD Workshop, Venture Capital, Business Angels, and Start-ups, online, 26 March 2021 (Harhoff)

Research Seminar Spring 2021, Department Innovation and Entrepreneurship Research, online, 23 – 26 March 2021 (numerous participants from the Department)

The NEXUS:ISRAEL Dealmakers Summit, online, 23/24 March 2021 (Chugunova)

NBER Economics of Digitization Conference, online, 19 March 2021 (Wernsdorf)

The Evolution, Persistence and Success of Entrepreneurial Ecosystems, Workshop Series, University of Cardiff, online, 18 and 25 March/15, 22 and 29 April 2021 (**Defort**)

MaCCI Annual Conference, Mannheim Centre for Competition and Innovation, online, 11/12 March 2021 (Gaessler, Wang)

20th International Conference on Competition, Bundeskartellamt, Berlin, online, 4 March 2021 (**Harhoff, Heller**)

14th RGS Doctoral Conference in Economics, Ruhr Graduate School in Economics (RGS Econ), Essen, online, 3/4 March 2021 (Wernsdorf)

Workshop on Field Experiments in Strategy, Innovation and Entrepreneurship (now: Conference on Field Experiments in Strategy CFXS), online, 26 February 2021 (Chugunova)

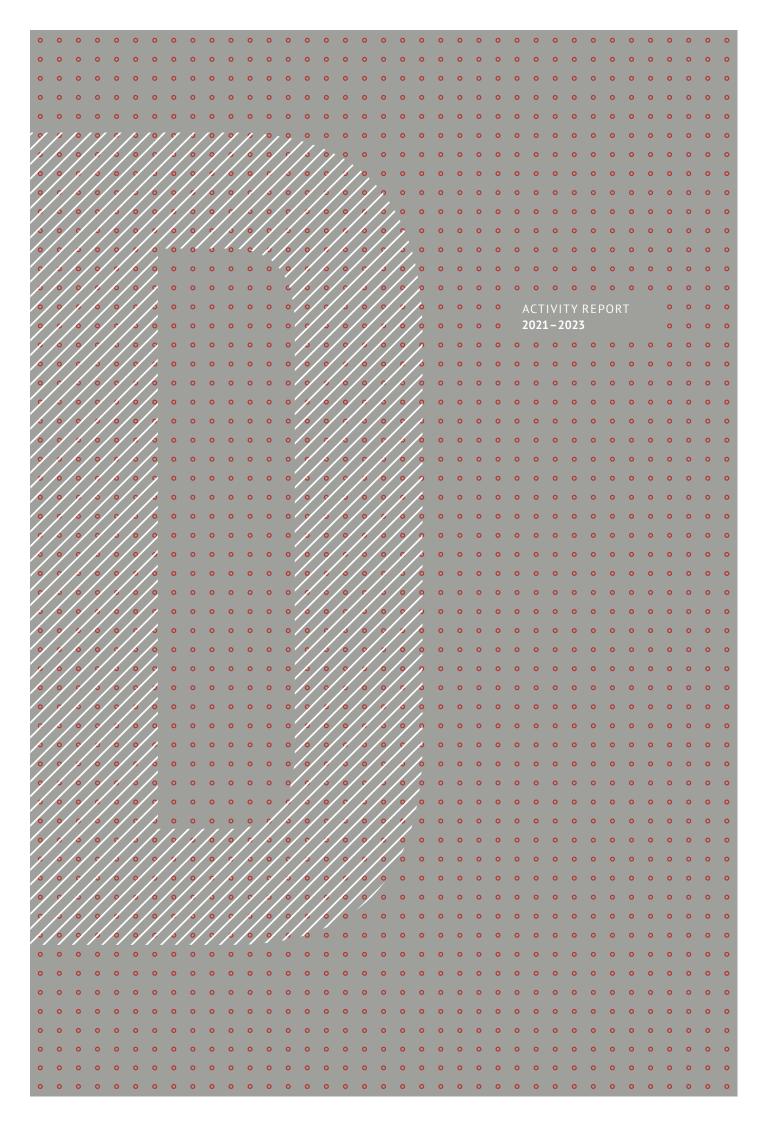
Expert Workshop "Digitale Innovationspotenziale für den Klima- und Umweltschutz", Bavarian State Ministry for Digital Affairs, online, 5 February 2021 (Harhoff)

International Conference on AI in Work, Innovation, Productivity, and Skills: Core and No-Core AI, OECD, Paris, online, 1 – 5 February 2021 **(Harhoff)**

Harvard DataFest 2021, A Data Science Bootcamp for Better Research, Harvard IQSS, online, 19 – 22 January 2021 (Buunk)

European Patent Office Academic Research Programme (EPO ARP) Workshop, online, 19/20 January 2021 (Brachtendorf, Harhoff, Heller)

Allied Social Science Association (ASSA) Annual Meeting/ American Economic Association (AEA) Annual Meeting, online, 6/7 January 2021 (Harhoff)



Munich Intellectual Property Law Center (MIPLC) Cooperation Project

Since 2003, the Max Planck Society, the University of Augsburg, the Technical University of Munich, and the George Washington University Law School in Washington, D.C., have offered an English-language master's degree program (LL.M.) within the framework of the Munich Intellectual Property Law Center Cooperation Project (MIPLC, www. miplc.de). Over the years, this program has earned the reputation of being one of the world's elite programs in the field of intellectual property and competition law.

From a scientific perspective, the MIPLC Cooperation Project helps the Institute to identify young talented candidates from all over the world who may be interested in pursuing a doctoral degree following the completion of their LL.M. studies. While the LL.M. program is financed by tuition, the Max Planck Society provides the Max Planck Institute with additional annual research funds that serve the scientific purposes of the MIPLC Cooperation Project, in particular the promotion of doctoral students. The Institute alone decides on the use of these funds within the framework of a department established specifically for this purpose (hereinafter "MIPLC Research Unit") and is evaluated by the Institute's Academic Advisory Board.

The LL.M. Program

The MIPLC LL.M. Program stands as a beacon of international and interdisciplinary legal education, embodying the principles of excellence and continuous innovation. A notable highlight during this reporting period is the successful accreditation of the LL.M. program in 2022. For the third time in its 20-year history, a committee of experts affirmed the elite and unique nature of the MIPLC LL.M. program, acknowledging the clear commitment to maintaining the highest standards in legal education and research.

Diversity defines the MIPLC student community, comprising an average of approximately 30 scholars from over 20 countries. Beyond nationality, students bring a wealth of professional and educational backgrounds. Approximately two-thirds of the cohort boast legal expertise, while the remaining third

have degrees and experience in natural sciences and business. This dynamic mix fosters an enriched learning atmosphere characterized by robust knowledge exchanges among peers.

The MIPLC faculty presents a global tapestry of experts from universities and research institutions. This faculty, extending beyond legal scholars to include professionals from economics and business, embodies the international essence of the MIPLC Cooperation Project. The composition of the faculty is strategic, aiming to equip students with the requisite knowledge for successful careers, recognizing the significance of international legal trends and economic concepts.

In response to the dynamic landscape of innovation and competition, the MIPLC curriculum recently underwent significant changes. These revisions, implemented for the 2023/24 academic year, aim not only to modernize the course offerings but also to strengthen collaboration among the cooperation partners. For example, for the first time, graduates of the MIPLC LL.M. program will be awarded a joint degree from the Technical University of Munich as well as the University of Augsburg. In addition, faculty of the cooperation partners will teach many of the newly introduced courses. As noted, the occasion of the accreditation presented an opportune moment to align the LL.M. program with the research emphasis of the Max Planck Institute for Innovation and Competition. The focus on the impact of digitalization on innovation and competition, with special attention to artificial intelligence and the role of data in the modern economy, ensures that the curriculum remains at the forefront of legal and technological developments.

From a structural point of view, the program of study remains comprised of four main modules: the **Introductory Module**, the **Basic Modules**, the **Elective Modules**, and the **Thesis Module**. However, both the contents as well as the relative weight of each module has been modified.

The Basic Module curriculum now includes a module dedicated to the study of Innovation and Competition Law. The inclusion of this module, taught by Prof. Dr. Michael Kort of the University of Augsburg and Prof. Dr. Josef Drexl of the Max Planck Institute for Innovation and Competition, is an overdue recognition of the preeminence of the Institute in the field of Innovation and Competition. The knowledge conveyed in this module forms an essential prerequisite to the elective section of the curriculum dealing with the law of digital services and markets.

The Basic Module curriculum now also includes a Data Law module. The addition of this module, taught by Dr. Lucie Antoine of the Ludwig-Maximilians-Universität (LMU) Munich and Prof. Dr. Benedikt Buchner of the University of Augsburg, aligns the LL.M. program more closely with the research agenda of the Institute. The Data Law module also very clearly responds to student research interests, exemplified by the increased number of master's thesis topics dedicated to the study of data-related issues.

The Elective Modules have been completely overhauled and now signal the innovative nature of the new curriculum. With the addition of cuttingedge modules such as The Law of Digital Services and Markets, Digital Technology Regulation, Innovation and Technology Management, and Regulation of the Life Sciences, the Elective Module curriculum has evolved to offer specialized knowledge in crucial domains of innovation. Notably, there has also been a significant expansion of this section of the LL.M. program, with the Elective Modules now constituting one-third of the curriculum. This empowers students to tailor their academic journey, fostering a deeper understanding of intricate subjects such as Artificial Intelligence, Data Law, the Platform Economy, Digital Health, and the intersection of Ecological Sustainability with IP (only to name a few). The enhanced Elective Module offering ensures that MIPLC graduates emerge not only with a robust foundation of knowledge on core IP and Competition issues but also as experts in other essential fields of law. MIPLC graduates complete the program and are immediately ready to navigate the complexities of intellectual property, innovation, data and competition law.

Impact of COVID-19

The onset of the COVID-19 pandemic in March 2020 necessitated swift and adaptive measures in the administration of the MIPLC LL.M. program. Responding to the unprecedented challenges, MIPLC seamlessly transitioned to remote lectures within a matter of days, ensuring the continuity of academic activities. This shift not only demonstrated resilience but also had positive externalities on the remote working conditions at the Max Planck Institute, fostering an environment conducive to ongoing research and collaboration.

Unfortunately, the pandemic introduced persistent travel restrictions, affecting not only the immediate period in 2020 but extending into 2021. These restrictions posed significant challenges for students, faculty, and staff, disrupting the traditional dynamics of international collaboration and cultural exchange that are intrinsic to the MIPLC experience. Despite these adversities, the dedicated MIPLC staff, in collaboration with faculty, worked tirelessly to ensure the smooth administration of the program. Adapting to the virtual landscape, faculty, staff, and students employed innovative strategies to maintain the high standards of education, providing two graduating classes with excellent educational environments.

Internship Program

The MIPLC Internship Program offers an enriching opportunity for students to complement their LL.M. studies with hands-on, practical experience. This optional program allows students to immerse themselves in longer-term internships, applying the theoretical and practical knowledge acquired during their LL.M. program to real-world scenarios.

To facilitate the placement of students in valuable internship positions, MIPLC actively seeks collaboration with esteemed law firms, companies, national and international IP offices/organizations,

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Welcome Day, Class 2023.

and NGOs. The extensive network, comprising both longstanding and new partners, provides a diverse array of opportunities for students to engage with the professional landscape.

By the time students embark on their internships, they have acquired significant theoretical and practical expertise in intellectual property, data and competition law. This unique blend of knowledge, coupled with their prior professional experience, positions them as valuable contributors to the daily operations of our internship sponsors. The reciprocal nature of this relationship is evident as our sponsors appreciate the fresh perspectives and advanced training students bring to their organizations. Many of the sponsors have fostered enduring partnerships, annually welcoming new students to their teams. This symbiotic connection between students and internship sponsors not only benefits the individuals involved but also contributes to the overall success and richness of the MIPLC community.

Alumni Network

Since its establishment in 2003, almost 600 individuals have successfully concluded the LL.M. program. Whether they have ascended to leadership roles or embarked on the initial steps of their professional journey, these individuals collectively shape the "MIPLC Alumni Network", a closely-knit assembly of global experts in intellectual property and competition law.

Established in 2012 and centrally administered by the MIPLC Cooperation Project, the MIPLC Alumni Network automatically welcomes all LL.M. program graduates into its fold. Unsurprisingly, mirroring the diverse composition of the MIPLC student body, the network exudes a distinctly international character. Furthermore, it proudly encompasses a diverse array of intellectual property and competition law experts highlighting their expertise across an extensive spectrum of fields and jurisdictions.

The network actively encourages alumni to maintain connections with the MIPLC and engage in various activities. These activities encompass interactions with current students, active participation in MIPLC events like the MIPLC Lecture Series, the Career Talks series, presenting their firms or law practices as potential employers and/or internship sponsors, and, crucially, contributing to the ongoing development of both the network and the MIPLC.

Alumni Conferences

The MIPLC Alumni Conference stands as a dynamic forum where alumni, current students, and supporters of the MIPLC forge and nurture meaningful personal connections and professional networks. Annually, MIPLC Alumni from across the globe convene in Munich to rekindle friendships, engage with other

members of the MIPLC community, and delve into captivating presentations on the latest developments in IP and competition law.

The distinctive strength of MIPLC lies in the unified diversity of its student body and alumni network. Students worldwide choose MIPLC to exchange unique perspectives on policymaking, research, and practice. Despite differing experiences and viewpoints, a shared frame of reference for interpreting fundamental issues in IP and competition law unites all. To highlight this diversity of perspectives, alumni are annually encouraged to submit creative ideas for conference presentations covering any aspect of IP or competition law. This approach ensures that the conference remains a genuine reflection of what motivates MIPLC alumni – a relentless quest to question, explore, and better understand IP and competition law.



Graduation 2022.

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The annual alumni conference receives vital support from the "Friends of MIPLC e.V"., an association founded in 2014 to bolster the ongoing development and success of the MIPLC Cooperation Project. Beyond organizing and hosting the conference, the association plays a pivotal role by awarding scholarships to students in need of financial assistance. This function is especially crucial in enabling qualified candidates from the developing world to participate in the program of study.

In light of the negative impact of COVID-19, no conferences were held from 2021 to 2023. However, the 9th Annual MIPLC Alumni Conference takes place on 20 April 2024, providing a much-anticipated opportunity for renewed connections, insightful discussions, and the vibrant exchange of ideas.

MIPLC Research Unit

In order to coordinate the integration of the MIPLC into the achievement of the Institute's goals, the Institute has established an MIPLC Research Unit. The Max Planck Society also provides the Institute with annual research funds that serve the scientific purposes of the MIPLC, in particular the promotion of doctoral students. The Institute alone decides on the use of these funds and is evaluated in this respect by the Institute's Academic Advisory Board.

The Institute's research interest in the MIPLC is multifaceted. First, the LL.M. program is an important mechanism for identifying highly qualified doctoral students. Over the course of the academic year, the Institute gets to know students both personally (in

> For more information on the MIPLC Alumni Network, please visit:

https://www.miplc.de/alumni

For more information on the "Friends of MIPLC e.V.", please visit:

http://friends-miplc.org



Prof. Dr. Josef Drexl, Prof. Robert Brauneis, J.D. (George Washington University Law School), and Prof. Dr. Michael Kort (University of Augsburg).

terms of goal orientation) and professionally (in terms of qualifications). This experience allows only "the best of the best" to be admitted to the MIPLC doctoral program.

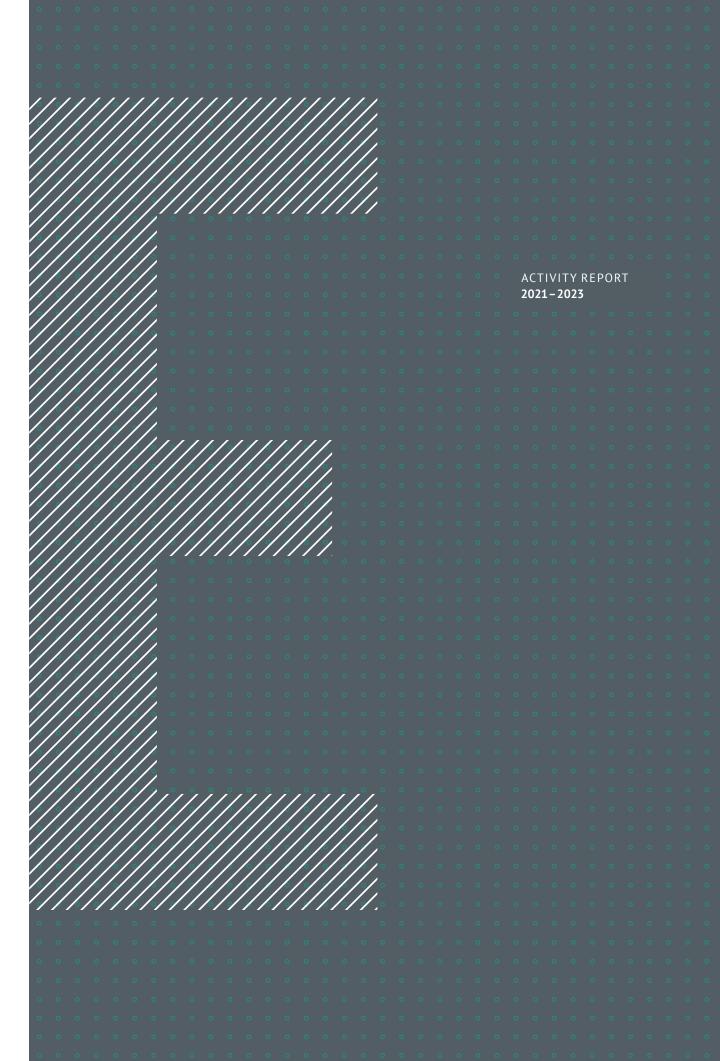
Also worthy of note is the scholarly achievement that the LL.M. students provide in the form of the master's thesis. Due to the in-depth knowledge of the field of law provided by the LL.M. program, quite a few students submit excellent theses.

MIPLC Lecture Series

Within the framework of the MIPLC Lecture Series, initiated in 2005, the MIPLC invites renowned scholars and practitioners from all over the world to give presentations on current issues of intellectual property and competition law. The lectures are organized with the support of and hosted at the Max Planck Institute for Innovation and Competition. They are aimed at the greater IP and competition law community and are thus open to the public.

MIPLC Publications

In cooperation with Nomos Verlag, the MIPLC publishes the dissertations of the MIPLC Research Unit in the English-language "MIPLC Studies". Further, in order to ensure broad dissemination and to increase visibility of the MIPLC Cooperation Project, a select number of high-quality master's theses are published on the Social Science Research Network (SSRN) website under the logo of the MIPLC Cooperation Project.



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Organisation und Ausstattung

I Publikationswesen

GRUR International

Die Zeitschrift GRUR International – Journal for European and International IP Law ist eine monatlich erscheinende Fachzeitschrift, deren inhaltlicher Schwerpunkt auf dem Recht des geistigen Eigentums, dem Wettbewerbsrecht und verwandten Rechtsgebieten liegt. Die Zeitschrift wurde 1952 als GRUR Int. gegründet. Das heutige Max-Planck-Institut für Innovation und Wettbewerb übernahm 1967 die wissenschaftliche Leitung der Zeitschrift. Wirtschaftlicher Träger der Zeitschrift ist bis heute die Deutsche Vereinigung für Gewerblichen Rechtsschutz und Urheberrecht (GRUR). Die GRUR hat kürzlich bekannt gegeben, dass ihr englischer Name Anfang 2024 von "German Association for the Protection of Intellectual Property" zu "German Association for Intellectual Property Law" geändert werden soll. Diese Änderung wird auch auf dem Titelblatt der GRUR International zu sehen sein.

Die Traditionszeitschrift wurde Anfang 2020 von ihrem hybriden, deutsch-englischen Format in eine rein englischsprachige Zeitschrift umgewandelt. Seit diesem Zeitpunkt liegt auch die verlegerische Hauptverantwortung beim renommierten Oxford University Press Verlag. Der C.H. Beck Verlag übernimmt weiterhin den Vertrieb der Zeitschrift für Abonnenten in den deutschsprachigen Ländern. Darüber hinaus wurde mit diesen Neuerungen auch ein unabhängiges Peer-Review-Verfahren eingeführt. Artikel, die in der GRUR International veröffentlicht werden, werden durch zwei Peer-Reviewer aus einer Datenbank von mehr als 90 Fachleuten aus der ganzen Welt begutachtet. Seit April 2023 ist die GRUR International in Scopus indexiert, einer der weltweit führenden Abstract- und Zitationsdatenbanken für wissenschaftliche Publikationen.

Inhaltlich liegt der Schwerpunkt der Zeitschrift weiterhin auf dem Gewerblichen Rechtsschutz und dem Wettbewerbsrecht in zivilrechtlichen Rechtsordnungen. Jede Ausgabe enthält ein Editorial, drei akademische Aufsätze und einen ausführlichen Rechtsprechungsteil mit einschlägigen Entscheidungen im Bereich des Marken-, Urheber-, Geschmacksmusterund Patentrechts sowie des Rechts des unlauteren Wettbewerbs, des Kartellrechts und des Datenschutzrechts. Die Entscheidungen stammen überwiegend aus nicht-englischsprachigen Rechtsordnungen. Die Redaktion gibt hochwertige Übersetzungen dieser Entscheidungen ins Englische in Auftrag, um sie für die vergleichende Forschung und Praxis verfügbar zu machen. Darüber hinaus veröffentlicht die Zeitschrift regelmäßig eine Vielzahl anderer Beiträge in den Kategorien Meinungen, Berichte, offizielle Stellungnahmen, Case Notes und Buchbesprechungen.



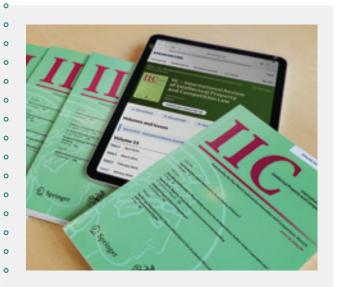
Seit 2021 hat die Zeitschrift drei Aufrufe zur Einreichung von Beiträgen für Sonderausgaben (Special Topic Issues) veröffentlicht. Diese führten zu Heft 5/2021 über IP-Lizenzverträge und Heft 10/2022 über die Regulierung der digitalen Wirtschaft – Wettbewerbsrecht, Datenschutz und Fragen des geistigen Eigentums (The Regulation of the Digital Economy - Competition Law, Data Protection, and Intellectual Property Issues). Die dritte Sonderausgabe erscheint 2024 zum Thema "Innovation zur Bewältigung des Klimawandels - Regulatorische Anforderungen und die Auswirkungen von IP-Recht und Wettbewerbspolitik" (Innovation to Tackle Climate Change – Regulatory Requirements and the Impact of IP Law and Competition Policy).

Die Herausgeber der Zeitschrift sind Prof. Dr. Josef Drexl und Prof. Dr. h.c. Reto M. Hilty. In der Zeit von 2022 bis 2023 verabschiedete das Redaktionsteam die Executive Editors Gabriele Spina Ali und Francisco Beneke Ávila, die zusammen mit ihrem Vorgänger Pedro Henrique D. Batista den Übergang zu Oxford University Press erfolgreich begleitet haben. Die beiden neuen Executive Editors sind Tian Lu, die auch wissenschaftliche Referentin am Max-Planck-Institut für Innovation und Wettbewerb ist, und Maria José Schmidt-Kessen, die zudem Assistenzprofessorin an der Central European University in Wien ist. Sie koordinieren den gesamten Inhalt der Zeitschrift.

Die Redaktion hat die Aufgabe, eingehende Manuskripte zu prüfen, das Peer-Review-Verfahren und das Korrespondentennetz zu koordinieren, Urteile aus aller Welt zu recherchieren und zu bearbeiten, sowie eine Vorauswahl der zu veröffentlichenden Materialien zu treffen. Alle angenommenen Manuskripte werden von Robert Loher erfasst und redaktionell bearbeitet. Diese Tätigkeit umfasst auch die Anpassung der Beiträge an die Richtlinien der Zeitschrift, die Bearbeitung von Fußnoten und Quellenangaben und die Koordination mit den Autoren und mit dem Verlag. Charles Heard ist für die sprachliche Überprüfung des Materials zuständig. Die Manuskripte werden satzfertig an Oxford University Press weitergeleitet und vom Redaktionsteam bis zur Veröffentlichung der jeweiligen Ausgabe betreut.

International Review of Intellectual Property and Competition Law (IIC)

Seit 1970 gibt das Max-Planck-Institut für Innovation und Wettbewerb die "International Review of Intellectual Property and Competition Law" (IIC) in englischer Sprache heraus. Die in der Fachzeitschrift für Imma-



terialgüter- und Wettbewerbsrecht veröffentlichten Inhalte werden im Rahmen eines Peer-Review-Verfahrens von 45 renommierten Experten aus aller Welt sowie aus verschiedenen Teilbereichen der Rechtsgebiete ausgewählt und geprüft. Mit einer Ablehnungsquote der eingereichten Beiträge von rund 80 Prozent hat sich IIC als weltweit führendes akademisches Journal in seinen Fachgebieten etabliert.

Veröffentlichungen umfassen insbesondere

- · rechtsvergleichende, auslands- und nationalrechtliche Aufsätze,
- Stellungnahmen,
- Berichte,
- wichtige nationale, ausländische und europäische Gerichtsentscheidungen,
- Urteilsanmerkungen sowie
- Buchbesprechungen.

Mit einem Sonderheft im Jahr 2021 ehrte IIC Urherausgeber Dr. Jochen Pagenberg zu seinem 80. Geburtstag. Diese sogenannte Festschrift konnte auf die Koopera-

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tion von verschiedenen Persönlichkeiten aus der akademischen Welt sowie der Praxis zählen, die Beiträge zu Patent-, Marken- und Kartellrecht verfassten.

IIC erscheint seit 2021 zehnmal pro Jahr im Springer-Verlag mit einem jährlichen, seitenunabhängigen Gesamtumfang von 130 Beiträgen. Die im Jahr 2021 eingeführte Änderung des Jahresbudgets von Seiten- zu Beitragsanzahl führte zu einem massiven Gesamtanstieg in der Produktion von ca. 1.150 Seiten (bis 2020) zu 1.485 (2021), 1.574 (2022) und 1.638 Seiten (2023). Außerdem wächst weiterhin der Anteil an Open-Access-Beiträgen im Rahmen von IICs Angebot als sogenanntes transformative journal.

 \rightarrow IIC ist online verfügbar auf:

SpringerLink (www.link.springer.com)
Westlaw (www.westlaw.co.uk)
LexisNexis (www.lexisnexis.com)
Beck-Online (www.beck-online.beck.de)

Herausgeber von IIC sind Prof. Dr. Josef Drexl und Prof. Dr. Dr. h.c. Reto M. Hilty. Seit 2022 kann sich die Zeitschrift auf die Mitwirkung eines Academic Advisory Board stützen, dessen Mitglieder führende Wissenschaftler aus aller Welt im Bereich des Immaterialgüter- und Kartellrechts sind: Mor Bakhoum, Guillermo Cabanellas, Thomas K. Cheng, Annette Kur, Pierre Larouche, Bryan Mercurio, Caroline B. Ncube, Juliana Krueger Pela, Alexander Peukert, Ernesto Rengifo García, Ben Sihanya, Marketa Trimble und Simonetta Vezzoso.

Als Legal Manager der IIC koordiniert Sofia Filgueiras das Peer-Review-Verfahren sowie den gesamten Inhalt und berät die Autor*innen und redaktionell Mitwirkenden der Zeitschrift. Sie recherchiert und bearbeitet nationale und internationale Gerichtsurteile (Zusammenfassung, Kürzung, Formulierung von Leitsätzen), begutachtet das zu veröffentlichende Material, trifft eine Vorauswahl desselben und übersetzt rechtswissenschaftliche Texte. Die zur Veröffentlichung angenommenen Beiträge werden unter der Leitung von Charles Heard sprachlich und redaktionell bearbeitet. Er überwacht zudem den Druckprozess bis zur Veröffentlichung der Zeitschrift.

Social Science Research Network (SSRN)

Das seit dem Jahr 2009 vom Institut auf der Plattform des Social Science Research Network (SSRN) herausgegebene E-Journal "Max Planck Institute for Innovation & Competition Research Paper Series" war auch in den Jahren 2021 bis 2023 eine tragende Säule der Open-Access-Aktivitäten des Instituts. Das E-Journal wird derzeit von etwa 2.800 Personen abonniert. Aktuelle Forschungsergebnisse werden einer großen Fachöffentlichkeit zeitnah und kostenfrei zur Verfügung gestellt und finden so einen schnellen und direkten Eingang in die wissenschaftliche Diskussion. In dem E-Journal werden Postprints, Preprints und Working Papers aus den einzelnen Abteilungen des Instituts veröffentlicht. Im Berichtszeitraum erschienen pro Jahr vier bzw. fünf Ausgaben mit bis zu 27 Beiträgen jährlich.

Obwohl die jährliche Zahl der Downloads weiter gestiegen ist, hat sich der Rang des Instituts innerhalb der Top 500 International Law Schools von Platz 22

auf Platz 31 verändert. Dies ist durch das Hinzukommen weiterer Einrichtungen in diesem Ranking zu erklären. Trotzdem bleibt das Institut führende Institution aus Deutschland bei den jährlichen Downloads. Die Beiträge des Instituts fließen zudem in die "Max Planck Law Network Research Paper Series" ein.

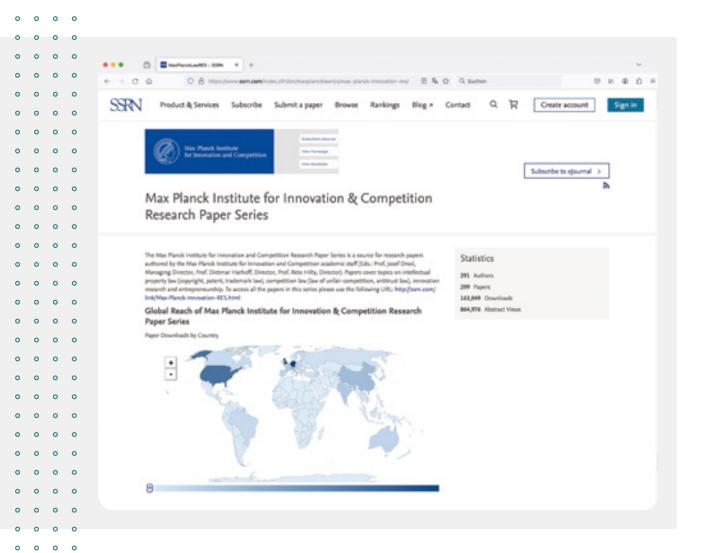
Jahr	Anzahl Downloads	Rang
2021	30.883	22
2022	32.061	26
2023	33.250	31

Die Entwicklung der "Max Planck Institute for Innovation & Competition Research Paper Series" 2021–2023 (SSRN-Statistik)

Max Planck Law fasst unter diesem Namen auf SSRN die Publikationen von zehn juristischen Max-Planck-Instituten zusammen. Diese Research Paper Series stand Ende 2023 mit Blick auf die Downloads auf Platz eins der Top 500 International Law Schools. Die 33.250 Downloads des Max-Planck-Instituts für In-

novation und Wettbewerb im Jahr 2023 entsprechen gut 28,3% der Gesamtdownloads (117.421) der "Max Planck Law Network Research Paper Series", wodurch die Bedeutung der Publikationen unseres Instituts auch für Max Planck Law unterstrichen wird.

- → Die Startseite des E-Journals ist unter folgendem Link abrufbar: https://www.ssrn.com/index.cfm/en/maxplancklawrps/max-planck-innovation-res
- Die Inhaltsverzeichnisse aller Ausgaben sind unter folgendem Link abrufbar:
 https://www.ip.mpg.de/de/publikationen/zeitschriften/research-paper-series.html



II Bibliothek

Die Bibliothek ist die zentrale Einrichtung zur Informationsversorgung des Max-Planck-Instituts für Innovation und Wettbewerb und des Max-Planck-Instituts für Steuerrecht und Öffentliche Finanzen und Anlaufstelle für Akademikerinnen und Akademiker aus aller Welt. Mit einer personellen Kapazität von 10,5 Vollzeitstellen gelang es der Bibliothek seit Jahren, trotz sich ständig verändernder Anforderungen im Bibliotheks- und Informationsbereich, den Service auf einem hohen Niveau zu halten und gleichzeitig das Informationsangebot kontinuierlich auszubauen. Für den Berichtszeitraum brachte nicht nur die andauernde Pandemie teils gravierende Einschnitte, sondern auch im Personalbereich gestalteten sich die Jahre 2021 bis 2023 als extrem herausfordernd.

Die Entwicklung der Bibliothek in den Jahren 2021 bis 2023

Die Bibliothek des Max-Planck-Instituts für Innovation und Wettbewerb weist zum 31.12.2023 einen Bestand von ca. 262.200 Bänden auf. In den Jahren 2021 bis 2023 wuchs der Print-Bestand um etwa 9.400 Bände. Hinzu kommen ca. 2.600 lokal erfasste E-Books. Aufgrund der Pandemie gestaltete sich der Literaturerwerb teilweise sehr schwierig, da kleinere Verlage ihr Angebot deutlich herunterfuhren und Ansprechpartner, besonders außerhalb Deutschlands, nicht oder nur schwer zu erreichen waren. Der Lesesaal der Bibliothek war während der Pandemie teilweise ganz geschlossen. Es wurde in zwei getrennten, voneinander unabhängigen Teams gearbeitet, sodass bei einer Infektion nicht das gesamte Bibliotheksteam Gefahr lief, zu erkranken. Es konnte auch weiterhin mobil gearbeitet werden. Im Mai 2023 wurde die Bibliothek schließlich wieder mit neuen Öffnungszeiten allen Nutzenden zugänglich gemacht.

In die Zeit der Pandemie fiel 2021 auch die Einführung der sogenannten E-Rechnungen, die dank guter Koordination im Bibliotheksteam und aufgrund der guten Zusammenarbeit mit der Buchhaltung ohne Probleme startete.

Die Bibliothek erwirbt Literatur weiterhin prospektiv, um den Bestand systematisch zu erweitern und nach Möglichkeit die zu den Forschungsgebieten erschienen Bücher vollständig zu erwerben. Nur durch den vorausschauenden Erwerb von Literatur ist es – auch bei Kleinauflagen von ausländischen Verlagen – möglich, die für die Forschung am Institut benötigte Literatur zur Verfügung stellen zu können.

Der weltweit einmalige lokale Bestand der Bibliothek wird durch das europaweit einzigartige und umfassende elektronische Angebot aus der Grundversorgung der Max-Planck-Gesellschaft abgerundet. Über die Grundversorgung stehen den Wissenschaftler*innen des Instituts tausende elektronische Zeitschriftenzugänge aller bedeutenden Wissenschaftsverlage zur Verfügung. Weiterhin stellt die Max Planck Digital Library den Zugang zu mehr als 700.000 E-Books. Lokale Lizenzen zu einzelnen Datenbanken wie z.B. der Rechtsdatenbank von Manz oder zu einzelnen Zusatzmodulen des Beck-Verlages runden das Informationsangebot ab.

In einem anderen Bereich wird aktuell versucht, die Kosten zu senken. So werden Loseblattausgaben abbestellt, wenn deren Inhalte über Datenbanken zur Verfügung gestellt werden können. Dies betrifft aktuell Werke des Verlages Matthew Bender. Hierbei können bis zu 90% der Kosten eingespart werden.

Durch Lizenzverträge der Max Planck Digital Library mit einzelnen Verlagen, wie beispielsweise Oxford University Press, können die Wissenschaftler*innen des Instituts Open Access publizieren, wobei die Kosten hierfür zentral über den Etat der Max Planck Digital Library beglichen werden. Hiervon profitieren Wissenschaftler*innen, wenn sie Aufsätze in der vom Institut herausgegebenen Zeitschrift GRUR International publizieren, sofern sie eine Affiliation zu unserem Institut haben.

Die Bibliothek gibt weiterhin alle Publikationen der Wissenschaftler*innen in das institutionelle Repositorium der Max-Plank-Gesellschaft, MPG.PuRe, ein und macht die Daten damit öffentlich zugänglich. Die Bibliothek ist auch nach wie vor erste Anlaufstelle

für alle Fragen rund um das E-Journal "Max Planck Institute for Innovation & Competition Research Paper Series", das auf der Plattform des Social Science Research Network (SSRN) gehostet wird und einen zentralen Bestandteil der Open-Access-Strategie des Instituts darstellt.

2021 erhielt unser Auszubildender für den Beruf des Fachangestellten für Medien- und Informationsdienste, Alexander Geiß, den Azubi-Preis der Max-Planck-Gesellschaft für herausragende Leistungen im Rahmen seiner Ausbildung, die er im Juli 2020 abschloss. Der Azubi-Preis wird jährlich an bis zu 20 Auszubildende in der MPG vergeben und ist mit 750 Euro dotiert.

Eine sehr große Herausforderung stellten im Berichtszeitraum die personellen Veränderungen und die teilweise sehr langen krankheitsbedingten Abwesenheiten dar. [Details aus entfernt.] Datenschutzgründen Ohne das gewaltige Engagement der Kolleg*innen, schon seit vielen Jahren Teil des Bibliotheksteams sind, wäre die Bewältigung dieser tiefgreifenden personellen Veränderung nicht möglich gewesen. Sie haben teilweise die alleinige Betreuung der Bibliothek übernommen, haben sich Aufgaben angenommen, die nicht in ihrem Tätigkeitsbereich liegen, um so zu verhindern, dass die Bibliothek einzelne Services für die Wissenschafter*innen einstellen muss. Hierfür kann den Kolleg*innen nicht genügend gedankt werden. Trotz der Neueinstellungen sind immer noch nicht alle Stellen der Bibliothek wiederbesetzt.

Die Besetzung weiterer offener Stellen soll in einem Gesamtkonzept der Bibliothek des Max-Planck-Instituts für Innovation und Wettbewerb, des Max-Planck-Instituts für Steuerrecht und Öffentliche Finanzen und des Max-Planck-Instituts für Sozialrecht und Sozialpolitik betrachtet und umgesetzt werden. Diese Entwicklung zeichnete sich in der zweiten Jahreshäfte 2023 ab. Derzeit hat sich nur die räumliche Situation des Max-Planck-Instituts für Sozialrecht und Sozialpolitik verändert, das die Liegenschaft in der Amalienstraße verlassen musste.

Dies hatte auch Auswirkungen auf die Bibliothek Innovation und Wettbewerb. Im Lesesaal der Bibliothek wurde Freifläche für die blattausgaben und die Zeitschriftenauslage der Bibliothek des Max-Planck-Instituts für Sozialrecht und Sozialpolitik geschaffen. Außerdem wurde ein Magazin mit etwa 1.100 Metern Regalen freigeräumt und die dort befindlichen Bücher eingelagert, um so Platz für einen Teil der Literatur Max-Planck-Instituts für Sozialrecht und Sozialpolitik zu schaffen.

Im Berichtszeitraum konnte für das Max-Planck-Institut für Innovation und Wettbewerb eine neue Liegenschaft an der Ecke Neuhauser/Herzog-Max-Straße gefunden werden. Hier werden alle Bereiche Instituts erstmaliq unter einem untergebracht werden können. Die Planungen für das neue Instituts-gebäude und die dortige Bibliothek beanspruchten bereits seit 2021 sehr viel Zeit und auch Umsicht, damit alle künftigen Belange der Bibliothek in den Planungsprozess eingebracht werden und mit dem Baufortschritt bei der Sanierung des historischen Ge-bäudes zeitgerecht umgesetzt werden können.

Fortbildungen und externe Aktivitäten wurden in nur sehr geringem Umfang wahrgenommen. Wenn eine Teilnahme erfolgte, so geschah dies über Online-Meetings, wie beispielsweise bei einem Zoll-Workshop oder auch bei den jährlichen Bibliothekstagungen der Max-Planck-Gesellschaft.

Ausblick

Für die Bibliothek des Max-Planck-Instituts für Innovation und Wettbewerb stellen die Planungen für den Umzug an den neuen Standort eine große Chance dar, da in dieser Liegenschaft genügend Platz für Bibliotheksregale vorhanden sein wird, um auch den Zuwachs der kommenden fünfzehn Jahre aufstellen zu können. Der Umzug der Bücher und die Integration der ausgelagerten Bestände wird eine große Herausforderung, bei der das gesamte Bibliotheksteam involviert sein wird. Mit dem Umzug wird zeitgleich die

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Medienausleihe auf ein neues System mit RFID-Transpondern umgestellt, was sowohl den Ausleihvorgang als auch die Erkennung nicht entliehener Medien beim Verlassen der Bibliothek verbessern wird. Die neue Bibliothek wird mit 46 Arbeitsplätzen ähnlich viele wie der derzeitige Lesesaal haben. Aufgrund der baulichen Besonderheiten wird die Hälfte der Arbeitsplätze im Untergeschoss der Bibliothek zu finden sein und somit in unmittelbarer Nähe zu der Literatur. Trotzdem werden die Arbeitsplätze auch hier Tageslicht haben.

Bis Ende 2026 soll ermittelt werden, in welchen Bereichen und in welchem Umfang die drei Institute auch in der Serviceeinheit Bibliothek zusammenarbeiten können, um so Synergieeffekte zu erzielen. In den kommenden Wochen und Monaten werden Kooperationsfelder, beispielsweise im Bereich der Bib-

liotheks-IT eruiert. So kommen eine gemeinsame Verbundteilnahme der Bibliotheken, eine gemeinsame Lizenzierung von Datenbanken, die zeitnahe Einführung eines Ressource-Discovery-Systems (RDS), eine gemeinsame Strategie für den Wechsel des integrierten Bibliothekssystems (Aleph), ein erneutes Angebot einer Ausbildung zum/zur Fachangestellten für Medien- und Informationsdienste, eine Vereinheitlichung der Bibliotheksbenutzungsordnungen etc. als potentielle Handlungsfelder in Betracht. Eine Umsetzung kommt aber erst nach dem Umzug des Max-Planck-Instituts für Innovation und Wettbewerb in Frage, da bis zu diesem Zeitpunkt alle Kräfte des Bibliotheksteams in dieses Vorhaben investiert werden müssen, das im Vorfeld einen enormen Arbeitsaufwand beinhaltet, so beispielsweise das Aussondern der Mehrfach-Exemplare von Zeitschriften, um den Umzug möglichst ohne Dubletten vorzunehmen.



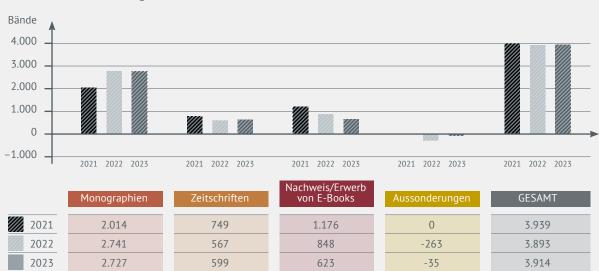
Das Bibliotheksteam.

Etat und Mittelverteilung

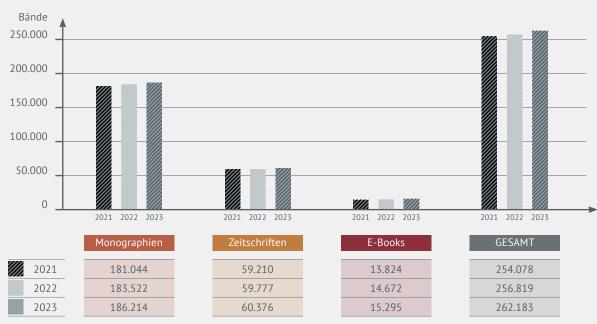
(Daten nur zur internen Verwendung)

Statistik 2021 bis 2023 - Bibliothek Max-Planck-Institut für Innovation und Wettbewerb

Bestandsveränderung



Entwicklung des Bestandes



Laufend gehaltene Zeitschriften und Loseblattausgaben



III Wissenschaftskommunikation, Presse- und Öffentlichkeitsarbeit

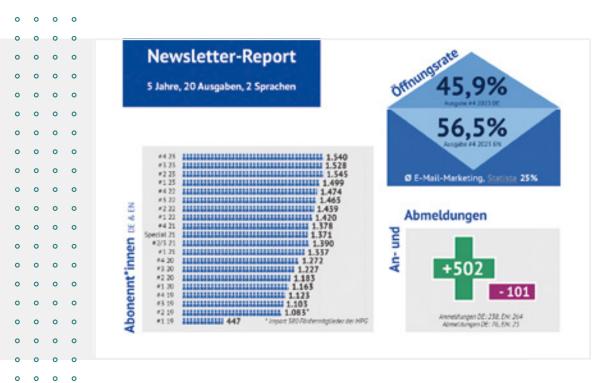
Angesichts des gegenwärtigen gesellschaftlichen Klimas ist es unerlässlich, der Öffentlichkeit wissenschaftliche Aktivitäten und Ergebnisse mit gesellschaftlicher Relevanz auf transparente, zugängliche und verständliche Weise zu vermitteln. Dies geht einher mit dem Selbstverständnis, als öffentlich finanzierte Forschungseinrichtung durch die Vermittlung von Forschungsergebnissen gesellschaftlichen Nutzen zu stiften.

Im Berichtszeitraum 2021 bis 2023 wurden die externe und interne Kommunikation des Instituts konsequent weiterentwickelt. Im Rahmen der externen Kommunikation wurde die etablierte Presse- und Öffentlichkeitsarbeit (Beantwortung von Journalistenanfragen, Erstellung von Meldungen und Presseinformationen, Platzierung redaktioneller Beiträge in Print-, Online-, Hörfunk- und TV-Medien, Vermittlung und Betreuung von Interviews, Erstellung von Institutsporträts und Jahrbuchbeiträgen), die bereits im letzten Berichtszeitraum mit einem besonderen Fokus auf eigene Kommunikationskanäle aktualisiert wurde, zu einer zeitgemäßen Wissenschaftskommunikation ausgebaut.

Die digitale Transformation schlägt sich auch in der Wissenschaftskommunikation, Presse- und Öffentlichkeitsarbeit nieder. Traditionelle Kommunikationskanäle und -formate treten zugunsten neuer, innovativer Publikations- und Erscheinungsformen in den Hintergrund. Hier beobachten wir die Kommunikationslandschaft permanent, experimentieren mit neuen Kanälen und Formaten und evaluieren die Ergebnisse für eine weitere Planung von Kommunikationsmaßnahmen. Der Einsatz von KI in der Kommunikation wird zunehmend zum Thema. Die Redaktion versucht bei der Erstellung von Bild- und Textinhalten KI mithilfe von Bildgeneratoren wie Dall-E bzw. Textgeneratoren wie ChatGPT durchaus zum Einsatz zu bringen. Jedoch ist im relevanten Themenspektrum der Nutzen im Vergleich zum Aufwand durch Prompting und Nachkorrektur noch überschaubar. Derzeit bewährt sich KI als Tool nur für sehr kurze Texte oder zur Ideengenerierung.

Das zentrale Kommunikationsmedium des Instituts ist nach wie vor der Internetauftritt, der einer kontinuierlichen Pflege und intensiven Betreuung bedarf. Ständige Aktualisierungen der Startseite mit neuen Meldungen und Inhalten stellen auch sicher, dass das Institut im Diskurs zu gesellschaftlich relevanten Themen in Suchmaschinenergebnissen eine Rolle spielt.

Der Newsletter, der nun bereits seit fünf Jahren in zwei Sprachen erscheint, erfreut sich weiterhin einer treuen Leserschaft. Hier sind keine Sättigungs- oder Ermü-



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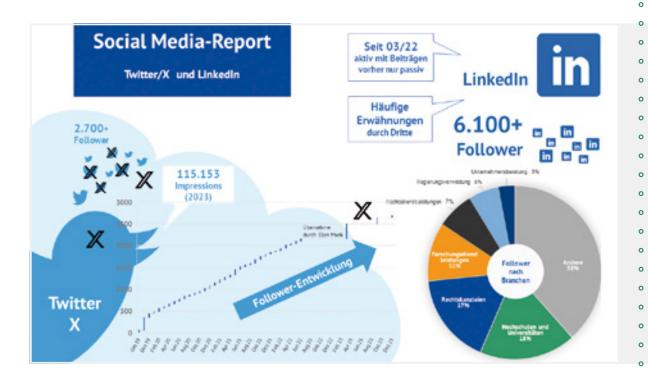
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dungseffekte des Publikums aufgetreten. Das bedeutet aber auch, dass ständig überprüft und gemessen werden muss, welche Inhalte ein positives Echo finden und welcher Content Priorität erhalten soll. Abwechslung in der Themenauswahl und im Ranking der Themen, eine Einbindung von Audios und Videos und lebendigere optische Gestaltung halten das Interesse der Lesenden hoch.

Der Newsletter erscheint viermal im Jahr und deckt aktuelle Themen aus der Forschung, dem Institut, zu neuen Publikationen sowie Hinweise zu kommenden und Nachberichte zu vergangenen Veranstaltungen ab. Die Rubrik "Kurz gemeldet" erlaubt im Sinne eines Newstickers wichtige Kurzinfos zu kommunizieren. Regelmäßig informiert der Newsletter auch über Themen aus dem MIPLC. Der Newsletter wird aktuell an über 1.500 Abonnentinnen und Abonnenten versandt, davon an knapp 270 Personen in englischer Sprache. Die Öffnungsraten sind mit über 45 Prozent für die deutsche bzw. bis zu 60 Prozent für die englische Version gemessen an üblichen Standards für Mailings außergewöhnlich hoch. Die Neuanmeldungen zum Newsletter überwiegen gegenüber den Abmeldungen um ein Vielfaches.

Die Präsenz des Instituts in den sozialen Medien wurde im Berichtszeitraum noch erweitert und hat ein hohes Maß an Resonanz gefunden. Die Social-Media-Kanäle garantieren dem Institut weiterhin schnelle Kommunikationswege, auf denen aktuelle Themen rasch bespielt werden können. Zudem richtet sich der Fokus hier stärker auf jüngere, aktiv kommunizierende Zielgruppen. Durch Veränderungen in der Social-Media-Landschaft ergaben sich besondere Herausforderungen.

Seit Anfang 2019 ist das Institut mit einem eigenen Profil auf der webbasierten sozialen Netzwerk-Plattform LinkedIn vertreten. Diese Präsenz erlaubt es Mitarbeitenden, sich mit dem Institut zu vernetzen, und stellt eine Repräsentanz des Instituts nach Außen dar. Dieser Kanal wurde bis Februar 2022 nur passiv betrieben, hat aber mit den Verwerfungen, die sich im Berichtszeitraum beim Microblogging-Dienst Twitter/X ergaben, für die Kommunikation des Instituts deutlich an Bedeutung und Reichweite gewonnen. Bereits im Vorfeld der Übernahme von Twitter durch Elon Musk, als sich das Kommunikationsklima auf Twitter deutlich verschlechterte und Desinformation und Fake News zunahmen, begann das Institut im März 2022 vorausschauend, LinkedIn aktiv zu nutzen und regelmäßig mit Beiträgen zu Forschungsthemen, Publikationen, Veranstaltungen und Personalien zu bespielen. Damit hat sich seit dem letzten Berichtszeitraum die Zahl der Follower mehr als vervierfacht, lag Ende des aktuellen Berichtszeitraums bei mehr als 6.100 und zum

Redaktionsschluss dieses Berichts bereits bei über 6.500 Followern. Mit Abwanderungsbewegungen von Twitter/X hin zu LinkedIn hat sich dort auch das Publikum des Institutsaccounts verjüngt. Damit ist LinkedIn für das Institut nun der reichweitenstärkste Push-Kanal für schnelle Nachrichten aus dem Institut.

Seit November 2019 kommuniziert das Institut aktiv über Twitter, jetzt X. Zwar ist nach der Übernahme durch Elon Musk, die sich ab April 2022 abzeichnete und im Oktober 2022 vollzogen wurde, und Umbenennung des Kanals zu X die Zahl der Follower des Instituts weiterhin stetig gestiegen und lag am Ende des Berichtszeitraums bei mehr als 2.700 Followern. Jedoch ist mit den eingeführten Bezahlmodellen und -schranken die Effizienz der Kommunikation über X deutlich gesunken - gemessen in Impressionen, also der Ausgabe von Tweets in der Zeitleiste von Abonnentinnen und Abonnenten. Diese sind auf fast ein Drittel im Vergleich zum vorhergehenden Berichtszeitraum zurückgegangen. Mit weniger hochwertigem Publikum und einer weiter verstärkten Tendenz zu unsachlichem oder abträglichem Feedback verliert der Kanal an Attraktivität und Relevanz.

Um für künftige Entwicklungen vorbereitet zu sein, sondiert die Redaktion laufend alternative Social-Media-Kanäle. Nach der Übernahme von Twitter/X hat das Institut wie zahlreiche andere Wissenschaftsinstitutionen eine Präsenz beim dezentralen Mikroblogging-Dienst mastodon eingerichtet und ist dort seit Dezember 2022 über den vom Informationsdienst Wissenschaft (idw) verwalteten Server wisskomm.social aktiv. Die Bilanz nach einem Jahr Nutzung ist jedoch, dass mastodon die Anforderungen an Reichweite und Resonanz nicht erfüllen kann.

Im Rahmen der Wissenschaftskommunikation wurden auch Aktivitäten verstärkt, die Forschenden selbst bei der Kommunikation ihrer Forschungsergebnisse zu unterstützen, sei in es in Fragen der Textgestaltung, der fasslichen Darstellung von Forschungsergebnissen oder -unterfangen, bei der Beantwortung von Medienanfragen, oder im Zuge der Erstellung von Podcasts. Es steht zu erwarten, dass in naher Zukunft die Beratung von Forschenden zur Kommunikation von kritisch betrachteten Themen (z.B. Klimawandel) noch an Bedeutung zunehmen wird.

Ein verstärktes Augenmerk wurde auch auf die Außendarstellung des Instituts im Hinblick auf die Qualität und Wiedererkennbarkeit des Erscheinungsbildes gelegt (wissenschaftliche Poster, Präsentationen, neue Visitenkarten, die über einen vCard-QR-Code den Übergang ins Digitale schaffen, u.v.a.m.).

Die interne Kommunikation wurde im Berichtszeitraum ebenfalls weiterentwickelt. Aus der Redaktion heraus wurden in verstärktem Maße das Institut betreffende Informationen und Themen direkt an die Mitarbeitenden verteilt, wobei nunmehr nicht nur auf eine Einbindung der wissenschaftlich Mitarbeitenden, sondern auch der Servicebereiche geachtet wird, sodass insgesamt eine stärkere Teilhabe am Institutsgeschehen gewährleistet ist.

Für die interne Kommunikation wurde auch eine aufwendige Neugestaltung des Intranets in Angriff genommen, das eine Anbindung an das Intranet MAX der Max-Planck-Gesellschaft mit neuen Features und Funktionen bietet. Dabei wurden spezifische Funktionen, die die IT über Jahre hinweg für die Zusammenarbeit am Institut erarbeitet hat, eingebunden. Insgesamt wird auch hiermit im größeren Maßstab auf MPG-Ebene mehr Einsicht und Transparenz für alle Mitarbeitenden hergestellt. Der Launch des neuen Intranets erfolgte schließlich am 29. Mai 2024.

Als neues Normal kann man mittlerweile bezeichnen, was im letzten Berichtszeitraum noch als Anliegen formuliert wurde: den zeitgemäßen Gebrauch von gendersensitiver Sprache im Bereich der internen und externen Kommunikation des Instituts und ein Augenmerk auf Themen der Gleichstellung und Diversität sowie eine Darstellung der Gleichstellungsaktivitäten des Instituts (siehe auch Teil E IV, Gleichstellung und Chancengleichheit, S. 390). Die Wahrnehmung der Aktivitäten des Instituts in der Öffentlichkeit und wissenschaftlichen Community soll auch in diesem Bereich stark sein – nicht zuletzt um exzellente Wissenschaftlerinnen und Wissenschaftler zu attrahieren. Hier wurden erhebliche Fortschritte erzielt.

Das Redaktionsteam wurde im Berichtszeitraum von vier auf zwei Personen konzentriert. Vorteilhaft wirkt sich aus, dass neben regelmäßigen Redaktionssitzungen zur Planung der Kommunikationsmaßnahmen

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ein enger persönlicher Austausch stattfindet, der eine schnelle Entscheidungsfindung fördert. Im vergleichsweise klein besetzten Team für ein interdisziplinär aufgestelltes Institut mit einer Fülle gesellschaftlich relevanter Themen muss die Ressourcenplanung und -allokation jedoch sehr effizient gestaltet werden, um den Wirkungsgrad der Kommunikation unter möglichst geringem Zeit-, Mittel- und Personalaufwand weiter erhöhen zu können.

Wichtig in diesem Zusammenhang sind Fortbildungen und ein verstärkter Austausch innerhalb des PR-Netzwerks der Max-Planck-Gesellschaft, etwa zu Experimenten mit neuen Medien und Formaten sowie zu Best Practices. Folgende Veranstaltungen wurden wahrgenommen:

Teilnahme an Veranstaltungen

PR-Netzwerktreffen der Max-Planck- Gesellschaft 2023 – KI in der Öffent- lichkeitsarbeit, Harnack-Haus, Berlin
Virtuelles PR-Netzwerktreffen
Virtuelles PR-Netzwerktreffen
PR-Netzwerktreffen der Max-
Planck-Gesellschaft 2022 –
Fokus Jubiläum, 75 Jahre MPG,
Harnack-Haus, Berlin
GSHS-Netzwerktreffen der Max-
Planck-Gesellschaft 2022 – Science
Podcasts, Max-Planck-Institut zur
Erforschung von Kriminalität,
Sicherheit und Recht, Freiburg
PR-Netzwerktreffen der Max-Planck-
Gesellschaft 2021 – Umgang mit
Fake News/Desinformation, Harnack-
Haus, Berlin



PR-Netzwerktreffen der Max-Planck-Gesellschaft im Oktober 2023 im Harnack-Haus, Berlin.

Der Medienspiegel 2021 – 2023 in Auszügen

2023

13.11.2023

Transfer und Gründungen an Hochschulen

Video des Stifterverbandes mit Beiträgen von Dietmar Harhoff

12.10.2023

DATI-Gründungskommission nimmt Arbeit auf

Dietmar Harhoff ist Mitglied der Gründungskommission der neuen Deutschen Agentur für Transfer und Innovation (DATI). Artikel, bildungsklick.de

06.08.2023

Wie wir alle Deutschland aus der Krise helfen können

Artikel von Patrick Bernau und Ralph Bollmann mit Beiträgen von Dietmar Harhoff, Frankfurter Allgemeine Sonntagszeitung, sowie Online-Ausgabe

06.07.2023

Ukrainian Science Is Struggling, Threatening Long-Term Economic Recovery – History Shows Ways to Support the Ukrainian Scientific System

Artikel von Michael E. Rose et al., The Conversation

23.05.2023

Clicking against the Clock: How Time Pressure and Regret Influence Our Behavior in Online Shopping

Podcast mit Timm Opitz, Game Changer Podcast, TWS Partners

09.05.2023

Innovation und Wettbewerbsfähigkeit: Wie Digitalisierung Chancen für Wohlstand schafft

Artikel mit Beiträgen von Dietmar Harhoff, brandaktuell.at

26.04.2023

Zwischen Klimaschutz und Technikskepsis – Wie entsteht Fortschritt?

Radiodiskussion mit Dietmar Harhoff, Deutschlandradio

13.03.2023

Notfälle & Co: Wie viel Datenzugang für den Staat?

Interview zum Data Act von Elena Metz mit Heiko Richter, Tagesspiegel Background Digitalisierung & KI

28.02.2023

"Die Zukunftsstrategie ist schöne Prosa"

Interview von Manfred Ronzheimer mit Dietmar Harhoff, Tagesspiegel Background Digitalisierung & KI

24.02.2023

Data Hint at Russia's Shifting Science Collaborations after Year of War

Artikel von Richard Van Noorden mit Beitrag von Michael E. Rose, Nature, News

23.02.2023

Die Max-Planck-Gesellschaft – Spitzenforschung mit Freiraum Radiobeitrag von Renate Ell mit Beiträgen von Michael E. Rose, Bayern 2, IQ – Wissenschaft und Forschung

22.02.2023

The Fight to Keep Ukrainian Science Alive through a Year of War

Artikel von Isling Irwin mit Beiträgen von Michael E. Rose, Nature, 614, S. 608–612, News Feature

13.02.2023

SPRIND-Podcast #49 Dietmar Harhoff

Podcast-Interview von Thomas Ramge mit Dietmar Harhoff

2022

19 12 2022

Five Patent Highlights from Europe in 2022

Artikel von James Nurton zur SPC-Studie, IPWatchdog.com

02.12.2022

Data Act - Where Are We?

Podcast-Interview von Luca Bertuzzi mit Heiko Richter, EURACTIV.com

17.11.2022

Im Gespräch: Die Zukunft der Innenstädte

TV-Beitrag zum Standortwechsel des Instituts, BR, Abendschau

08.11.2022

Future Medicine Science Match: Interdisziplinäre Zusammenarbeit im Fokus

Artikel mit Beitrag von Dietmar Harhoff, Tagesspiegel online

17.10.2022

Wie Market Intelligence hilft, Marktdynamiken zu verstehenArtikel von Daniela Hoffmann mit Beiträgen von Dietmar Harhoff, Produktion – Technik und Wirtschaft für die deutsche Industrie

29.09.2022

"Wir müssen auch radikale Innovationen umsetzen können!"

Sind Deutschlands Ministerien, Projektträger und etablierte Forschungsförderer noch in der Lage, die nötige Modernisierung zu organisieren? Oder braucht es dafür neue Player? Und wer braucht eigentlich Agenturen wie DATI und SPRIND? Ein Streitgespräch.

Interview von Jan-Martin Wiarda mit Dietmar Harhoff und Klaus Uckel, jmwiarda.de

18.08.2022

Homeoffice - Das neue Büro?

Radiobeitrag von Andreas Kuhnt mit Beiträgen von Dietmar Harhoff, NDR Info – Redezeit

13.07.2022

Agenturen versus Ministerien

Gastkommentar von Dietmar Harhoff, Handelsblatt, S. 10, sowie Online-Ausgabe

24.05.2022

Artificial Intelligence Is Breaking Patent Law

Kommentar von Alexandra George und Toby Walsh, Nature $605, S.\,616-618$

02.05.2022

Drei Tech-Ideen, die die Zukunft verändern

Artikel von Leonie Tabea Natzel mit Beiträgen von Dietmar Harhoff, Handelsblatt, S. 24–25, sowie Online-Ausgabe

24.04.2022

Endstation Universität

Artikel mit Beitrag von Dietmar Harhoff, Frankfurter Allgemeine Sonntagszeitung, S. 20, sowie Online-Ausgabe

08.02.2022

Europas Chipoffensive: 43 Milliarden Euro für die Aufholjagd

Artikel von Moritz Koch, Joachim Hofer und Julian Olk mit Beitrag von Dietmar Harhoff, Handelsblatt

25.01.2022

IG Farben: Die segensreiche Zerschlagung eines Kartells

Derzeit entstehen in vielen Industrien bis hin zur digitalen Plattformökonomie wieder riesige Konglomerate. Ginge es in kleineren Einheiten weiter, wäre das vermutlich besser, sagt Carsten Knop: Ein Blick in die Geschichte anhand der Dissertation von Felix Pöge.

Artikel von Carsten Knop, Frankfurter Allgemeine Zeitung, sowie Online-Ausgabe

12.01.2022

Was wichtig wird (Teil 3): Führen Agenturen aus der Innovationskrise?

Blogbeitrag von Jan-Martin Wiarda mit Beitrag von Dietmar Harhoff, jmwiarda.de

06.01.2022

Das globale Impf-Versagen

Artikel von Claudia Bröll, Thiemo Heeg, Christoph Hein, Philipp Krohn, Roland Lindner, Johannes Ritter mit Beiträgen von Dietmar Harhoff, Frankfurter Allgemeine Zeitung

02.01.2022

Warum die Impf-Solidarität nicht ausreicht

Artikel von Claudia Bröll, Thiemo Heeg, Christoph Hein, Philipp Krohn, Roland Lindner, Johannes Ritter mit Beiträgen von Dietmar Harhoff, FAZ.NET

2021

02.12.2021

Angela Merkel: In ihrem Element

Ehrensymposium zur Emeritierung der Kanzlerin mit Beiträgen von Dietmar Harhoff, DIE ZEIT, 49/2021

01.11.2021

"Artificial Intelligence Systems as Inventors?" - The Max Planck Institute on Machine Autonomy and AI Patent Rights Blogbeitrag zur Stellungnahme des Instituts, Blog der Osgoode Hall Law School, York University, Ontario

05.10.2021

Ganz oder gar nicht

Blogbeitrag von Jan-Martin Wiarda mit Beitrag von Dietmar Harhoff, imwiarda.de

01.10.2021

Ausgründungen aus der Wissenschaft – Deutschland muss handeln!

Gastbeitrag von Dietmar Harhoff, Personal in Hochschule und Wissenschaft entwickeln, Ausgabe 4/2021

27.09.2021

"Demokratietheoretisch problematisch"

Blogbeitrag von Jan-Martin Wiarda mit Beitrag von Dietmar Harhoff, jmwiarda.de

23.09.2021

Was die neue Regierung anpacken muss

Blogbeitrag von Jan-Martin Wiarda mit Beitrag von Dietmar Harhoff, jmwiarda.de

14.09.2021

Baerbock polarisiert mit Verbotsthese

Artikel von Johannes Pennekamp mit Beitrag von Dietmar Harhoff, Frankfurter Allgemeine Zeitung

20.08.2021

Weg von den Ministerien

Kommentar von Jan-Martin Wiarda mit Beitrag von Dietmar Harhoff, Newsletter ZEIT WISSEN 3 und jmwiarda.de

11.08.2021

COVID-Impfstoffe für alle: Was Staaten tun können – und wieso das Aussetzen von Patenten nichts bringt

Artikel von Reto M. Hilty, ifo Schnelldienst 08/2021, S. 12

12.07.2021

Zu deutsch bei Innovationen

Artikel von Jan-Martin Wiarda mit Beitrag von Dietmar Harhoff, Der Tagesspiegel, S. 21

27.05.2021

Was spricht gegen das Aussetzen des Patentschutzes?

Radiointerview mit Reto M. Hilty von Simone Hullinger, Radio SRF1

18.05.2021

Streit um COVID-19-Impfstoff-Patente: Ein Gespräch zwischen Bundespräsident Parmelin und der U.S.-Handelsbeauftragten Tai soll Klärung bringen

Artikel von Lorenz Honegger mit Beitrag von Reto M. Hilty, Neue Züricher Zeitung

11.05.2021

Ein Ministerium, viele Agenturen

Die gesamte Forschungsförderung muss umgebaut werden, fordert Dietmar Harhoff, der langjährige Innovationsberater der Kanzlerin.

Gastbeitrag von Dietmar Harhoff, DIE ZEIT, Nr. 20/2021

09.05.2021

Blut, Schweiß und Patente. Verhindert Big Pharma eine gerechte Verteilung von Corona-Impfstoff?

Artikel von Rainer Hank mit Beiträgen von Reto M. Hilty, Frankfurter Allgemeine Sonntagszeitung

07.05.2021

Impfungen für die Welt – Sollen Hersteller die Lizenzen frei geben?

Radiobeitrag von Hellmuth Nordwig mit Beiträgen von Reto M. Hilty, Bayern 2

07.05.2021

Tauziehen um den Impfstoff

Artikel von Marc Beise, Elisabeth Dostert, Alexander Hagelüken und Hans von der Hagen mit Beiträgen von Reto M. Hilty, Süddeutsche Zeitung, S. 15

06.05.2021

"Man kann nicht mal eben ein paar Wässerchen zusammenmischen"

Interview mit Reto M. Hilty von Martin U. Müller, Spiegel Online

06.05.2021

Mangel bei Corona-Impfstoffen – Rechtsexperte: Aufhebung des Patentrechts ist keine Lösung

Radiointerview von Sandra Pfister mit Reto M. Hilty, Deutschlandfunk

14.04.2021

Verheerendes Digital-Zeugnis

Artikel zum Gutachten des Wissenschaftlichen Beirats des BMWK, Frankfurter Allgemeine Zeitung, S. 17

14.04.2021

"Teilweise archaisch"

Artikel mit Beiträgen von Dietmar Harhoff, Der Tagesspiegel, S. 13

14.04.2021

Altmaier-Berater attestieren Verwaltung "archaische" Zustände

Artikel von Martin Greive und Till Hoppe mit Beitrag von Dietmar Harhoff, Handelsblatt, S. 9

05.04.2021

Fünf Fragen zum Patentschutz an Reto Hilty

Interview mit Reto M. Hilty von Michaela Hutterer, Max Planck Forschung, S. 82

04.04.2021

Missing Link: COVID-19-Impfstoffpatente retten die Welt – oder auch nicht

Artikel von Monika Ermert zur Rolle von Patenten bei der Entwicklung von Impfstoffen gegen COVID-19 mit Beiträgen von Reto M. Hilty, heise online

03.04.2021

Übertreiben die Volkswirte die Empirie?

Artikel von Volker Caspari mit Beitrag von Dietmar Harhoff und Frank Mueller-Langer, Frankfurter Allgemeine Zeitung

25.03.2021

Zukunftskommission rät Niedersachsen zu mehr Forschungsförderung

Artikel zur Übergabe des Gutachtens "Niedersachsen 2030 – Potenziale und Perspektiven", Wolfsburger Nachrichten

08.03.2021

"Wer am Patentschutz rüttelt, spielt mit dem Feuer"

Interview mit Reto M. Hilty von Michaela Hutterer, mpg.de

24.02.2021

Patente sichern schnelle Impfung

In Deutschland verlaufen die Corona-Impfungen nur schleppend. Schuld daran sind aber nicht die Patente. Die sind für den Erfolg unverzichtbar.

Artikel von Reto M. Hilty, Frankfurter Allgemeine Zeitung, S. 16

16.02.2021

Research into Patents: Drilling Deeper on the Standard-Essentiality of SEPs

Podcast-Interview mit Dietmar Harhoff, EPO podcast "Talk Innovation", Europäisches Patenamt

15.02.2021

Weniger Geld für Innovation

Die Corona-Pandemie lässt viele Unternehmen die Investitionen in ihre Forschung und Entwicklung drosseln – und das ist nicht das einzige Problem.

Artikel von Svea Junge mit Beiträgen von Dietmar Harhoff, Frankfurter Allgemeine Zeitung, Nr. 38, S. 17

05.02.2021

Corona und die Folgen für die Digitalisierung

Podcast mit Dietmar Harhoff und Volker Zimmerman, Folge 1 der Audio-Serie "Zukunft:digital", KfW

03.02.2021

Amazon ohne Jeff Bezos - geht das?

Podcast-Interview mit Dietmar Harhoff von Michael Wegmer, SWR aktuell

03.02.2021

Sanfter Wachwechsel: So soll die Machtübergabe bei Amazon gelingen

Artikel von Alexander Demling, Florian Kolf und Christof Kerkmann mit Beiträgen von Dietmar Harhoff, Handelsblatt

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Presseinformationen

Die klassische Presseinformation bzw. Pressemitteilung verliert aus mehreren Gründen an Bedeutung und Wirkung. Im Zuge der digitalen Transformation hat sich die Medienlandschaft mit Online-Plattformen, sozialen Medien und Blogs stark verändert. Die Menge an täglich produzierten Informationen und Nachrichten hat erheblich zugenommen. Journalist*innen und Redaktionen erhalten täglich eine Flut von Pressemitteilungen und informieren sich selbst eher online. Rezipierende erwarten zunehmend multimediale Inhalte und Inhalte, die schnell geteilt werden können. Daher hat das Institut im Jahr 2021 die letzten Presseinformationen versandt. Das Institut hält jedoch noch einen Account beim Informationsdienst Wissenschaft (idw), da unter bestimmten Voraussetzungen eine Presseinformation noch das Kommunikationsmittel der Wahl sein kann.

2021

21.05.2021

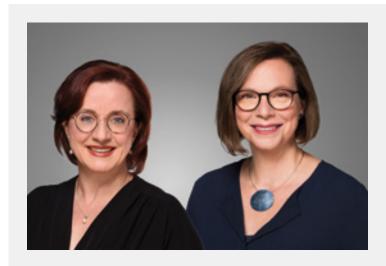
COVID-19 und immaterielle Güter: 10 Argumente gegen das Aussetzen von Schutzrechten

Behindern Patente die globale Verfügbarkeit von Impfstoffen gegen COVID-19? In einem Positionspapier mit zehn Punkten argumentiert eine Forschungsgruppe des Instituts, warum das Aussetzen von Schutzrechten weder die Impfstoffproduktion ankurbeln noch zu einer gerechteren Verteilung der Vakzine führen würde.

21.04.2021

Forschungsgruppe erarbeitet Analyse zu Künstlicher Intelligenz und IP-Rechten

Der zunehmende Einsatz von Künstlicher Intelligenz (KI) hat das Potenzial, die Rahmenbedingungen des bestehenden IP-Systems zu verändern. In einer ausführlichen Untersuchung gibt eine Forschungsgruppe der juristischen Abteilungen des Instituts einen breit angelegten Überblick über Fragestellungen, die sich an der Schnittstelle von KI und Immaterialgüterrechten ergeben.



Dr. Myriam Rion und Hella Schuster – Wissenschaftskommunikation, Presse- und Öffentlichkeitsarbeit.

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IV Gleichstellung und Chancengleichheit

Gleichstellung im Team

Im Januar 2021 wurden Begoña Gonzalez Otero zur Gleichstellungsbeauftragten des Instituts und Hella Schuster zu ihrer Stellvertreterin gewählt. In der praktischen Arbeit teilen sich beide die anstehenden Aufgaben und begreifen sich als Team.

Die Gleichstellungsbeauftragten stellten sich und ihre Arbeit in den jährlichen erweiterten Institutsbesprechungen vor. Sie nahmen regelmäßig am Teil A der Sitzungen des Kollegiums teil. Zudem konnten sie in vertraulichen Gesprächen Institutsangehörige persönlich beraten.



Priority Parking am Institut.

Chancengleichheit und Diversität als Recruiting-Instrument

Maßnahmen zur Förderung von Gleichstellung und Chancengleichheit werden in Zeiten des allgegenwärtigen Fachkräftemangels auch im Wissenschaftsbetrieb immer mehr zur Grundvoraussetzung, um auf dem Arbeitsmarkt als Arbeitgeber*in bestehen zu können. Damit die dahingehenden Bemühungen des Instituts nach außen hin sichtbarer werden, hat das Institut als Bekenntnis zu Chancengleichheit im März 2023 die Charta der Vielfalt unterzeichnet. Des Weiteren führt das Institut das Zertifikat des audit berufundfamilie, das für gezielte Maßnahmen zur Vereinbarkeit von Beruf und Familienleben vergeben wird.



Vereinbarkeit von Beruf und Sorgearbeit

Seit der Corona-Pandemie hat sich der Arbeitsalltag am Institut gewandelt. Damit haben sich auch die Bedarfe an Vereinbarkeitsmaßnahmen verändert. Um dem Rechnung zu tragen, haben die Gleichstellungsbeauftragten in einer Online-Umfrage unter den Beschäftigten ermittelt, ob die geplante Einrichtung eines Eltern-Kind-Zimmers der geänderten Bedürfnislage noch entspricht oder ob durch die verbesserten Möglichkeiten des mobilen Arbeitens dieses Projekt als überholt eingestuft werden kann. Gemäß den Ergebnissen der Umfrage wurde auf ein Eltern-Kind-Zimmer verzichtet.

Ende 2022 wurde ein Training zu Vereinbarkeit von Beruf und Sorgearbeit mit der Trainerin Johanna Bing angeboten, das mit einem Tagesseminar begann und über 12 Wochen fortgeführt und begleitet wurde, um das Gelernte besser in den Alltag zu integrieren. Abschließend konnten die Teilnehmerinnen in einem halbtägigen Seminar rekapitulieren, welche Ideen und Maßnahmen sie in ihren Alltag aufnehmen konnten und an welchen Stellen noch Verbesserungspotenzial besteht.

Begleitung von Bewerbungs- und Berufungsverfahren

Die Gleichstellungsbeauftragten sind berechtigt, jedes Bewerbungsverfahren beobachtend zu begleiten. Aus Zeitgründen wird dieses Recht nur bei ausgewählten Verfahren wahrgenommen. So wurde 2021 das Bewerbungsverfahren für die Stelle der Verwaltungsleitung begleitet, da es sich um eine Schlüsselund Führungsposition handelt, bei der die Gleichstellungsbeauftragten darauf Wert gelegt haben, diese mit einer Person besetzt zu wissen, die neben fachlicher Qualifikation auch die angemessene Offenheit und Toleranz mitbringt, um eine fruchtbare Zusammenarbeit hinsichtlich der Themen Gleichstellung und Chancengleichheit zu gewährleisten.

Gleichstellungsplan ausgezeichnet, Evaluation Gleichstellungsplan

Der Gleichstellungplan für die Jahre 2021–2023 wurde von der Kommission "Qualitätsmanagement der Max-Planck-Gleichstellungspläne" mit der Silbermedaille ausgezeichnet, was gleichermaßen eine Anerkennung für die geleistete Arbeit, aber auch Ansporn für Verbesserungen war. Bei der Evaluation der Maßnahmen aus diesem Zeitraum und der Überarbeitung der Maßnahmen für den kommenden Plan 2024–2026 fiel besonders auf, dass die Zahl der Publikationen von Frauen deutlich hinter jener der Männer liegt. Daher ist eines der Ziele für die Zukunft, durch entsprechende Unterstützungsmaßnahmen Wissenschaftlerinnen zu ermutigen, mehr zu publizieren.

Außendarstellung und Kommunikation

Eines der Ziele des ersten Gleichstellungsplans 2021–2023 war, Frauen und ihrer Arbeit durch die Institutskommunikation mehr Sichtbarkeit zu verleihen. Hierzu wurden gemeinsam mit der Webredaktion immer wieder geeignete Themen identifiziert, die im Newsletter, auf den Social-Media-Kanälen und der Website des Instituts verbreitet wurden. Um die nicht-wissenschaftlich Beschäftigten zu berücksichtigen und Frauen zu ermutigen, sich in der IT-Abteilung zu bewerben, wurde ein Feature über

die erste Auszubildende in der IT verfasst, das unter folgenden Link zu finden ist: https://www.ip.mpg.de/de/it-ausbildung. Zusätzlich wurde mit der Webredaktion eine Webseite über die Forscherinnen am Institut erstellt, die zum Welttag der Frauen 2023 über Social Media bekannt gemacht wurde: https://www.ip.mpg.de/de/forscherinnen.

Teilnahme an Veranstaltungen

Die Gleichstellungsbeauftragten nahmen im Rahmen ihrer Arbeit an folgenden Veranstaltungen teil:

13.10.2020 Gleichstellungsbeauftragte 2020–2024 (Seminar)

10.11.2020 Diversity & Diversitätsmanagement (Seminar)

23.03.2021 Grundwissen für Gleichstellungsbeauftragte (Seminar)

26.03.2021 Jahrestagung der Gleichstellungsbeauftragten

27.04.2021 Fehlverhalten erkennen – Fehlverhalten entgegentreten (Schulung)

04.10.2021 Inklusive Sprache – vom Muss zum Mehrwert (Seminar)

01.04.2022 Jahrestagung der Gleichstellungsbeauftragten

28.11.2022 Gleichstellung messbar machen (Workshop für Gleichstellungsbeauftragte)

23.11.2023 Inclusive Research and Innovation Ecosystems – A Sustainable Way Forward for Gender Equality (Tagung)



Geschlechterverteilung im Institut

Am Institut und in den gemeinsamen Servicebereichen sind 129 Personen beschäftigt (Stand: 1.7.2023), 77 von ihnen sind Frauen (60 %).



Wissenschaft

Im Bereich Wissenschaft (Direktoren, Promovierende und Postdocs sowie sonstige wissenschaftliche Mitarbeiter*innen am Institut und am MIPLC) sind 64 Personen beschäftigt. Knapp die Hälfte (30) von ihnen sind Frauen, was einem Frauenanteil von 46 % entspricht.



Promovierende

Der Frauenanteil unter den 38 Promovierenden in den drei Abteilungen beträgt mit 20 Frauen gut die Hälfte. Im vergangenen Bericht (2018–2020) lag der Anteil der Frauen noch bei einem Viertel. Hier wurde im aktuellen Berichtszeitraum eine ausgewogene Verteilung erreicht.



Postdocs

Der Frauenanteil unter den Postdocs (19) beträgt etwa die Hälfte (neun Frauen). Damit ist auf dieser Karrierestufe der Frauenanteil im Vergleich zum vorangegangenen Berichtszeitraum etwa gleichgeblieben. Bei den Postdocs unterscheidet sich der Frauenanteil sehr stark zwischen den Abteilungen. Während er in der wirtschaftswissenschaftlichen Abteilung lediglich ein Sechstel beträgt, liegt der Frauenanteil in den rechtswissenschaftlichen Abteilungen deutlich höher (acht Frauen, fünf Männer).



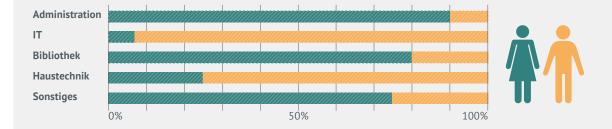
Nichtwissenschaftlicher Bereich

Von den 65 nichtwissenschaftlich beschäftigten Personen sind 41 Frauen (63 %). Die Servicebereiche zählten 53 Beschäftigte, davon 32 Frauen (60 %).



Die Gesamtzahl der weiblichen Beschäftigten in den Bereichen Services und Nichtwissenschaft unterscheidet sich stark zwischen den einzelnen Bereichen.

In den wissenschaftsnahen Bereichen Forschungskoordination, Wissenschaftskommunikation, Presse- und Öffentlichkeitsarbeit und Webredaktion sowie Wissenschaftsredaktion (im Diagramm unter "Sonstiges" zusammengefasst) liegt der Frauenanteil bei 75 % (neun von zwölf). In der Administration und der Bibliothek ist der Frauenanteil mit 90 % bzw. 80 % besonders hoch. In IT und Haustechnik hingegen sind weibliche Beschäftigte stark unterrepräsentiert (eine von 14 bzw. eine von vier).



MIPLC

Im MIPLC sind von 15 Beschäftigten elf weiblichen Geschlechts. In der Administration des MIPLC arbeiten ein Programmdirektor und zwei Verwaltungsdirektorinnen mit einem ansonsten weiblichen Team. Vier der sieben Doktorand*innen am MIPLC sind Frauen.



VIT Services

Als Teil der gemeinsamen Servicebereiche des Max-Planck-Instituts für Innovation und Wettbewerb und des Max-Planck-Instituts für Steuerrecht und Öffentliche Finanzen liefern die IT Services die zentralen Dienste für die Datenverarbeitung und Kommunikation beider Institute.

Erweiterungen der IT-Infrastruktur

Das Jahr 2021 war weiterhin durch die Corona-Pandemie geprägt und erforderte weitere Verbesserungen an der IT-Infrastruktur. So wurden die VPN- und VoIP-Systeme erweitert und verbessert.

2022 wurde für die ökonomische Abteilung des Instituts eine besondere GPU-Workstation für ein KI-Projekt beschafft. Aufgrund wachsender Datenmengen an den Instituten wurde im selben Jahr auch das Backupsystem erweitert.

Im Berichtszeitraum wurden zahlreiche defekte und alte Rechner durch neue ersetzt. Die alten Multifunktionsdrucker wurden durch neue Systeme eines anderen Herstellers ersetzt. Hierfür wurde auch die zugrundeliegende Server-Struktur erneuert.

Asset-Management und Identity-Access-Management

Im Berichtszeitraum wurden die Systeme regelmäßig an neue Gegebenheiten angepasst und, wo nötig, erweitert, um die Anforderungen der Fachabteilungen noch besser erfüllen zu können.

Gemeinsam mit dem Einkauf und der Buchhaltung wurde im Jahr 2023 im Bereich Asset-Management ein Lizenzmanagement eingeführt. Dies wird die Überwachung der Lizenzen und Wartungstermine weiter verbessern.

Software-Pflege

Die Software für zentrale Dienste der IT wurde über den gesamten Berichtszeitraum gepflegt und notwendige Verbesserungen im Bereich der IT-Sicherheit wurden vorgenommen. Zusätzlich wurde ein neues Privilege-Management eingeführt, um die Anforderungen in der Wissenschaft besser steuern zu können.

Internet und Intranet

Die Systeme für das Internet wurden im Berichtszeitraum regelmäßig gewartet und an die aktuellen Bedrohungslagen angepasst. Die IT unterstützt regelmäßig die Webredaktion des Max-Planck-Instituts für Innovation und Wettbewerb bei Verbesserungen des Webauftrittes.

Mit Unterstützung der IT wurde im Jahr 2023 mit der Überführung des vorhandenen Intranet in das MAX-Intranet der Max-Planck-Gesellschaft begonnen.

Planungen für den Umzug des Max-Planck-Instituts für Innovation und Wettbewerb

2021 begann die Planung für den Umzug des Max-Planck-Instituts für Innovation und Wettbewerb an den neuen Standort Herzog-Max-Straße/Ecke Neuhauser Straße. Die Planung beschäftigte die gesamte IT über den gesamten Berichtszeitraum. Es wurden Pläne für eine vollständig neue IT-Infrastruktur für diesen Standort erstellt, Markterkundungen durchgeführt und erste Angebote für die notwendige Hardware eingeholt.

Umstrukturierung der Institute

Durch den geplanten Umzug des Max-Planck-Instituts für Innovation und Wettbewerb ergibt sich eine Restrukturierung der gesamten IT-Landschaft. Ab 2022 wurde der Wunsch geäußert, dass die IT auch weiterhin als Full-Service-Provider für beide Institute zur Verfügung steht. Im Jahr 2023 änderte sich die Situation nochmals, da nun zusätzlich das Max-Planck-Institut für Sozialrecht und Sozialpolitik in die Gemeinschaft der Institute aufgenommen wurde und die bestehende IT auch dieses Institut in Zukunft betreut. Die notwendigen Planungen für diese Aufgabe wurden in Angriff genommen.

Programmierung

Um die Digitalisierung an den Instituten weiter voranzutreiben, wurden der Workflow für Forschungsaufenthalte mit und ohne finanzielle Förderung, die elektronischen Workflows für Urlaubs- und Dienstreiseanträge und der Gäste-Workflow weiterentwickelt und an die aktuellen Bedarfe der Mitarbeiter angepasst.

Personelle Entwicklung

(Daten aus Datenschutzgründen entfernt)



Auszubildende in der IT: Raul, Zinon und Halil – immer bereit, die Dinge in Ordnung zu bringen.

VI Administration

Die gemeinsame Verwaltung des Max-Planck-Instituts für Innovation und Wettbewerb und des Max-Planck-Instituts für Steuerrecht und Öffentliche Finanzen unterstützt und entlastet die Wissenschaft in allen administrativen Fragen und gewährleistet einen reibungslosen Ablauf aller erforderlichen Serviceleistungen.

Unter der Leitung von Thomas Dzionsko sind derzeit 17 Mitarbeiterinnen und Mitarbeiter sowie zwei Auszubildende in den vier Sachgebieten Personal, Buchhaltung, Einkauf und Allgemeine Verwaltung beschäftigt. Seit Herbst 2013 befindet sich die Verwaltung in einem gesonderten Gebäude am Karl-Scharnagl-Ring.

Im Zeitraum von 2021 bis 2023 sah sich die Verwaltung großen Herausforderungen und Veränderungen gegenüber.

Fachkräftegewinnung und Schaffung verbesserter Arbeitsbedingungen

Die Lage auf dem Arbeitsmarkt für die Gewinnung von Mitarbeitenden in der allgemeinen Verwaltung, der IT und den Bibliotheken ist in München äußerst problematisch. Nicht nur der allgemeine demographische Wandel, sondern auch die Konkurrenz am Standort München sowie das geänderte Arbeitnehmerverhalten (Remote Work, Work-Life-Balance etc.) machen es zu einer extrem schwierigen Aufgabe, qualifiziertes Personal außerhalb der wissenschaftlichen Mitarbeiterschaft zu finden, zu gewinnen und auch langfristig zu halten.

Der anhaltende Fachkräftemangel am Standort München führte nach dem Ende der COVID-19-Pandemie insbesondere in den Servicebereichen Bibliothek und Verwaltung zu einem deutlich spürbaren Personalwechsel; jede zweite Stelle musste hier neu besetzt werden. Diese Fluktuation stellte uns vor die Herausforderung, offene Stellen nicht immer direkt beim ersten Stellenbesetzungsverfahren nachbesetzen zu können. Teilweise lange Übergangszeiten und Arbeitsverdichtungen waren die Folge. Dass die Verwaltung auch in dieser Zeit der personellen Erneuerung ihr Dienstleistungsangebot aufrechterhalten und sogar ausbauen konnte, war nur durch das große persönliche Engagement aller Mitarbeiterinnen und Mitarbeiter in der Verwaltung möglich.

Um dem Rekrutierungsproblem zu begegnen, hat unsere Personalabteilung zunehmend und erfolgreich auf Active Sourcing und Social-Media-Kampagnen

gesetzt. Durch diese proaktive Herangehensweise konnten wir qualifizierte Fachkräfte identifizieren und gewinnen, insbesondere wenn die herkömmlichen Gewinnungsmethoden nicht ausreichend waren.

Darüber hinaus wurden weitere Maßnahmen ergriffen, um die Fluktuation in den Servicebereichen zu minimieren. Hierzu gehörten Halte- und Fortbildungsmaßnahmen, die dazu beitrugen, die Arbeitszufriedenheit zu steigern, attraktive Entwicklungsmöglichkeiten zu schaffen und bestehendes Personal zu binden. Ein weiterer entscheidender Schritt zur Bewältigung des Fachkräftemangels bestand zudem in der Schaffung zusätzlicher Ausbildungsstellen im Bereich Verwaltung.

Unsere Personalabteilung konnte darüber hinaus folgende wichtige Impulse für verbesserte Arbeitsbedingungen setzen:

- Überarbeitung der Vergütung für Promovierende und die Entwicklung eines Konzepts zur Nachwuchsförderung im Rahmen der Max-Planck-Förderrichtlinien,
- Umsetzung übertariflicher Eingruppierungsregelungen im Bibliotheksbereich,
- Abschluss eines Rahmenvertrages für ein Jobticket für den öffentlichen Nahverkehr mit Zahlung eines Arbeitgeberzuschusses sowie
- Abschluss einer Betriebsvereinbarung zur mobilen Arbeit in Zusammenarbeit mit dem Betriebsrat.

Insgesamt zeigen diese Maßnahmen, dass wir aktiv auf die Herausforderungen der letzten drei Jahre reagiert haben. Die erfolgreiche Umsetzung von Active Sourcing, Mitarbeiterbindung und die Förderung von Mitarbeiterinnen und Mitarbeiter sind essenzielle Elemente unserer Personalplanung und -entwicklung, um auch zukünftig den Anforderungen des Arbeitsmarktes gerecht zu werden.

Dennoch sind weitere Anstrengungen notwendig, um alle zur Verfügung stehenden Möglichkeiten zur Verbesserung der Arbeitsbedingungen zu eruieren sowie auf die Zuwendungsgeber der Max-Planck-Gesellschaft einzuwirken, damit Instrumente wie zum Beispiel die Zahlung von Ballungsraumzulagen ermöglicht werden können.

Unterstützung ukrainischer Wissenschaftlerinnen und Wissenschaftler

Im International Office stellte sich ab dem Jahr 2022 die Herausforderung der kurzfristigen Ankunft und Aufnahme von Forschenden aus der Ukraine (siehe auch Special "Ukraine", S. 32). Es wurden zeitnah Maßnahmen zur Unterstützung ergriffen, um ihre Gesamtsituation zu verbessern und die Integration in die lokale Gemeinschaft zu fördern. Dazu gehörten Hilfsangebote im Rahmen der Wohnungssuche, wie beispielsweise die Bereitstellung von Gästewohnungen des Instituts. Zusätzlich wurden die Betroffenen bei behördlichen Antragsverfahren begleitet und es wurden umfassende Informationen zu nachgelagerten Themen bereitgestellt, darunter Versicherungsschutz in Deutschland, Kontoeröffnung, Unterstützungsdienste für die psychosoziale Gesundheit sowie gezielte Hilfe für Familienangehörige (Kinderbetreuungsangebote, Schulen).

Digitalisierung und Einführung neuer Prozesse

Um die Wissenschaft bestmöglich unterstützen zu können, ist eine zeitgemäße Organisation und Arbeitsweise der Verwaltung notwendig, wobei die Digitalisierung der Verwaltungsprozesse ein wichtiger Baustein ist.

In den Jahren 2021 bis 2023 konnten durch die Buchhaltung, den Einkauf und die Reisekostenstelle sowohl zentrale MPG-Projekte als auch eigene Initiativen umgesetzt und Fortschritte erzielt werden. Nachfolgend einige Beispiele:

Die Implementierung der elektronischen Rechnungsbearbeitung (XSuite) im Jahr 2022 führte zu einer deutlichen Effizienzsteigerung der Prozesse zwischen Bedarfsträger, Einkauf und Buchhaltung. Rechnungen werden in digitaler Form empfangen, konsequent medienbruchfrei verarbeitet und aufbewahrt. Dadurch konnten die Bearbeitungszeiten von

Rechnungen erheblich verkürzt und die Transparenz sowie digitale Nachvollziehbarkeit der Rechnungsprozesse verbessert werden.

- Die Umstellung unseres Reisekostenabrechnungssystems auf SAP im Jahr 2023 hat verwaltungsinterne Schnittstellen verringert und wird eine schnellere Bearbeitungszeit und Auszahlung der Reisekosten ermöglichen.
- Durch die Einführung eines digitalen Vertragsmanagementsystems im Jahr 2023 haben wir nun die Möglichkeit, vertraglich zu regelnde Sachverhalte mit passenden und vorausgefüllten Vertragsvorlagen teilweise mit Einbindung der Rechtsabteilung in der Generalverwaltung zu erstellen und abzulegen. Das Vertragsmanagement schafft Transparenz und Rechtssicherheit.
- Die Einrichtung eines Destination-Managers wurde ebenfalls im Jahr 2023 umgesetzt und wird es uns künftig ermöglichen, Auslandsdienstreisen effektiver zu planen und den Komfort für unsere Mitarbeitenden zu verbessern.



Thomas Dzionsko ist seit 2021 Verwaltungsleiter des Max-Planck-Instituts für Innovation und Wettbewerb sowie des Max-Planck-Instituts für Steuerrecht und Öffentliche Finanzen.

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- Die Beschaffung einer neuen Inventursoftware (PA-SAM) im Jahr 2023 wird eine schnellere und genauere Erfassung von Inventardaten im Vergleich zum bisherigen Verfahren sowie eine effizientere Nachverfolgung ermöglichen.
- Als Erweiterung unseres Hardware-Asset-Management-Systems (Matrix42) ermöglicht das Software-Asset-Management-System seit dem ersten Quartal 2023 eine genauere Ermittlung von Lizenzbedarfen sowie ihrer Laufzeiten.
- Die Einführung von elektronischen Bankauszügen, Kreditkarten für den Bereich Einkauf sowie der Ausbau bargeldloser Bezahlung im Jahr 2023 hat die Sicherheit und Transparenz der Zahlungsvorgänge am Institut verbessert und ermöglicht künftig alternative Bezahlungen bei der Bestellung von Waren und Dienstleistungen.
- Öffentliche Vergaben werden im Einkauf seit 2022 papierlos über eine Webanwendung des Staatsanzeigers Baden-Württemberg sowie weitere Workflows wie digitale Wettbewerbsregisterabfragen abgewickelt. Hierdurch ist nicht nur eine revisionssichere Archivierung gewährleistet, sondern der Prozess benötigt zudem einen geringeren Einsatz an Ressourcen und Lagerfläche.

Neues Gebäude für das Max-Planck-Institut für Innovation und Wettbewerb

Das Max-Planck-Institut für Innovation und Wettbewerb ist derzeit in mehreren Gebäuden untergebracht, wobei seine Flächenbilanz ein deutliches Flächendefizit von 12,2% (626 m²) aufweist.

Um dieses Flächendefizit zu beheben und das Institut räumlich zusammenzuführen, was eine Zusammenlegung von Wissenschaft und Servicebereichen ermöglicht, musste ein neues Gebäude gefunden werden (siehe auch Special "Relocation of the Institute and New Building Site", S. 400). Das Max-Planck-Institut für Innovation und Wettbewerb hat mit Unterstützung der Generalverwaltung und Maklerunternehmen den Mietmarkt in München im Jahr 2021 umfassend geprüft und mit dem Objekt in der Herzog-Max-Straße/Ecke Neuhauser Straße eine geeignete Lösung gefunden. Der Umzug in das angemietete Gebäude ist für das erste Quartal 2025 vorgesehen. Die zentrale Lage

gewährleistet weiterhin eine gute und schnelle Erreichbarkeit der Ludwig-Maximilians-Universität und Technischen Universität München, was für wissenschaftliche Kooperationen, Lehre, gemeinsame Doktorandenausbildung und -betreuung sowie die Probandengewinnung für das wirtschaftswissenschaftliche Experimentallabor von entscheidender Bedeutung ist.

Während der zeitintensiven Mietvertragsverhandlungen und der Ausarbeitung der Baubeschreibung für einen derart großen Gebäudekomplex mit einer angemieteten Fläche von rund 9.600 qm² ergaben sich große Herausforderungen. Dabei wurden nicht nur finanzielle Aspekte, sondern auch die spezifischen Anforderungen des Instituts berücksichtigt, um eine optimale Arbeitsumgebung für die Wissenschaft und die Servicebereiche zu schaffen.

Es wurden von der Verwaltung zahlreiche Arbeitsgruppen organisiert und geleitet, in denen auch weitere Funktionsträger und/oder Abteilungen des Instituts wie IT, Bibliothek, Haustechnik und -dienste, Arbeitssicherheit sowie Wissenschaft und Wissenschaftskommunikation involviert waren. Diese Arbeitsgruppen beschäftigten sich zum Teil mit hohem zeitlichen Aufwand neben dem eigentlichen Arbeitsbereich unter anderem mit der künftigen IT-Infrastruktur, der Planung von Konferenz- und Veranstaltungsräumen sowie Aufenthaltsbereichen und Küchen, der Neubeschaffung von Büromöbeln und Bibliotheksregalen, der Erstellung von Sicherheitskonzepten für den neuen Standort, der Gestaltung und Bemusterung von Oberflächen, Materialien und Ausstattungsgegenständen sowie der Signaletik.

Compliance und künftige Organisationsentwicklung

In den Jahren 2021 bis 2023 wurde das Max-Planck-Institut für Innovation und Wettbewerb durch zahlreiche Einzel-, Querschnitts- und Jahresabschlussprüfungen der Internen Revision der Max-Planck-Gesellschaft, aber auch durch die Finanz- und Zollbehörden sowie durch externe Wirtschaftsprüfer auf Einhaltung der Regelungen und Vorgaben in den Sachgebieten Personal, Buchhaltung, Einkauf und Allgemeine Verwaltung überprüft. Erfreulicherweise gab es größtenteils positive Rückmeldungen der Prüfinstanzen und nur wenige Feststellungen, von denen keine gravierend waren.

Dennoch ist festzuhalten, dass wir seit mehreren Jahren einer drastisch ansteigenden Zahl von rechtlichen Anforderungen unterliegen, die weit über das hinausgehen, was Institutsverwaltungen in der Vergangenheit abverlangt wurde.

Die Vielfältigkeit der Aufgaben reicht vom Personalrecht zum Datenschutz und vom Steuer- und Sozialrecht bis hin zur Exportkontrolle und zum Arbeitsschutz. Die angemessene Wahrnehmung dieser Aufgaben setzt im Idealfall größere Verwaltungseinheiten voraus, in denen sich Spezialwissen bilden kann, ein laufender wechselseitiger Austausch zu Problemen und Lösungen besteht, eine gegenseitige Fehlerkontrolle etabliert ist und in denen für neu auftretende Fragestellungen Personal zielgerichtet ausgebildet und eingesetzt werden kann.

Aus diesem Grund haben sich die Geschäftsführungen der in der Münchner Innenstadt gelegenen Max-Planck-Institute für Innovation und Wettbewerb, Steuerrecht und Öffentliche Finanzen sowie Sozialrecht und Sozialpolitik in Jahr 2023 entschlossen, die Institutsverwaltungen im Rahmen einer dreijährigen Experimentierphase zu einer gemeinsamen Einrichtung zusammenzuführen, um ab voraussichtlich März 2024 insbesondere Formen der Organisation, Kooperation und Teambildung zu erproben.

Bereits im Vorfeld haben wir im Jahr 2023 die Verwaltung des Max-Planck-Instituts für Sozialrecht und Sozialpolitik in der Personalabteilung unterstützt und darüber hinaus die Einstellung und Einarbeitung einer neuen Mitarbeiterin im Bereich Travel Management übernommen.

Diese Zusammenführung wird die Compliance der Verwaltung und damit mittelbar auch die Compliance der wissenschaftlichen Einheiten und der Max-Planck-Gesellschaft in ihrer Gesamtheit sichern, die Entwicklung und Nutzung von Spezialwissen in den Verwaltungsbereichen ermöglichen sowie die Attraktivität der Arbeit in der Verwaltung steigern und größere Synergien freisetzen.

Es bleibt jedoch die Herausforderung, dass die drei Institute künftig an zwei verschiedenen Standorten (einerseits Herzog-Max-Straße, andererseits Marstallplatz/Marstallstraße, mit einer Entfernung von ca. 1,5 km) untergebracht sind. An beiden verbleibenden Standorten kann jedoch gesichert werden, dass die jeweiligen Verwaltungsmitarbeiterinnen und -mitarbeiter im selben Haus mit Wissenschaftlerinnen und Wissenschaftler zusammenarbeiten und nicht mehr – wie jetzt am Karl-Scharnagl-Ring – als isolierte Außenstelle organisiert sind.



Das Verwaltungsteam.

Photo: Julia Salzei

SPECIAL

Relocation of the Institute and New Building Site

he Max Planck Institute for Innovation and Competition is currently housed in three locally dispersed buildings, with a significant space deficit of 12.2% (626 m²). A new building had to be found in order to eliminate this space problem and to bring the scientific and service departments together under one roof.

Over several years, a number of properties in the city center were examined. In addition to its central location, the Institute needs a building with special features to meet particular requirements: offices, conference, event, and teaching rooms, as well as library space for the large, internationally renowned collection, where academics from all over the world come to conduct research. Structural requirements also had to be fulfilled, such as a large floor space with high floor stability, which not every building can provide.

In 2021, the Institute, with the support of the General Administration and real estate agents, conducted a

comprehensive search on the Munich rental market and found a suitable solution in the property HERZOG MAX at Herzog-Max-Str. 5/corner of Neuhauser Straße. The building is located in close proximity to Karlsplatz (Stachus), a central neo-baroque square and lively place that functions as a major hub for public transportation.

The heritage-listed edifice from 1865 served as a department store for over four decades. Intensive construction work is still ongoing to adapt the functionality of the building to its new use. The change reflects the transformation of city centers and follows a future-oriented trend, which ensures that city centers remain vibrant and livable in the long term.

The move to the new building is planned for the first quarter of 2025. The central location will continue to ensure good and fast accessibility to the Ludwig-Maximilians-Universität and the Technical University of Munich, which is of crucial importance for scientific

cooperation, teaching, joint doctoral training, and supervision as well as the recruitment of examinees for the economics experimental laboratory.

Major challenges arose during the time-consuming rental contract negotiations and the preparation of the building specifications for such a large complex with a rented area of around 9,600 square meters. Not only financial aspects, but also the specific requirements of the Institute were taken into account in order to create an optimal working environment for the scientific and service departments.



Sven Thomas Munck, Accumulata.



Various representatives from the administration, IT, library, facility management, occupational health safety, scientific departments, and science communication collaborated in numerous working groups. In addition to their regular workload, they spent a considerable amount of time planning the future IT infrastructure, conference and event rooms as well as common areas and kitchens, new office furniture and library shelving, security concepts for the new location, as well as signage, and dealt with the design and sampling of surfaces, materials, and furnishings.

The Institute intends to continue its successful strategy in basic legal and economic research at the new location.















VII Personalia, wissenschaftlicher Nachwuchs und Gastwissenschaftler*innen

Institutsangehörige im Zeitraum 01/2021 – 12/2023

E

Wissenschaftlicher Nachwuchs und Gastwissenschaftler*innen im Zeitraum 01/2021 bis 12/2023



VIII Haushalt

Das Max-Planck-Institut für Innovation und Wettbewerb verfügt über einen gemeinsamen Haushalt mit dem Max-Planck-Institut für Steuerrecht und Öffentliche Finanzen. Die zur Verfügung stehenden Mittel setzen sich aus der Kernfinanzierung, überjährigen Max-Planck-Forschungsvorhaben sowie Drittmitteln zusammen.

(Daten nur zur internen Verwendung)

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Members of the Board of Trustees and Representatives of the Institute gathered for a poster session at the Board Meeting on 3 July 2023.



Cornelia Rudloff-Schäffer, former President of the German Patent and Trade Mark Office, at her farewell as Chairwoman of the Board of Trustees on 3 July 2023.

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In Memoriam Dan L. Burk (1962 - 2024)

We are deeply saddened by the death of Dan L. Burk, Professor of Law at the University of California, Irvine School of Law. He passed away on 4 February 2024, leaving behind a profound and worldwide legacy on issues related to technology law, including the areas of patent, copyright, electronic commerce, and biotechnology law.

He had close ties with the Max Planck Institute for Innovation and Competition. He was a member of the Scientific Advisory Board from 2013 to 2023. In 2011, as a Fulbright Scholar, he conducted groundbreaking research at the Institute on the patenting of biotechnology in Germany and the European Union. Dan was a long-standing member of the Munich Intellectual Property Law Center (MIPLC) faculty. His contributions were crucial in helping to establish its excellent reputation and made a profound impact on the MIPLC community.

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