

Utility Model Protection in Pakistan An Option for Incentivising Incremental Innovation

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This paper was commissioned by the World Intellectual Property Organization (WIPO) under the second European Union-Pakistan Trade Related Technical Assistance (TRTA-2) Program.

The views expressed in this work are those of the author in his/her personal capacity and do not necessarily represent the positions or opinions of the Secretariat of the World Intellectual Property Organization, its Member States or the funding institution.

OUTLINE

1. **Introduction**
 - a. Tasks assigned
 - i. *Contextual Background*
 - ii. *Principal Tasks*
 - b. Methodology

2. **Overview of Legal and Economic Aspects of Utility Model Protection**
 - a. International Legal Framework
 - i. *The Paris Convention*
 - ii. *The WTO TRIPS Agreement*
 - iii. *Free Trade, Economic Partnership, and International Investment Agreements*
 - iv. *Key Aspects of Policy Space for Designing Domestic Protection*
 - b. Legal Aspects of Utility Model Protection
 - i. *Common Elements amongst National Systems*
 - ii. *Main Areas of Divergence*
 - c. Economic Aspects and Policy Considerations of Utility Model Protection
 - i. *Economic Rationale*
 1. Incentives for Minor and Incremental Innovation
 2. Incentives for Small and Medium Sized Enterprises (SMEs)
 3. Encouraging Local Innovation
 - ii. *Costs and Disadvantages*
 1. Legal Uncertainty and Wasteful Litigation
 2. Blocking the Public Domain and Preventing Technological Learning by Imitation
 - iii. *Specific Considerations for Developing Countries*
 1. Domestic Innovation below the Patent Level
 2. Degree of Copying and Imitation in Sub-Patentable Innovation
 3. Alternative Protection Regimes
 4. Domestic IP Infrastructure (IP Offices, Courts, Professionals)

3. **Key Features of Utility Model Protection in Selected Jurisdictions and Relevant Country Experiences**
 - a. Developed Countries
 - i. *Germany*
 1. History of Utility Model Protection in Germany
 2. Protection under the Current System
 3. Checks and Balances
 4. Empirical Data and Economic Impact
 - ii. *Australia*
 1. History of Second-tier Protection in Australia
 2. Main Features of the Current Innovation Patent System
 3. Empirical and Economic Analysis

 - b. Developing Countries, especially in Asia
 - i. *China*
 1. The wider Economic and Innovation Context
 2. History of Utility Model Protection in China
 3. The Main Features of Utility Model Protection
 4. Empirical and Economic Analysis
 - ii. *Malaysia*
 1. History of Innovation Patents in Malaysia

2. Main Features of Innovation Patent Protection
3. Empirical Findings and Economic Impact

4. **Reasons For and Against Introducing Utility Model Protection in Pakistan**
 - a. The relevant Economic Situation & Technological Developments in Pakistan
 - i. *Pakistan as an IP Importing / Exporting Country*
 - ii. *Which domestic industries (especially SMEs) engage in small scale or incremental innovative activities?*
 - iii. *Is copying or imitation an issue in these industrial sectors which functions as disincentive?*
 - iv. *How can relevant industries benefit from a system of legal protection for small scale / incremental innovation?*
 - v. *Further (external) factors affecting the Operation of a Utility Model System: SMEs familiarity with IP issues (IP culture), rule of law, good governance, other relevant facts on the ground)*
 - b. The Local IP Infrastructure
 - i. *The Pakistani IP Office*
 - ii. *Courts Dealing with IP Cases*
 - iii. *Professionals (Lawyers, Patent Attorneys)*
 - c. Reasons for Introducing a Utility Model System
 - i. *Any relevant incentives for minor and incremental innovation?*
 - ii. *Any relevant incentives for SMEs?*
 - iii. *Can local innovation be encouraged by utility model protection?*
 - d. Reasons Against a Utility Model System in Pakistan
 - i. *Is there a significant threat of legal uncertainty and wasteful litigation due to introducing utility model protection?*
 - ii. *Is there a realistic danger of blocking the public domain and/or preventing ongoing technological learning by imitation?*
5. **Recommendations**
 - a. A tailored Utility Model System suited to the Needs of Pakistan
 - i. *The Rationale for Introducing Utility Model Protection*
 - ii. *Registration versus Examination System*
 - iii. *Scope of Utility Model Protection*
 1. *The Essential Object of Protection: Invention or Form?*
 2. *Exclusion of Products from certain Fields of Technology and/or Processes*
 3. *Limiting Protection to Inventions embodied in Working Tools and other Three-Dimensional Models or Objects?*
 4. *Conditions for Protection (Novelty, Inventive Step)*
 - iv. *Exceptions and Limitations (including compulsory licensing & duration of protection)*
 - v. *Checks and Balances in the Enforcement System*
 - vi. *Embedding Utility Model Protection in the IP Infrastructure of Pakistan (role of IP office, courts, IP professionals; awareness raising campaigns towards potential beneficiaries)*

- b. Alternatives to Utility Model Protection in the Pakistani Context
 - i. *Retaining the Status Quo*
 - ii. *Lowering the Thresholds for Patent Protection*
 - iii. *Trade Secret Protection*
 - iv. *Protection against Unfair Competition / Passing-Off Tort*
 - v. *Industrial Design Protection*

Annex: Survey Questionnaire: Utility Model System in Pakistan

1. Introduction

a. Tasks assigned

This section briefly describes the tasks assigned to us as consultants to prepare this analytical paper on the feasibility of introducing a system of utility model protection in Pakistan. It mainly reproduces the contextual background and principal tasks as described in the terms of reference agreed to by WIPO and the consultants.

i. Contextual Background

In the second phase of the Trade Technical Assistance Program (TRTA-II) for Pakistan, the lead implementing agency UNIDO selected WIPO and the International Trade Centre (ITC) as partner implementing agencies. UNIDO has signed a Contribution Agreement with WIPO to implement the Component of the Program relating to intellectual property (IP) in accordance with the Inception Report that was approved on September 30, 2010 by the Program Steering Committee (PSC) in Islamabad, Pakistan. Implementation of the Component 3 is planned to be completed by end of 2013.

Component 3 activities are aimed at strengthening of the intellectual property rights (IPR) system and are grouped into the following four clusters:

- Strengthening of IP Institutions
- Strengthening IP Legislative and Policy Framework
- Improving Enforcement of IPRs
- Increasing Use of the IP System by Businesses and Research Institutions

One of the activities under the cluster of “Strengthening IP Legislative and Policy Framework” is the preparation of an analytical paper on the protection of utility models in Pakistan.

There is increasing interest in Pakistan the possibility of using utility models (or petty patents) to encourage incremental innovation. Such innovation is especially evident in the light engineering sector (e.g. in the automotive sector, agricultural machinery, machine tools). However, this small scale innovation is seldom recognized, let alone economically rewarded. Utility models could provide the necessary protection and economic incentive to promote innovation at this level. Utility models could also facilitate greater awareness and use of the patent system by local inventors.

ii. Principal Tasks

To assist the national authorities in their consideration of issues related to the protection of utility models, the International Consultant shall:

1. Prepare a paper on Protection of Utility Models in Pakistan. The paper shall include the following elements:
 - (i) An overview of the legal and economic aspects of utility models;
 - (ii) Key features of utility models legislation in certain countries having utility models protection, and the experience of these countries in the use of utility models;
 - (iii) Reasons for introduction, or non-introduction, of utility models protection in Pakistan, taking into account the country's level of economic and technological development; and
 - (iv) Recommendations on further action, including on alternatives to utility models protection.

2. The International Consultant shall carry out other activities as may be deemed necessary, and as may be requested by WIPO in order to help achieve the objectives of this exercise.
3. The International Consultant shall be assisted by a National Consultant who shall primarily be responsible for providing relevant national data/information, as required.
4. The International Consultant shall submit to WIPO an initial outline of the Paper within two weeks of accepting this assignment. A first draft of the Paper shall be submitted within ten weeks of submission of the outline. The final text of the Paper shall be submitted within three weeks of receiving comments/inputs from WIPO and the national authorities on the draft paper.

The National Consultant assists the International Consultant in the preparation of paper by:

- (i) Providing relevant, Pakistan specific background information and documentation that may be required by the international consultant;
- (ii) Identifying, and as required, arranging telephonic interviews, with relevant officials/stakeholders whose views/comments may need to be taken into account in finalizing the paper;
- (iii) Circulating any questionnaires to stakeholders, and facilitating completion of such questionnaires; and
- (iv) Clarifying any questions and issues pertaining to Pakistan's intellectual property and economic situation that may arise in the course of preparing the paper.

b. Methodology

The methodology followed in this paper involves legal, economic and empirical research and analysis. In particular, the following approach has been chosen with regard to individual tasks to be performed by the study:

- (1) legal research and economic analysis to identify the key legal and economic aspects of utility model protection, including an in-depth legal analysis of the pertinent international legal framework and the flexibilities for Pakistan in introducing such a system;
- (2) comparative legal and economic analysis of utility model protection systems in selected other jurisdictions (the design of the legal system, its impact on industrial and economic development (where such impact could be deduced from the literature available), and recent statistical data on the use of the utility model system in terms of applications and grants, by residents and foreign right holders). The selected jurisdictions include developed countries (Germany and Australia) and developing countries (China and Malaysia);
- (3) empirical research and analysis concerning the core research question: i.e., whether small scale, incremental innovation in Pakistan, especially by SMEs, might benefit from a system of utility model protection. Such research has been conducted by drafting – in light of the findings on the key legal and economic aspects of utility model protection discussed in part 2) of the study – a questionnaire which the national expert then sent to various stakeholders in Pakistan. A copy of the questionnaire is attached as annex to this study. Since within the limited time for preparing a first draft (10 weeks as per agreed terms of reference) only few responses could be gathered on the questionnaire, the national expert conducted extensive telephone interviews with various stakeholders (such as SME representatives, IP lawyers, government departments/agencies dealing with IP issues, manufacturers and IP (patent) holders. The feedback obtained by the national expert is presented in part 4) of this study. In addition, the national expert provided background information on

- the economic, industrial and technological context as well as the wider law enforcement framework relevant for IP protection in Pakistan; and
- (4) Based on the feedback obtained by the national expert, legal and economic analysis were employed – together with further input from the national expert – to draft the recommendations as to the costs and benefits of introducing a system of utility model protection in Pakistan.

The international consultant was able to rely on the vast resources available in the library of the Max Planck Institute for Intellectual Property and Competition Law and uses this opportunity to express his gratitude for this. More importantly, he was able to rely on extensive discussions and advice on utility model protection in the South-Asian context given by his colleague Mr. Nishantha Sampath Punchi Hewage who is currently pursuing a PhD on this topic at the Max Planck Institute. The international expert is further grateful for discussions and input on IP law in Pakistan provided by Mr. Owais Hassan Shaikh, formerly IPO Pakistan, who currently also pursues a PhD at the Max Planck Institute. Finally, he wishes to thank Professor Hanns Ullrich for the fruitful discussions and advice on utility model protection in the German and EU context. The report submitted here however is in the sole responsibility of the international and the national expert.

2. Overview of Legal and Economic Aspects of Utility Model Protection

a. International Legal Framework

International IP treaties cover various IP rights in varying degrees of detail and comprehensiveness. Hence the treaty obligations the contracting parties must adhere to equally vary.¹ For utility models, international IP law so far contains relatively few provisions and consequently few relevant treaty obligations the contracting states must comply with. In essence, this means that the policy space countries enjoy in designing their national systems of utility model protection is quite broad.²

More recent tendencies to include comprehensive additional obligations on the protection and enforcement of IP beyond those in the TRIPS Agreement (TRIPS-plus) in Free Trade Agreements (FTAs) however may change this to some extent. Although additional protection for utility models is certainly not at the core of TRIPS-plus obligations in FTAs, some recent examples exist which will be discussed briefly below. They of course only bind those countries which have agreed to the bilateral or plurilateral FTA. Beyond FTAs, International Investment Agreements (IIAs) or investment chapters in FTAs may further limit the policy space on the multilateral level.

¹ The WTO TRIPS Agreement for example contains obligations concerning the protection of copyrights, trademarks, industrial designs, geographical indications, patents, semiconductors and undisclosed information and includes the core obligations of the two main pre-existing IP substantive treaties, the Berne Convention on Literary and Artistic Works (Berne Convention) and the Paris Convention on the Protection of Industrial Property (Paris Convention), via reference. TRIPS provisions on copyright have more of a gap-filling character, since the provisions of the Berne Convention, incorporated via Art.9:1 TRIPS, already contain a significant degree of harmonised minimum standards on copyright protection. TRIPS provisions on trademarks (Art.15-21 TRIPS) and patents (Art.27-34 TRIPS) on the other hand are much more comprehensive and detailed since the Paris Convention does not contain a comparable degree of harmonised minimum standards.

² A recent WIPO study on flexibilities in the international patent system comes to the same result; see *WIPO – CDIP, Patent related Flexibilities in the Multilateral Legal Framework and their Legislative Implementation at the National and Regional Level* – Document prepared by the Secretariat (CDIP/5/4, 1st March 2010), at 26.

i. The Paris Convention

The definition of industrial property under the Paris Convention covers amongst other forms of IP, utility models.³ The main consequence for the contracting states, including Pakistan,⁴ is that they are bound to the national treatment obligation under Art.2 of the Paris Convention in relation to any system of utility model protection provided in the national law. Art.2 states:

- (1) Nationals of any country of the Union shall, as regards the protection of industrial property, enjoy in all the other countries of the Union the advantages that their respective laws now grant, or may hereafter grant, to nationals; all without prejudice to the rights specially provided for by this Convention. Consequently, they shall have the same protection as the latter, and the same legal remedy against any infringement of their rights, provided that the conditions and formalities imposed upon nationals are complied with.
- (2) However, no requirement as to domicile or establishment in the country where protection is claimed may be imposed upon nationals of countries of the Union for the enjoyment of any industrial property rights.
- (3) The provisions of the laws of each of the countries of the Union relating to judicial and administrative procedure and to jurisdiction, and to the designation of an address for service or the appointment of an agent, which may be required by the laws on industrial property are expressly reserved.

Art.2:1 requires all contracting states to grant nationals of other contracting states the same protection and same remedies against infringement as available to their own nationals – in relation to industrial property defined in Art.1:2. Therefore, any national system of utility model protection may not discriminate against foreign right holders in terms of protection and enforcement.⁵

This national treatment obligation however does not create an obligation for Paris Union countries to introduce utility model protection in their national laws; nor does it require any specific minimum scope or substance of protection if such a system is established. Contracting parties, including Pakistan, remain free not introduce such a system. If they decide to foresee utility model protection in their national law, they can freely determine the conditions for; as well as the scope, substance, limitations and duration of utility model protection. This absence of any substantive minimum standards is one of the main reasons for the diversity in the design of national utility model systems around the world.

Beyond the national treatment obligation described above, the Paris Convention contains a right of priority under Art.4 which applies also to utility models.⁶ Therefore, Paris Union countries which foresee a system of utility model protection have to allow a grace period of 12 months from the date of the first filing of a utility model registration in one of the Union countries within which the right holder may register the utility model in other Union countries. Furthermore, it is permissible to file a utility model in a Union country with such a system by virtue of a right of priority based on the filing of a patent application, and vice versa.⁷ Finally, Art.4 allows that an industrial design is filed in a Union country by virtue of a right of priority based on the filing of a utility model – however with the shorter priority period of 6 months for industrial designs.⁸

³ Art.1:2 of the Paris Convention states: “The protection of industrial property has as its object patents, utility models, industrial designs, trademarks, service marks, trade names, indications of source or appellations of origin, and the repression of unfair competition.”

⁴ As of 22nd April 2004, Pakistan acceded to the most recent Stockholm Act (1967) of the Paris Convention; see http://www.wipo.int/treaties/en/Remarks.jsp?cnty_id=288C.

⁵ See *Bodenhausen*, Guide to the Paris Convention (1968), p.29.

⁶ See Art.4 A:1, B & C:1 of the Paris Convention.

⁷ See Art.4 E:2 of the Paris Convention.

⁸ See Art.4 E:1 of the Paris Convention.

In terms of substantive obligations, Art.5 A of the Paris Convention – although primarily addressing national limitations to patent protection – applies with the necessary modifications (*mutatis mutandis*) also to utility models (Art.5 A (5)). Art 5 A provides:

- (1) Importation by the patentee into the country where the patent has been granted of articles manufactured in any of the countries of the Union shall not entail forfeiture of the patent.
- (2) Each country of the Union shall have the right to take legislative measures providing for the grant of compulsory licenses to prevent the abuses which might result from the exercise of the exclusive rights conferred by the patent, for example, failure to work.
- (3) Forfeiture of the patent shall not be provided for except in cases where the grant of compulsory licenses would not have been sufficient to prevent the said abuses. No proceedings for the forfeiture or revocation of a patent may be instituted before the expiration of two years from the grant of the first compulsory license.
- (4) A compulsory license may not be applied for on the ground of failure to work or insufficient working before the expiration of a period of four years from the date of filing of the patent application or three years from the date of the grant of the patent, whichever period expires last; it shall be refused if the patentee justifies his inaction by legitimate reasons. Such a compulsory license shall be non-exclusive and shall not be transferable, even in the form of the grant of a sub-license, except with that part of the enterprise or goodwill which exploits such license.
- (5) The foregoing provisions shall be applicable, *mutatis mutandis*, to utility models.

Therefore, by virtue of Art.5 A (5) of the Paris Convention, the limits imposed in sections 1-4 on the ability of Paris Union Countries to forfeit or revoke patents or to introduce compulsory licenses, especially for failure to work,⁹ apply also to utility models. These provisions are primarily relevant in the context of importing protected products and their local working, whereas utility model protection is primarily utilised by local residents.¹⁰ The obligations contained in Art.5 A hence will likely not play an important role in the practice of utility model protection.¹¹

Nevertheless, allowing some form of compulsory licensing may be an issue to consider for Pakistan if it decides to introduce a system of utility model protection. In this context, Art.5 A (2) explicitly allows “the grant of compulsory licenses to prevent the abuses which might result from the exercise of the exclusive rights conferred by the patent.” While failure to work is mentioned as example, this is not exhaustive and other forms of abuse can also be addressed by compulsory licensing, and if that has not proven to be sufficient to tackle the abuse, by forfeiture in accordance with Art.5 A (3).¹² Art.5 A (4) then contains further relevant obligations for the compulsory licenses issued to tackle “failure to work or insufficient working”. As mentioned above, the issue of local working will usually not be relevant for utility models. For all other cases of abuse, Art.5 A (4) does not apply.

More importantly, the obligations in Art.5 A (2)-(4) do not apply to measures other than those whose purpose is to prevent abuses.¹³ That means that Pakistan is free to introduce compulsory licenses (or other limitations to utility model protection) for other reasons – such

⁹ The concept of failure to work refers to the situation that a patent (or in our case utility model) holder has obtained an exclusive right but refrains to work the invention (or innovation) locally – usually by manufacture of the protected product or industrial application of the protected process – see *Bodenhausen*, Guide to the Paris Convention (1968), p.71

¹⁰ For statistics on the registration of utility models see *WIPO*, World Intellectual Property Indicators (2011), at 95-96 – indicating that non-resident applications (and subsequent grants) represent only a tiny fraction of the overall utility model applications (and grants). See also the further empirical evidence in part 3) of this study discussing examples of utility model protection in different jurisdictions: In almost all cases, domestic filings represent the very large majority of all applications for utility model protection.

¹¹ See also *Bodenhausen*, Guide to the Paris Convention (1968), p.73.

¹² See *Bodenhausen*, Guide to the Paris Convention (1968), p.70.

¹³ *Bodenhausen*, Guide to the Paris Convention (1968), p.70.

as to promote public interest or to allow the utilisation of utility models necessary for follow-on innovation.¹⁴ In essence, Art.5 A of the Paris Convention thus does leave significant flexibility to design exceptions and limitations to utility model protection. It will primarily be relevant for compulsory licenses addressing failure to work – a scenario which does not seem to have practical significance for utility models.

The Paris Convention further addresses utility models in Art.5 D and 11.¹⁵ In essence, its core obligation in relation to utility models is that of national treatment which prohibits to treat nationals of other Union countries any less favourable in terms of protection and enforcement of utility models rights. The Paris Convention nevertheless does not contain any obligations on how a system of protection and enforcement of utility models must look like and hence leaves all freedom in its design to the domestic lawmaker.

ii. *The WTO TRIPS Agreement*

The Agreement establishing the World Trade Organisation (WTO) contains in as Annex 1 C the Agreement on Trade related Aspects of Intellectual Property Rights (TRIPS). As a WTO Member State, Pakistan is bound by the TRIPS Agreement. The substantive scope of TRIPS is defined in its Art.1:2 whereby “the term ‘intellectual property’ refers to all categories of intellectual property that are the subject of Sections 1 through 7 of Part II” of the Agreement. As the subject of these sections in TRIPS do not in any way refer to utility models, TRIPS does not contain any independent obligations on the protection and enforcement of utility models.

In Art.2:1 however, WTO Members are obliged to “comply with Articles 1 through 12, and Article 19, of the Paris Convention (1967)”.¹⁶ That means that the substantive obligations of the Paris Convention, including those on utility models described above, are made part of TRIPS and hence are obligations under the WTO Agreements.¹⁷ Compliance with these provisions of the Paris Convention therefore can be tested under the WTO dispute settlement system.¹⁸ For the protection and enforcement of utility models, this arguably means that compliance with the core national treatment obligation in Art.2:1 of the Paris Convention can be challenged by a WTO Member in front of a dispute settlement panel established under the DSU.¹⁹ In case the national laws of a WTO Member are found to be inconsistent with this obligation, and the Member fails to correct this inconsistency, the DSU

¹⁴ Compare the discussion of the international flexibilities related to exceptions and limitations from utility model protection in section iv below.

¹⁵ Art.5 D prohibits national requirements to indicate or mention the utility model as a condition for recognising the right to protection. Finally under Art.11, “the countries of the Union shall, in conformity with their domestic legislation, grant temporary protection to patentable inventions, utility models, industrial designs, and trademarks, in respect of goods exhibited at official or officially recognized international exhibitions held in the territory of any of them.”

¹⁶ To be exact, this obligation is limited to the TRIPS provisions contained “Parts II, III and IV of this Agreement”. These parts however address all relevant questions of protection, enforcement and acquisition and maintenance of IP rights under TRIPS.

¹⁷ See *US – Sec 211 Omnibus Appropriations Act of 1998*, Appellate Body Report (WT/DS/176/AB/R), para.124-125.

¹⁸ The System for settling disputes over the compliance with WTO treaty obligations is primarily set out in the WTO Dispute Settlement Understanding (DSU).

¹⁹ A similar debate concerning the scope of WTO/TRIPS obligations in relation to trade names has been subject to the ‘Havana Club’ dispute. Here, the Appellate Body overruled the Panels decision that due to the limitation in Art.2:1 to parts II, III and IV of TRIPS, the Paris Convention obligations in relation to trade names are not part of WTO law; see *US – Sec 211 Omnibus Appropriations Act of 1998*, Appellate Body Report (WT/DS/176/AB/R), para.333-338. Whether the exact same reasoning would apply to Paris Convention obligations concerning utility models is however not completely clear. Nevertheless, good arguments speak in favour of such an understanding of Art.2:1 TRIPS: The qualification in Art.2:1 (which limits compliance with Art.1-12, 19 of the Paris Convention to parts II, III and IV of TRIPS) is better to be understood as limitation to issues of availability, scope and use (part II), enforcement (part III), acquisition and maintenance (part IV) of IP – rather than conditioning compliance with the Paris Convention to the fields of IP covered in part II (which would exclude utility models). Hence the obligation to comply with Art.1-12, 19 of the Paris Convention is limited to the issues addressed in parts II, III and IV of TRIPS – but not to the fields of IP covered in part II.

allows the complaining Member, as a last resort, to suspend equivalent obligations vis-à-vis the defendant.²⁰

In sum, the TRIPS Agreement does not add to the international treaty obligations Pakistan has in relation to utility models. The main non-discrimination (national treatment) obligation flowing from the Paris Convention in case Pakistan decides to introduce a system for protecting utility models however would be enforceable via the WTO dispute settlement system.

As noted in a recent WIPO publication, also the other multilateral treaties which refer to utility models, such as the International Patent Classification (IPC)²¹ and the Patent Cooperation Treaty (PCT),²² do not contain any substantive minimum standard of protection.²³ The resulting flexibility in designing a utility model system is almost unique in comparison to other IP rights. Section (iv) below highlights some of the key aspects of this policy space – in particular vis-à-vis the now ‘highly regulated’ patent system.

iii. Free Trade-, Economic Partnership-, and International Investment Agreements

Beyond the multilateral treaties described above, relevant international obligations pertaining to utility models may increasingly result from bilateral, plurilateral or regional agreements which increasingly contain additional obligations concerning the protection and enforcement of IP. Most of these obligations go beyond the multilateral standards as enshrined in the TRIPS Agreement and hence are frequently referred to as ‘TRIPS-plus’. Although additional protection for utility models is certainly not at the core of TRIPS-plus obligations in FTAs, it may nevertheless affect the policy space available under the multilateral IP system. In the following, some examples for IP provisions in FTAs relating to utility models are provided. They do not directly affect Pakistan at this point, since none of the FTAs or related economic integration or cooperation agreements Pakistan has signed contain IP provisions which cover utility models.²⁴ Nevertheless, the examples indicate how even areas of IP so far unregulated on the international plane are increasingly subject to international treaty obligations.

In 2008, the European Union has concluded the first so called Economic Partnership Agreement (EPA)²⁵ with a group of Caribbean states. This EU – CARIFORUM EPA contains a comprehensive chapter on IP which in turn has one provision on utility models:

²⁰ See Art.22:3 DSU.

²¹ The IPC covers not only patents for invention, but also inventors’ certificates, utility models and utility certificates.

²² In the framework of the PCT, references to an application for the protection of an invention shall be construed as covering applications for patents for inventions, inventors’ certificates of addition, and utility certificates of addition.

²³ *WIPO – CDIP*, Patent related Flexibilities in the Multilateral Legal Framework and their Legislative Implementation at the National and Regional Level – Document prepared by the Secretariat (CDIP/5/4, 1st March 2010), at 26.

²⁴ For a list of Agreements in force for Pakistan which contains IP or competition law provisions or other rules relevant in the IP and trade context, see the compilation on the WIPO website at <http://www.wipo.int/wipolex/en/profile.jsp?code=PK>. Only the FTA with China which entered into force in 2007 contains a provision on border measures akin to Art.51 TRIPS and another on investment protection which will be discussed below. Finally, the Economic Cooperation Organisation Trade Agreement (ECOTA, for details see http://www.wipo.int/wipolex/en/other_treaties/details.jsp?group_id=24&treaty_id=415) which entered into force in 2004 contains with its Art.19 a provision with obligations concerning the protection of IP rights. The term however is defined in a way which does not include utility models; see Art.19:2 ECOTA.

²⁵ The EPAs the EU is currently negotiating are the continuation of the trade relations Europe has with the Group of African, Caribbean and Pacific (ACP) states. Other recent FTAs the EU has concluded (for example with South Korea, Columbia and Peru, as well as a group of Central American States) do not contain any provisions on utility models.

ARTICLE 148 – Utility models

A. Requirements for protection

1. The EC Party and the Signatory CARIFORUM States may provide protection for any products or processes in any fields of technology, provided they are new, involve some degree of non-obviousness and are capable of industrial application.
2. The EC Party and the Signatory CARIFORUM States may exclude from protection all those products and processes the prevention within their territory of the commercial exploitation of which is necessary to protect *ordre public* or morality, human, animal or plant life or health or to avoid serious prejudice to the environment, provided that such exclusion is not made merely because the exploitation is prohibited by their law.
3. The EC Party and the Signatory CARIFORUM States may also exclude from protection: (a) diagnostic, therapeutic and surgical methods for the treatment of humans or animals;
(b) subject to Article 150, plants and animals other than micro-organisms, and essentially biological processes for the production of plants or animals other than non-biological and microbiological processes.
4. The provisions of this Article shall be without prejudice to existing legislation in the EC Party or the Signatory CARIFORUM States.

B. Term of protection

The term of protection available shall not end before five years, nor exceed ten years, counted from the filing date, or where priority is claimed, from the priority date.

C. Relationship to patents

1. All other conditions and flexibilities provided for patents in Section 5 of the TRIPS Agreement shall apply *mutatis mutandis* to Utility Models, in particular any that might be required to ensure public health.
2. An application for the grant of a patent may be converted into an application for utility model protection provided the request for conversion is made before the patent has been granted.

While the general question whether to introduce a system of utility model protection remains optional under Art.148:1 of the EPA, the provision then contains several requirements on how such a system has to be designed if a contracting party decides to introduce utility model protection in its domestic law in the future²⁶:

- (1) Such as system must be available for “any products or processes in any fields of technology” (Art.148 A:1),²⁷
- (2) Requirements of protection are novelty, “some degree of non-obviousness” and industrial application (Art.148 A:1);
- (3) The grounds for excluding certain subject matter from protection are equivalent to those recognised in Art.27:2 and 3 of the TRIPS Agreement (Art.148 A:2, 3)
- (4) The term of protection must be minimum five and maximum ten years (Art.148 B); and
- (5) The conditions and (only) those flexibilities provided for patent rights in Art.27-34 TRIPS apply also to utility model protection (Art.148 C).

²⁶ Since Art.148 A:4 makes the obligations contained in Art.148 subject to „existing legislation in the EC Party or the Signatory CARIFORUM States”, contracting states which already have a system of utility model protection are not affected.

²⁷ It remains unclear from the ordinary meaning of the text whether, once a country introduces utility model protection that must be available for ‘any fields of technology’, or if it is to be understood as a flexibility that allows a implementing country to limit protection to ‘any fields of technology’ as it deems fit.

These are significant constraints of the existing flexibilities for designing a utility model system under the multilateral framework. The ‘grandfathering clause’ in Art.148 A:4 of the EPA operates in a way that these constraints are only relevant for those contracting parties aiming to introduce utility model protection – while those with “existing legislation” on the matter are exempted from any obligations under Art.148. If confronted with such a provision in future FTA negotiations, Pakistan should carefully analyse the impact such a provision may have on the policy space it currently enjoys under the multilateral system.²⁸

Also the trade agreements concluded by Japan – which are usually also referred to as ‘Economic Partnership Agreements’ – sometimes contain provisions on utility model protection. For example, the Japan – Indonesia EPA addresses utility models in Art.109 (concerning the efficient administration of IP),²⁹ in Art.110 (concerning transparency)³⁰ and Art.121 (on criminal enforcement). Especially the latter provision may have significant implications. It states:

Each Party shall provide for criminal procedures and penalties to be applied in cases of the infringement of patent rights, rights relating to utility models, industrial designs, trademarks or layout-designs of integrated circuits, copyrights or related rights, or plant breeder’s rights, committed wilfully and on a commercial scale. Remedies available shall include imprisonment and/or monetary fines sufficient to provide a deterrent, consistently with the level of penalties applied for crimes of a corresponding gravity.

This obligation to foresee criminal sanctions for wilful infringements of utility models on a commercial scale arguably does not imply an obligation to introduce a system of utility model protection. However, if a contracting party has such a system in place or chooses to introduce one, it must provide criminal sanctions for the type of utility model infringements described above. This is quite a significant step – especially for a developing country whose scarce law enforcement resources (police, public prosecution, criminal courts) may be better utilised elsewhere. Even more important, the criminal law enforcement agencies may not be well equipped to deal with the highly complex and technical questions of utility model infringements. Especially in such an environment, the threat of criminal liability may function as a significant disincentive for companies to develop, produce and market products which may potentially infringe other’s utility model rights. Given that utility models are usually registered without prior substantive examination, this threat may be even graver. In the information technology (IT) sector and other IP-intensive industries, one product is often covered by several – if not hundreds – of technology-related IP rights such as patents, industrial designs or utility models. Imposing criminal liability (even if limited to wilful and commercial scale infringements) may seriously affect the incentive for companies to introduce new, value-added products into the market which are based on improving existing products. Pakistan should therefore proceed very cautiously before accepting such an obligation in an international agreement.

²⁸ On this point see further section iv. below.

²⁹ Art.109:2 provides that “neither Party may require the authentication of signatures or other means of self-identification on documents to be submitted to the competent authority of the Party, including applications, translations into a language accepted by such authority of any earlier application whose priority is claimed, powers of attorney and certifications of assignment, in the course of application procedure or other administrative procedures on patents, utility models, industrial designs, or trademarks.” Further, under Art.109:5, “each Party shall introduce and implement a system in which a power of attorney for application procedures or other administrative procedures on patents, utility models, industrial designs, or trademarks before the competent authority of the Party may relate to one or more applications and/or registrations identified in the power of attorney or, subject to any exception indicated by the appointing person, to all existing and future applications and/or registrations of that person.

³⁰ Art.110 provides in its relevant part that “for the purposes of further promoting transparency in administration of intellectual property protection system, each Party shall, in accordance with its laws and regulations, take appropriate measures to: (a) publish information on at least the applications for and the grants of patents, the registrations of utility models and industrial designs, and the applications for registration of, and the registrations of, trademarks and new varieties of plants, and make available to the public information contained in the dossiers thereof”. An equivalent provision contains Art.117 of the Japan – Malaysia EPA.

Finally and beyond IP provisions in FTAs, International Investment Agreements (IIAs) or investment chapters in FTAs may further limit the policy space for designing a utility model system according to the domestic development needs. To the extent that utility models are considered as an investment under IIAs or investment chapters of FTAs, the obligations to protect investments made by foreign investors have to be taken into account: Under international investment treaties, two countries or more enter into reciprocal obligations concerning the investments made by investors of one contracting state in the territory of the another contracting state (the so called host state). These obligations are substantive standards of treatment owed in relation to foreign investments – such as regulating the expropriation of investments or demanding fair and equitable treatment for investments.³¹ Often, these IIAs provide for a direct right for investors to sue the host state in front of an international tribunal (investor - state arbitration). In these proceedings investors can claim damages or even the revocation of host state measures which infringe the investor's rights – usually without the need to exhaust local remedies in the host state's domestic legal system.³²

Several IIAs concluded between Pakistan and other countries (such as the Netherlands, China, Australia, Japan, South Korea) contain a general reference to 'intellectual property rights' or 'industrial property rights' as a form of investment covered by the respective IIA.³³ Further, the 2009 Germany – Pakistan IIA includes in its definition of investment "intellectual property rights, in particular (...) utility model patents (...) technical processes, know how, and good will".³⁴ This certainly does not result in any obligation to introduce a specific form of IP rights – such as utility models – if this form of IP right does not exist in the domestic system of the host state.³⁵ However, in case Pakistan chooses to establish a system of utility models, any rights registered under the national system by foreign investors arguably would fall under the definition of investment and enjoy the substantive standards of protecting foreign investments under the IIA.³⁶ In essence that means that state measures limiting the protection of a utility model registered by a foreign investor in Pakistan can be tested against these standards of protection – such as those concerning expropriation or fair and equitable treatment.³⁷ On the other hand, the practical implications may be less severe since utility

³¹ For details on such standards see *Campell McLachlan, Laurence Shore & Matthew Weiniger*, International Investment Arbitration, 2007, Part III; *Rudolf Dolzer & Christoph Schreuer*, Principles of International Investment Law, 2008, chapters VI, VII.

³² For details on investor - state arbitration see *Campell McLachlan, Laurence Shore & Matthew Weiniger*, International Investment Arbitration, 2007, Part I chapter 3; *Rudolf Dolzer & Christoph Schreuer*, Principles of International Investment Law, 2008, chapter X.

³³ See for example Art.1:1 d) of the Japan – Pakistan IIA, Art.1:1 a) iv) of the Australia – Pakistan IIA, Art.I a) iv) of the China – Pakistan IIA and Art.1:3 d) of the South Korea – Pakistan IIA. All IIAs can be accessed at <http://www.unctadxi.org/templates/DocSearch.aspx?id=779>.

³⁴ See Art.1 (1) (d) of the Germany – Pakistan IIA. The full text of the agreement is available at <http://www.pakemb.de/index.php?id=198>.

³⁵ Even if utility models are explicitly mentioned in the definition of investments (see also Art.74 (e) (vi) of the Indonesia – Japan EPA), this entails no obligation to introduce utility model protection. IIAs and Investment chapters of FTAs do not create individual (intellectual) property rights, but merely protect (intellectual) property rights as far as they exist in domestic law. This insight has important implications for the scope of IPR protection under IIAs. Since they do not create IPRs, the protection offered under IIAs and FTA Investment Chapters depends on the existence of the relevant type of IP right in the domestic law of the host state. If the latter does not recognise an IP right or only in a limited way, international investment law cannot introduce or expand these IPRs as protected investments – even in cases where the relevant definition of investment includes those IP rights. For further details on the effect of including IP rights in the definition of investment in IIAs see *Henning Grosse Ruse - Khan*, Investment Law and Intellectual Property Rights, in *Bungenberg, Griebel, Hobe & Reinisch* (editors), INTERNATIONAL INVESTMENT LAW, Hart Publishing, (forthcoming, 2012).

³⁶ For a comprehensive study on how IIAs cover IP rights as protected investment see *Rachel Lavery*, Coverage of Intellectual Property Rights in International Investment Agreements: An Empirical Analysis of Definitions in a Sample of Bilateral Investment Treaties and Free Trade Agreements; TDM 2009, Vol. 6. Issue 2, at 4-7 and Annex 1. One can observe that although few IIAs do explicitly address all IP rights, this does not necessarily mean that IP rights not mentioned are not covered IP since IIAs generally provide that the lists of covered investments are not exhaustive.

³⁷ Especially exceptions and limitations applicable to utility models, or the issuance of compulsory licenses, or the effectiveness of enforcement of utility model protection may be challenged under these standards. For details see *Henning Grosse Ruse - Khan*, Investment Law and Intellectual Property Rights, in *Bungenberg, Griebel, Hobe & Reinisch* (editors), INTERNATIONAL INVESTMENT LAW, Hart Publishing, (forthcoming, 2012) and *Simon Klopschinski*, Der Schutz geistigen Eigentums durch völkerrechtliche Investitionsschutzverträge, (2011).

models are – generally speaking – registered primarily by domestic applicants so that claims by foreign investors relating to the treatment of registered utility models may be seldom.³⁸

Overall, the examples given above provide some anecdotal evidence on how the existing policy space under the multilateral framework may be eroded under bilateral, plurilateral or regional agreements concerning IP or investment protection. This is not to be understood as a normative judgement against such agreements which may contain important benefits for the negotiating countries. However, countries engaging in such negotiations should carefully assess the often not so clear implications of the IP and investment protection obligations on their ability to tailor their domestic law to the local development needs.

iv. Key Aspects of Policy Space for Designing Domestic Protection

The previous sections have shown that:

- (1) On the multilateral level, the main international obligation which WTO Members and Paris Union countries, including Pakistan, owe to another is to grant national treatment to nationals of other contracting parties. Beyond this duty to abstain from discrimination for foreign right holders when designing a domestic utility models system, the multilateral framework does not contain any practically relevant³⁹ obligations as to how this system must look like.
- (2) On the bilateral, plurilateral or regional level however, individual agreements such as FTAs, EPAs or IIAs contain additional obligations concerning the protection of utility models. These generally do not require introducing utility model protection – but in case a country bound by those obligations decides to do so, those will impose conditions how such a system of utility model protection must look like. Or, in case of the protection of foreign investments via IIAs, countries have to consider the implications of protecting utility models registered by a foreign investor under the substantive standards of treatment usually available in IIAs.
- (3) Such considerations will also be relevant for Pakistan since it is bound by several IIAs which either generally include IP rights under its definition of investment or specifically include utility models. The obligations flowing from international investment law however may be less relevant in practice since utility model systems tend to be used primarily by domestic applicants. In any case, countries bound by such additional obligations will have less policy space to design a system of utility model protection in line with its domestic (economic) development needs.

In the following, the key flexibilities which the absence of international treaty obligations (aside national treatment) on the multilateral level brings about will be highlighted. This is best conducted in comparison to the rather dense regulation of patent protection on the multilateral level. Patent rights are the primary means within the IP system to protect technological innovations and utility models in turn are – despite significant disparity in national approaches – generally perceived as a second-tier patent system offering a cheaper and quicker alternative protection regime for minor and incremental innovations which may not meet the requirements for patent protection.⁴⁰ Emphasising some important flexibilities vis-à-vis the obligations in the multilateral patent protection system offers good examples of

³⁸ For statistics on the registration of utility models see *WIPO, World Intellectual Property Indicators* (2011), at 95-96 – indicating that non-resident applications (and subsequent grants) represent only a tiny fraction of the overall utility model applications (and grants). However, under international investment law, not only the non-residents may be eligible for protection since also company shares and other assets hold in the host country may be a protected investment.

³⁹ The obligations resulting from Art.5 A (1)-(5) of the Paris Convention, in particular relating to compulsory licenses addressing failure to work the utility model protected innovation locally, are not of real practical significance for a system which tends to be used by local residents for their small and incremental innovations; see section (i) above.

⁴⁰ See *U Suthersanen, Utility Models and Innovation in Developing Countries*, ICTSD Issue Paper No.13 (2006), at ix.

what countries can freely determine in designing a utility model system in accordance with their domestic needs.

This policy space can best be presented along the lines of the main elements for a national IP system:

- (1) the protected subject matter
- (2) the requirements for protection
- (3) the rights granted to the right holder
- (4) exceptions and limitations to the exclusive rights, including compulsory licensing
- (5) duration of protection
- (6) enforcement mechanisms

(1) With regard to the protected subject matter, the TRIPS Agreement obliges WTO members to make patents “available for any inventions, whether products or processes, in all fields of technology” (Art.27:1 TRIPS). In particular, Art.27:1 TRIPS further demands that “patents shall be available and patent rights enjoyable without discrimination as to the place of invention, the field of technology and whether products are imported or locally produced.” This specific non-discrimination provision has to be distinguished from the general national treatment obligation under Art.3 TRIPS and Art.2:1 of the Paris Convention – the latter of which also applies to utility models.⁴¹ The TRIPS obligation to protect patents in the same manner regardless the place of invention, field of technology and place of production is a crucial aspect in the harmonisation of patent protection on the international level – as for example several developing countries did not grant product patents to pharmaceuticals prior to TRIPS.⁴²

For utility models, no such obligation exists. That means that countries can freely determine whether they wish to make such a system available to all fields of technology – or whether they want to limit protection to certain technology sectors while excluding others. Given that utility model systems often are designed as registration systems without a substantive examination as to the requirements for protection (such as local or universal novelty, a degree of inventiveness, etc), an exclusion of certain fields of technology which are primarily served by the patent system may be an important consideration.⁴³ In that way, a second tier protection system can focus on minor and incremental innovations which often will not meet the high standards of patent protection that are necessary to ensure high patent quality. For Pakistan, tailoring utility model protection to specific fields of technology may be a way of facilitating incremental innovation in the light engineering sector (especially in the automotive sector, agricultural machinery, machine tools) and other sectors where minor or incremental innovation occur.

Focussing protection on specific fields of technology where small scale innovation appears particularly vulnerable and in need of protection further prevents any abusive registration behaviour in those sectors excluded from protection: Especially in case of registration-only systems, companies may attempt to use the exclusivity utility model rights entail in order to block competitors from offering their products on the market.⁴⁴ In this regard, software, pharmaceuticals and high-tech Information Technology (IT) products may be amongst those

⁴¹ See section i and ii above.

⁴² India and Argentina are examples for countries which traditionally excluded pharmaceutical products from patent protection, see *UNCTAD & ICTSD, Resource Book on TRIPS and Development*, Cambridge University Press (2005), at 356.

⁴³ Countries such as Germany for example have historically limited utility models to three dimensional models or working tools – hence excluding compounds, processes and initially even machines as such from protection. As an overview of national utility models laws indicates, commonly excluded subject matter may be processes, chemical or biological substances, other substances, compositions or compounds as such, computer programmes, (business) methods, as well as the typical subject matter excluded from patent protection; see *WIPO – CDIP, Patent related Flexibilities in the Multilateral Legal Framework and their Legislative Implementation at the National and Regional Level – Document prepared by the Secretariat (CDIP/5/4, 1st March 2010)*, Annex II.

⁴⁴ See section 2) c. ii. for details.

to be excluded from utility model protection as the need for substantive examination appears particularly important here to prevent abusive and anti-competitive blocking behaviour.

Overall, the option to exclude certain fields of technology from utility model protection appears as an important element of flexibility in designing a system that primarily fits domestic needs and responds to demands for encouraging incremental and minor innovations from micro, small and medium enterprises (MSMEs). In light of this insight, any international obligations – along the lines of Art.148 A:1 of the EU – CARIFORUM EPA⁴⁵ – which arguably demand for indiscriminate protection for all fields of technology should not be agreed to without considerations as to the impact for any future domestic system of utility model protection.

(2) As to the requirements for protection, Art.27:1 TRIPS prescribes the three criteria of novelty, inventiveness and industrial applicability (or utility). Beyond this, TRIPS does not regulate further details as to how these requirements must be implemented in the national laws of WTO Members – it for example does not contain an obligation as to foreseeing a high or low threshold of inventiveness.⁴⁶

For utility model systems, again no international obligation on this matter exists. Countries can hence freely determine what conditions for protection they see fit in their domestic setting. In particular, they can decide on the ‘degree’ of novelty required – by demanding an innovation to be universally, regionally or merely locally new: meaning is that the innovation for which protection is claimed has not been available to the (relevant international, regional or domestic) public prior to the application for registration for utility model protection. Merely demanding local novelty for example would further lower the threshold and so make protection available to innovations which may be already in use elsewhere, but not domestically. While this may be a way to promote local incremental and small scale innovation, it also carries the danger of unreasonably encroaching the public domain.⁴⁷

Countries also have the flexibility to decide on the level of inventiveness which they wish to require as condition for protection. The same applies to the utility/industrial applicability requirement. Countries could also completely do away with any of these requirements or substitute any of them with other requirements more suitable in the respective domestic setting.⁴⁸ Again, there is plenty of flexibility which can be used in a constructive manner in favour of a system tailored towards encouraging local innovation and taking into account any other relevant interests on the domestic level.

(3) Under the TRIPS patent regime, Art.28 deals with the rights which national laws of the WTO Members states must grant to the patent holder. They are conceived as negative rights to exclude others from utilising the patented invention in all commercially relevant forms.⁴⁹

⁴⁵ See section iii above.

⁴⁶ UNCTAD & ICTSD, Resource Book on TRIPS and Development, Cambridge University Press (2005), at 358.

⁴⁷ See section 2) c. ii. 2. for details.

⁴⁸ Malaysia for example has implemented a system of utility model protection which does not require an inventive step (see section 3) b. ii. for details). Other countries, like Germany, initially conceived the system as a form of design protection (see section 3) a. i. for details) or limit protection to innovations which are embodied in a three-dimensional form or structure (such as the case in Spain or Portugal – see *U Suthersanen*, Utility Models and Innovation in Developing Countries, ICTSD Issue Paper No.13 (2006), at, 13). See also the discussion in section b. below.

⁴⁹ Art.28 TRIPS states: 1. A patent shall confer on its owner the following exclusive rights:

(a) where the subject matter of a patent is a product, to prevent third parties not having the owner's consent from the acts of: making, using, offering for sale, selling, or importing for these purposes that product;

(b) where the subject matter of a patent is a process, to prevent third parties not having the owner's consent from the act of using the process, and from the acts of: using, offering for sale, selling, or importing for these purposes at least the product obtained directly by that process.

2. Patent owners shall also have the right to assign, or transfer by succession, the patent and to conclude licensing contracts.

For utility models, countries may decide not to extend the exclusivity to all acts of making, using, offering for sale, selling, or importing the protected innovation. They may also choose a completely different system of protection by exchanging the concept of negative rights to exclude others from engaging in certain acts with a form of liability rule whereby the beneficiary of utility model protection cannot prevent the use of her/his innovation, but is entitled to some form of reasonable compensation instead.⁵⁰ The system of protection then is akin to the situation of statutory licenses which apply to exclusive rights under certain circumstances.⁵¹ It primarily means that others – in particular market competitors or second-comers – may use the protected utility model without the need for obtaining and negotiating a license, but against payment of a fee (so called ‘take and pay’ rules). On the one hand, this may reduce the incentive for investing into new innovations and therefore could decrease the encouragement for incremental and small-scale innovations.⁵² On the other hand, liability regimes have a much lesser impact on the public domain since others remain free – against the payment of a fee – to use the protected utility model.⁵³

In any case, due to the policy space on the multilateral level, all options are on the table for designing a system of utility model protection. This may include seriously taking into account options beyond the traditional concept of exclusive rights.

(4) Another important area to consider are exceptions and limitations to the exclusive rights, including options of compulsory licensing. Here, two TRIPS provisions are pertinent in the patent protection context. For once, Art.30 allows WTO Members to provide “limited exceptions to the exclusive rights conferred by a patent, provided that such exceptions do not unreasonably conflict with a normal exploitation of the patent and do not unreasonably prejudice the legitimate interests of the patent owner, taking account of the legitimate interests of third parties.” It hence functions as a general limitation as to which types of exceptions can be allowed from patent protection in national laws: An exception must be such that it:

- 1) is limited;
- 2) does not unreasonably conflict with a normal exploitation of the patent; and
- 3) does not unreasonably prejudice the legitimate interests of the patent owner, taking account of the legitimate interests of third parties.

In the *Canada – Patents*⁵⁴ dispute, two exceptions in the Canadian patent law relating to pharmaceutical patents and the market-entry of generic competitors were scrutinised under Art.30 TRIPS. The WTO Panel charged with the case, adopted a rather narrow reading of the open and ambiguous terms of Art.30 TRIPS and found one of the Canadian exceptions to be inconsistent with that provision.⁵⁵

⁵⁰ Of course, a crucial issue then is to determine who decides over the amount of compensation and according to which criteria. On the distinction between exclusive rights and liability rules see generally *A Kur & J Schovsbo*, Expropriation or fair game for all? The gradual dismantling of the IP exclusivity paradigm, in *A Kur, M Levin* (Editors) *Intellectual Property Rights in a Fair World Trade System*, Edward Elgar Publishing: Cheltenham, 2011, 408-451. On liability rules for sub-patentable innovations see generally *J H Reichmann*, Of Green Tulips and Legal Kudzu: Repackaging Rights in Subpatentable Innovation, *Vanderbilt Law Review* (2000), 25-53.

⁵¹ See Art.13 (1) of the Berne Convention on the Protection of Literary and Artistic Works (1971) dealing with the statutory authorisation of subsequent sound recordings of musical works once the author has already agreed to a recording of her/his work. After this first recording, (other) phonogram producers then can re-record the work against payment of an “equitable remuneration which, in the absence of an agreement, shall be fixed by the competent authority.”

⁵² The argument is that an exclusive right offers more protection to the beneficiary of the right (who can actually exclude others from using the protected subject matter and refrain from licensing her/his product) and thereby a greater incentive to innovate.

⁵³ This right to use could further – depending on the domestic environment – be limited to certain uses. It could for example cover only situations where the user can show that she/he needs to rely on a protected utility model to come up with a value-added product or to implement a follow on innovation which would equally be eligible for utility model protection (and which she/he would have to license back to the holder of the first utility model).

⁵⁴ *Canada – Patent Protection of Pharmaceutical Products*, March 17, 2000 – Report of the Panel (DS 114).

⁵⁵ See *H Grosse Ruse - Khan*, Policy Space for Domestic Public Interests Measures under TRIPS, South Centre Research Paper Series, No.22 (July 2009); online available at <http://ssrn.com/abstract=1542542>.

Any country considering establishing a system of utility model protection is not bound to exceptions which meet the three conditions of Art.30 TRIPS. It can freely determine which type of uses do not require any authorisation of the right holder, whether any compensation is owed for such a use and what kind of conditions apply for invoking such an exception. Given the widespread use of provisions equivalent to Art.30 TRIPS in the context of other IP rights regulated under the multilateral framework,⁵⁶ the policy space available for countries with regard to exceptions applicable to utility models is extraordinary. Pakistan may therefore consider without any constraints what kind of uses should be exempted from the protection available for utility models.

The other provision in TRIPS which deals with uses without the authorization of the right holder is Art.31 TRIPS. It regulates a long list of conditions under which countries may foresee compulsory licenses to use the patented invention.⁵⁷ Also with regard to compulsory licensing, the multilateral framework does not contain any equivalent obligations that apply to utility models.⁵⁸ Beside the issue of local working, countries thus are flexible to design a system of compulsory licenses, in case they consider such as system necessary, in accordance with their domestic needs. It could, for example, cover situations similar to those mentioned in relation to statutory licensing (take and pay rules) above. These may be cases where a user can show that she/he needs to rely on a protected utility model to come up with a value-added product or to implement a follow-on innovation.

(5) With regard to duration of protection, the TRIPS patent regime includes in Art.33 a minimum term of 20 years counted from the filing date. For utility models, no multilateral minimum standard exists and countries have chosen terms between 5 years and 25 years.⁵⁹ Given this flexibility, a country should design the duration of protection in light of overall objective pursued with the utility model system. If it is to encourage incremental innovation in certain industrial sectors, the average lifecycle of products subject to protection in the relevant sectors as well as the time needed to develop such products may be key determining factors.

(6) Finally, the multilateral framework for patent protection – and other IP rights falling under TRIPS – contains obligations concerning the enforcement of these IP rights. In part III of the TRIPS Agreement, 20 provisions on general enforcement obligations, civil and administrative procedures and remedies (such as injunctive relief and damage awards), provisional measures, border enforcement measures and criminal sanctions set out comprehensive obligations pertaining to the enforcement of IP rights.

The core question that arises in this context is whether these obligations also apply in case a country establishes a system of utility model protection. According to the first sentence of Art.41:1 TRIPS which sets out the overall scope of the enforcement part of TRIPS,

“Members shall ensure that enforcement procedures as specified in this Part are available under their law so as to permit effective action against any act of infringement of *intellectual property rights covered by this Agreement*, including expeditious remedies to prevent infringements and remedies which constitute a deterrent to further infringements.”⁶⁰

⁵⁶ See Art.9 (2) of the Berne Convention, Art.13 TRIPS and Art.10 of the WIPO Copyright Treaty (1996) in the context of copyright, Art.17 TRIPS concerning trademarks, and Art.26:2 TRIPS with regard to industrial designs.

⁵⁷ See Art.31 (a) – (l) TRIPS.

⁵⁸ As discussed above, the Paris Convention provisions on compulsory licensing (see Art.5 A) do apply to utility models, as explicitly stated in Art.5 A (5) of the Paris Convention. The obligations contained therein however are primarily relevant for compulsory licenses tackling failure to use and do not apply to compulsory licenses for other reasons – such as to promote public interest or to allow the utilisation of utility models necessary for follow-on innovation. See section (i) for details.

⁵⁹ See *U Suthersanen*, Utility Models and Innovation in Developing Countries, ICTSD Issue Paper No.13 (2006), at 2.

⁶⁰ Emphasis added.

The decisive issue hence is whether utility models are a “form of intellectual property rights covered by this Agreement” in the sense of Art.41:1 TRIPS. If so, then the different types of enforcement measures required in Art.41 to 61 TRIPS have to be extended also to utility model protection.

Two provisions are relevant in this regard. On the one hand, Art.1:2 TRIPS states that “for the purposes of this Agreement, the term ‘intellectual property’ refers to all categories of intellectual property that are the subject of Sections 1 through 7 of Part II.” As argued above,⁶¹ this does not include utility models since they are not addressed in any form in the sections 1-7 of part II of TRIPS. On the other hand, Art. 2:1 TRIPS states that “in respect of Parts II, III and IV of this Agreement, Members shall comply with Articles 1 through 12, and Article 19, of the Paris Convention (1967).” As concluded above, that means that the substantive obligations of the Paris Convention, including those on utility models described above, are made part of TRIPS and hence are obligations under the WTO Agreements.⁶² The reference in Art.2:1 also includes the enforcement provisions in part III of TRIPS. Does this imply that, if a country decides to introduce utility model protection, it must offer all enforcement tools required under part III of TRIPS also to utility models?

This question must be answered in the negative. Based on Art.2:1 TRIPS, the Paris Convention obligations contained in Art.1-12 and 19 of the Paris Convention apply also “in respect of”⁶³ parts II, III and IV of TRIPS. The obligation to grant national treatment in case a country introduces utility models therefore applies to the availability, scope and use (the scope of part II TRIPS), enforcement (part III), as well as acquisition and maintenance (part IV) of utility model protection.⁶⁴ In other words: with regard to these issues of IP protection (including enforcement), the national treatment obligation of the Paris Convention also applies to utility models. WTO Members therefore may not discriminate against nationals of other WTO Member states with regard to issues of enforcement.⁶⁵ It however does not mean that the individual obligations contained in part III of TRIPS concerning IP enforcement apply to utility models protected in the national laws of WTO members.⁶⁶

In sum, the enforcement obligations contained in part III TRIPS do not apply in case WTO Members foresee utility model protection in their national laws – but they are obliged, by virtue of Art.2:1 TRIPS in connection with Art.1:1 and 2:1 of the Paris Convention, not to discriminate against nationals from other WTO Members to the extent they do offer enforcement remedies and procedures against infringements of utility models. This results in another significant flexibility to design the enforcement system for (merely registered, not examined) utility models in a manner which takes into account safeguards against abuse – for example by limiting the injunctive relief remedies or damages unless there is at least a prima facie case that the registered utility model meets the novelty- and other requirements for protection.

This section has shown the almost unlimited policy space which the multilateral framework leaves to Pakistan in designing a utility model system tailored to the domestic needs, in particular to encourage small scale and incremental innovation. Contrasted to the dense regulation of patent protection, the flexibilities regarding subject matter, conditions for protection, rights granted, exceptions and limitations, duration as well as enforcement measures become evident and indicate the range of options available to Pakistan. Against

⁶¹ See section ii.

⁶² See *US – Sec 211 Omnibus Appropriations Act of 1998*, Appellate Body Report (WT/DS/176/AB/R), para.124-125.

⁶³ Art.2:1 TRIPS.

⁶⁴ Compare the explanations in fn.15 above.

⁶⁵ This also follows from the Paris Convention as such – since Art.2:1 requires all contracting states to grant nationals of other contracting states the same protection *and same remedies against infringement* as available to their own nationals; compare section i above.

⁶⁶ This conclusion does not stand against the conclusion reached in section ii above (see fn.15) that the Paris Convention obligation to grant national treatment concerning utility models are incorporated into TRIPS by virtue of Art.2:1 TRIPS and hence part of WTO law. As already explained above, this incorporation is limited to the issues addressed in parts II, III and IV of TRIPS.

this background, the next section examines common elements and areas of divergence in the legal protection of utility models around the world.

b. Legal Aspects of Utility Model Protection

This section briefly describes the main legal features and aspects of utility model systems. It first points to the common elements amongst different national systems and then turns to the main areas where these systems differ. Given the large amount of policy space available under the multilateral IP framework, significant differences are not surprising from an international law perspective. They point to the diversity of options available for Pakistan in designing utility model protection; while the common elements may be viewed as a form of 'best practice' amongst those countries opting for a utility model system.

i. *Common Elements amongst National Systems*

The term most commonly used by national legislators to describe a system of protection for sub-patentable innovations or specifically three-dimensional technical structures and forms is primarily the term 'utility model'. Other expressions include short term patent, petty patent, innovation patent, minor patent, utility innovation, consensual patent.⁶⁷ These terms simply refer to a title of protection for certain innovations, in particular devices, articles or other engineering products which are technically less complex and have short product life cycles in order to fostering local innovations. Often, this system is designed to complement the patent system where the inventions relating to minor technical progress are not protected – although such inventions may have a need to be protected and promoted actively from industrial point of view.⁶⁸ Currently, about 70 countries as well as three regional organisations provide for such a system of IP protection in one way or another.⁶⁹

In essence, 'utility model' is not an accepted or clearly defined legal concept within the intellectual property paradigm – but a generic term which refers to subject-matter that hinges between that protectable under patent law and sui generis design law.⁷⁰ It is most commonly used to refer to a second tier patent system, offering a cheap, no-examination protection regime for technical inventions which would not usually fulfil the strict patentability criteria.⁷¹

U Suthersanen in her study 'Utility Models and Innovation in Developing Countries' for the International Centre for Trade and Sustainable Development (ICTSD) counts the following aspects common to all the national utility model systems from a global perspective:

- (1) all utility model laws confer exclusive rights on the proprietor of the right (as opposed to an anti-copying right).
- (2) novelty is a criterion in all utility model systems, though the standard of novelty varies widely.
- (3) registration is a requirement but that usually there is no substantive examination of applications.

⁶⁷ See *WIPO – CDIP*, Patent related Flexibilities in the Multilateral Legal Framework and their Legislative Implementation at the National and Regional Level – Document prepared by the Secretariat (CDIP/5/4, 1st March 2010), at 26.

⁶⁸ *K.S. Kardam*, Utility Models – A Tool for Economic and Technological Development (2007), at 1-2.

⁶⁹ See the list of countries in *WIPO – CDIP*, Patent related Flexibilities in the Multilateral Legal Framework and their Legislative Implementation at the National and Regional Level – Document prepared by the Secretariat (CDIP/5/4, 1st March 2010), at Annex 1. The WIPO statistics on utility models lists 75 IP offices which register utility models around the world; see the table on breakdown by residents and non-residents at <http://www.wipo.int/ipstats/en/statistics/models/>. The three regional organisations which provide for a system of utility model protection are the Andean Community (comprising Bolivia, Colombia, Ecuador, Peru and Venezuela), OAPI (the African Intellectual Property Organisation) and ARIPO (the African Regional Industrial Property Organisation).

⁷⁰ *U Suthersanen*, Utility Models and Innovation in Developing Countries, ICTSD Issue Paper No.13 (2006), at 1.

⁷¹ *Ibid.* See also *A Odman Boztosun*, Exploring the Utility of Utility Models for Fostering Innovation, *Journal of Intellectual Property Rights*, Vol.15 (2010), at 430.

- (4) most utility model laws protect the technical character of the invention, as opposed to the ornamental function or the appearance of the product.⁷²

It hence appears that the common denominator for a system of utility model protection is a regime consisting of negative rights to exclude others from commercially exploiting the protected subject matter. The system requires novelty and demands for a registration (but usually no substantive examination of the conditions for protection).⁷³ It protects technical innovations – rather than the design of a product. One may add that the term of protection – although it differs as to its exact length – is commonly significantly shorter than patent protection.⁷⁴

On a policy level, the most common rationale for introducing utility model protection is the intention to provide a system of protection for the results of innovative activities which do not meet the threshold for patent protection – such as minor and/or incremental inventions.⁷⁵ In order to prevent trivial patents (which may lead to an unwarranted blocking of competition on the domestic market and limit access to essential technological knowledge), while at the same time providing protection to such smaller innovations, a second tier system complementary to the patent system is considered necessary. While the first-tier patent system can retain its higher thresholds for obtaining protection; the second-tier system is often utilised to serve the needs of local innovators, especially SMEs.⁷⁶ In line with these policy considerations, recent WIPO statistics confirm that the very vast majority of users are local residents – while only a small fraction of non-residents register and are being granted utility models.⁷⁷ Even more importantly, several commentators argue that there is convincing evidence from various countries that UM systems have primarily served the interests of SMEs.⁷⁸

ii. Main Areas of Divergence

Based on the absence of substantive harmonisation concerning utility model protection in the multilateral IP framework, there is substantial divergence in how countries design their system of utility model protection. According to a recent WIPO study, utility model systems can be categorized into (1) patent-type regimes and (2) three-dimensional regimes.⁷⁹ In the former, in order to get utility model protection the applicant usually must fulfil the same type of requirements as under the patent system (novelty, inventiveness, industrial application/utility) – with the main differences to the patent system often being:

⁷² U Suthersanen, *Utility Models and Innovation in Developing Countries*, ICTSD Issue Paper No.13 (2006), at 1.

⁷³ For the common reliance on the novelty requirement see also the list of countries in Annex II of *WIPO – CDIP, Patent related Flexibilities in the Multilateral Legal Framework and their Legislative Implementation at the National and Regional Level – Document prepared by the Secretariat (CDIP/5/4, 1st March 2010)*. According to that list, all countries have such a requirement in their national systems.

⁷⁴ While the duration of patent protection must be minimum 20 years from the filing date (by virtue of Art.33 TRIPS), the term for utility model protection varies usually between 5 and 15 years (sometimes on a renewable basis), with a significant amount of countries granting protection for about 8-10 years.

⁷⁵ For a list of policy rationales for utility model protection see A *Odman Boztosun*, *Exploring the Utility of Utility Models for Fostering Innovation*, *Journal of Intellectual Property Rights*, Vol.15 (2010), at 430.

⁷⁶ *WIPO – CDIP, Patent related Flexibilities in the Multilateral Legal Framework and their Legislative Implementation at the National and Regional Level – Document prepared by the Secretariat (CDIP/5/4, 1st March 2010)*, at 28.

⁷⁷ See *WIPO, World Intellectual Property Indicators (2011)*, at 95-96. An exception represents the number of filings in Hong Kong (about 37% of non-residents), followed by Australia, Austria, Slovakia and Japan, where non-resident applicants accounted for around two-fifths of the total.

⁷⁸ See *Yahong Li*, 'Utility Models in China' in Christopher Heath and Anselm Kamperman Sander (eds), *Industrial Property in the Bio-Medical Age: Challenges for Asia* (Kluwer, 2003) 157, 160. *Sarah L. Moritz and Andrew F. Christie*, 'Second-Tier Patent System: The Australian Experience' (2006) *EIPR* 230, 237. See also *Australian Government's Advisory Council on Intellectual Property, Review of the Innovation Patent System: Issues Paper (August 2011)* 6 <<http://www.acip.gov.au>> accessed 10 February 2012.

⁷⁹ *WIPO – CDIP, Patent related Flexibilities in the Multilateral Legal Framework and their Legislative Implementation at the National and Regional Level – Document prepared by the Secretariat (CDIP/5/4, 1st March 2010)*, at 26.

- potential restrictions to the protectable subject matter (beyond the three-dimensional form requirement);
- a lower (if any) degree of inventiveness required;
- a shorter period of protection; and
- a relatively fast registration (instead of extensive substantive examination) system with much lower costs.⁸⁰

In those countries categorised within the group of the *three-dimensional regime*, inventions eligible for protection must be embodied in a three-dimensional form, structure or apparatus⁸¹ – hence excluding other innovative products (such as chemicals, bio-technology and software) and all processes or methods.

Beyond this classification in two groups, the main differences in national approaches to utility model protection can be described in relation to the following criteria:

- (1) *Protectable subject matter*: While some countries foresee the same exclusions as they apply to define patentable subject matter (hence generally excluding discoveries, scientific theories and mathematical methods and further, for example plants and animals other than micro-organisms, software as such, or diagnostic, therapeutic and surgical methods for the treatment of humans or animals),⁸² others add exclusions specific to utility models. Those may be either the consequence of applying the three-dimensional requirement' or result from particular exclusions that apply exclusively to utility models (such as chemical or pharmaceutical substances, solutions intended to satisfy aesthetic requirements, methods and processes and/or any kind of substances or compounds).⁸³
- (2) *Conditions for protection*: While the novelty requirement as such is used by all countries with a system of utility model protection, the level of novelty required ranges from universal novelty to domestic (local) novelty.⁸⁴ In particular, some countries adopt relative novelty standards.⁸⁵ Even wider differences exist with regard to the degree of inventiveness required which ranges from the standard applied to patents, via variations of lower levels of inventiveness (referred to as 'inventive act', 'exceeding the framework of professional skill', technical addition' or 'minimum inventive activity')⁸⁶ to substituting this requirement with others (such as 'creative effort')⁸⁷ or simply abandoning it altogether. The third criterion, industrial application or utility, can be found in almost all national laws – with the exception of China and Poland for example which instead demand 'usefulness';

⁸⁰ See *J Richards*, *Utility Model Protection throughout the World* (2000) and *WIPO*, *Understanding Intellectual Property*, at 9.

⁸¹ Also for the three-dimensional regimes, the degree of inventiveness required (if any) is usually lower than for patents, thereby extending protection to minor inventions. Nevertheless, within this group, important differences exist from one country to another regarding substantive examination; see *WIPO – CDIP*, *Patent related Flexibilities in the Multilateral Legal Framework and their Legislative Implementation at the National and Regional Level – Document prepared by the Secretariat (CDIP/5/4, 1st March 2010)*, at 26.

⁸² See for example Art.52 of the European Patent Convention, Art.1 of the German Patent Act (Patentgesetz) and Art.27:2, 3 TRIPS (on the multilateral framework for exclusions from the patentable subject matter).

⁸³ *WIPO – CDIP*, *Patent related Flexibilities in the Multilateral Legal Framework and their Legislative Implementation at the National and Regional Level – Document prepared by the Secretariat (CDIP/5/4, 1st March 2010)*, at 27. A detailed table which includes information on the exclusions from utility model protection can be found in Annex II of the WIPO study mentioned above.

⁸⁴ See *U Suthersanen*, *Utility Models and Innovation in Developing Countries*, ICTSD Issue Paper No.13 (2006), at 2.

⁸⁵ Relative novelty means that the availability of publications in any country will destroy novelty – whereas the use of the invention outside the country in which protection is sought does not.

⁸⁶ See the different terms use in Annex II to *WIPO – CDIP*, *Patent related Flexibilities in the Multilateral Legal Framework and their Legislative Implementation at the National and Regional Level – Document prepared by the Secretariat (CDIP/5/4, 1st March 2010)*.

⁸⁷ Such as the case in Slovenia and Albania; see Annex II to the *WIPO – CDIP* study.

whereas Uruguay and Egypt seem not to foresee this requirement at all.⁸⁸ In sum, the various divergences one observes in relation to the three standard conditions for patent protection are primarily motivated by and related to establishing a second tier system of protection for small and incremental innovations.

- (3) *Granting procedure*: Most national systems substitute the substantive examination common for patent applications (novelty search, assessment of inventive step, etc) with a registration system with cursory or no examination or mere checking of formalities. Some countries nevertheless maintain a comprehensive examination of the criteria for utility model protection.⁸⁹ The rationale for a registration system of course is to reduce the time, efforts and cost involved on the side of the IP office to process applications which in consequence lowers the administrative and maintenance fees to be borne by applicants. This in turn can be viewed as an indication that the system should primarily serve the needs of SMEs. Some of those countries which allow for a simple registration system nevertheless require that an examination report concerning novelty must be carried out before any infringement action can be brought.⁹⁰
- (4) *Duration of protection*: A final element of divergence amongst the different national approaches to utility model protection is the duration of protection which varies from 5 years to 25 years.⁹¹ As noted already in section (i) above, the term usually fluctuates between 5 and 15 years (sometimes on a renewable basis), with a significant amount of countries granting protection for about 8–10 years.⁹²

In essence, the about seventy national systems of utility model protection do contain important differences when it comes to the details and specific elements of the system. This reinforces the general insight that for IP protection, no 'one size fits all' approach is suitable. The absence of any relevant substantive obligations on the multilateral level allows countries more than in cases of other IP right to tailor protection to the domestic needs.

Nevertheless, certain common denominators exist which define the notion of utility model protection as a system which is aimed at protecting sub-patentable innovations in a quick and comparable cheap manner, for a more limited time.⁹³ As a policy instrument, this system is often utilised to serve the needs of local innovators, especially SMEs.

c. Economic Aspects and Policy Considerations of Utility Model Protection

Against the background of the international legal framework and the observations of commonalities and differences in the national system of utility model protection, this section focuses on the main economic motives offered, the potential costs and disadvantages and on policy considerations specific to developing countries. Section 4) then discusses these issues to the extent they are relevant in the specific context of Pakistan.

i. *Economic Rationale*

The economic rationale for protecting utility models – understood as primarily covering some or all forms of minor or incremental innovations – is closely tied to the patent system and its presumed inability to extend legal rights to inventions that fall short of the novelty and/or inventive step thresholds.⁹⁴ The most common accepted rationale for the patent system in

⁸⁸ See Annex II to *WIPO – CDIP*, Patent related Flexibilities in the Multilateral Legal Framework and their Legislative Implementation at the National and Regional Level – Document prepared by the Secretariat (CDIP/5/4, 1st March 2010).

⁸⁹ An example is Malaysia which is further discussed in section 3) b. ii. below.

⁹⁰ *J Richards*, Utility Model Protection throughout the World (2000). The rationale here is to make sure that no subject matter is being protected against alleged infringements without having tested whether it actually meets the conditions for utility model protection (as those have not been examined before in simple registration systems).

⁹¹ *U Suthersanen*, Utility Models and Innovation in Developing Countries, ICTSD Issue Paper No.13 (2006), at 2.

⁹² See *J Richards*, Utility Model Protection throughout the World (2000), Table I.

⁹³ The system therefore lends itself especially for technically less complex inventions or other innovative products which have a short commercial life; see *WIPO*, Understanding Intellectual Property, at 8.

⁹⁴ *G Dufield & U Suthersanen*, Innovation without Patents (2007), at 17.

turn is to serve as a tool to incentivise new innovations: An incentive for market actors to produce and deliver innovative goods or develop innovative processes which are to the benefit of society and mankind. Without a certain degree of legal protection, economic theory argues that inventors and creators will not disclose the results of their innovative activities to the public in fear of imitation and copying.⁹⁵ Hence, a legal form of artificial exclusivity which prohibits appropriation and so allows recouping investments and offers options for rewards is deemed necessary to encourage the development of new innovations. These are generally welcomed as a way of promoting progress in a society. Insofar, societal progress is the central objective underlying the system of patent protection.⁹⁶ This in turn also requires the widest possible accessibility and dissemination of new innovations so that as many as possible may benefit from it. In order to achieve the objective of societal progress, IP regulation therefore has to offer a trade-off between a protection-incentive for market actors and public access to and dissemination of the resulting innovations. In general terms, this balance is achieved by the limiting the exclusive rights granted to innovators in time and in scope.⁹⁷

In the context relevant here, the main limitation which represents the trade-off between incentive and access are the requirements for patent protection – namely novelty, inventive step and industrial applicability/utility. With regard to innovative activity that results in products or processes which do not meet these criteria, patent law does not offer legal exclusivity in their (commercial) exploitation and hence no incentive to innovate. Such sub-patentable innovations may nevertheless be considered as useful, important and worth to be incentivised by an IP right – depending on the relevant economic, technological and other societal circumstances. Hence, countries may decide to shift the incentive/access balance inherent in the traditional criteria for patent protection for small-scale, incremental innovations. With regard to these types of innovations, policy makers then have to decide between the following four options:

- (1) *not to protect sub-patentable innovation at all* by IP rights and thereby leave them in the public domain for everybody free to use;
- (2) *lower the thresholds for patent protection* in order to cover some or most of the innovations considered worthy of protection under the patent system;
- (3) *rely on alternative mechanisms* for protecting these innovations – in particular under notions of preventing misappropriation or unfair competition; or
- (4) *introduce a specific system (such as utility models)* for protecting sub-patentable innovations as alternative incentive mechanism.

In the following, the main economic reasons for introducing a system of utility model protection are presented. The next section then discusses the potential costs and disadvantages of utility model protection, followed by specific considerations for developing countries. In the course of this analysis, the three alternative options (1) – (3) mentioned above are also taken into account.

⁹⁵ This is due to the *public good* character of ideas or other creations of the mind which comprise the subject matter generally referred to as intellectual property: In economic terms, such intellectual creations are generally *non-rival* and *non-exclusive* in their nature: They can be used and consumed by one person without excluding the simultaneous use or consumption by others (non-rivalry) and, once made public, their use cannot be effectively controlled (non-exclusivity).

⁹⁶ See for example Article I, Section 8, Clause 8 of the United States Constitution, known as the Intellectual Property Clause, which empowers the United States Congress: “*To promote the Progress of Science and useful Arts, by securing for limited Times to Authors and Inventors the exclusive Right to their respective Writings and Discoveries*” (emphasis added).

⁹⁷ See for example Art.28 TRIPS (providing for certain exclusive rights for patent holders) on the one hand and Art.27 TRIPS (requiring patents only for new, inventive and industrially applicable products or processes and further allowing to exclude certain subject matter), 30 TRIPS (allowing to foresee certain exceptions to these exclusive rights), Art.31 TRIPS (allowing compulsory licenses) and Art.33 TRIPS (limiting the period of patent protection to the minimum of 20 years) on the other hand.

1. Incentives for Minor and Incremental Innovation

In their book 'Innovation without Patents' Dutfield and Suthersanen offer two justifications for introducing a system of utility model protection in order to encourage small-scale and/or incremental innovation:

- (1) A theoretical justification for utility models: Since most welfare enhancing inventions are cumulative in nature and often sub-patentable in the sense that they may not meet the high standards of novelty and inventive step imposed by the patent system, there should be another, second-tier system of protection which focuses on these sub-patentable innovations.
- (2) A practical justification is that many inventions are vulnerable to 'unfair' copying,⁹⁸ especially the sub-patentable ones: Since they usually will be based on small-scale, incremental advancements of the existing state of the art, they will generally be easier to imitate or copy than technological breakthroughs.⁹⁹

The basic rationale therefore is as follows: As patent law will traditionally not cover such small-scale and incremental innovations, a utility model system specifically addresses this perceived protection gap and prohibits copying and imitation, hence preventing free-riding. It so creates a new incentive for the development, production and commercialisation of products (and services) based on such minor and/or incremental innovations.

Further arguments for utility model protection are based on:

- (1) the nature of IPRs and their role in securing investments and in exploitation; and
- (2) psychological advantages over competitors.

1. A utility model protection based on exclusive rights tailored to sub-patentable innovation further creates a legally recognised asset for those investing into the development, production and marketing of goods based on such innovations. This legal right functions as a tradable commodity which, as one may argue, can in principle be used as a collateral or security for venture capital or other investments by third parties. This in turn may make investments into the development, production, marketing of products based on sub-patentable innovations more attractive to venture capitalist. On the other hand, there may be a limited willingness of traditional banks to accept IP, in particular a new right such as a utility model, as collateral. According to a study commissioned by the European Commission, it is the difficulty involved in valuation of intellectual property assets which serves as an important reason why such assets cannot be used effectively as collateral.¹⁰⁰ A WIPO study however points out that in countries with functioning and developed markets for venture capital, IP rights play an important role in obtaining access to funding.¹⁰¹

Regardless whether or not one views the existence of a new exclusive right in sub-patentable innovations as a potentially useful security/collateral, a utility model right can be licensed and so makes commercialisation and dissemination of the protected technology much easier by providing a reliable legal framework for exploitation of protected goods/services. Especially, as an exclusive right, not only the licensor but also the licensee may be in a position to invoke the right (to the extent of the license or transfer of rights)

⁹⁸ On the validity of the 'unfair copying' argument which is mainly based on natural right theories, see sections ii) and iii) 2) in this part below.

⁹⁹ *U Suthersanen & G Dutfield*, *Innovation Without Patents* (2007), at 35-36. See also *U Suthersanen*, *Utility Models and Innovation in Developing Countries*, ICTSD Issue Paper No.13 (2006), at 6.

¹⁰⁰ See *European Commission*, *Guarantee Mechanisms for Financing Innovative Technology* (2001). The survey indicates that none of the surveyed European commercial banks accepts intangible assets like IP rights as a security for a loan.

¹⁰¹ *WIPO*, *Intellectual Property Rights and Innovation in Small and Medium-Sized Enterprises* (2004), at 10. Although this role of IP rights may be limited to patents and apply rather in high-tech sectors for which utility models will be less relevant.

against a third party infringing the relevant rights. Licensing can further be used as a tool to access new markets.¹⁰²

2. Finally, a psychological argument has been forwarded by Dutfield and Suthersanen: Having a recognised right in a specific result of sub-patentable innovative activity confers to the holder a psychological advantage over competitors by creating an (illusory) effect that imitation by competitors will be delayed due to the exclusive right. This in turn encourages investment into the development, production and marketing of goods based on the innovative activity and covered by utility model protection. In absence of this psychological effect caused by the state-granted IP right, companies and third party investors would much more likely anticipate rapid imitation and hence refrain from significant investments due to the competition from imitations.¹⁰³

While two of the alternatives mentioned above (lowering thresholds for patent protection as well as alternative modes of protection for sub-patentable innovation) may entail the same positive effects in securing investments and in facilitating exploitation,¹⁰⁴ and may also convey a 'psychological advantage' over competitors, this would of course not apply the alternative option of leaving these innovations in the public domain. The latter however has several positive connotations as discussed in the section (ii) below.

2. Incentives for Small and Medium Enterprises (SMEs)

A system of utility model protection is argued to be of specific benefit to SMEs. This follows from the assumption that there is a large presence of SMEs in technological sectors where small and incremental innovation is the norm.¹⁰⁵ In a study on IP rights and Innovation in SMEs, WIPO recognises that in a number of industrial sectors other than the development and production of high-tech goods, innovation by SMEs mainly consists in minor adaptations to existing products, innovation in designs, mode of service delivery or management and marketing practices.¹⁰⁶ In many such sectors, SME innovations are to a large extent of an informal nature and without formal R&D investments, R&D laboratories or R&D personnel. The study acknowledges that in such cases, other intellectual property rights, in particular as utility models, industrial designs and trademarks may play a bigger role than patents in providing a competitive edge to SMEs.

Of course, this assumption needs to be verified by empirical data in the relevant national setting. In an ideal scenario, such empirical research should focus not only on the question how large the percentage of SME presence is in those industrial sectors where incremental innovation occurs (and whether this is actually the case). It must also try to find relevant data on whether there is indeed harmful copying and imitation of the results of these innovative activities – and whether such copying and imitation leads to improved or otherwise value-added products based on follow-on innovations.¹⁰⁷ This fits with the utility model related conclusion of a WIPO research paper on Intellectual Property Rights and Innovation in Small and Medium-Sized Enterprises. Here, WIPO generally recommends to "evaluate the current use – and potential impact of a wider use – of utility models and consider their more active promotion or their introduction, as the case may be".¹⁰⁸

¹⁰² WIPO, *Intellectual Property Rights and Innovation in Small and Medium-Sized Enterprises* (2004), at 6.

¹⁰³ *U Suthersanen & G Dutfield, Innovation Without Patents* (2007), at 42.

¹⁰⁴ However, one would need to take into account the practical availability of patents or other alternative IP protection regimes in terms of costs and time until protection is obtained; see the next section below.

¹⁰⁵ *U Suthersanen & G Dutfield, Innovation Without Patents* (2007), at 38. See also *U Suthersanen, Utility Models and Innovation in Developing Countries*, ICTSD Issue Paper No.13 (2006), at 6-7.

¹⁰⁶ WIPO, *Intellectual Property Rights and Innovation in Small and Medium-Sized Enterprises* (2004), at 5.

¹⁰⁷ See sections ii. 2. and 4) a. ii. & iii. for further details.

¹⁰⁸ WIPO, *Intellectual Property Rights and Innovation in Small and Medium-Sized Enterprises* (2004), at 22.

Further arguments are based on:

- (1) cost factors; and
- (2) patent backlogs.

(1) Due to the usual absence of a comprehensive examination system, the up-front costs for registering and obtaining a utility model hence are significantly lower than in the patent system. This cost factor is also one which is especially important to SMEs.¹⁰⁹ Relevant costs are not only the official fees (including application fees, publication fees and maintenance fees) but also the costs entailed in preparing an application and those subsequently related to enforcing a patent (such as court and attorney fees).¹¹⁰ As the WIPO study on the use of IP rights by SMEs notes, the costs of protection may be perceived by many SMEs as exceeding the potential benefits to be obtained from patent protection, particularly considering that a significant part of the costs may be incurred before the product has reached the market and that lenders, investors or government programs rarely provide financial support for the protection of IP rights.¹¹¹

The costs involved in obtaining a utility model registration and subsequently enforcing it on the other hand usually need not be prohibitively high. This applies first of all to the registration and maintenance fees which do not need to compensate for expensive novelty searches. Even if a utility model system demands for an examination before infringement proceedings can be initiated or successfully concluded, SME right holders are still significantly better off than under a system where high up-front costs have to be paid before obtaining protection.¹¹² SME utility model holders can make a cost-benefit calculation based on the costs of the examination report (and the further litigations costs) in comparison to the costs incurred by the alleged infringing activity (and the likelihood of winning the case). This enables them to decide on a case-by-case basis whether they consider the enforcement of their utility model protection to be worth it. Finally, alternative dispute resolution, arbitration or mediation facilities could be introduced or existing ones applied in order to facilitate a mutual acceptable solution in infringement cases.¹¹³ The WIPO report on IP rights and SMEs concluded that "it is clear that expedited procedures for settling IP disputes out of court such as expedited arbitration and the introduction of post-grant opposition and/or review procedures at IP offices are mechanisms for settling disputes that seem particularly appealing to inventors, researchers, entrepreneurs and SMEs with limited financial resources. In addition, fast and efficient procedures for disputes in courts are also necessary to ensure that SMEs may rely on the courts whenever necessary."¹¹⁴

(2) Next to the issue of costs, further elements of the patent application process may act as a disincentive for SMEs to seek protection, such as the time required to be granted a patent. The ever-increasing number of patent filings has often led to an increasing backlog which in turn creates continuously increasing time-periods from filing to grant of a patent. As the WIPO study notes, for SMEs, a long delay for obtaining a patent leaves a great degree of uncertainty and delays the possibility of finding potential licensees or partners for exploiting an invention.¹¹⁵ This has further substantiated calls for a simple, fast, no-examination

¹⁰⁹ The costs of patenting are generally perceived as one of the greatest barriers for SMEs, see WIPO, *Intellectual Property Rights and Innovation in Small and Medium-Sized Enterprises* (2004), at 7.

¹¹⁰ See *U Suthersanen*, *Incremental Innovations in Europe: A Legal and Economic Appraisal of Second Tier Patents*, *Journal of Business Law* (2001), at 327-329. Further difficulties and complexities in patent enforcement add to the obstacles which prohibitive costs produce for SMEs in using the patent system and often lead to a perception of ineffectiveness of the patent system from the side of SMEs; see *WIPO*, *Intellectual Property Rights and Innovation in Small and Medium-Sized Enterprises* (2004), at 7-8.

¹¹¹ *WIPO*, *Intellectual Property Rights and Innovation in Small and Medium-Sized Enterprises* (2004), at 7.

¹¹² For a more critical position on this point see *U Suthersanen*, *Incremental Innovations in Europe: A Legal and Economic Appraisal of Second Tier Patents*, *Journal of Business Law* (2001), at 329.

¹¹³ In the European context for example, a report commissioned by the EU recommended the introduction of compulsory expert arbitration as a possible solution to the excessive costs of patent litigation; see *European Technology Assessment Network*, *Strategic Dimensions of Intellectual Property Rights* (1999).

¹¹⁴ *WIPO*, *Intellectual Property Rights and Innovation in Small and Medium-Sized Enterprises* (2004), at 20-21.

¹¹⁵ *WIPO*, *Intellectual Property Rights and Innovation in Small and Medium-Sized Enterprises* (2004), at 8.

second-tier system of protection whereby the applicant would gain registered right within weeks or months from application – as compared to the waiting period in cases of patent applications which usually take several years until grant.¹¹⁶

Looking again at the alternatives to utility model protection as mentioned above, the first option of not protecting sub-patentable innovation at all certainly does not function as a direct incentive for SMEs. It may however have positive welfare effects in terms of keeping such innovations free in the public domain for everyone to use – while the innovator would be required to amortise her/his costs within natural lead time she/he enjoys. Another other options (lowering patent thresholds) will usually be too costly and time-consuming – as discussed in detail above. While reliance on other alternative means of protection (e.g., via unfair competition law) may not involve such costs and do not require a lengthy application procedure, they are usually dependant on certain conduct of competitors deemed unfair and hence involve significant uncertainty and litigation costs for SMEs.

3. Encouraging Local Innovation

From the first two rationales addressed above (incentives for small and incremental innovation; incentives especially for SMEs), the third rationale of encouraging local innovation follows: As most SMEs engaged in minor or incremental innovative activities are presumed to be part of the local industry, a system which promotes innovative activities by SMEs facilitates local innovation. Of course, this is another issue which demands verification by means of empirical research in the relevant domestic setting.¹¹⁷ General empirical support comes from the WIPO World IP Indicators 2011 Report which concludes on the question of users and beneficiaries of national utility model systems:

The UM system is primarily used by resident applicants to protect inventions at their respective national patent offices. In 2010, resident applications accounted for 98% of the world total, and the share has remained more or less constant since the mid-1980s. Grant data show a similar distribution.¹¹⁸

Further arguments are based on:

- (1) information contained in utility model applications; and
- (2) historical evidence.

(1) A general argument in favour of a utility model system which however may be especially relevant in the context of facilitating domestic innovation is based on the value of technological information contained in the applications for patents and utility models. For patents, the utility of patent information as a source for inspiration for further research and for follow-on innovations has been acknowledged – although often the under-utilisation of this source, especially by SMEs has been highlighted.¹¹⁹ For information contained in utility model registrations, the accessibility, quantity and quality of the data – and hence its relevance for follow-on innovation – certainly depends on the respective national system.¹²⁰ Even though a registration may not entail a mandatory examination by the IP office, the information required in an application should always include the claims. These, in

¹¹⁶ *U Suthersanen*, Incremental Innovations in Europe: A Legal and Economic Appraisal of Second Tier Patents, *Journal of Business Law* (2001), at 327.

¹¹⁷ See sections 4) a. & c. below.

¹¹⁸ *WIPO*, World Intellectual Property Indicators (2011), at 95. For further details on foreign registrations see pages 96-99.

¹¹⁹ *WIPO*, Intellectual Property Rights and Innovation in Small and Medium-Sized Enterprises (2004), at 9-10. The report laments the lack of awareness of the wealth of information contained in patent documents and searchable via online patent databases and the inability to interpret patent claims in these documents.

¹²⁰ In case of Germany for example, the DPMA website allows various searches for utility model registrations according to various parameters (see <http://register.dpma.de/DPMAregister/pat/einsteiger> for the search page directed to anyone not familiar with patent searches) and allows to access individual registration certificates (Gebrauchsmusterschrift) which contain the basic data as well as the main utility model claims, taken from the application.

combination with any illustrative figures, should be made available online for searches. Another aspect is that utility model registrations may represent a valuable source indicating domestic innovative activity and allowing tailored and informed responses by policy makers concerning innovation policy in general.¹²¹ These aspects therefore should be taken into account when designing a national registration system.

(2) Research on historical evidence from the use of a second-tier system of protecting minor innovations in certain Asian countries also points to a positive role such a system has in encouraging technological learning and follow-on innovation by local industries. Kumar found that in Japan, South Korea and Taiwan a combination of weak first-tier patent protection and the availability of second tier patent systems (like utility models) to protect minor technological advances has facilitated local innovation through technological learning: While 'weak' patent protection¹²² allowed to absorb foreign technology, a second tier patent system encouraged minor adaptations and follow-on innovations by local firms.¹²³ The relevance of these findings for the current debate on utility model systems however may be limited: Since the multilateral legal framework after the TRIPS Agreement has entered into force allows much less policy space for a 'weak' patent system,¹²⁴ the historical approach taken by certain East Asian countries will not be available for repetition in a post-TRIPS world.

A final argument relates to the positive impact of increased local innovative activities: Especially for countries which are net-importers of IP protected goods, encouragement of local industry to produce more IP protected goods is important to reduce dependency on imports. This would equally reduce a trade deficit in IP protected goods – and in turn reduce royalty outflows.

Contrasted with the three alternatives in dealing with sub-patentable innovation, the option of lowering threshold for patent protection may to some extent bring about similar positive results in terms of providing a source of knowledge and enabling follow-on innovation through patent data. The historical evidence however suggests to go rather the opposite route when weak patent protection is considered a key ingredient for technological and industrial development. Not protecting sub-patentable innovations would of course not trigger additional information on these innovations in any database administered by the IP office – but it may serve as a common knowledge base from which innovators, including those who come up with small improvements and follow-on innovation, may draw.¹²⁵ That in turn may also facilitate local innovation. Alternative protection mechanisms finally are often by their nature not functioning as incentives for (local) innovation – they rather allow investors ex-post to prevent specific unfair conduct of competitors. The need to show the existence of these criteria for unfairness causes significant ex-ante legal uncertainty so that the system would not lend itself in facilitating business decisions to invest in the development of innovative products – where the product itself will not obtain any protection per se.

ii. Costs and Disadvantages

The introduction of a second-tier system to protect minor or incremental innovations may also involve costs and disadvantages. Again, much will depend on the respective circumstances in the jurisdiction where such a system is being implemented.¹²⁶ In the

¹²¹ See *A Odman Boztosun*, Exploring the Utility of Utility Models for Fostering Innovation, *Journal of Intellectual Property Rights*, Vol.15 (2010), at 430.

¹²² Such weak protection for example entailed the exclusion of food, beverage and pharmaceutical products as well as chemical compounds from patent protection in Japan until 1975 when domestic technological advancement mandated an extension of the patentable subject matter; see *N Kumar*, *Intellectual Property Rights, Technology and Economic Development: Experiences of Asian Countries* (2002), at 4-5.

¹²³ *N Kumar*, *Intellectual Property Rights, Technology and Economic Development: Experiences of Asian Countries* (2002), at 4-6 & 22-26.

¹²⁴ See section a. iv. above for details.

¹²⁵ See section ii. 2. below for details.

¹²⁶ For a Pakistan-specific analysis see section 4) d.

sections below, the arguments which are generally raised against utility model protection are discussed.

1. Legal Uncertainty and Wasteful Litigation

One point of critique that has been raised by Suthersanen appears particularly relevant in the context of SMEs in developing countries. She observes:

The fact that the utility model regime encourages a lowering of thresholds without an appropriate examination system in place may result in legal uncertainty and excessive litigation. Indeed, there is a reasonable concern that larger market players may use utility models as a means of circumventing the more stringent criteria under the patent system and overuse the system in ways that make it hard for SMEs to compete. Certainly, the lack of substantive examination prior to grant will give rise to uncertainty for third parties when conducting infringement searches to ascertain what valid rights exist in a particular field of technology, which may act as an additional barrier to competitors.¹²⁷

The main argument therefore is based on the absence of any substantive examination system which serves as a gatekeeper to prevent the protection of products and processes which do not meet the relevant protection criteria. Of course, the main idea behind a utility model system is to establish protection at a lower threshold for incentivising innovative activity below the patent level. But this certainly does not imply that protection will or should be available for 'anything under the sun made by man'. The main criteria for utility model protection – a certain level of novelty and usually also a degree of inventive activity – must be present for any innovative result to receive protection via a system of exclusive rights granted by the state to private persons and enforceable by legal remedies.

The absence of a pre-grant examination system therefore carries with it the automatic risk of abuse where protection is claimed for utility models which do not meet the conditions for protection. If such utility models are being enforced, other market actors may be prevented from selling competing goods on the market and innovators may be prevented or discouraged from innovating for fear of litigation. Of course, SMEs are a prime target for such abusive enforcement activities as they may easily give in without risking court proceedings or may not have the financial means to fight it out in courts.

The risk of abuse however could be addressed by several mechanisms. First, it has been noted that it is not the introduction of utility model protection as such, which is the main concern, but rather its improper enforcement.¹²⁸ Tailored checks and balances in the IP enforcement system therefore may be the most appropriate response to mitigate the potential for abuse. For example, several national utility model systems do not allow the enforcement of a utility model without a mandatory prior examination procedure.¹²⁹ The rationale here is to make sure that no subject matter is being protected against alleged infringements without having tested whether it actually meets the conditions for utility model protection. Such mandatory pre-trial examination should prevent abusive litigation – but may not undermine abusive pre-litigation bullying against competitors (especially SMEs). Potential defendants may still give in and cease the allegedly infringing activity out of fear for

¹²⁷ *U Suthersanen*, *Utility Models and Innovation in Developing Countries*, ICTSD Issue Paper No.13 (2006), at 8.

¹²⁸ See also *A Odman Boztosun*, *Exploring the Utility of Utility Models for Fostering Innovation*, *Journal of Intellectual Property Rights*, Vol.15 (2010), at 431.

¹²⁹ See section b. ii. above.

any sort of legal action and the costs involved.¹³⁰ In any case, no presumption of validity should apply to utility models which are merely registered and not substantively examined.¹³¹

Another enforcement related safeguard against abuse may be not to make injunctive relief available to utility model right holders. Especially without having obtained a substantive examination report which validates the claimed innovation as protected utility model, no injunction should be granted. Since the relevant multilateral treaty obligations concerning IP enforcement (including the availability of injunctive relief) under TRIPS do not apply to utility model protection, countries have sufficient policy space to design the enforcement system outside the obligations contained in part III of TRIPS.¹³² Such a limitation of the enforcement options for a utility model holder does not leave her or him without any protection: If the main proceedings (after a substantive examination has taken place) find in favour of the claimant, infringing activity must cease and the defendant should be obliged to pay reasonable compensation for the unauthorised use of the utility model. This effectively turns the exclusive right into a liability rule until (1) the IP office has confirmed that the registered model fulfils the conditions for protection and (2) a court has positively confirmed that the utility model is indeed infringed.

Further safeguards against abuse which have been suggested in this context are antitrust remedies and compulsory licensing.¹³³ It however remains unclear whether either of them can function as a valuable remedy especially for SMEs. Antitrust investigations take time, are expensive and require a functioning Competition Law authority. They usually further depend on the existence of market power (in form of a monopoly or market dominance) and hence do not apply to all market actors.¹³⁴ Compulsory licensing may be an option where the utility model holder is not willing to license her/his technology and there is a recognised public interest for its use. But as the system is generally based on an individual procedure for each technology to be licensed, it involves lengthy proceedings and does not offer a speedy remedy against abusive reliance on a claimed utility model.

Finally, one may consider limiting the protectable subject matter to those areas of innovative activities where SMEs are mainly engaging in innovations which are perceived as worthy of protection and/or where the conditions for protection are easy to determine. Certain patentable subject matter – such as pharmaceutical products, chemical compounds, biological material, software or business methods – could hence be excluded from utility model protection. In this way, policy makers could reduce the potential for the system to be abused by major market players which take advantage of the absence of an up-front substantive examination system.

2. Blocking the Public Domain and Preventing Technological Learning by Imitation

The other main argument which has been forwarded against introducing a second-tier system to protect innovation below the patentability threshold is based on the conception of public domain. The traditional notion IP protection rests on the idea of protecting creative works under copyright law, distinctive signs as trademarks and inventions under patent law.

¹³⁰ In order to reduce the cost factor, one could prescribe that the costs for the pre-trial examination are in any case borne by the right holder. This on the other hand may disproportionately affect the claimant who may hence be effectively prevented from enforcing her/his rights. An option may be that the pre-trial examinations are carried out for free by the IP office for SMEs (as part of an enabling SME programme), whereas other claimants beyond a specific company size and turnover must bear the costs themselves.

¹³¹ Such a presumption often applies in the patent enforcement context. As it is based on the comprehensive examination conducted by the patent office, it does not apply where such an examination does not take place.

¹³² See section a. ii. and iv. for details. The national treatment obligation under Art.2:1 of the Paris Convention however does apply to utility models so that foreign right holders must be treated as nationals in matters of enforcement; see section a. i. above.

¹³³ A *Odman Boztosun*, Exploring the Utility of Utility Models for Fostering Innovation, *Journal of Intellectual Property Rights*, Vol.15 (2010), at 431.

¹³⁴ Nevertheless, provisions relating to restriction of competition can well be applicable. For example, if two or more firms enter into agreement to restrict competition, i.e., price fixing or market sharing, can be investigated by competition law authorities.

If the latter do not fall under the patentable subject matter and fulfil the accepted conditions of novelty, inventive step, and utility/industrial application, then no protection applies and the relevant innovations remain in the public domain. This allows everyone to utilise, exploit and build on such un-protectable subject matter.¹³⁵

Introducing another layer of protection below the thresholds established by traditional patent protection requirements on the other hand results in the newly protected subject matter to be taken out of the public domain. Thereafter, no-one can freely use it without the authorisation of the right holder or within the boundaries of an applicable exception or limitation to the exclusive right. This shifts the balance between access and incentive¹³⁶ in a significant way and therefore should not be decided lightly. As Dutfield and Suthersanen have observed:

In a market-based economy it is generally accepted that all market actors, including competitors, follow-on creators and consumers, should be allowed to freely use any work which falls short of the required standards. Indeed, as some courts and jurists have argued, copying and free riding is necessary, if not beneficial, for competition. As we saw, imitation is an essential stage in learning to innovate and can even be creative in itself.¹³⁷

Any curtailment of the public domain therefore must be based on positive evidence which establishes a clear need for introducing a new IP right or expanding existing ones as a matter of policy. As the economist Machlup has stated in his famous review of the US patent system in the 1950s:

If one does not know whether a system 'as a whole' (in contrast to certain features in it) is good or bad, the safest 'policy conclusion' is to 'muddle through' either with it, if one has long lived with it, or without it, if one has lived without it. If we did not have a patent system, it would be irresponsible on the basis of our present knowledge of its economic consequences to recommend instituting one. But since we have had a patent system for a long time, it would be irresponsible on the basis of our present knowledge to recommend abolishing it.¹³⁸

Of course, the whole idea of introducing utility model protection is premised on the inability of the patent system to protect minor and incremental innovations below the patent level.¹³⁹ As these innovations are being perceived as particularly vulnerable to appropriation and copying by others, a need to protect them is identified. This policy rationale is not as such invalid in light of the arguments identified in section (i) above. However, it must be weighed against the potential negative impact of taking such sub-patentable innovation out of the public domain and the consequences this has for follow-on innovation and technological learning through imitation and copying as well as competition on the market.

This weighing and balancing cannot be performed in abstract. It must be conducted within a specific national legal system, taking into account all relevant domestic circumstances. Only then one can find out what the concrete positive welfare effects are (does the system incentivise innovative activity which would otherwise have not occurred?) and whether they outweigh the concrete negative welfare effects (does the system prevent technological learning by copying and imitation?). In the context of sub-patentable innovation, this entails empirical analysis which should, to the extent possible, ascertain the following aspects:

¹³⁵ An expression of this boundary between protection and the public domain free from protection in the copyright context can be found in Art.9:2 TRIPS which states that... In the patent context, Art.52 of the European Patent Convention fulfils a similar function by excluding from patent protection

¹³⁶ See at the beginning of section c above.

¹³⁷ *U Suthersanen & G Dutfield, Innovation Without Patents (2007)*, at 41.

¹³⁸ *F Machlup, An Economic Review of the Patent System*, US Senate Subcommittee on Patent, Trademarks and Copyrights – 85th Congress, 2nd Session (1958), at 79-80.

¹³⁹ See section i above.

- (1) Which domestic industries/sectors especially engage in small scale or incremental innovative activities?
- (2) What role do micro, small and medium enterprises (MSMEs) play in these sectors?
- (3) What role do IP rights play in these sectors, especially for MSMEs?
- (4) Is copying or imitation an issue in the industrial sectors with small scale or incremental innovative activities which functions as disincentive to innovate or to bring the products resulting from innovative activity onto the market?
- (5) On the other hand, is there any indication or evidence that MSMEs rely on existing innovative products locally produced to come up with follow-on innovation or to produce value-added products?¹⁴⁰

One could however argue that imitation and copying of the results of another person's effort, labour or other form of investment is *per se* unfair and hence should not be allowed.¹⁴¹ This 'unfair copying' argument is primarily vested in natural right theories whereby someone who has not sowed may not harvest. It has been relied upon in the traditional context of patent or copyright protection as a justification for the inventor or creator to reap her/his just rewards.¹⁴² There however, the 'unfairness' is premised on the fact that what has been copied meets the conditions for protection under either copyright or patent law. It therefore does not lend itself as an argument against copying or imitation *per se*. If one would accept the unfair copying argument as a general principle, the results of any investment-bearing activity would be eligible for some form of protection against misappropriation.¹⁴³ That for example would imply to protect scientific discoveries, laws of nature, mathematical concepts or ideas if finding out about them entailed skill, labour, effort or other forms of investments – a result which contradicts all well-accepted boundaries of IP protection.

Further, unfair competition torts in civil law countries or misappropriation doctrines in some common law countries protect, under specific circumstances, against acts of copying or imitation. Those are however generally acts where additional circumstances justify findings of unfairness – whereas the general rule remains that anything that does not meet the traditional criteria for copyright, patent or trademark protection, stays in the public domain and hence is free for everyone to use.¹⁴⁴ In that sense, the unfair competition and misappropriation laws reinforce the general rule that copying and imitation as such – outside the accepted boundaries of IP protected subject matter – is not in any way 'unfair'.

A decision on expanding the scope of existing IP protection or introducing new IP rights in order to cover some subject matter previously in the public domain should therefore not simply be based on arguments of unfairness in regard to the copying going on. It is a value judgement the law and policy makers of a country have to take whether they consider the negative welfare effects of the copying or imitation as so harmful that it outweighs the benefits of the newly protected subject matter remaining in the public domain. This decision should be informed by knowledge on relevant industrial, technological, economic and other societal circumstances. It hence should base on a sound empirical analysis and attempts to find answers to the questions posed above.

¹⁴⁰ These questions have been, amongst others, raised with the relevant stakeholders in Pakistan in the preparation of this study. For a complete list of the questions raised see Annex 1 to this study.

¹⁴¹ On this topic in the context of utility model protection see further *U Suthersanen*, Incremental Innovations in Europe: A Legal and Economic Appraisal of Second Tier Patents, *Journal of Business Law* (2001), at 330-332.

¹⁴² See the dictum of Peterson J ('what is worth copying is *prima facie* worth protecting') in *University of London Press Ltd v. University Tutorial Press Ltd* (1916) 2 Ch.601 at p.610.

¹⁴³ See *U Suthersanen*, Incremental Innovations in Europe: A Legal and Economic Appraisal of Second Tier Patents, *Journal of Business Law* (2001), at 332.

¹⁴⁴ In the German unfair competition law doctrine for example, this is expressed by the notion of 'Freihaltebedürfnis' (need for a public domain). Any act of copying or imitation *per se* is not unfair, unless specific additional elements are present which justify a value judgement of unfairness (compare also Art.10 bis of the Paris Convention). For a summary of different approaches in national laws in Europe see *A Kampermann-Sanders*, *Unfair Competition Law* (1997), at 22-68.

iii. Specific Considerations for Developing Countries

Based on arguments in favour (in section (i)) and against (in section (ii)) a second-tier system of protecting innovations below the threshold of patent law, the following four main considerations should guide policy makers in developing countries when determining the utility and feasibility of introducing a system of utility model protection.

1. Domestic Innovation below the Patent Level

The basic rationale of utility model protection is based on the idea that patent protection does not extend to most minor and/or incremental innovations. With regard to innovative activity that results in products or processes which do not meet the criteria for patent protection, patent law therefore cannot offer an incentive to innovate. Such sub-patentable innovations may nevertheless be considered as useful, important and worth to be incentivised by an IP right – depending on the relevant economic, technological and other societal circumstances. The key questions for policy makers therefore are:

- What is the domestic standard for patent protection, in particular how high is the threshold of inventiveness being applied in practice by the domestic IP office?
- Which domestic industries/sectors, especially SMEs, engage in small scale or incremental innovative activities?
- To what extent does the output of these innovative activities meet the threshold for patent protection?

2. Degree of Copying and Imitation in Sub-Patentable Innovation

If policy makers have a fairly clear picture of the domestic innovation landscape, especially regarding innovative activities below the patent threshold by SMEs, the next question concerns how the results of these innovative activities are being appropriated and used by the innovators, competitors and other third parties. Two issues must be considered:

- (1) The amount of imitation or copying of these results and whether this serves as a disincentive for further innovative activities or investments into such activities. Alternatively, copying or imitation may lead to other responses such as keeping the innovations secret, or reliance on other tools for legal protection (see 3. below).
- (2) The extent to which imitation and copying creates follow-on innovation, value-added products or is otherwise used in a societal beneficial way. These two sides must be considered, empirical data and stakeholder opinions – not just of the main beneficiaries of a potential new utility model right, but also commercial and private users and other affected groups – must be gathered and then policy makers have to make an informed decision: Do they wish to protect sub-patentable innovation legally or do they want to leave this subject matter in the public domain? Of course, this value judgement need not be a categorically yes / no answer, but may involve safeguards as further discussed in section (ii) above.

This decision hence requires primarily an inquiry into the following:

- Is copying or imitation an issue in the industrial sectors with small scale or incremental innovative activities which functions as disincentive to innovate or to bring the products resulting from innovative activity onto the market?
- On the other hand, is there any indication or evidence that MSMEs rely on existing innovative products locally produced to come up with follow-on innovation or to produce value-added products?

3. Alternative Protection Regimes

As it has been pointed out above, there are generally four different legal options for dealing with small-scale, incremental innovations. With regard to this type of innovations, policy makers then have to decide between the following options:

- (1) *not to protect sub-patentable innovation at all* by IP rights and thereby leave them in the public domain for everybody free to use;
- (2) *lower the thresholds for patent protection* in order to cover some or most of the innovations considered worthy of protection under the patent system;
- (3) *rely on alternative mechanisms for protecting* these innovations – in particular under notions of preventing misappropriation or unfair competition; or
- (4) *introduce a specific system for protecting* sub-patentable innovations as alternative incentive mechanism.

If – on the basis of points 1 and 2 above – policy makers have decided that a degree of imitation and/or copying is taking place which is not outweighed by the benefits of having the respective innovative output in the public domain, the next question concerns the different legal alternatives for protection. The main alternatives in the IP context to introducing a special IP right covering sub-patentable innovations (like a system of utility model protection) – which will be further examined in the Pakistani context in section 5) b – are:

- Trade Secret Protection
- Protection against Unfair Competition/Passing-Off Tort
- Industrial Design Protection

In the context of identifying alternatives which can be used by SMEs the main issues to be considered by policy makers are:

- Are there any existing alternatives, either within or outside the IP system, to a system of utility model protection which especially MSMEs can rely on? In particular:
 - o Is there a legal protection against ‘unfair competition’, misappropriation of another person’s efforts, or passing of (usually in form of a tort)?
 - o Can industrial design protection be used, in particular in form of unregistered design right?
 - o Is trade secret protection a viable alternative?
- If available, are any of these alternative systems being used by MSMEs?

In addition, non-IP related alternatives should also be taken into account. In this regard, the WIPO study on Innovation and SMEs points out the following:

Given some of the barriers faced in using the patent system, SMEs often use alternative means of appropriating their innovations. Some of the alternatives to patenting include secrecy, exploitation of lead-time advantages, moving rapidly down the learning curve, use of complementary sales and service capabilities, technical complexity, on-going innovation, relationships based on trust and use of trademarks to differentiate their products from those of imitators. It is often noted that secrecy and lead-time advantages may be the most common way of appropriating innovations among firms, particularly (though not exclusively) among SMEs.¹⁴⁵

Especially in case any of these ‘non’ IP alternatives encourage further innovations, or at least do not allow for copying or imitation by others to serve as disincentive, they are one argument in favour of retaining the status quo in terms of IP protection. In some industrial sectors natural lead time in particular will make any specific new form of IP right obsolete.

¹⁴⁵ WIPO, Intellectual Property Rights and Innovation in Small and Medium-Sized Enterprises (2004), at 8.

Such sectors may be those in which other factors than imitation or copying are decisive for successful product development – such as skilled personnel, know-how, including traditional knowledge, infrastructure, raw materials, etc. Whether these or other factors may play a relevant role, is another aspect to be taken into account.

4. Domestic IP Infrastructure (IP Offices, Courts, Professionals)

Any decision on which form of IP protection – if any – to be introduced or modified in order to protect small-scale and incremental innovation should be taken with the relevant domestic IP infrastructure and its use by the main target group of such protection, in this case SMEs, in mind. This aims to ensure that the legal protection regime chosen actually can deliver meaningful results on the ground. Especially for SMEs,

- the familiarity with the IP system in general and its potential utility for SMEs;
- the availability of support and/or awareness programmes in applying for IP rights;
- the costs involved for using the system; and
- easy and affordable access to legal services, the court system and other IP enforcement tools

is of crucial importance. For a system especially designed to protect the results of innovative activities by SMEs, these aspects will probably have a greater bearing on the overall success of the system than its substantive rules. Of course, they may involve further costs and administrative efforts than simply introducing a new IP right or modifying existing ones. Nevertheless, a tailored legal regime should be accompanied – to the extent possible – by equally tailored measures which focus on the practical usability of the system for its main target group, SMEs.

The following issues therefore should be addressed by policy makers:

- How detailed – if existing – is the knowledge of SMEs of the IP system?
- To what extent do SMEs generally use the domestic IP system? In particular:
 - o Are there any awareness programmes by the IP Office (or other institutions) focussing on SMEs?
 - o Is there any support for SMEs in registering or applying for IP rights?
 - o Do SMEs use the judicial system to settle IP related disputes; especially do they bring infringement proceedings?
 - o Are legal services (advice, litigation) from attorneys, etc. affordable to SMEs?
 - o What role do IP rights play for SMEs in their business activities in general and in protecting the results (good, services, processes) of their innovative activities in particular?
 - o If so, what kind of IP rights is relied upon by SMEs?
- Are there any factors outside the IP system which may affect the ability of MSMEs to use the IP system to protect their innovations?

In sum, the considerations discussed in this section should guide the decision of policy makers in developing countries on how to deal with sub-patentable innovation. It is evident from the number of factual questions raised above that such a decision always is highly dependant on the domestic circumstances addressed in the considerations above. In section 4) these circumstances are addressed in the context of Pakistan – on the basis of the information provided by the national expert, Mr. Ahmed Mukthar. In section 5) then, recommendations for the treatment of sub-patentable innovation in Pakistan are offered. Before, section 3) below looks at key features of utility model protection in selected countries.

3. Key Features of Utility Model Protection in Selected Jurisdictions and Relevant Country Experiences

a. Developed Countries

In the following, two developed country systems for utility model protection are presented in terms of their historical developments, the current legal framework as well as the economic impact (mainly based on statistical analysis of the use of the system). At first, Germany as the country which has first introduced a second-tier system of protecting innovative products is discussed as an example. Secondly, the system in Australia as a common law country (which shares to some extent a common legal heritage with Pakistan) is described.

i. *Germany*

Given Germany's precedence-setting role in introducing a system of utility model protection for sub-patentable innovation in the late 19th century, it is appropriate to begin by focussing on the design of the system as it initially appeared (rather than simply describing the main features of the current system). The main rationale for establishing such a system in Germany back then mirrors that which has been discussed extensively above: To provide a cheap and fast tool for protecting incremental and small-scale innovations especially from SMEs.

The system however has developed over time: In light of recent jurisprudence of the Supreme Court in Germany, the idea to protect innovation below the patentability standard to a large extent does not hold true anymore. Instead, as the utility model system has moved close to patent law in its scope, more emphasis is placed on preventing clogging the system with 'trivial' inventions that encroach upon the public domain.

1. History of Utility Model Protection in Germany

Germany was the first country to introduce a specific second-tier system of protection for innovative goods which did not meet the thresholds for patent protection under the Patent Act (Patentgesetz) of 25 May 1877.¹⁴⁶ Prior to the enactment of the German Utility Model Act (Gebrauchsmustergesetz, GebrMG) of 1 June 1891, IP protection for innovative goods was in general available in accordance with the two traditional branches of exclusive rights: Either under the Patent Act or under the Copyright and Design Act (Gesetz betreffend das Urheberrecht an Mustern und Modellen) of 11 January 1876. Soon after the enactment of these laws the question arose whether the Copyright and Design Act would extend protection also to technical and/or functional features of products of practical use – or whether it merely covers aesthetical features of designs.¹⁴⁷ In a far-reaching decision the highest German Commercial Court of that time, the Reichsoberhandelsgericht (ROHG), denied protection under the Copyright and Design Act.¹⁴⁸

In consequence, developers of new products in Germany could only apply for a patent in order to ask for protection for innovative technical features and technical improvements. As the German Patent Office was subsequently confronted with an increasing amount of applications for such minor, 'petty' inventions which did not meet the thresholds for patent protection, it had no option but to turn down these applications – although a need for their protection under IP law was generally acknowledged.¹⁴⁹ In addition, applying for a patent involved high costs and necessitated a substantial, time-consuming examination process which made it not attractive – in particular for SMEs. About 10 years after the ROHG decision, the Commission for a Revision of the Patent Law after hearings in November 1886

¹⁴⁶ See *J Richards*, *Utility Model Protection throughout the World* (2000), at 3.

¹⁴⁷ See *Kraßer*, *Patentrecht* (2009), at 67; *H F Loth*, *Gebrauchsmustergesetz* (2001), at 2; *C Heath*, *Utility Models in East and West*, in 'Current Problems of Intellectual Property Law - Writings in honour of Nobuo Monya' (1998), at 47-72.

¹⁴⁸ Decision of 3 September 1878 – ROHG 24, 109.

¹⁴⁹ See *M Bühring*, *Gebrauchsmustergesetz* (2011), at 5; *H F Loth*, *Gebrauchsmustergesetz* (2001), at 2.

reached the conclusion that a specific Utility Model Act as a second-tier system for protecting sub-patentable innovation should remedy the above situation.¹⁵⁰

Heath describes the main features of the first German Utility Model Act as follows:

- (1) protection of models of working tools and objects of utilitarian use or parts of those, insofar as these were meant for working or utilitarian purposes by a new design, arrangement or contraction (Art. 1(1) GebrMG);
- (2) utility model applications were only checked for the formalities, without any substantial examination;
- (3) the protection period was six years in total, divided into two periods of three years each;
- (4) fees were 15 German marks for the first period, and 60 marks for the extension; and
- (5) novelty was limited to publications or domestic use.¹⁵¹

The scope of protection under the new law differed substantially from patent law. Initially, the Utility Model Act covered three-dimensional models of working tools (Arbeitsgerätschaften) and other objects of utilitarian purpose (Gebrauchsgegenstände), but not processes, methods or compositions.¹⁵² Further, the threshold for obtaining protection was significantly lower – especially in terms of the level of inventiveness.¹⁵³ Since the German Patent Office was not meant to undertake substantial examination, neither even issue a search report on novelty, it was up to the courts to decide the protectability of utility models.¹⁵⁴ The Patent Office merely checked certain formalities and would grant a utility model, if these were fulfilled.¹⁵⁵ Registration in turn initiated the first protection period of three years – with an option for renewal of another three years.

Another important difference between patent- and utility model protection resulted from the so called ‘Raumform’ requirement which explains the name given to the new right: As a legal measure designed to address the protection gap for technical and/or functional features which appeared after the ROHG decision, the protection as a utility model required a certain three-dimensional form or shape.¹⁵⁶ In essence, protection was limited to new and innovative working tools or other objects of utilitarian purpose which contained a three-dimensional form in which novelty and inventiveness were embodied.¹⁵⁷

This rather limited scope of protection was subsequently enlarged to closer match with patent protection: In order to protect against similar or almost identical copies of the three-dimensional form which fulfilled the same function, it was later presumed that not the form or shape as such should be the subject-matter of protection, but rather the underlying utilitarian idea or function for which in effect utility model protection was granted.¹⁵⁸ Hence, instead of merely submitting a drawing of the model in the registration process, it became necessary in 1936 to state a certain claim for utility model protection. However, since protection still could only be obtained for working tools and utilitarian objects, the discussion

¹⁵⁰ C Heath, *Utility Models in East and West*, in ‘Current Problems of Intellectual Property Law - Writings in honour of Nobuo Monya’ (1998).

¹⁵¹ Ibid.

¹⁵² H F Loth, *Gebrauchsmustergesetz* (2001), at 2-3.

¹⁵³ The standard of inventiveness had not been codified for a long time so that the patent office and courts could set different thresholds; see J Richards, *Utility Model Protection throughout the World* (2000), at 3.

¹⁵⁴ C Heath, *Utility Models in East and West*, in ‘Current Problems of Intellectual Property Law - Writings in honour of Nobuo Monya’ (1998).

¹⁵⁵ H F Loth, *Gebrauchsmustergesetz* (2001), at 3.

¹⁵⁶ H F Loth, *Gebrauchsmustergesetz* (2001), at 2-3. See also U Suthersanen, *Utility Models and Innovation in Developing Countries*, ICTSD Issue Paper No.13 (2006), at 15 who notes that the German protection system was initially conceived as a form of design protection.

¹⁵⁷ According to the Law of 1891, protection applied to “Modelle von Arbeitsgerätschaften oder Gebrauchsgegenständen oder von Teilen derselben, insoweit sie dem Arbeits- oder Gebrauchszweck durch eine neuen Gestaltung, Anordnung oder Vorrichtung dienen sollen“.

¹⁵⁸ C Heath, *Utility Models in East and West*, in ‘Current Problems of Intellectual Property Law - Writings in honour of Nobuo Monya’ (1998).

about the requirement of 'Raumform' (three-dimensional form) continued.¹⁵⁹ Soon after the 1936 reform, the German Supreme Court held machines to be protectable as such.¹⁶⁰

Finally, more recent revisions of the Utility Model Act in 1986 and 1990 extinguished the remainders of the three-dimensional form requirement.¹⁶¹ The protectable subject matter of a utility model thereby moved again closer to that what can be protected under the Patent Act. Nowadays, protection as a utility model is available to all sorts of inventions that are new, involve an inventive step (*erfinderischer Schritt*) and have an industrial application – with the important exception of processes and the exclusion of bio-technological inventions.¹⁶² In sum, the German system of utility model protection has moved from a regime tailored to cover a gap between industrial design and patent protection towards a system closely resembling patent law – albeit with certain exclusions from protectable subject matter and (until very recently, as will be discussed below) less stringent conditions for protection.

2. Protection under the Current System

The current German system of utility model protection demands novelty, inventive step and industrial applicability. Novelty does not require absolute novelty as under patent law: Instead, the relevant state of the art against which novelty is assessed under Art.3 (1) of the Utility Model Act comprises anything disclosed in domestic and foreign publications as well as disclosure to the public via domestic use (hence excluding foreign use as well as oral descriptions at home or abroad). The second criterion of 'inventive step' (*erfinderischen Schritt*) has only been codified in 1986.¹⁶³ Court decisions initially considered this to require a lesser degree of inventiveness as compared to the condition of 'inventive activity' (*erfinderische Tätigkeit*) in German patent law.¹⁶⁴

However, in a 2006 decision of the German Supreme Court, this jurisprudence was set aside. According to the decision, there is now no more a distinction between the threshold for inventiveness in German patent- and utility model law – so that there is no more a lower degree of inventiveness under the Utility Model Act.¹⁶⁵ The Court argues that due to the continuous erosion of the inventiveness standard under German Patent law – not least because of international and European influences – there are no reliable or workable general criteria for an even lower threshold under the Utility Model Act.¹⁶⁶ Otherwise, the courts fears to protect 'trivial' improvements to the state of the art under an exclusive right – something which the court considers as interfering with the constitutionally guaranteed general freedom to act without state interference.¹⁶⁷ Utility model protection should not serve as a 'dumping ground' for sub-patentable subject matter.¹⁶⁸ The court however also notes that different standards to some extent still follow from the differences in the respective novelty standards which in turn affect the assessment of inventiveness.¹⁶⁹

¹⁵⁹ *Ibid.*

¹⁶⁰ Decision of Reichsgericht (RG) – see RGZ 41, 74 (at 75).

¹⁶¹ On these reforms see *F.K. Beier*, *Gebrauchsmusterreform auf halbem Wege: Die überholte Raumform*, GRUR 1986.

¹⁶² See Art.1 (1) and Art.2 (3) of the Utility Model Act of 28 August 1986 (in its current version of 24 November 2011). A current version of the German Utility Model Act (in German) is available at <http://www.gesetze-im-internet.de/gebrmg/>.

¹⁶³ Earlier, courts had derived it from the concept of invention (*Erfindung*); see for example *RG*, BIPMZ 1908, (188), at 189; *BGH GRUR* 1957, (270) at 271.

¹⁶⁴ See *R Nirk & E Ullmann*, *Patent- Gebrauchsmuster- und Sortenschutzrecht* (3. Edition, 2007), at 175.

¹⁶⁵ See Bundesgerichtshof (BGH) decision of 20 June 2006 – GRUR 2006, at 842.

¹⁶⁶ *BGH*, GRUR 2006, at 846.

¹⁶⁷ *Ibid.* In this context, the freedom to act (*allgemeine Handlungsfreiheit*, Art.2 (1) of the German Constitution, *Grundgesetz*) means an individual right to be free from state interferences in one's own conduct on the market – including the freedom from limitations set out by the grant of exclusive rights which allow right holders to legally prevent certain activities.

¹⁶⁸ *Ibid.*

¹⁶⁹ Since novelty is judged only against anything disclosed in domestic and foreign publications as well as disclosure to the public via domestic use, the question whether the invention involves an inventive step in

As before, also the current Utility Model Act is based on a registration system without substantive examination. The applicant however can choose to apply for a search report by the Patent Office which lists all relevant published documents for judging the application against the state of the art in the relevant field of technology.¹⁷⁰ The information the applicant has to submit under Art.4 includes:

- the name of the applicant;
- one or more claims;
- a description of object of utility model protection; and
- (optional) illustrations in relation to the claims or the description.

According to Art.8 of the Utility Model Act, the Patent Office will then register the applied utility model if this information is provided; in practice however, the patent office further examines (on the basis of the information submitted) whether the application covers unprotectable subject matter under Art.1 (2), Art.2 and rejects an application if it does.¹⁷¹ This registration has constitutional effects in that it brings about the exclusive right in relation to the utility model applied for (see Art.11).

The substantive protection available to the right holder includes the right to exclude others from making, using, offering for sale, selling or to import or possess for such purposes the protected utility model or goods containing this model.¹⁷² The scope of this protection depends – similar to patent law – on the scope of the claims stated in the utility model application. Anything which is not claimed, but merely referred to in the description or illustrations does not participate in the protection under German utility model law.¹⁷³ However, under Art.12a, the descriptions and illustrations have to be taken into account in interpreting the claims.

Utility Model protection under German law is not without limits. The following exceptions and limitations exclude from utility model protection:

- acts of private nature, not taken for a commercial purpose;
- experimental uses in relation to the protected subject matter;
- specific acts in relation to international traffic and transit;¹⁷⁴ further
- certain acts done by a prior user of the protected subject matter; and
- the use of the protected subject matter if so ordered by the state¹⁷⁵

According to Art.20, utility models can also be subject to a compulsory license – here the same conditions as for issuing a compulsory license in relation to a patented invention apply.¹⁷⁶ The use of a protected utility model without the authorisation of the right holder or the authorisation by law (in form of exceptions or compulsory licenses) amounts to an infringement of the utility model.

accordance with the Utility Model Act equally must be judged by asking whether it was obvious against the background of *this* state of the art (hence excluding foreign use as well as oral descriptions at home or abroad).

¹⁷⁰ See Art.17 of the Utility Model Act.

¹⁷¹ *R Nirk & E Ullmann*, Patent- Gebrauchsmuster- und Sortenschutzrecht (3. Edition, 2007), at 176. As mentioned above, this includes – apart from the subject matter also excluded from patent law – primarily processes and bio-technological inventions.

¹⁷² See Art.11 of the Utility Model Act.

¹⁷³ *R Nirk & E Ullmann*, Patent- Gebrauchsmuster- und Sortenschutzrecht (3. Edition, 2007), at 178.

¹⁷⁴ See Art.12 of the Utility Model Act.

¹⁷⁵ See Art. 13 (3) of the Utility Model Act. The prior use defence is the same as in patent law (see Art.12 of the Patent Act) and generally depends on a good faith based use of the invention within Germany prior to the date of application. If these conditions are met, the prior user can continue to use the invention for her/his own purposes within her/his own (commercial) enterprise.

¹⁷⁶ See Art.24 of the German Patent Act (Patentgesetz) which generally requires that no license could be obtained from the right holder, a public interest in favour of a compulsory license and payment of adequate remuneration to the right holder.

German law foresees the same remedies against infringements of utility models as for patent infringements.¹⁷⁷ First and foremost, the infringer must cease her/his infringing activity (Unterlassungsanspruch, Art.24 (1) Utility Model Act). In this regard, injunctive relief is of course the main procedural remedy. Secondly, any negligent or purposeful infringement leads to damage claims in accordance with Art.24 (2). Further remedies concern the destruction of infringing goods and equipment used in the production of these goods (Art.24 a); as well as comprehensive obligations to disclose information about the origin and chain of production of infringing goods, as well as further documents (see Art.24b, c, d). Finally, wilful utility model infringements on a commercial scale are a criminal offense and subject to criminal proceedings.¹⁷⁸

Utility model protection in Germany is nowadays granted for a period of maximum ten years from the date from the date of application (Art.23).¹⁷⁹ After the first three years, protection is contingent on the payment of a renewal fee for:

- the fourth until the sixth year;
- the seventh and eighth; and
- the ninth and tenth year.¹⁸⁰

Failure to pay the renewal fees in due cause leads to the termination of utility model protection (Art.23 (3) of the Utility Model Act).

The fees for obtaining utility model protection are currently structured as follows:

- an application fee of 40 Euros;
- an optional search fee of 250 Euros;
- a renewal fee for the fourth until the sixth year of 210 Euros;
- a renewal fee for the seventh and eighth year of 350 Euros; and
- a renewal fee for the ninth and tenth year of 530 Euros.

3. Checks and Balances (to Test the Validity of a Registered Utility Model)

Based on a mere registration without substantive examination, the German utility model system contains two mechanisms to test the validity of the registered utility model:

(1) Revocation Proceedings

- a. First, everyone has the right to initiate revocation procedures at the Patent Office which aim at the annulment of the registered utility model and its deletion from the registry (see Art.15-19). These proceedings can be initiated any time during the period of protection and currently cost 300 Euros.
- b. After initiation, the Patent Office will forward the revocation claim to the utility model holder who has to object to the revocation within one month. Failure to object will lead to the deletion of the utility model from the register.
- c. If the right holder objects, proceedings on the merits are initiated. The main test for revocation is whether (i) the invention falls within the protectable subject matter for utility models (Art.1 (2), Art.2); and (ii) the invention meets the conditions for protection (Art.1 (1), Art.3). The decision is taken by a panel of one legal and two technical experts at the Patent Office (Art.18).
- d. Against the decision of the panel, an option of judicial review to the Patent Court is provided (Art.18). If the panel decides to revoke the utility model

¹⁷⁷ R Nirk & E Ullmann, Patent- Gebrauchsmuster- und Sortenschutzrecht (3. Edition, 2007), at 179.

¹⁷⁸ See Art.25 of the Utility Model Protection Act.

¹⁷⁹ One should be reminded that the protection conferred only comes into existence from the day of registration – which usually may be about 6 months after the application.

¹⁸⁰ See Art.23 (2) of the Utility Model Protection Act.

and delete it from the registry, this has *inter omnes* and retroactive effect – i.e., the decision is valid for everyone (not just the parties) and extinguishes the utility model protection from its initial registration.

(2) Infringement Proceedings

- a. Within infringement proceedings initiated by the utility model holder against an alleged infringer, the latter can raise objections against the validity of the utility model.
- b. In these cases, the court has to examine, amongst other issues, whether (i) the invention falls within the protectable subject matter for utility models (Art.1 (2), Art.2); and (ii) the invention meets the conditions for protection (Art.1 (1), Art.3).
- c. If the court finds the utility model to be invalid, it cannot grant the utility model holder relief against the allegedly infringing activity and dismiss the action.¹⁸¹ The court decision however has only *inter-partes* effect and hence does not affect the general validity of the utility model.¹⁸²
- d. In case infringement proceedings overlap with revocation proceedings, the court may stay its proceedings until the Patent Office issues a decision in the revocation proceedings. The court must stay its proceedings if it considers the utility model to be invalid.
- e. In case the Patent office holds the utility model to be valid, the court is bound by its decision only if the same parties are involved in the infringement- and revocation proceedings. On the other hand, the court may hold the utility model invalid (with *inter-partes* effect only), even if the Patent Office rejects the revocation proceedings.¹⁸³

4. Empirical Data and Economic Impact

As it has been explained above,¹⁸⁴ at the time of its creation in 1891, the Utility Model Act served one primary purpose: It was intended above all to provide small and medium-sized businesses with inexpensive, quickly-available protection for less significant innovations for useful purposes, while at the same time releasing the Patent Office from the burden of examining such innovations.¹⁸⁵ These small- and medium-sized enterprises (the so-called 'Mittelstand'), traditionally a major pillar of the German economy, were most significantly affected by the pre-existing protection gap under patent- and design laws. Looking at early statistical data, the Act may well have fulfilled this goal: As Heath notes,

"the Utility Model Act got a warm reception from industry. Between 1891 and 1895, 55.173 utility models were registered, of which 51.202 came from Germany. As to patents, between 1877 and 1890, 187.218 patents were applied, 85.340 patents were granted, of which 85.242 came from Germany, 27.098 from abroad. While in the first year of full operation, in 1892, a total of 9.066 utility model applications were made, the figure had climbed to 21.432 in 1900, and 54.580 in 1910."¹⁸⁶

It hence appears that the then new protection system was used to more than 90% from domestic applicants. In the first twenty years of operation, the annual applications had increased five-fold from about 10.000 to more than 50.000. Since however utility model applications often were filed just in case the corresponding patent application failed, this may

¹⁸¹ See *R Nirk & E Ullmann*, Patent- Gebrauchsmuster- und Sortenschutzrecht (3. Edition, 2007), at 181.

¹⁸² See *C Heath*, Utility Models in East and West, in 'Current Problems of Intellectual Property Law - Writings in honour of Nobuo Monya' (1998).

¹⁸³ *Ibid.* This is because third parties may certainly raise other objections in subsequent revocation proceedings. Once however the Patent Office has decided that a utility model is invalid, this decision binds everyone (see BGH, GRUR 1968, 86).

¹⁸⁴ See subsection 1. above.

¹⁸⁵ *R Kraßer*, Developments in Utility Model Law, IIC 1995 (950), at 953.

¹⁸⁶ *C Heath*, Utility Models in East and West, in 'Current Problems of Intellectual Property Law - Writings in honour of Nobuo Monya' (1998).

be the single most important factor explaining the high numbers in applications.¹⁸⁷ Subsequently, in the late 1980s, a study on the relationship between the German patent system and innovative activity in firms contains some findings on the importance of industrial property rights, including utility models, in relation to the size of the firm.¹⁸⁸ The study finds that when applicants are sorted by type of business, utility model protection is second in order of importance, after patents (but before trademarks and industrial design rights), among independent inventors and craft firms. Among industrial and manufacturing companies and research institutes it ranks at least third. The study seems to confirm that in Germany, utility models are of importance especially to small and medium-sized industry – the reasons having for the most part to do with savings in costs time and administration.¹⁸⁹ In relation to the question of significance of UM protection for particular industries, an European-wide industry-by-industry analysis in 1993 of applications for utility model protection in the (then) European Community, ignoring differences between systems in the member states, gives the following picture: The industry which makes most use of utility models is mechanical engineering. After the mechanical engineering industry the main users are electrical engineering, precision instruments and optics, and the motor industry.¹⁹⁰

As the historical analysis above has shown, both due to changes in the law and in its practical application, the protection of utility models over time came closer and closer to patent protection.¹⁹¹ This is especially evident in the continuous erosion of the specific requirements for protectable subject matter and in raising the conditions for protection: Notably by abolishing the three-dimensional form requirement and synchronising the degree of inventiveness, the main remaining distinction in these two fields currently is the different standards of novelty.¹⁹² As to the substantive scope of protection, the core difference is the significantly shorter period of protection (maximum 10 years for utility models, 20 years for patents).¹⁹³

This approximation of the two systems of protection arguably affects the strategic behaviour of applicants and thereby the function of the utility model system: For applicants primarily aiming at patent protection, there is an incentive to file for both a patent and a utility model – in order to cover the time period until the patent is granted by the utility model protection which comes automatically upon registration after a comparable short period of time. This was facilitated by a change in the application system in 1986: Previously, a high number of utility models were registered only as a supplementary application in cases where patent applications for the same invention were pending. In such a scenario, the utility model was only registered if the patent application had been rejected. The system was unhelpful for most applicants, because they did not enjoy immediate protection for a utility model registration – unless they applied for the patent and utility model on the same day (which was often not possible for practical purposes).¹⁹⁴ In 1986, the system of ‘supplementary’ application was abolished which caused the high number of supplementary applications (annually about 20.000) to disappear. In this regard, Heath describes the new possibility of both applying for patent and utility model protection as follows

¹⁸⁷ Ibid. In 1920 for example, a total of 52.467 utility models were applied, while only 34,300 were registered – with the significant difference due to the high number of applications where a utility model was the less attractive alternative to a patent which was eventually obtained. This nevertheless did not affect the overwhelming percentage of domestic filings: Of the application total in 1920, 41.855 applications came from Germany, while only came 11.672 from abroad.

¹⁸⁸ See *U Tager & H Seyler*, Probleme des deutschen Patentwesens im Hinblick auf die Innovationstätigkeiten der Wirtschaft, study carried out by the Ifo Institute for the German Federal Ministry of Economic Affairs, May 1989.

¹⁸⁹ See also *EC Commission*, Green Paper on the Protection of Utility Models in the Single Market, 1995 (COM(95) 370 final), p.15.

¹⁹⁰ For a more detailed table see *EC Commission*, Green Paper on the Protection of Utility Models in the Single Market, 1995 (COM(95) 370 final), p.16.

¹⁹¹ *R Kraßer*, Developments in Utility Model Law, IIC 1995 (950), at 953.

¹⁹² See Art.3 (1) of the Utility Model Act and subsection 1. above.

¹⁹³ See subsection 2. above.

¹⁹⁴ For further details see *C Heath*, Utility Models in East and West, in ‘Current Problems of Intellectual Property Law - Writings in honour of Nobuo Monya’ (1998).

“Insofar as technical inventions can both be patented and protected under the Utility Model Act, protection for both can be sought on condition that the two applications are filed within one year from each other in order to retain the priority. In this case, the inventor can at least enjoy protection as a utility model for an invention that later on might be found to be unpatentable. (...) Utility model protection starts from the registration date. Protection thus is important, especially before the patent application has been examined, because an unexamined patent application cannot be the basis of claims for injunctive relief and damages other than a licensing fee, Arts. 58(1) and 33(1) Patent Act. Thus, the utility model right can serve as a sort of interim protection before the patent application relating to the same invention has been examined.”¹⁹⁵

Today, the so-called split-off utility models, as provided by German Utility Model Law, are used to protect inventions that are no longer eligible for patent protection due to lack of novelty, as utility models have a six month novelty grace period.¹⁹⁶ Perhaps, even more significantly, Split-off (branch off) applications provide flanking protection between patent application and grant, when no or only limited protection is available, which could also be viewed as ‘fallback position’ for a patent application.¹⁹⁷ The official information leaflet of the German Patent Office on utility models also highlights this form of interim protection of the utility model system which provides the applicant with the full range of remedies from the day of registration of the utility model.¹⁹⁸ It indicates a shift in the function of the German utility model system: Initially created to close a protection gap for small and incremental innovation especially in the area of working tools and other three-dimensional objects with a utilitarian (instead of an aesthetic) purpose, this function became less and less relevant with the continuous erosion of the specific requirements for protectable subject matter and in raising the conditions for protection. At least since the ‘Demonstrationsschrank’ decision of the German Supreme Court in 2006, utility model protection is not really a second-tier protection for sub-patentable subject matter anymore. Instead, the system now serves the need to close a completely different protection gap: The time period until a corresponding patent has been granted.

This functional shift however does not feature (yet) prominently in the current statistics on utility model applications. In its most recent annual report for 2010, the German Patent Office notes that only in 1498 cases the specific option to utilise an earlier priority date of a corresponding patent application has been used (in order to rely on the quick and cheap system of utility model protection until the patent is granted).¹⁹⁹ This is in contrast to a total number of 17.005 applications for utility models in 2010.

In general, the most recent statistical data on utility model protection in Germany shows a continuous decrease of applications over the last six years: From 20286 applications in 2004, the number dropped to 17005 applications in 2010.²⁰⁰ Of these, 15.476 utility models were

¹⁹⁵ C Heath, Utility Models in East and West, in ‘Current Problems of Intellectual Property Law - Writings in honour of Nobuo Monya’ (1998).

¹⁹⁶ See Peter A. Cummings, ‘From Germany to Australia: Opportunity for a Second Tier Patent System in the United States’ (2010) 19 Mich. St. J. Int’l L 297, 304. See also Christoph von Einem and Jeannine Bartmann, The Rise of the Utility Model Protection in Germany, (1995) Managing IP (July August) 44.

¹⁹⁷ See Deutsches Patent und Markenamt (DPMA), Eine Informationsbroschüre zum Gebrauchsmusterschutz, (2010), at 8. Online available at http://www.dpma.de/docs/service/veroeffentlichungen/broschueren/gebrauchsmuster_dt.pdf.

¹⁹⁸ See Deutsches Patent und Markenamt (DPMA), Eine Informationsbroschüre zum Gebrauchsmusterschutz, (2010), at 7. Online available at http://www.dpma.de/docs/service/veroeffentlichungen/broschueren/gebrauchsmuster_dt.pdf.

¹⁹⁹ This type of applications (Abzweigungserklärungen) has been continuously decreasing in the last years: the numbers are 1412 in 2009, 1557 in 2008, 1737 in 2007 and 1948 in 2006.

²⁰⁰ The application numbers are 17.306 for 2009, 17.067 for 2008, 18.083 for 2007, 19.766 for 2006, 20.418 for 2005 and 20.286 for 2004; see DPMA, Jahresbericht 2010, at 19 and 94. Online available at <http://www.dpma.de/docs/service/veroeffentlichungen/jahresberichte/dpma-jahresbericht2010.pdf>. Earlier figures after the 1986 reform (which resulted in the extinction of supplementary utility model applications, compare above) show that in 1990 for example 14.354 applications were received at the DPMA, while this number rose to 20.581 in 1994; see C Heath, Utility Models in East and West, in ‘Current Problems of Intellectual Property Law - Writings in honour of Nobuo Monya’ (1998).

registered – while 2.858 applications were rejected, withdrawn or otherwise did not lead to a registration. In 2010, 22.546 utility models received a renewal of their protection period, while 16.787 utility models ceased to enjoy protection – leading to total 95.598 utility models in force in Germany in 2010 (compared to 96.909 in 2009, 100.093 in 2008, 102.559 in 2007, 104.117 in 2006, 104.976 in 2005 and 106.096 in 2004).²⁰¹ The overall number of utility models in force in Germany therefore is equally declining gradually – albeit not at high rates. Whether the decrease in applications and registered utility models is indicative for lower attractiveness of the utility model system (or the German market for marketing products which may receive protection), for less innovative activity or is based on other factors (such as the financial crisis and the subsequent economic downturn in 2009 and 2010), cannot be determined in this study.²⁰² It appears likely that several factors have an influence on the most recent statistical data on overall applications and registered utility models.

More straightforward is the data on the ratio between foreign and domestic filings. About 80 % of all applications in 2010 stem from domestic applicants – with the remaining 20% chiefly divided amongst applicants from Taiwan (6.5%), Austria (2.4%), Switzerland (1.9%), USA (1.3%) and another 1247 applications from other countries (amounting to 7.3%).²⁰³ This indicates that domestic filings still are the vast majority and supports the claim that utility models are (still) primarily a tool for domestic innovators.²⁰⁴ Further it remains worth noting that in 2010, 3.253 applications for search reports and 168 applications for revocation of registered utility models have been filed.²⁰⁵

All in all, the recent statistical data indicates that the utility model system is an integral part of the German IP system and used by innovators – although the numbers of new applications and of registered models continuously have been declining in recent years. The data however is not conclusive on how the system is being used nowadays: It appears however quite clear from the legal developments that it cannot fulfil its historical function of incentivising minor, sub-patentable innovations. Instead, it seems to function more and more as a strategic tool to protect inventions until the time a patent has been granted. This indicates that the German system as it stands cannot be ‘transplanted’ into the Pakistani context. While some of its features may be useful inspiration, the proximity to the patent system will not serve the interests of SMEs with minor and incremental innovations in the light industry sectors.

ii. Australia

Australia is one of the leading common law countries that has introduced a second-tier protection to supplement its existing patent system. Therefore, the Australian experience with a second-tier system provides useful insights for countries considering an introduction of similar protection regime, in particular, for a country like Pakistan. Both countries share commonalities in terms of their legal heritage and the development of jurisprudence in many respects. The current Australian patent system provides protection for both standard and so called ‘innovation patents’. The innovation patent system, which replaced the former petty patent system was introduced into the Patent Act 1990 (Cth) by the Patents Amendment

²⁰¹ Ibid. For earlier data on the years 2006 - 2009 see

<http://www.dpma.de/service/veroeffentlichungen/jahresberichte/index.html>.

²⁰² In the equivalent period 2004-2010, the number of patent applications at the DPMA (including PCT applications which reached the national phase) first rose from 59.234 in 2004 to 62.417 in 2008 and then again declined to 59.583 in 2009 and 59.245 in 2010.

²⁰³ DPMA, Jahresbericht 2010, at 19.

²⁰⁴ See section 2) c. i. on the role of utility models for domestic industries. In contrast, patent Applications at the DPMA have been around 60.000 per year in the last ten years (see DPMA, Jahresbericht 2010, at 5 & 2007, at 13). While the applications at the German Patent Office stem also to around 80% from domestic applicants, this figure is misleading. Most foreign filings (about 90% in 2007; see DPMA, Jahresbericht 2007, at 13) are EPO applications with Germany as a destination country. Hence foreigners tend to file their patent application primarily with EPO where they can designate several EPC countries. This explains the high percentage of domestic patent filings at the DPMA.

²⁰⁵ DPMA, Jahresbericht 2010, at 21.

(Innovation Patents) Act 2000 (Cth) with effect from May 24, 2001.²⁰⁶ The development of Australian second tier patent protection was a response to perceived deficiencies in patent and design law.²⁰⁷ As can be seen, the objective of the innovation patent system is to stimulate innovation in Australian small to medium business enterprises (SMEs) by providing intellectual property (IP) rights for lower level inventions.²⁰⁸

1. History of Second-tier Protection in Australia

In Australia, protection for sub-patentable innovation was largely initiated by the findings of the Design Law Review Committee (the Franki Committee) in its report relating to utility models.²⁰⁹ As a consequence, Australia adopted a second-tier protection system, designed to provide for lower level, relatively short-lived inventions in 1979 – following the recommendations of the said Franki Committee report.²¹⁰ The objective of the ‘petty patent’ system was to create a form of protection that was less expensive, more easily to be obtained and granted more quickly than standard patent protection, and that would accordingly used for inventions with relatively short commercial life.²¹¹ The petty patents received an initial one-year term of protection from the date of sealing of the patent, with a maximum term of six years.²¹² The granting procedure for petty patents required only a cursory review of the application’s formalities, but during the petty patent’s initial year of registration anyone could present evidence of invalidity to the patent office commissioner to invalidate the petty patent. The granting procedure also allowed for divisional patents to be made from a petty patent application and a petty patent application could be converted to a standard patent application.²¹³ Interestingly, the subject-matter and the patentability requirements (in particular novelty and inventiveness) of the petty patent system were identical to standard patent system.²¹⁴ Initially only one claim was allowed in a petty patent specification.

The Petty patent system was subsequently criticized for not serving the people for whom they were intended.²¹⁵ One of the major problems with the petty patent system resulted from its requirement that only one claim could be made for each petty patent and the single claim

²⁰⁶ *Ann L. Monotti*, ‘Innovation Patents: The Concept of a Manner of New Manufacture and Assessment of Inventive Step: Dura-Post (Aust) Pty Ltd v Delnorth Pty Ltd’, (2010) EIPR 93, 94. See also, Peter A. Cummings, ‘From Germany to Australia: Opportunity for a Second Tier Patent System in the United States’ (2010) 19 Mich. St. J. Int’l L 297, 331 (Another recently implemented second tier patent system is Australia’s Innovation Patent System. The innovation patent system is Australia’s second attempt at the second tier system, the first being the petty patent system).

²⁰⁷ *Andrew Christie and Sarah Moritz*, ‘Australia’ in Uma Suthersanen, Graham Dutfield & Kit Boey (eds), *Innovation Without Patents: Harnessing The Creative Spirit In A Diverse World*, (Edward Elgar Publishing 2007) 119.

²⁰⁸ See Explanatory Memorandum for the Patents Amendment (Innovation Patents) Bill 2000 <http://www.austlii.edu.au/au/legis/cth/bill_em/papb2000410/> accessed 12 February 2012

²⁰⁹ *Andrew Christie and Sarah Moritz*, ‘Australia’ in Uma Suthersanen, Graham Dutfield & Kit Boey (eds), *Innovation Without Patents: Harnessing The Creative Spirit In A Diverse World*, (Edward Elgar Publishing 2007) 120; The Parliament of the Commonwealth of Australia, *Design Law Review Committee (Franki Report), The Law Relating to Utility Models* (Parliamentary paper No. 121, 1973) (The Franki Committee compiled a report analyzing whether Australian needed a form of intellectual property protection for lesser technological developments in addition to patent and design law).

²¹⁰ See *James Lahore*, ‘Designs and Petty Patents: A Broader Reform Issue’, (1996) AIPJ, vol. 7, (February 1996) 14.

²¹¹ *Sarah L. Moritz and Andrew F. Christie*, ‘Second-Tier Patent System: The Australian Experience’ (2006) EIPR 230, 231.

²¹² *Ibid.* (According to the section 68 of the Patent Act 1990, the term of a petty patent is: (a) the period of 12 months beginning on the date of sealing of the patent. Moreover, according to Schedule 1 (Dictionary) ‘Sealing’ means sealed with the seal of the patent office.

²¹³ *Peter A. Cummings*, ‘From Germany to Australia: Opportunity for a Second Tier Patent System in the United States’ (2010) 19 Mich. St. J. Int’l L 297, 312.

²¹⁴ *Ibid.* 311. See also *Colin Bodkin*, *Patent Law in Australia* (2008) 15. (The standard for novelty under the Patent Act of 1952 was the local novelty, which was applicable for both standard and utility patents. Under the patent Act 1990, a two-tier system of patent protection with differing standards of novelty and obviousness was introduced: standard patents applications were to be assessed against the prior art based of the world on one hand, and on the other and an Australian prior art base for petty patents).

²¹⁵ *Sarah L. Moritz and Andrew F. Christie*, ‘Second-Tier Patent System: The Australian Experience’ (2006) EIPR 230, 232.

made it difficult to enforce.²¹⁶ Another problem was that the costs associated with petty patent were comparably same to the standard patents. Moreover, the six year term was criticized for being too short to provide an incentive for a potential manufacturer to invest.²¹⁷ An analysis of the Petty patent system reveals that it was in fact rarely used in Australia. Their only advantage was that only publications or acts within Australia were considered when assessing novelty as it was the domestic novelty that was required. The problem associated with the petty patent system resulted in only 389 petty patent applications in 1994.²¹⁸

In 1995, the Advisory Council on Intellectual Property (ACIP) undertook an extensive review of the petty patent system.²¹⁹ In its report, entitled 'Review of the Petty Patent System', ACIP identified that the system was being under-used, with one of the key problems being the level of invention required to obtain a petty patent. ACIP concluded that there was a gap between the protection afforded under the registered designs regime and the available under the patent system, so that what it called "functional innovations" were unable to be protected.²²⁰ Its solution was to replace petty patents with another second-tier protection system called the innovation patent, which would have a lower inventive threshold than that required for a standard patent.²²¹

2. Main Features of the Current Innovation Patent System

Innovation patent system was introduced in July 2001,²²² its primary objective being to fill the 'protection gap' that existed with regard to minor and incremental innovations.²²³ Secondly, it offers a quick, less expensive and simple form of protection to encourage individuals and SMEs to realize their good ideas.²²⁴ In addition, the inventiveness threshold for innovation patent was reduced to render a greater range of lesser innovations patentable.²²⁵ The new innovation patent system was hence designed to help SMEs to obtain IP protection and to recoup their investment. The key aspects of innovation patents system are as follows:²²⁶

- innovation patents are available for all areas of technology for which a standard patent may be granted.²²⁷ It means that an innovation patent can be obtained for any subject matter that may be protected by standard patent including processes as well as products. The one exception is that protection cannot be gained in respect of plants or animals and biological processes. Nevertheless, microbiological processes and products thereof are expressly outside this exception,²²⁸
- application for innovation patent should be limited to maximum five claims;
- the prior art base applicable to innovation patent is that of standard patent. However, the threshold level of inventiveness is lower,²²⁹

²¹⁶ Ibid.

²¹⁷ Ibid.

²¹⁸ Peter A. Cummings, 'From Germany to Australia: Opportunity for a Second Tier Patent System in the United States' (2010) 19 Mich. St. J. Int'l L 297, 312.

²¹⁹ Rebekah Gay, 'Editorial: The Innovative Step Conundrum' (April 2009) Managing IP 98.

²²⁰ Ibid.

²²¹ Ibid.

²²² By way of *Patent Amendment Act 2001*(Cth).

²²³ Andrew Christie and Sarah Moritz, 'Australia' in Uma Suthersanen, Graham Dutfield & Kit Boey (eds), *Innovation Without Patents: Harnessing The Creative Spirit In A Diverse World*, (Edward Elgar Publishing 2007) 124.

²²⁴ Ibid.

²²⁵ Ibid.

²²⁶ See also *Australian Government's Advisory Council on Intellectual Property*, Review of the Innovation Patent System: Issues Paper (August 2011) 7 < <http://www.acip.gov.au>> accessed 10 February 2012.

²²⁷ Davis Ryan BeBoos, 'Australia-Review of Petty Patent System' (February, 1996) Patent World 6.

²²⁸ Campbell Thompson and Louise Dumbrell, 'A Really Useful Utility Model' (March, 2010) Patent World 28.

²²⁹ Andrew Christie and Sarah Moritz, 'Australia' in Uma Suthersanen, Graham Dutfield & Kit Boey (eds), *Innovation Without Patents: Harnessing The Creative Spirit In A Diverse World*, (Edward Elgar Publishing 2007) 126.

- The innovation patents are granted without substantive examination.²³⁰ However, an innovation patent must be certified before the patent right associated with the patent may be enforced against a third party.²³¹ If certification of an innovation patent is requested, the patent office will conduct a substantive examination to determine whether the innovation patent meets threshold requirements such as novelty and inventive step;²³²
- a maximum term of protection eight years;
- substantive examination will be conducted only upon request by the applicant, request by a third party or direction of the Commissioner after an innovation patent is granted;²³³
- there is no pre-grant opposition and only post-grant and post-certification;
- an application for a standard patent may be converted to an innovation patent application.²³⁴ This can be done simply by filing a divisional innovation patent from the parent patent application at any time before patent application is granted;²³⁵ and
- despite the disparate inventive threshold, innovation patent enjoy identical remedies against infringement which are available for standard patents.

The Patent Amendment Act 2001 (Cth) for the first time imposed a comprehensive absolute novelty standard for Australian patents.²³⁶ The test for novelty is the same for both standard and innovation patents.²³⁷ Innovation patent system requires an “innovative step” instead of an “inventive step.” An invention involves an innovative step unless – when compared with the relevant prior art base the invention would, to a person skilled in the relevant prior art in the light of the common general knowledge as it existed in the patent area before the priority date of the relevant claim – only vary from the base in ways that make ‘no substantial contribution to the invention’.²³⁸ By contrast, the ‘inventive step’ applicable for the standard patent requires that an invention must not have been obvious to a person skilled in the art, in the light of common general knowledge and prior art.²³⁹ The test is that the difference between the claimed invention and the prior art base must make a “substantial contribution”

²³⁰ See Patents Act 1990, s 52.

²³¹ See Patents Act 1990, s 120(1A). (An infringement proceeding in respect of an innovation patent cannot be started unless the patent has been certified.)

²³² *Will Hird and David Collison Cave*, ‘Protect Your Rights with Utility Model Patents’ (July/August 2009) Managing IP 68.

²³³ See s 101A of the Patents Act of 1990; Moritz and Christie (n 204) 232. According to s 101A, after the grant of an innovation patent, the commissioner: (a) may, if he decides to do so; and (b) must if asked to do so in writing, patentee or any other person, examine the complete specification relating to an innovation patent.

²³⁴ See s 79(B) and (C) of the Patent Act 1990.

²³⁵ *Campbell Thompson and Louise Dumbrell*, ‘A Really Useful Utility Model’ (March, 2010) Patent World 31.

²³⁶ *Colin Bodkin*, Patent Law in Australia (2008) 113 (‘At its commencement, the *Patent Act 1990* imposed a “relative novelty” standard by excluding information made publicly available by doing an act outside the patent area from the prior art base. The change to “absolute novelty” was achieved by changing part (a)(ii) of the definition of “prior art base” by replacing the words “in the patent area”, which had appeared previously, with the words “whether in or out of the patent area which now appear there”’).

²³⁷ See Patent Act 1990 (consolidated as of 1 January 2011), s 7(1). Section 7(1) states, for the purposes of this Act, an invention is to be taken to be novel when compared with the prior art base unless it is not novel in the light of any one of the following kinds of information, each of which must be considered separately: (a) prior art information (other than that mentioned in paragraph (c)) made publicly available in a single document or through doing a single act; (b) prior art information (other than that mentioned in paragraph (c)) made publicly available in 2 or more related documents, or through doing 2 or more related acts, if the relationship between the documents or acts is such that a person skilled in the relevant art would treat them as a single source of that information; (c) prior art information contained in a single specification of the kind mentioned in subparagraph (b)(ii) of the definition of prior art base in Schedule 1. Further, the Schedule 1 explains “prior art base” means: (a) in relation to deciding whether an invention does or does not involve an inventive step or an innovative step: (i) information in a document that is publicly available, whether in or out of the patent area; and (ii) information made publicly available through doing an act, whether in or out of the patent area. This means Australia or anywhere else in the world.

²³⁸ See Patents Act of 1990 (consolidated as of 1 January 2011), s 7 (4) and (5).

²³⁹ *Ibid* s 7 (2).

to the working of the claimed invention.²⁴⁰ Nevertheless, the 'innovative step', according to scholars, remained less clear until the decision of *Delnorth* in 2008.²⁴¹

The innovative step test was first judicially considered in the 2008 decision of *Delnorth Pty Ltd v Dura- Post (Australia) Pty Ltd*,²⁴² by Justice Gyles. It was a decision of a single judge of the Federal Court of Australia and was affirmed on appeal by the Full Court on 30 June 2009.²⁴³ This decision analyzed the meaning of word 'substantial' and confirmed that 'make no substantial contribution to the working of the invention, does not mean "great" or "weighty". Instead, it must be taken to mean "real or 'of substance' as contrasted with distinction without real difference".²⁴⁴ Arguably, after *Delnorth* decision, an innovation patent can validly be granted in respect of a claimed invention which may be obvious, provided that it makes a contribution that is real or of substance to the working of the invention.²⁴⁵ In essence, Australian Courts have reinforced the original intention of the legislature, by embracing the desired objectives of the legislation, for which it was introduced.

3. Empirical and Economic Analysis

An analysis of patent statistics reveals that there is a gradual increase in both standard and innovation patent applications since 2001. In 2010 alone, 25,167 standard patent applications and 1559 innovation patent applications have entered the Australian patent system.²⁴⁶ Interestingly, the share of innovation patent applications as against the total number of patent applications accounted for 6.1 percent. Although innovation patent applications made up less than 10 percent of total standard patent application, its portion have been on increase and continued to constitute a greater proportion of total patent applications. On the other hand, foreign patent applications constitute a large share of the total standard patent application in Australia i.e., of all standard patent applications, approximately 23 percent applications represents domestic national applications.²⁴⁷

The following table provides the statistics of innovation patents that have been granted since the introduction of the system in 2001.

²⁴⁰ See *Colin Bodkin*, *Patent Law in Australia* (2008) 164; *Anne Fitzgerald and Fabiano Duffenti*, 'Patents Amendment (Innovation Patents) Act 2000' (2001) 23 EIPR N-38.

²⁴¹ See *Rebekah Gay*, 'Editorial: The Innovative Step Conundrum' (April 2009) *Managing IP* 99.

²⁴² (2008) 78 IPR 463. The case concerns three innovation patents owned by Delnorth for an invention for a roadside post comprising of flexible sheet spring steel. The post included features known from existing plastic roadside marker posts. Delnorth accused Dura-Post for having violating the innovation patents owned by Delnorth. Dura-Post brought a cross-claim for revocation, claiming that one or more of the patents failed to relate to a manner of manufacture, lacked fair basis, novelty, utility or clarity.

²⁴³ *Dura-Post (Aust) Pty Ltd v Delnorth Pty Ltd* (2009) 177 FCR 239; *Campbell Thompson and Louise Dumbrell*, 'A Really Useful Utility Model' (March, 2010) *Patent World* 30.

²⁴⁴ *Rebekah Gay*, 'Editorial: The Innovative Step Conundrum' (April 2009) *Managing IP* 100. (Moreover, the Court confirmed that, in accordance with subsections 7(4) and 7(5) of the Patent Act 1990 the following elements should be identified and considered: (a) the invention "so far as claimed in any claim"; (b) the "person skilled in the relevant art"; (c) the common general knowledge as it existed in Australia before the priority date; and, (d) whether the invention only varied from the prior art information in ways that make no substantial contribution to the working of the invention.

²⁴⁵ See also *Campbell Thompson and Louise Dumbrell*, 'A Really Useful Utility Model' (March, 2010) *Patent World*

29.

²⁴⁶ *IP Australia*, IP Statistics <<http://www.ipaustralia.gov.au/about-us/what-we-do/ip-statistics/>> accessed 10

February 2012

²⁴⁷ *Ibid.*

Innovation Patents Granted by Calendar Year

Years	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	Totals
Innovation patents granted	660	1026	1036	1104	1068	1085	1241	1272	1326	1469	11,287
Granted to foreign applicants	83	136	145	146	146	167	207	244	217	342	1,833
Percentage of foreign applicants	13%	13%	14%	13%	14%	15%	17%	19%	16%	23%	16%
Granted to Australian (AU) applicants	577	890	891	958	922	918	1034	1028	1109	1127	9,454
Percentage of AU applicants	87%	87%	86%	87%	86%	85%	83%	81%	84%	77%	84%
Granted to AU individuals	428	644	674	667	626	566	682	686	676	697	6,346
Overall percentage of AU individual applicants	65%	63%	65%	60%	59%	52%	55%	54%	51%	47%	56%
Granted to AU companies/firms	149	246	217	291	296	352	352	342	433	430	3,108
Overall percentage of AU companies/firms	23%	24%	21%	26%	28%	32%	28%	27%	33%	29%	28%

(Source: Australian Government's Advisory Council on Intellectual Property, 'Review of the Innovation Patent System: Issue Paper', 2011)

As can be seen from above table, a vast majority of innovation patents are granted to Australian applicants with, on average, only about 1 in 6 innovation patents being granted to foreign applicants.²⁴⁸ Interestingly, however, the proportion of foreign users of the system has been increased considerably in recent years, with nearly one-quarter of the innovation patents granted in 2010 being granted to foreign applicants.²⁴⁹ Most strikingly, majority of innovation patents are granted to Australian individuals, which on average 84 percent of total granted innovation patents. Over the same period, just over a quarter of all patents were granted to Australian companies or firms, with this proportion trending upwards in recent years.²⁵⁰

In sum, the objective of the petty patent and the innovation patent system was to create a form of patent protection that was less expensive, more easily obtained and more quickly granted than standard patent, and that would accordingly be used for inventions with a relatively short commercial life.²⁵¹ On the basis of increasing number of users and other evidence, one could reasonably argue that the innovation patent system has largely been successful and that the objectives for which it was introduced are being realized. One can also observe that over the year there has been a high representation of domestic users (individuals more than companies) of innovation patents. To that extent, innovation patent system seems to have served the interests of the domestic innovators and SMEs. The IP Australia's Final Report on the Review of the Innovation Patent (2006) reveals that although it is difficult to objectively measure whether incremental and small-scale innovation has been stimulated by the innovation patent, the higher use of the system than was the case for the petty patent suggests that it has to some degree. The innovation patent hence is predominantly being used by Australian individuals and SMEs for less-knowledge intensive

²⁴⁸ Australian Government's Advisory Council on Intellectual Property, Review of the Innovation Patent System: Issues Paper (August 2011), at 8 < <http://www.acip.gov.au> > accessed 10 February 2012.

²⁴⁹ Ibid.

²⁵⁰ Ibid.

²⁵¹ Sarah L. Moritz and Andrew F. Christie, 'Second-Tier Patent System: The Australian Experience' (2006) EIPR 230, 231.

innovations.²⁵² One possible explanation for this development would be that the innovation patent system has lowered the threshold for inventive step. According to commentators, after Delnorth, the test of 'innovative step' seems to amount at most of a test for 'modified novelty' rather than a test of 'reduced inventiveness'.²⁵³ Moreover, the extensive subject matter that can be protected by innovation patents makes them useful across far more industries than some systems of utility model protection in other countries.²⁵⁴ Last but not least, the short time frame within which an innovation patent can be obtained and enforced in a court against alleged infringements. For instance, the time from filing to grant takes potentially as little as two months, although typically around six months, is seen as one of the greatest advantages to standard patents.²⁵⁵

The economic sectors and technology groups who benefitted from the Australian innovation patent system can be seen as those relating to consumer goods and equipment, civil engineering, building and mining, transport, information technology, handling and printing.²⁵⁶ In comparison, applications under earlier petty patent system represented the same technology groups but in different proportions.²⁵⁷ Most strikingly, these are all industries in which products often have short life cycles.²⁵⁸ Moreover, these top five technology groups account for 59 percent of innovation patent applications in Australia.²⁵⁹ An analysis of the spectrum of technology shows that distinct to the old petty patent system, the information technology sector has received protection under the innovation patent regime. A possible explanation for this would be that such technology needs a speedy grant of IP rights in order to prevent competitors from copying the invention.²⁶⁰

Nevertheless, in recent years, there are also increasing concerns over the abuses of the innovation patent system. One of the key concerns is that the innovation patent is overly generous given since it has a lower inventive threshold – while it offers the same remedies against infringement as a standard patent. However, an innovation patent owner can only enforce her or his rights if the patent has undergone substantive examination and been certified.²⁶¹ On the other hand, some commentators have viewed the need of certification as a barrier for accepting innovation patent as security or as the basis for a commercial exploitation agreement.²⁶² Another concern is that some applicants are using the innovation patent system for tactical purposes regarding higher-level inventions rather than as attempts to protect lower-level inventions.²⁶³ The easy option to convert standard patent to an innovation application has been criticized for being vulnerable to constant abuses.

This critique indicates that the system also has its downsides. All in all however, in spite of these downsides, the innovation patent system appears to have successfully been implemented meeting its objectives in Australian legal landscape.

²⁵² *IP Australia*, Review of the Innovation Patent - Final Report (July 2006) (available from: <<http://www.ipaustralia.gov.au/media/resources/ReviewInnoPatentFinalReport.pdf>> accessed 10 February 2012.

²⁵³ *Campbell Thompson and Louise Dumbrell*, 'A Really Useful Utility Model' (March, 2010) Patent World 29.

²⁵⁴ Compare the historical experiences in Germany described above; see also *Campbell Thompson and Louise Dumbrell*, 'A Really Useful Utility Model' (March, 2010) Patent World 28.

²⁵⁵ *Ibid* 29.

²⁵⁶ *Sarah L. Mortiz and Andrew F. Christie*, 'Second-Tier Patent System: Australian Experience' (2006) EIPR 230, 236.

²⁵⁷ *Ibid*.

²⁵⁸ *Ibid*.

²⁵⁹ *Ibid*.

²⁶⁰ See *Ibid* at 238.

²⁶¹ *Ibid*.

²⁶² See *Anne Fitzgerald and Fabiano Duffenti*, 'Patents Amendment (Innovation Patents) Act 2000' (2001) 23 EIPR N-38.

²⁶³ See *Australian Government's Advisory Council on Intellectual Property*, Review of the Innovation Patent System: Issues Paper (August 2011) 4 <<http://www.acip.gov.au>> accessed 10 February 2012.

b. Developing Countries, especially in Asia

Several countries in Asia such as Japan, South Korea, China, Taiwan (Province of China), Vietnam, Thailand, Cambodia, the Philippines and Malaysia have a system of utility model protection.²⁶⁴ As Professor Heng Gee concludes in his 2006 comparative survey of second-tier systems of protecting sub-patentable innovation, the systems implemented in various parts of Asia show wide divergence.²⁶⁵ Since it is well beyond the scope of this study to discuss all systems and their particularities, Malaysia and China have been chosen as examples which will be discussed in greater detail below. China has been selected due to its economic success, industrial and technological development and its sky-rocketing numbers in both patent- but especially utility model application and granting numbers. It follows a system which closely resembles the protection for 'three-dimensional models' as historically foreseen in Germany.²⁶⁶ Malaysia on the other hand has a system which is often referred to as 'patent model' due to its close proximity to the system of patent protection – for example with regard to the protectable subject matter and the need for a substantive examination where the same standard of novelty as in patent application has to be shown.

i. *China*

1. The Wider Economic and Innovation Context

From the beginning of the 21st century, the epicenter of world economic growth has shifted to East Asia. This was evidenced, for example, by the robust economic growth achieved by China during last decade. Of all emerging economies in Asia, China has achieved a remarkable economic growth by becoming a 'growth miracle' in the world's economic arena. It has sustained an average 9.8 percent annual rate of economic growth.²⁶⁷ Even more importantly, in 2010, China has become world's second largest economy.²⁶⁸ It also seems that China is going to lead the world in patent application filings.²⁶⁹ In 2009, China filed about 279,298 patent applications, ranking third behind Japan, which led the world with 357,338, and the United States, which had 321,741 filings.²⁷⁰ Moreover, according to WIPO IP indicators 2011, China has displaced Japan to become the top country for resident patent applications.²⁷¹ According to commentators, China has experienced a paradigm shift and has now become a common outsourcing manufacturing centre for the United States, Japan and Europe. Tremendous growth has been witnessed in recent years after establishing its open door policy towards foreign trade and investments, and improving its economic and

²⁶⁴ See for further details on these countries' laws *U Suthersanen*, *Utility Models and Innovation in Developing Countries*, ICTSD Issue Paper No.13 (2006), at 17-25 (focussing on Japan, South Korea, China Malaysia and Taiwan); as well as *G Duffield & U Suthersanen*, *Innovation without Patents* (2007), at 142-187 (focussing on Japan and South Korea, China and Taiwan, as well as the ASEAN states). For a brief account of the various systems in Asia see also *L Heng Gee*, *Second Tier Protection for Minor Inventions in Asia: An Appraisal of the Similarities and Differences*, Paper presented at the 3rd ASLI Conference Shanghai (China), 25-26 May 2006.

²⁶⁵ See *L Heng Gee*, *Second Tier Protection for Minor Inventions in Asia: An Appraisal of the Similarities and Differences*, Paper presented at the 3rd ASLI Conference Shanghai (China), 25-26 May 2006, at 11.

²⁶⁶ See section 3) a. i. above for details.

²⁶⁷ See Federation of Hong Kong Industries (FHKI), 'Made in PRD: Challenges and Opportunities for HK Industries' (2007) 2.

<http://www.hkcer.hku.hk/Reports/INTERNET/prd%20report%20II/English_Executive_Summary.pdf> accessed 14 January 2012. (China's economy has continued to grow at a rapid rate. The trend has shown no signs of abatement with an average annual real GDP growth rate of 9.8%, recorded since the year 2000).

²⁶⁸ Yubin Jin, Numia, 'Analysis: Chinese Utility Model: Why Should You Have a Chinese Utility Model Patent?' *WTO Reporter* (September 2011) <<http://www.globallawwatch.com/2011/09/analysis-chinese-utility-model-why-should-you-have-a-chinese-utility-model-patent/>> accessed on 5 January 2012.

²⁶⁹ *Ibid.*

²⁷⁰ *David Barbada*, 'China Poised to Lead World in Patent Filing' *The New York Times* (6 October 2010) <<http://economix.blogs.nytimes.com/2010/10/06/china-poised-to-lead-world-in-patent-filings/>> accessed 5 January 2012.

²⁷¹ See *WIPO*, *World Intellectual Property Indicators* (2011) 51. (China, with 293,066 resident applications, overtook Japan (with 290,081) to become top country for resident applications. The US, with 241,991 resident applications ranked third but US residents filed the greatest number of application in foreign countries).

legal structures.²⁷² Many believed that China's tremendous progress in the economic front has been backed by sound economic and legal policies.

2. History of Utility Model Protection in China

China became a member of the WTO in year 2001 and in recent years, China has increased its effort to protect IP. China is one of the leading countries that has adopted a utility model system. Chinese utility model system is governed by its Patent Act. China's first modern patent law was enacted in 1984 and came into force in 1985.²⁷³ According to Chinese sources, throughout the drafting of the Patent Act, there had been a strong debate regarding the adoption of the utility model law (*shiyong xinxing*), with legislators fearing that the patent office would be flooded by minor inventions from foreign corporations, especially those from Japan.²⁷⁴

Since its introduction in 1985, the Chinese patent law has been amended in 1992, 2000 and 2009 respectively. Of these amendments, the first and third have brought significant changes to country's utility model regime. The first amendment, which came into effect in 1992, extended the length of utility model protection from 5 to 10 years. The third amendment to the Patent Act, which became effective on October 1, 2009, has replaced the relative novelty standard for patentability with a new absolute novelty standard.²⁷⁵ Since the passage of the 1984 patent law, the central government has issued over twenty regulations and guidelines to promote innovative activity in China,²⁷⁶ which are also applicable for utility patents. There are three types of patents available in China, namely the invention patents, utility patents and design patents respectively.²⁷⁷

- *Invention (standard) Patents*- These are conventional patents. The protection period is 20 years from the date of filing or priority date. However, excluded from invention patents are scientific discoveries, rules and methods for diagnosis or the treatment of diseases, animal and plant varieties and substances obtained by nuclear transformation.²⁷⁸
- *Design Patents*-Original designs relating to the shape, pattern, colour or a combination of an object. They have a life-span of 10 years from the date of application or priority date.²⁷⁹
- *Utility Models*- Besides the restrictions in the invention patents, these include restrictions on chemical compounds. Faster protection under the utility model is obtained as no examination is required.²⁸⁰ The life of a utility model patent is 10 years from the date of filing.

3. The Main Features of Utility Model Protection

According to section 2 of the Patent Law, utility models mean new technical solutions proposed for the shape and structure of a product, or the combination thereof, which are fit for practical use. A utility model patent is therefore only granted for product-related technical solutions but not for processes, biological material, fluids, gases, or computer-implemented

²⁷² U Suthersanen, 'Utility Models and Innovation in Developing Countries', ICTSD Issue Paper No.13 (2006), at 19.

²⁷³ Kit Boey Chow, Kah Mun Leo, Susanna Leond and Jerry Hsiao, 'China and Taiwan' in Uma Suthersanen, Graham Dutfield & Kit Boey (eds), *Innovation Without Patents: Harnessing The Creative Spirit In A Diverse World*, (Edward Elgar Publishing 2007) 152, 154.

²⁷⁴ Ibid 153.

²⁷⁵ See Weishi Lee, 'All Change for China' (June 2009) Patent World (Issue No. 213) 18.

²⁷⁶ U Suthersanen, Utility Models and Innovation in Developing Countries, ICTSD Issue Paper No.13 (2006), at 19.

²⁷⁷ Ibid 20.

²⁷⁸ Ibid.

²⁷⁹ Ibid.

²⁸⁰ Ibid.

invention-creations.²⁸¹ In addition, food beverages, flavorings and pharmaceutical products are not protected by utility model patents either. In accordance with Announcement No.27, utility models are strictly limited to ‘the shape, the structure, or their combination, of a product’.²⁸²

The Chinese Patent Law stipulates that any invention or utility model for which a patent right may be granted must be novel, inventive and practically applicable.²⁸³ The novelty requirement for utility models is the same as that for an invention.²⁸⁴ Before 2009, the standard of novelty adopted by the Patent Act was a mixture between absolute novelty and relative novelty.²⁸⁵ According to the previous law, an utility model shall be considered novel if no identical invention or UM has been disclosed in the publications anywhere in the world or publicly used or made known by any other means in China.²⁸⁶ In addition, an identical invention or utility model disclosed in an earlier application by the same applicant prior to the filing date of a later application can be used as a novelty bar against any later application.²⁸⁷ However, a public use can destroy the novelty of an invention only when the public use occurs within China. Under the current law, the “prior art” is now explicitly defined as the state of the art known worldwide to the public prior to the application or priority date, which has raised the bar of the novelty requirements.²⁸⁸ Now, any public use in China or abroad serves as a novelty-destructive-factor.

Unlike novelty, the inventiveness standard is lowered for utility model patents.²⁸⁹ Inventiveness means that, as compared with the technology existing before the filing date the invention has prominent substantive features and represents a notable progress; whereas the for utility model must have a substantial feature and represent progress.²⁹⁰ The Chinese Patent Law insofar has attempted to distinguish the requisite inventiveness as ‘prominent substantive feature’ and ‘notable progress’ for invention patent and ‘substantive feature’ and ‘progress’ for Utility model patents.²⁹¹ Due to frequent confusion as to what level of inventiveness required, the Examination Guidelines proposed that for invention patent, ‘an invention is deemed to be non-obvious even to an expert who has conducted a comprehensive search in all neighboring and related fields,’ but for utility model patents ‘the search should be restricted to the fields to which the technical solution immediately pertains’.²⁹² Practical applicability (as the third criterion for protection) means that the utility model can be made or used and can produce effective results.²⁹³

Although the Patent Law has stipulated a strict novelty standard for utility model patents, there is no substantive examination before a utility model patent is granted. The preliminary

²⁸¹ Kit Boey Chow, Kah Mun Leo, Susanna Leong and Jerry Hsiao, ‘China and Taiwan’ in Uma Suthersanen, Graham Dufield & Kit Boey (eds), *Innovation Without Patents: Harnessing The Creative Spirit In A Diverse World*, (Edward Elgar Publishing 2007) 152, 155.

²⁸² Xiaoguang Yang, ‘Utility Models Have a Vital Role in China’ (July/August 1995) *Managing IP* 46.

²⁸³ See Patent Law of the People’s Republic of China, s 22. Thomas Pattloch, ‘China’ in Christopher Heath (ed), *Intellectual Property in Asia* (Kluwer, 2003) 48.

²⁸⁴ Xiaoguang Yang, ‘Utility Models Have a Vital Role in China’ (July/August 1995) *Managing IP* 46.

²⁸⁵ Thomas Pattloch, ‘China’ in Christopher Heath (ed), *Intellectual Property in Asia* (Kluwer, 2003) 48.

²⁸⁶ Xiaoguang Yang, ‘Utility Models Have a Vital Role in China’ (July/August 1995) *Managing IP* 46.

²⁸⁷ See Patent Law of the People’s Republic of China, s 22. See also Weishi Lee, ‘All Change for China’ (June 2009) *Patent World* (Issue No. 213) 18.

²⁸⁸ See Patent Law of the People’s Republic of China, s 22 (as amended).

²⁸⁹ Peter A. Cummings, ‘From Germany to Australia: Opportunity for a Second Tier Patent System in the United States’ (2010) 19 *Mich. St. J. Int’l L* 297, 310.

²⁹⁰ *Ibid* s 22(3). See also U Suthersanen, ‘Utility Models and Innovation in Developing Countries’, ICTSD Issue Paper No.13 (2006), at 20. Gua Shoukang, ‘Drafting and Promulgation of the Chinese Patent Law’ (1985) *IIC* 371.

²⁹¹ Peter A. Cummings, ‘From Germany to Australia: Opportunity for a Second Tier Patent System in the United States’ (2010) 19 *Mich. St. J. Int’l L* 297, 310.

²⁹² *Ibid*. (Before the Examination Guidelines, The Higher People’s Court of the Beijing has attempted to resolve the confusion, saying “‘prominent substantive features’ means an invention with essential technological breakthrough, resulting in prominent and essential changes in the relevant field of technology; ‘notable progress’ represents a great leap forward which overcomes any shortcomings of the relevant technology, or a noticeable technical success.”)

²⁹³ See Patent Law of the People’s Republic of China, s 22 (4).

examination includes some kind of cursory examination as to formalities of the application, patentability of subject matters, and unity of subject matters.²⁹⁴ However, in litigation relating to utility models, the tribunal before which the litigation is pending may require the right holder to submit a search report issued by the patent office relating to the novelty of the subject matter.²⁹⁵ According to critics however, the novelty requirement is quite frequently abused by Chinese nationals and firms. For example, UMs are being granted to local 'inventors' for inventions imported from overseas.²⁹⁶ This practice is possible to the fact that UM patents are only given a cursory examination for formalities. These fraudulent UMs allow the owners to threaten legal action on foreign corporations seeking to manufacture in China.²⁹⁷

One other major downside of the Chinese utility model system is the increasing concerns about validity. In accordance with 1992 amendment of Patent Law, pre-grant opposition has been abolished and replaced by post-grant revocation.²⁹⁸ Nevertheless, having observed that post-grant opposition system was time-consuming and was maliciously used to obstruct protection for legitimately acquired patents, in the second revision of the Patent Law, the post-grant opposition procedure has been scrapped.²⁹⁹ Today, the only way to challenge a patent is through an invalidation action according to section 45 of the Patent Act.³⁰⁰ According to statistics, there is an increasing trend in invalidation actions. Currently, of the patent invalidity proceedings brought, 95 percent are filed against UM patents, of which 60 percent are declared invalid.³⁰¹

With regard to limitations and exceptions, pursuant to article 42 of the Patent Law, the duration of patent right for utility models shall be ten years, counted from the date of filing. In addition, the subject matter of a UM patents is limited to product's shape, structure or their combination. Inventions about methods, processes, or chemical compounds, as seen before, are excluded from patentable subject matter.

4. Empirical and Economic Analysis

Table 1: Applications and Grants for the three kinds of Patents by Calendar Year

U Ms	2005	2006	2007	2008	2009	2010	2011
Applications	139566	161366	181324	225586	310771	409836	585467
Grants	79349	107655	150036	176675	203802	344472	408110
Invention	2005	2006	2007	2008	2009	2010	2011
Applications	476263	573178	694153	828328	976686	391177	526412
Grants	214003	268002	351782	411982	581992	135110	172113
Design	2005	2006	2007	2008	2009	2010	2011
Applications	163371	201322	267688	312904	351342	421273	521468
Grants	81349	102561	133798	141601	249701	335243	380291

²⁹⁴ See Ibid s 40.

²⁹⁵ Kit Boey Chow, Kah Mun Leo, Susanna Leond and Jerry Hsiao, 'China and Taiwan' in Uma Suthersanen, Graham Dutfield & Kit Boey (eds), *Innovation Without Patents: Harnessing The Creative Spirit In A Diverse World*, (Edward Elgar Publishing 2007) 152, 156.

²⁹⁶ See U Suthersanen, *Utility Models and Innovation in Developing Countries*, ICTSD Issue Paper No.13 (2006), at 20.

²⁹⁷ Peter A. Cummings, 'From Germany to Australia: Opportunity for a Second Tier Patent System in the United States' (2010) 19 Mich. St. J. Int'l L 297, 310.

²⁹⁸ Xiaoguang Yang, 'Utility Models Have a Vital Role in China' (July/August 1995) *Managing IP* 46, at 47.

²⁹⁹ Thomas Pattloch, 'China' in Christopher Heath (ed), *Intellectual Property in Asia* (Kluwer, 2003) 48, at 50.

³⁰⁰ Ibid.

³⁰¹ Peter A. Cummings, 'From Germany to Australia: Opportunity for a Second Tier Patent System in the United States' (2010) 19 Mich. St. J. Int'l L 297, 310.

Source: Statistics-State Intellectual Property Office of People's Republic of China (SIPO)³⁰²

Patents are considered a measure of technology prowess and innovation.³⁰³ Table 1 reveals some illuminating facts on the latest and increasing numbers of UM, invention and design patent applications and grants by Chinese Intellectual Property Office from 2005 to 2011. As can be seen from Table 1, during this period, the applications and grants of utility model patents have risen to extraordinary levels. Furthermore, since 2005 the numbers saw double-digit growth for both. In 2011 alone, SIPO has received 585467 applications and issued 488110 utility models. According to the latest statistics of the WIPO, the total number of utility model applications filed across the world grew by 24 percent in 2010, driven by substantial growth in applications at SIPO. The numbers of UM applications and grants at SIPO are by far the largest.³⁰⁴

Table 2: Utility Models and Invention Patents: Chinese Versus Foreign Applications

	Utility Models			Invention		
	Applications			Applications		
	Domestic	Foreign	Total	Domestic	Foreign	Total
2006	159997	1369	161366	122318	88172	210490
%	99.2%	0.8%	100%	58.1%	41.9%	100%
2007	179999	1325	181324	153060	92101	245160
%	99.3%	0.7%	100%	73.3%	37.6%	100%
2008	223945	1641	225586	194579	95259	289838
%	99.3%	0.7%	100%	67.1%	32.9%	100%
2009	308861	1910	310771	229096	85477	314573
%	99.4%	0.6%	100%	72.8%	27.2%	100%
2010	407238	2598	409836	293066	98111	391177
%	99.4%	0.6%	100%	74.9%	25.1%	100%

Source: Statistics-State Intellectual Property Office of People's Republic of China³⁰⁵

As can be seen from Table 1, local residents formed the bulk of the application for utility model patents, consisting on the average of more than 99 percent of the applications. These numbers show that the system is predominantly used by Chinese individual innovators and firms. In stark contrast to domestic applications, the average portion of foreign applications has been very low and it accounts for less than 1 percent of total applications. Although numbers have slightly increased, the percentage (due to a larger number of local filing) continues to shrink. One possible explanation for this would be that most foreign users are by and large unaware of the potential benefits of the utility model system or not familiar how to use it.

Another notable difference is that the total number of applications by foreigners for invention patent protection averaged more than 1/3 of the total applications. Compared to these figures, the utility model protection regime may not attract as much foreign interests as compared to invention patent applications. Viewed from the statistics, one could reasonably argue that the utility model system in China is mainly of interest to domestic firms.³⁰⁶

³⁰² State Intellectual Property Office of People's Republic of China < <http://english.sipo.gov.cn/statistics/> > accessed 15 February 2012.

³⁰³ David Barbada, 'China Poised to Lead World in Patent Filing' *The New York Times* (6 October 2010) < <http://economix.blogs.nytimes.com/2010/10/06/china-poised-to-lead-world-in-patent-filings/> > accessed 5 January 2012.

³⁰⁴ See WIPO, World Intellectual Property Indicators (2011) 95-96

³⁰⁵ State Intellectual Property Office of People's Republic of China (CIPO) < <http://english.sipo.gov.cn/statistics/> > accessed 15 February 2012.

³⁰⁶ See also Lim Hen Gee, 'Second Tier Protection for Minor innovations in Asia: An Appraisal of the Similarities and Differences' (The 3rd Asian Law Institute Conference (ASLI), Asian Law Institute, Shanghai, China, 2006)

Table 3: Utility Models and Invention Patents Granted by Calendar Year

	Utility Models			Invention		
	Grants			Grants		
	Domestic	Foreign	Total	Domestic	Foreign	Total
2006	106312	1343	107655	25077	32709	57786
%	98.8%	1.2%	100%	43.4%	56.6%	100%
2007	148391	1645	150036	31945	36003	67948
%	98.9%	1.1%	100%	47.0%	53.0%	100%
2008	175169	1506	176675	46590	47116	93706
%	99.1%	0.9%	100%	49.7%	50.3%	100%
2009	202113	1689	203802	65391	63098	128489
%	99.2%	0.8%	100%	50.9%	49.1%	100%
2010	342258	2214	344472	79767	55343	135110
%	99.4%	0.6%	100%	59.0%	41.0%	100%

Source: Statistics-State Intellectual Property Office of People's Republic of China (SIPO)³⁰⁷

According to the statistics, in 2010, the State Intellectual Property Office (SIPO) has received a total of 409836 applications for the utility model applications, of which 344472 applications were granted utility model rights. Over the same period, a total of 391177 applications entered the Chinese invention patent system, of which only 135110 were granted invention patent rights. This shows that Chinese utility model applications are significantly higher than invention patent, and much more utility model applications are granted patent rights. One possible reason for this would be that utility model patent rights are granted only after a preliminary examination and of course without a substantive examination. It is also quite interesting to notice that, as compared with statistics on Table 2, a high number of UM applications are apparently rejected in the mere formal examination, which would rise to perhaps more than 10 percent.

Ever since 1985 when the Patent Law was introduced to China, the numbers suggest that the utility model patent has been playing an important role. Commentators have also argued that the utility model system has played an active role in encouraging invention-creations, and promoting the progress and development of science and technology.³⁰⁸ The current indicators suggest that the system in China has become very popular among domestic users and commentators argue that it is primarily utilized by individuals and firms in securing protection for their investments, in particular by small and medium scale enterprises (SMEs).³⁰⁹ Viewed from the statistic of SIPO, one Chinese author has argued that SMEs and individuals are the largest contributors to the utility model applications.³¹⁰ Moreover, this author argues that the system may not only be suitable for SMEs and individuals in China but also for large firms, given the level of technologies they create.³¹¹ One other possible explanation for this popularity would be that the period of examination is short, the cost associated with UM protection is relatively low and the decision is made quickly. In addition, given the backlog in invention patent examination process, even the genuine and deserving patent applications fail to receive timely and effective protection. The same is certainly true for product innovations with short life-cycle. These factors have no doubt attracted many users from China's IP system to the quick and cheap utility model system.

³⁰⁷ State Intellectual Property Office of People's Republic of China (CIPO)

< <http://english.sipo.gov.cn/statistics/> > accessed 15 February 2012.

³⁰⁸ Zhang Rongyan, 'Reflection on Improvement of Utility Model System in China' (2006) China Patent & Trademark Journal (No. 4) 36.

³⁰⁹ See Dong Wei, 'On the Simultaneous Filing of Patent Application for Invention and Patent Application for Utility Model' (1996) China Patent and Trademark (No.2) 28.

³¹⁰ Yehong Li, 'Utility Models in China' in Christopher Heath and Anselm Kamperman Sander (eds), *Industrial Property in the Bio-Medical Age: Challenges for Asia* (Kluwer 2003) 157, 160. According to Yehong Li, in Jiangsu province for example, among 3338 patent applications, 1764 are for UMs, 440 for invention patents. Of these, individuals contributed 1977 and SMEs 1234

³¹¹ Ibid.

The economic sectors targeted by- and benefitted from the Chinese utility model system, according to technology spectrum, are electronic engineering, instruments, chemical, and mechanical engineering.³¹² Pursuant to article 2 of the Chinese Patent Law, a utility model patent covers any new technical solution relating to the shape, the structure, or their combination, of a product, which is fit for practical use.³¹³ In other words, utility model patents can only protect devices, products, and articles of manufacture and do not protect methods or processes.³¹⁴ A review of the technology landscape of Chinese utility model patents shows, however, that utility model covers a far broader scope that one might imagine.³¹⁵ According to Patent Statistics issued by Planning and Development Department of SIPO in 2010 and 2011, the distribution of technology fields differs between domestic and foreign companies. The empirical evidence suggests that the domestic companies tend to emphasize on mechanical devices, while the foreign companies tends to focus on electrical devices.³¹⁶

In a nutshell, although UM system has provided substantial benefits to local industries, it has also suffered from certain criticisms. Concerns have been expressed even from top government officials regarding a major quantity versus quality discrepancy in the area of patents.³¹⁷ Concerns have also been raised regarding ever-increasing numbers of utility model registrations. Opponents criticize the system for producing a huge number of unstable and worthless rights with a high rate of invalidation.³¹⁸ Criticisms have also been leveled against the repetitively granting (double-patenting) of utility model rights for already granted invention patents, which are standing just for the sake of name but are in reality worth nothing.³¹⁹ One of the key concerns is that there can be utility model rights that infringe the existing invention patent rights because of overlapping rights. There are also fears that the utility model system provides a useful weapon in litigation, which is prone to be easily abused in the hands of right holders. Many have noted their skepticism towards the booming number of utility model applications and charge that the major incentives factors to file utility model applications in China are government encouragements in form of subsidies and tax incentives. All in all however, one could reasonably argue that Chinese utility model system has positively contributed towards achieving the current status of innovation landscape in China.

ii. Malaysia

In contrast to China, Malaysia has implemented a system of second-tier protection for small-scale, incremental innovation which is much closer to the patent system. In the following, this system of protecting 'innovation patents' is discussed in terms of its historical development, main features, and economic impact.

³¹² According to Patent Statistics issued by Planning and Development Department of SIPO in 2010 and 2011, the highest number of domestic utility patent ownership was recorded for mechanical engineering sector. Most strikingly, more foreigners own utility models patents for electronics engineering sector.

³¹³ Para 2, art 2 Chinese Patent Law of 1984

³¹⁴ *China Science Law Group (CSLG)*, 'Characteristics And Best Practices Of Utility Model System In China' at 15. <<http://www.chinasciencelawgroup.com/documents/Characteristic%20and%20Best%20Practices%20of%20Chinese%20Utility%20Model%20System%20July%2010,%202011>> accessed 20 June 2012.

³¹⁵ *Ibid*

³¹⁶ For a more detailed table that shows the number and ranks of utility model patents across the technology spectrum under domestic and foreign ownership as of 2009. see *ibid*, at 6.

³¹⁷ See the comment of *Ma Weiye*, The Director General of the State Intellectual Property Office's (SIPO) patent department, who has addressed the issue by saying that "Our companies should pay much more attention to patent quality instead of only quantity". *Ma Weiye*, 'SIPO: Quality not Numbers, Key to Patent and Innovation' *People's Daily* (Beijing China, 5 January 2011) <<http://english.people.com.cn/90001/90778/90860/7250698.html>> accessed 10 February 2012

³¹⁸ *Zhang Rongyan*, 'The Legislation for Utility Models and Their Examination and Approval: On Improving the System of Patent for Utility Model' (1997) *China Patents and Trademark* (No.2) 73. The author argues that, in 1995, the Patent Reexamination Board has examined and closed 82 cases of invalidation of patents for utility model, the success rate of invalidation being 55%.

³¹⁹ *Ibid*, at 74.

1. History of Innovation Patents in Malaysia

In the 1980s Malaysia implemented its first independent patent system by passing the Patents Act of 28 November 1983 which repealed the earlier system of re-registration of patents granted by the UK Patent Office.³²⁰ Under the current version of the Patents Act 1983 (as amended), two types of protection are available: Next to the traditional system of patent protection (based on meeting the three main conditions of novelty, inventive step and industrial application), a second-tier protection is available via a certificate for ‘utility innovation’. The latter system of protection available under the Act aims to protect “minor inventions”, called “utility innovations” in the statute, whereby a lower level of patentability criteria needs to be satisfied.³²¹ In a nutshell, Malaysia follows a second-tier protection system which is very close to the patent system which it supplements. It hence has been described as example for a ‘patent model’ where the applicant would have to meet the same or similar substantive requirements as that for a standard patent application – without any restriction to protectable subject matter to three-dimensional models or products.³²²

The rationale for the protecting ‘utility innovations’ under the Malaysian Patents Act however is the same as the motives which lead to introducing utility model rights in Germany in the late 19th century. As described by a member of the Malaysian IP Office

Utility Innovation in Malaysia is expected to attract the locals and also the small innovators like students, individual inventors and the SMEs. These innovators usually come up with simple but useful everyday life utilities. These innovations might not be able to surpass the threshold of inventive step if applied for patents. Thus, Utility Innovation incentivizes innovations by giving an easier and better path of protection for this group of innovators.³²³

This notion to protect minor innovations as main rationale is confirmed in the literature³²⁴ and further finds expression in the relevant provisions of the Patents Act which are discussed in the next section.

2. Main Features of Innovation Patent Protection

In the following, the protectable subject matter, the conditions for protection, the granting procedure, the rights granted, exceptions and limitations as well as the duration for utility innovations are described. In general and unless provided otherwise, the provisions governing patents also apply to utility innovations.³²⁵

In the Patents Act, a utility innovation is described as any innovation which creates a new product or process, or any new improvement of a known product or process, which is capable of industrial application. As legally defined in Section 17

“utility innovation” means any innovation which creates a new product or process, or any new improvement of a known product or process, which is capable of industrial application, and includes an invention.

³²⁰ *U Suthersanen & L Heng Gee* in *G Dutfield & U Suthersanen*, *Innovation without Patents* (2007), at 170. The patent system was however not put into practice before 1 October 1986; for details see *I M Azmi, L Heng Gee & R Alavi*, *Intellectual Property System and Industrial Development in Malaysia* (2009), at 14-20.

³²¹ *U Suthersanen*, *Utility Models and Innovation in Developing Countries*, ICTSD Issue Paper No.13 (2006), at 21.

³²² *L Heng Gee*, *Second Tier Protection for Minor Inventions in Asia: An Appraisal of the Similarities and Differences*, Paper presented at the 3rd ASLI Conference Shanghai (China), 25-26 May 2006, at 5-6.

³²³ Email Correspondence with MyIPO.

³²⁴ See *I M Azmi, L Heng Gee & R Alavi*, *Intellectual Property System and Industrial Development in Malaysia* (2009), at 22, 70.

³²⁵ See Section 17A of the Patents Act 1983 (as amended).

Excluded from protection is only subject matter which is equally not patentable – which under section 13 includes discoveries, scientific theories, plants and animal varieties other than manmade living micro organisms and their products, methods of doing business and methods of treatment for the human or animal body.³²⁶ This means that – similar to the Australian model – the Malaysian system is not limited to three dimensional models and also covers for example compounds and processes.

As to the conditions for protection, the patent standard of novelty applies to utility innovations³²⁷ – hence it is deemed to be new if it is not part of the prior art which comprises everything disclosed to the public anywhere in the world by written publication, oral disclosure or any other use prior to the priority date of the application.³²⁸ Utility innovations however do not have to consist of an inventive step since this requirement is explicitly excluded.³²⁹

The application procedure again is the same as that for a patent – with the important limitation that for utility innovations in Malaysia, only one claim is allowed.³³⁰ Thus, the claim is expected to be narrow and specific to include all the features of the innovation. Professor *Heng Gee* further describes the application system as follows:³³¹

In the full examination system, the examination that is carried out prior to registration is the same as that carried out for the standard patent. So, besides the formality examination, there would also be a substantive examination to ensure that the application complies with the requirement for novelty and/or inventive step. This system is practised in Malaysia. The application has to be lodged with the Malaysian Intellectual Property Office (MyIPO) to obtain a filing date.³³² The application is then automatically subject to a preliminary examination to ensure compliance with the formality requirements under Regulation 26.³³³ If an applicant wishes to proceed with his application, he has to file a request for a substantive examination within 2 years from filing date.³³⁴ Two forms of substantive examination are available, a full substantive examination or a modified substantive examination.³³⁵ A modified substantive examination can be requested for only if a certificate for a utility innovation has been granted by any one of the "prescribed industrial property offices". At present, the "prescribed industrial property offices" means the patent offices of the following: Australia, United Kingdom, United States of America, European Patent Office, Japan and Korea.³³⁶

Once a utility model certificate is issued, the rights granted to the right holder are again the same as those available to a patent holder. Therefore, under section 36 the right holder can prevent other without his authorisation to:

³²⁶ See Section 13 (1) (a) – (d) of the Patents Act.

³²⁷ Other Asian countries which apply the same novelty standard for both standard patents and second tier protection models include China, Japan, Indonesia, Macau, and the Republic of Korea; see *L Heng Gee*, Second Tier Protection for Minor Inventions in Asia: An Appraisal of the Similarities and Differences, Paper presented at the 3rd ASLI Conference Shanghai (China), 25-26 May 2006, at 8.

³²⁸ See Section 14 of the Patents Act which also contains a one year grace period for the applicant.

³²⁹ See Section 17A of the Patents Act.

³³⁰ See Section 28 (1) (d) – as modified by the Second Schedule of the Act.

³³¹ *L Heng Gee*, Second Tier Protection for Minor Inventions in Asia: An Appraisal of the Similarities and Differences, Paper presented at the 3rd ASLI Conference Shanghai (China), 25-26 May 2006, at 7.

³³² See section 26, Patents Act 1983, Malaysia. The application can be made at the main office in Kuala Lumpur or at any of the branch offices located in Sabah or Sarawak.

³³³ See section 28, Patents Act 1983, Malaysia, as modified by the Second Schedule and the Patents Regulations 1986.

³³⁴ See section 29A, Patents Act 1983, Malaysia and Reg. 27.

³³⁵ See section 29A, Patents Act 1983, Malaysia.

³³⁶ See Regulation 27A(5), Patents Regulations 1986, Malaysia. The Patent Office of Japan and the Patent Office of the Republic of Korea are now included in the list of "prescribed industrial property offices" by virtue of the Patents (Amendment) Regulations 2002 and 2003.

- exploit the patented invention (by making, importing, offering for sale, selling or using the patented product or by using the patented process and/or conducting any of the above mentioned acts in relation to a product directly obtained from a patented process);
- to assign or transmit the patent; and
- to conclude license contracts.

As to exceptions and limitations, in general the same provisions applicable to patent rights also apply to utility innovations. Hence a research exception as well as one covering acts done for obtaining marketing approval ('bolar' exception) apply.³³⁷ However, compulsory licenses are not available for utility innovations.³³⁸

The maximum term of protection for a utility innovation is 20 years from the filing date. However, renewal beyond 10 and 15 years from the filing date is dependent on completing an extension procedure that includes presenting evidence of commercial or industrial use in Malaysia, or a satisfactory explanation for non-use.³³⁹ Finally, as Part XIV of the Patents Act is not exempted from application to utility innovation, the enforcement concerning the infringement of utility innovation is the same as concerning patent rights.

In sum, the main features of the Malaysian system to protect sub-patentable innovation are as follows:

- 1) The protectable subject matter for utility innovations is the same as for patents – hence covering compounds and processes.
- 2) While generally based on patent protection criteria, there is no requirement for showing of an inventive step.
- 3) Utility Innovation is subjected to substantive examination before grant. However, only the criterion of (absolute and universal) novelty is examined during this process.
- 4) The number of claim allowed for utility innovations is only one. Thus, the claim is expected to be narrow and specific to include all the features of the innovation.
- 5) Initial protection is for 10 years, with an option for renewal for two additional 5 years periods – if the owner can show that the utility innovation is in commercial or industrial use in Malaysia.
- 6) Utility innovations are not subject to a compulsory license.

3. Empirical Findings and Economic Impact

In the initial 10 years after the introduction of the utility innovation system in 1986, there was an overall ten-fold increase in applications (from 15 in 1986 to 152 in 1995).³⁴⁰ After the change from local to universal novelty in 1995, the number of applications sharply declined to a low of 45 in 1998, from which they then recovered to a range between 70 and 90 applications per year.³⁴¹ The most recent figures are presented in the table below.

³³⁷ See Section 37 of the Patents Act.

³³⁸ See Section 17A of the Patents Act.

³³⁹ See Section 35 – as modified by the Second Schedule of the Act.

³⁴⁰ For a complete table of the patent and utility innovation applications received from 1986 to 2007 see *I M Azmi, L Heng Gee & R Alavi*, Intellectual Property System and Industrial Development in Malaysia (2009), at 90-91.

³⁴¹ See *L Heng Gee, I M Azmi & R Alavi*, Reform towards Intellectual Property-Based Development in Malaysia, *Journal of World Intellectual Property* (2009), 317-337, at 330.

Statistics of utility innovation applications 2003-2010³⁴²

Year of Filing	Foreign	Local	Total Application	Percentage from total applications, including Patents
2003	40	20	60	1.18
2004	49	48	97	1.78
2005	48	27	75	1.19
2006	46	31	77	1.60
2007	44	34	78	3.28
2008	66	32	98	1.81
2009	32	29	61	1.06
2010	37	47	84	1.30
Grand Total	362	268	630	1.51

Initially in 1986 and in the early nineties, the percentage of utility model applications as compared with patent applications as at around 4-6%. As the table above show, the current numbers are lower at around 1-3%.

The main users of the utility innovation system in the years 1986-2003 come from the region, with 47.3 % of users from Taiwan Province of China, followed by 38.9 % of the applications emanating from Malaysia, then from the United States (4.3 %) and Japan (1.3 %).³⁴³ The more recent data from the table above indicates an even higher percentage of Malaysian innovators compared to the overall number of foreign applications: While foreign applications have dropped significantly since 2008, domestic ones for the first time in 2010 overtook foreign filings.

Suthersanen and Heng Gee further observe that in relation to the proportion of utility innovation applications coming from companies and individuals and comparing the numbers with patents that from 1999-2003, 34.2 % of the utility innovation applications came from companies and institutions, while 65.8 % came from individuals.³⁴⁴ Contrasted with the patent statistics during the same period, the percentages are significantly different: companies and institutions are responsible for 96.2 % of applications with only 3.8 % coming from individuals. The authors conclude that it might appear from this that individual inventors find the utility innovation system to be more accessible than the patent system.³⁴⁵

They further note that in the years 1988-2003 the highest numbers of utility innovations encompasses innovations relating to 'human necessities'³⁴⁶ (such as footwear, furniture, agriculture, jewellery and travelling articles); followed by the second highest category concerning 'performing operations and transporting'³⁴⁷ (which classifies innovations relating to mechanical operations involving physical or chemical processes, machines, apparatus and also transportation such as railways, aircraft and vehicles).³⁴⁸ For innovations in these categories about twice as many utility model filings exist as compared to the third and fourth category – relating to 'Mechanical Engineering, Lighting, Heating, Weapons, and Blasting',³⁴⁹ as well as 'Fixed Constructions'.³⁵⁰ The authors note that the first two categories are areas in which individual innovators and SME's could be involved in the creation of

³⁴² Source: IP Office, Malaysia – see generally <http://www.myipo.gov.my/en/resources/statistics.html>.

³⁴³ U Suthersanen, *Utility Models and Innovation in Developing Countries*, ICTSD Issue Paper No.13 (2006), at 22.

³⁴⁴ U Suthersanen & L Heng Gee in G Duffield & U Suthersanen, *Innovation without Patents* (2007), at 176.

³⁴⁵ U Suthersanen & L Heng Gee in G Duffield & U Suthersanen, *Innovation without Patents* (2007), at 176.

Nonetheless, they emphasise that the total of utility innovation applications from individuals is substantially lower than the number of patent application from individuals: 329 for utility innovations and 1,102 for patents.

³⁴⁶ With a total of 24.9% of all utility innovations.

³⁴⁷ With a total of 22.3% of all utility innovations.

³⁴⁸ Ibid. For a complete table of utility innovations in Malaysia based on fields of technology see p.175.

³⁴⁹ With a total of 14.3% of all utility innovations.

³⁵⁰ With a total of 11.4% of all utility innovations.

incremental improvements without the use of high technology. They argue that this may reflect the fact that the percentage of individual innovators compared to companies/institutions making use of the utility innovation system is very much higher as compared to the use of the patent system.³⁵¹

Further commentators have concluded that

“the usage of utility model innovation remained modest in Malaysia between the years 1986 to 2006. In comparison, the introduction of utility innovations or petty patents in Korea had contributed to the increase in the number of local patent applications. This, however, was not the case in Malaysia.”³⁵²

Finally, a member of MyIPO tries to explain the main reasons attributing to the low number of UI applications in Malaysia by the following three points:

- “When these applications are subjected to substantive examination, though omitting the criteria of inventive step, the treatment received will be the same as of patent applications. The earlier applications will be examined first, thus utility innovation (UI) applications will have to wait for its turn to be examined. With UI applications’ pendency period being the same as of patent applications, applicants prefer to apply for patents.
- The scope of protection granted for UIs are often more specific and narrow than patents. Applicants will have to include all features of innovations into the only one claim allowed thus making it easier for others to modify or improvise for further exploitation.
- Applicants prefer to be granted with a total automatic protection period of 20 years (with yearly renewal fees) without the hassle of providing proof of utilization after the 10th year.”³⁵³

In sum, the close proximity of the Malaysian utility innovation regime to the patent system, in particular the need for a substantive examination procedure, seems to inhibit a more widespread use. While the system may “have a place in the intellectual property system of Malaysia”,³⁵⁴ it does not seem to offer a quick and cheap alternative to patent protection. Although reduced costs and a lower threshold for protection may be attractive especially for local SMEs, the long examination period (compared to a mere registration system), the limitation to one claim only and the need to proof domestic use in order to obtain the full term of protection appear to make the system unattractive in practice.

Comparing the four country experiences, which one appears as the most relevant, and effective, in light of the key objective to encourage individual inventors/SMEs to protect and exploit their inventions? There is no easy and straightforward answer here that can be applied in the context of Pakistan (which is further examined in the next section). Nevertheless, we try to offer some conclusions on this in the following: In general, intellectual creations at all levels should be encouraged and incentivized in order to develop a culture of innovation and creativity in any country. In that light, the rationale underlying a second tier protection system is to provide an IP right that is relatively inexpensive, quick, easy to obtain, which is more suited to inventions of short commercial life. From an economic perspective, most individual innovators and SMEs have limited financial resources and IPR protection becomes a hurdle for them as they are unable to secure IP rights at a cost they can afford. This in effect creates a barrier in terms of accessibility to the protection. In our view, a second tier protection system (such as utility models) can benefit individual

³⁵¹ Ibid.

³⁵² *I M Azmi, L Heng Gee & R Alavi, Intellectual Property System and Industrial Development in Malaysia (2009), at 92.*

³⁵³ Email Correspondence with MyIPO (facilitated by Ms. Shamsiah Kamaruddin, Deputy Director General (Industrial Property) - MyIPO).

³⁵⁴ *U Suthersanen, Utility Models and Innovation in Developing Countries, ICTSD Issue Paper No.13 (2006), at 22.*

innovators and SMEs, if a country could sufficiently focus it on which industries should be promoted.

As for the four country case studies examined above, the historic German, as well as the Australian system, appear most apt to protect innovation of SMEs and in this way arguably serve as a useful incentive mechanism. While there is less reliable data about the German system before its close approximation to the patent regime, the data discussed in relation to Australia does support a specific focus and use of the 'innovation patent' by SMEs and individual inventors. In Malaysia, the system appears somewhat less useful; mainly because of the required substantive examination applicable also to utility models – hence applicants rather opt for a patent wherever possible. In China, the situation is more complex and less clear to assess on this specific point. Evidence offered by some appears to indicate that utility model has a far broader scope in practice than one might imagine from looking at the scope of protection in accordance with the law.³⁵⁵ Based on SIPO statistics, one author has argued that SMEs and individuals are the largest contributors to the utility model applications.³⁵⁶ Others suggest by giving anecdotal evidence that also large firms (such as Foxconn) focus on utility model patent as a strategic tool because its (electronic) products have a relatively short life cycle and utility model patents offer a quick solution to secure protection.³⁵⁷

Furthermore, according to a Chinese academic consulted on this matter, SMEs or individuals generally do not expect money/income raised by licensing patents, but minimum protection by law so that no one else could employ or take advantage of the products they have created with great efforts. Even though most of the utility model patents will bring less profit than invention patent do; UM patent right holders are nevertheless equally protected against infringement under patent law after all. Hence, also a large company will seek for the UM protection. However, according to this opinion, most large companies will not concentrate on UM patents. Second, the application and maintenance fee maybe an issue. Application- and maintenance fee for UM patents is less than invention patent, and individuals or SMEs may not have the budget to apply and maintain several invention patents. Third, governmental support programmes generally encourage filing applications. It appears as a government policy to encourage filing for applications by deduction of fees or subsidy. However, each province of China may have different policy of encouragement. In that expert's opinion, all industries are likely to benefit from the utility model system. It does not seem to be targeting a specific industry; but rather aim to encourage and promote the development of science and technology as such. In sum, the specific role of the Chinese system to protect and promote small and incremental innovation especially by SMEs is less clear than in the case of Australia which seems to offer the strongest case for a UM system promoting minor innovative activities by SMEs.

4. Reasons For and Against Introducing Utility Model Protection in Pakistan

Based on the analysis in section 2) and the country case studies in section 3), this section looks at the reasons for and against utility model protection in the specific context of Pakistan.

a. The relevant Economic Situation and Technological Developments in Pakistan

i. Pakistan as an IP Importing/Exporting Country

The industrial development of Pakistan started very early, almost at par with the newly industrialized countries such as Republic of Korea. Despite the fact that the initial industrial

³⁵⁵ *China Science Law Group (CSLG), 'Characteristics and Best Practices of Utility Model System In China' at p.9.*

³⁵⁶ *Yahong Li, 'Utility Models in China' in Christopher Heath and Anselm Kamperman Sander (eds), *Industrial Property in the Bio-Medical Age: Challenges for Asia* (Kluwer 2003) 157, 160. According to Yahong Li, in Jiangsu province for example, among 3338 patent applications, 1764 are for UMs, 440 for invention patents. Of these, individuals contributed 1977 and SMEs 1234*

³⁵⁷ *China Science Law Group (CSLG), 'Characteristics and Best Practices of Utility Model System In China' at p.6.*

policies and plans were focused on import substitution, the indigenous technological development has been a clearly missing aspect. One of the factors may be attributed to the type of industry that was mostly primary manufacturing (i.e., textiles and leather) and did not need advance engineering or technological inputs.

It is evident that industrial and economic development of Pakistan has been less than optimal due to the missing “value addition” part in all economic activities resulting in lack of Intellectual Property usage as a major tool of value addition therein. Therefore Pakistan, thus far, has been an IP importing country; more so in industrial property (i.e., patents and trademarks, etc.).

The innovation factor is still not one of the notables for economic activities in Pakistan, in particular the manufacturing and related sectors do not emphasize R&D and its commercialization (in form of IP/patents). Some of the industrial sectors, such as light engineering have grown significantly in recent years and expanded their presence in African (fans and electrical motors) and Asian (bicycles) markets. However, the growth and development has stronger causal links with marketing and economies of scale rather than innovation. A case in example is the motorbike industry in Pakistan; which was restricted to 4 brands until 2003, but once the patented technology of the most famous brand expired, the market was flooded with numerous suppliers with different design and pricing structures but essentially based on the same engine (for which the patent had expired). The growth in this industry is also attributable to liberalization of imports of motorcycle kits.

ii. Which domestic industries (especially SMEs) engage in small scale or incremental innovative activities?

The light engineering and electrical home appliances are the major industries in Pakistan which engage in small scale or incremental innovative activities. Some of the notable sectors are surgical goods, electric fans, machinery for pharmaceuticals, bicycles, motorbikes, basic machinery for textiles, automobile parts, steel structures and prefabricated constructions.

If the protection system for incremental innovation is provided, through utility models, then there is a good chance that most of the aforementioned industries would genuinely focus on achieving such innovation, hence competing based on innovative products rather than merely sitting in the market waiting for expiry of a patent (such as described in the motorbikes example above); or availability of essential design, engine and machinery and serving the market through assembly only (such as in the case of air conditioners). It would require significant financial and human resources for developing new inventions which can be subject to patent protection. The need to engage in such substantial investments to obtain meaningful IP protection is a weakness for these industries in Pakistan. Therefore, a practical solution for this scenario may be the granting of a form of protection to incremental innovation through utility models.

iii. Is copying or imitation an issue in these industrial sectors which functions as disincentive?

Imitation or copying is a very serious issue for these industrial sectors due to lack of awareness and resources to enforce the intellectual property rights (patents) by the entrepreneurs who are mostly the small and medium sized enterprises (SMEs). Many of such enterprises strive merely on copying the in-demand designs and appliances in market and never considered this as illegal activity.

This imitation serves as clear disincentive for all players in the economic activity. The original producer/supplier, the innovator and hence (potential) IP holder, is certainly an affected party in this scenario – but so are the others in chain, i.e., producers involved in imitation activities. This is due to the fact that imitators have no incentive to employ the best of their resources and efforts in anticipation of further ‘competition’ from other

imitators/copiers, since the original innovative product would be available to all if it is for one. There is therefore no incentive to engage in follow-on innovation.

There appears to be no evidence that the benefits for competitors to be able to appropriate the original innovation (either because there is no enforcement in practice or there is no IP protection in the first place) does lead to follow-on innovation on their part.

In the longer term, imitators and copiers may destroy the reputation and market of the original product as well. This will be especially the case whenever competition on price drives competitors to use less expensive inputs or production methods or other ways which compromise the quality of the imitation-product they market. There seems to be no available evidence that natural lead time of originators/innovators is a sufficient incentive to continue innovating.

iv. How can relevant industries benefit from a system of legal protection for small scale/incremental innovation?

If a system is introduced to give legal protection for small scale/incremental innovation (for example through utility models) it may contribute to the industrial development of Pakistan. As a first step, this protection would raise the level of awareness and create a sense of ownership (and conversely infringements) of the resources employed in such innovation. As mentioned above, a psychological argument goes that having a recognised right in a specific result (here of sub-patentable innovative activity) confers to the holder a psychological advantage based on the legal ability to prevent copying. This in turn could encourage investment into the development, production and marketing of goods based on the innovative activity and covered by utility model protection.³⁵⁸ Further, utility model protection based on exclusive rights creates a legally recognised asset which can be licensed and so makes commercialisation and dissemination of the protected technology much easier by providing a reliable legal framework for exploitation of protected goods/services. Not only the licensor but also the licensee may be in a position to invoke the right against a third party infringing the relevant rights. The target industries therefore can benefit from a system of protection small-scale or incremental innovation because:

- 1) it creates a sense of ownership over their innovative output;
- 2) it facilitates exploitation of inventions via licensing; and
- 3) it encourages further investments into innovation.

The aforementioned benefits of incremental innovation arguably lead towards a value addition chain whereby the entrepreneurs have an incentive to focus more on the “premium” which attracts IP protection for their products. This in turn may support striving for yet a higher level of innovation (potentially subject to patent protection) in order to maximize such premiums. At present there is a clear absence of incentives for any innovation. Whatever little is happening is demand driven by the users of such products rather than creating something innovative and creating its own demand, i.e., the incremental innovation happens as a response to certain problem and rarely there are instances of innovation for the sake of improvement (absence of research and development focus).

A potential system of utility model protection in Pakistan should focus in its design on key areas as mentioned in the sections i and ii above, i.e., motorcycles, electric fans, electric motors, agricultural machinery and tools, and engineering tools, etc. The scope of protectable subject matter should therefore encompass incremental innovation in those areas. Section 5 below discusses the specific scope of protectable subject matter and exclusions from protection in greater technical detail.

³⁵⁸ *U Suthersanen & G Dutfield, Innovation Without Patents (2007), at 42.*

A main focus of the system should be on encouraging and rewarding incremental innovation with lower standards of novelty and smooth and quicker registration formalities. Again, further technical legal suggestions on this point (especially the criteria for protection) are discussed in the recommendations in section 5 below.

For SMEs to benefit from a system of utility model protection, the registration system should not involve prohibitively high costs, but rather a low fee – especially for an initial period of protection which could be around 3-5 years. The registration process should be easy to use (for example by allowing online submission of applications) and lead to a quick grant of rights – ideally within weeks of the filing. This strongly militates for an examination by IPO, limited mainly to formalities, not extending to a full substantive examination of the conditions for protection (via extensive novelty searches, etc). Further technical legal suggestions are discussed in section 5 below.

The existing patent application infrastructure maybe mobilized to serve a system of utility model protection – although one must be aware that it would require additional administrative and human resources. One of the aspects of this system, particularly for Pakistan, may be to involve the private sector in determination of innovation or novelty aspects. This would be in the form of using the respective industry association as a complementary source for verifying the authenticity of utility models in case of prima-facie examinations in the registration phase or subsequently in proceedings where validity is challenged.³⁵⁹ It would serve as an automatic filter and help the registration authorities. At the same time, it would create a cooperative mechanism with genuine innovation in the respective industry sector. Similar approaches are used in certifications of origin and geographical indications. Through this public-private partnership, another important aspect of enforcement would be served (to the extent of utility models) with a delegated and built-in checks and balance mechanism at the industry level.

One could envision a system where in revocation proceedings, or in case of validity counterclaims in infringement proceedings, industry-representatives are used as technical experts who, together with IPO personnel, judges or other legal experts, judge on the aspects of novelty and, if required, of inventiveness. In general, the enforcement tools for utility model rights obtained should be adequate and effective – but include ‘checks and balances’ to prevent abuses of the system – for example in form of options to challenge the validity of a registered model in revocation proceedings at the IPO and as a counterclaim in infringement proceedings. For further details, see section 5 below.

v. Further (external) factors affecting the Operation of a Utility Model System

External factors – such as SMEs’ familiarity with IP issues (IP culture), good governance, legal certainty and other relevant facts on the ground – play an important role in the effective functioning of any IP system, especially amongst the SMEs. Weaknesses such as less educated/groomed entrepreneurs could be mitigated through external influences by creating awareness, providing easy to use processing and registration systems, and effective enforcement of IPRs.

At present, even if an enterprise is aware, willing and engaged in obtaining IPR protection (mostly patents), they do not have sufficient experience and ‘stamina’ to go through and implement the whole lengthy process unless it is extremely necessary. This is a direct function of complex registration procedures and very high standards of examination applied to the patent applications. This is compounded by weak enforcement whereby despite getting legal protection on paper, the enforcement on ground may be completely inadequate.

³⁵⁹ For a more detailed discussion, see section 5) below.

b. The Local IP Infrastructure

i. *The Pakistani IP Office*

The legal and regulatory infrastructure for intellectual property in Pakistan has gone through reforms in recent years. Significant amendments were introduced in the laws on patents and copyrights, in particular, between the years 2000 and 2004 in order to ensure compliance with TRIPS obligations.

In the same period, the institutional reforms resulted in establishment of the Intellectual Property Organization of Pakistan³⁶⁰ (IPO Pakistan), as an umbrella organization for all IP related issues. Prior to the establishment of IPO Pakistan, Trademarks were administered by the Trade Marks Registry under the Ministry of Commerce, the Patents were administered by the Patents Controller under the Ministry of Industries and Production, and Copyrights were being managed by the Registrar of Copyrights under the Ministry of Education.

At present, IPO Pakistan is a focal point not only for all three above mentioned offices but is striving to address policy and enforcement challenges in a holistic manner. The enforcement machinery is, of course, administratively independent (i.e., largely under police, Federal Investigation Authority and Customs), but IPO Pakistan acts as a key focal point/coordinating agency dealing with IP enforcement matters.

ii. *Courts Dealing with IP Cases*

In Pakistan, both the criminal and civil courts deal with IP related cases. Most of the copyright violations are taken as criminal offence, and thus referred to the criminal courts while the other cases – for example those concerning trademarks – are dealt with by the civil courts.

The court of first instance is at the district level followed by the High Court (provincial and federal territory) as the appellate courts; whereas the Supreme Court is available as highest appellate court.

Mobilization of the key legal infrastructure (courts) for IP related cases in Pakistan is less than optimal. The main factors contributing to this situation are lack of awareness amongst IP holders (for enforcement), slow proceedings in the courts and very long and complex appeal procedures and the capacity of judges to address IPR related issues. To rectify this situation, one of the possible options would be to create specialized IP benches in courts on the lines of specialized corporate/company law benches in various courts.

iii. *Professionals (Lawyers, Patent Attorneys)*

There is a very limited set of professionals working on IP issues in Pakistan. This may be due to the fact that the number of IPR registrations, execution and cases are far less than would be expected from the size of Pakistan's economy and in comparison to the similar economies. There are very few law firms that are known for specialized IP legal professionals.

The intellectual property rights services providers (law firms and other IPR consultants) feel that an exclusive reliance on IPRs in general and patents in particular is not sufficient in sustaining their businesses due to low transactional volume of such services. The in-house IPR expertise is not visible as well in the Pakistani corporate sector – barring a few multinational corporations. The businesses are less convinced of investing in and developing human resources on intellectual property rights.

³⁶⁰ See www.ipo.gov.pk

There is also noticeable absence of focus on IPR professionals in the higher education in Pakistan. This may have causal link with low demand of such professionals in job market or vice versa.

c. Reasons for Introducing a Utility Model System in Pakistan

i. *Any relevant incentives for minor and incremental innovation?*

As discussed above, there are two justifications for introducing a system of utility model protection in order to encourage small-scale and/or incremental innovation: (1) A theoretical justification whereas most welfare enhancing inventions are cumulative in nature and often sub-patentable in the sense that they may not meet the high standards of novelty and inventive step imposed by the patent system. Hence, there should be another, second-tier system of protection which focuses on these sub-patentable innovations. (2) A related practical justification is that many inventions are vulnerable to 'unfair' copying,³⁶¹ especially the sub-patentable ones: Since they usually will be based on small-scale, incremental advancements of the existing state of the art, they will generally be easier to imitate or copy than technological breakthroughs.³⁶²

The basic rationale therefore is that since patent law will traditionally not cover small-scale and incremental innovations, a utility model system can address this protection gap and prevent free-riding by copying or imitation. It thus creates a new incentive for the development, production and commercialisation of products (and services) based on such minor and/or incremental innovations.

At present, the SME sector in Pakistan has the potential to form a major part in 'grassroots'³⁶³ innovative activities and also has the potential for more advanced innovation. However, at present their innovation is typically of either minor or incremental nature. It is generally recognised that in a number of industrial sectors (other than the development and production of high-tech goods), innovation by SMEs mainly consists in minor adaptations to existing products, innovation in designs, mode of service delivery or management and marketing practices.³⁶⁴ Here, SME innovations are often of an informal nature. Therefore the utility model system may fit better than the patent system for their needs,³⁶⁵ as has been corroborated through a survey involving a variety of stakeholders.³⁶⁶

Furthermore, the very low number of annual patent applications in Pakistan shows a disconnect between domestic economic/industrial activity and the corresponding IP protection. This may be due to the fact that patent applications involve very high standards of invention and not many innovative activities would qualify for such protection. The utility model system may be able to fill this gap. The following statistics give an idea of the current situation vis-à-vis patents in Pakistan.

³⁶¹ On the validity of the 'unfair copying' argument which is mainly based on natural right theories, see sections ii) and iii) 2) in this part below.

³⁶² *U Suthersanen & G Dufield*, *Innovation Without Patents* (2007), at 35-36. See also *U Suthersanen*, *Utility Models and Innovation in Developing Countries*, ICTSD Issue Paper No.13 (2006), at 6.

³⁶³ Grassroots innovation is a set of innovative activities of improving products, techniques and skills/crafts in a random and extensive way by the grassroots people who have grasped the corresponding techniques and skills. It is a flash in the common people and embodiment of their wisdom. Grassroots innovation is often not led by the government or any other organized incentives rather it is spontaneous and needs driven. These innovations, therefore, capture an unmet need of large section of consumer masses in developing countries like Pakistan.

³⁶⁴ *WIPO*, *Intellectual Property Rights and Innovation in Small and Medium-Sized Enterprises* (2004), at 5.

³⁶⁵ *Ibid.* The study acknowledges that in such cases in particular as utility models may play a bigger role than patents in providing a competitive edge to SMEs.

³⁶⁶ The survey was conducted by the national expert based on the questionnaire, annexed, different modes such as meetings, telephonic interviews, electronic exchange of information and filling the survey forms were employed to gather the views. A variety of stakeholders including manufacturers, IP practitioners and the trade support and policy institutions were approached.

Year	Applications Received	Patents Granted
2007-08	1537	153
2008-09	1365	162
2009-10	1208	252

ii. Any relevant incentives for SMEs?

SMEs are the major victims of absence/weakness of IP protection in Pakistan. Moreover, based on the results of a survey done by the national expert, SMEs in Pakistan seem to be mostly involved in incremental innovation and thus fit the best for utility model protection.³⁶⁷ As discussed above, a system of utility model protection is generally argued to be of specific benefit to SMEs – considering that there is often a large presence of SMEs in technological sectors where small and incremental innovation is the norm.³⁶⁸ Here, SME innovations are to a large extent without formal R&D investments, R&D laboratories or R&D personnel.

Existing data on utility model filings from other jurisdictions however is of limited help to judge how SMEs are using the system in those countries. In the absence of detailed statistics, it is impossible to determine whether the applicants, local or foreign, are individual entrepreneurs, small and medium enterprises, or multinational companies. However, some support comes from a study by the European Commission showing that in Germany, the greatest users of the second tier protection system are those from the small and medium-sized enterprises.³⁶⁹

If such a system would be introduced in Pakistan, the results of the survey support the assumption that a large number of SMEs would be inclined to use the IP system.

Further support comes from the general argument about lower costs involved in utility model registrations as compared to patent applications: Due to the usual absence of a comprehensive examination system, the up-front costs for registering and obtaining a utility model are significantly lower than in the patent system. As has been argued above, this cost factor is also one which is especially important to SMEs.³⁷⁰ Beyond application fees, relevant costs are also those subsequently related to enforcing a patent (such as court and attorney fees).³⁷¹ The costs involved in obtaining a utility model registration and subsequently enforcing it on the other hand usually need not be prohibitively high. Registration and maintenance fees at IPO can be set at a low level as they should not need to compensate for expensive novelty searches.³⁷²

Even if the envisioned utility model system in Pakistan would demand a mandatory full substantive examination before infringement proceedings can be initiated or successfully concluded,³⁷³ SME right holders are still significantly better off than under a system where

³⁶⁷ Based on the responses received through aforementioned survey. The respondents were of the view that they do not have heavy R&D budgets and thus rely on small scale and incremental innovation which may not qualify for patents. They also felt the value in having IP protection available for incremental innovation and held the view that it would encourage innovation in the SME sector.

³⁶⁸ *U Suthersanen & G Dutfield*, *Innovation Without Patents* (2007), at 38. See also *U Suthersanen*, *Utility Models and Innovation in Developing Countries*, ICTSD Issue Paper No.13 (2006), at 6-7.

³⁶⁹ See *European Commission*, Report from the Commission to the Council on the Definition of Small and Medium-sized Enterprises (SME's) used in the Context of Community Measures, SEC(92) 351 Final.

³⁷⁰ The costs of patenting are generally perceived as one of the greatest barriers for SMEs, see WIPO, *Intellectual Property Rights and Innovation in Small and Medium-Sized Enterprises* (2004), at 7.

³⁷¹ See *U Suthersanen*, *Incremental Innovations in Europe: A Legal and Economic Appraisal of Second Tier Patents*, *Journal of Business Law* (2001), at 327-329. Further difficulties and complexities in patent enforcement add to the obstacles which prohibitive costs produce for SMEs in using the patent system and often lead to a perception of ineffectiveness of the patent system from the side of SMEs; see *WIPO*, *Intellectual Property Rights and Innovation in Small and Medium-Sized Enterprises* (2004), at 7-8.

³⁷² This is based on the suggestion on a mere formal examination in the registration process made above.

³⁷³ As discussed above, such a mandatory test of the validity of the utility model by examining whether the criteria for protection are met (mainly via a novelty search) is an important element of the checks and balances which the system should include. See section 5) below for further details.

high up-front costs have to be paid before obtaining protection.³⁷⁴ As argued above, SME utility model holders can make a cost-benefit calculation based on the costs of the examination report (and the further litigations costs) in comparison to the costs incurred by the alleged infringing activity (and the likelihood of winning the case).

Another general argument militates in favour of SMEs as the beneficiaries of a system of utility model protection: the comparable less time required until complete registration. For SMEs, a long delay in obtaining (patent) protection creates legal uncertainty and inhibits licensing deals for exploiting their innovations.³⁷⁵ This can be addressed by a simple, fast, no-examination second-tier system of protection whereby the applicant would gain registered right within weeks or months from application – as compared to the waiting period in cases of patent applications which usually take several years.³⁷⁶

iii. Can local innovation be encouraged by utility model protection?

The general assumption outlined in part 2) above is that as most SMEs engaged in minor or incremental innovative activities are presumed to be part of the local industry, a system which promotes innovative activities by SMEs automatically facilitates local innovation. General empirical support comes from the WIPO World IP Indicators 2011 Report which concludes that the utility model system is primarily used by resident applicants to protect inventions at their respective national patent offices.³⁷⁷ Utility model protection, therefore, generally does not seem to attract much foreign interests as compared to patent protection. In another study done in the European context, the conclusion was reached that the main reasons given by the users for seeking second tier protection were quick and simple registration, limited requirements, low cost, and temporary protection pending the grant of a patent.³⁷⁸ The statistics seem to indicate that this alternative protection is mainly of interest to those involved in the local market for products not important beyond the national market.

As mentioned above, certain industrial sectors in Pakistan may be encouraged by getting protection for incremental innovation to employ more of their resources to obtain such protection and aim for higher end innovation (patents) in due course. There is no indication whatsoever that the global tendency of very high percentage of residential filings for utility models would not apply in the Pakistani context. Hence, if a system of utility model protection is introduced and tailored to domestic needs (as discussed further in section 5), one can expect this to be used primarily by domestic businesses and local residents – thereby promoting local innovation in Pakistan.

Furthermore, as discussed above, the information contained in a utility model can serve as a source for inspiration for further research and for follow-on innovations. The administration system should therefore be designed in a way which ensures accessibility of the data and, hence, its potential use for follow-on innovation.³⁷⁹ Even though a registration would not entail a mandatory examination by the IPO, the information required in an application should always include the claims. These, in combination with any illustrative figures, should be

³⁷⁴ For a more critical position on this point see *U Suthersanen*, Incremental Innovations in Europe: A Legal and Economic Appraisal of Second Tier Patents, *Journal of Business Law* (2001), at 329.

³⁷⁵ *WIPO*, Intellectual Property Rights and Innovation in Small and Medium-Sized Enterprises (2004), at 8.

³⁷⁶ According to the findings of the national expert, the waiting periods until a patent is granted may on average take 1-3 years. On the general argument concerning the effect of patent backlogs and SMEs, see *U Suthersanen*, Incremental Innovations in Europe: A Legal and Economic Appraisal of Second Tier Patents, *Journal of Business Law* (2001), at 327.

³⁷⁷ In 2010, resident applications accounted for 98% of the world total, and the share has remained more or less constant since the mid-1980s. Grant data show a similar distribution; see *WIPO*, World Intellectual Property Indicators (2011), at 95. For further details on foreign registrations see 96-99.

³⁷⁸ See *G Weitzel*, Ifo Institute, The Economic Impact of the Legal Protection of Utility Models on Enterprises in the European Union.

³⁷⁹ In case of Germany for example, the DPMA website allows various for utility model registrations according to various parameters (see <http://register.dpma.de/DPMAregister/pat/einsteiger> for the search page directed to anyone not familiar with patent searches) and allows to access individual registration certificates (Gebrauchsmusterschrift) which contain the basic data as well as the main utility model claims, taken from the application.

made available online for searches. Yet another aspect is that utility model registrations may represent a valuable source indicating domestic innovative activity and allowing tailored and informed responses by policy makers concerning innovation policy in general.³⁸⁰

d. Reasons against a Utility Model System in Pakistan

i. *Is there a significant threat of legal uncertainty and wasteful litigation due to introducing utility model protection?*

As it has been observed above, the fact that the utility model regime encourages a lowering of thresholds without an appropriate examination system in place, may result in legal uncertainty and excessive litigation. Especially larger market players may use utility models as a means of circumventing the more stringent criteria under the patent system and over-use the system in ways that make it hard for SMEs to compete. The EU Commission fears that legal uncertainty, arising from the lack of any prior examination, could be especially harmful to SMEs. The main argument is that when SMEs make improvements to a product or process, they could come up against a utility model granted without any examination to someone else, resulting in costly litigation or even the loss of the sums they have invested in the improvements in question. Consequently, SMEs would have to bear additional expenditures on monitoring utility models.³⁸¹

In its earlier Green paper the Commission notes that the introduction of a utility model system was rejected in the United Kingdom because industry in particular feared that it would leave firms unsure of their legal position – by producing large numbers of registered but untested rights.³⁸² These concerns must be taken seriously, as there is no indication that they would not equally apply when a system of utility model protection is introduced in Pakistan.

The main argument – which would equally apply in the specific context of Pakistan – is based on the absence of any substantive examination system which serves as a gatekeeper to prevent the protection of products and processes which do not meet the relevant protection criteria. This absence carries with it the automatic risk of abuse in cases where protection is claimed for utility models which do not meet the conditions for protection. As mentioned above, if such utility models are being enforced, other market actors may be prevented from selling competing goods on the market and innovators may be prevented or discouraged from innovating for fear of litigation. Also, in the Pakistani context SMEs would be the prime target for such abusive enforcement activities as they may easily give in without risking court proceedings or may not have the financial means to fight it out in courts.

The risk of abuse could be addressed by several mechanisms. Since it is not the introduction of utility model protection as such which is the main concern, but rather its improper enforcement,³⁸³ tailored checks and balances in the IP enforcement system are the most appropriate response. For example, several national utility model systems do not allow the enforcement of a utility model without a mandatory prior examination procedure.³⁸⁴ As discussed further in section 5 below, these types of enforcement checks and balances should also be employed in the context of Pakistan to mitigate the risks of abuses of the utility model protection.

³⁸⁰ See *A Odman Boztosun*, Exploring the Utility of Utility Models for Fostering Innovation, *Journal of Intellectual Property Rights*, Vol.15 (2010), at 430.

³⁸¹ *EC Commission*, Consultations on the impact of the Community utility model in order to update the Green Paper on the Protection of Utility Models in the Single Market (SEC(2001) 1307), p. 5.

³⁸² *EC Commission*, Green Paper on the Protection of Utility Models in the Single Market, 1995 (COM(95) 370 final), p.56.

³⁸³ See also *A Odman Boztosun*, Exploring the Utility of Utility Models for Fostering Innovation, *Journal of Intellectual Property Rights*, Vol.15 (2010), at 431.

³⁸⁴ See section b. ii. above.

In its response to the concerns described above the EU Commission points to the experience of several EU Member States with such a system of protection and notes that in most Member States, a cursory examination is made at the time of registration to ensure that the invention is prima facie protectable – and that this acts as some sort of filter and avoids the necessity of registering all inventions.³⁸⁵ Section 5 below suggests a similar cursory examination – in relation to the protectable subject matter – which could be part of a utility model protection system in Pakistan. One specific option to mitigate the uncertainty resulting from an absence of substantive examination maybe to mobilize the public-private partnership models mentioned above (i.e., involving respective industry associations) to act as a first level filter and ensure the adherence to a minimum benchmark.

ii. *Is there a realistic danger of blocking the public domain and/or preventing ongoing technological learning by imitation?*

The other main argument against introducing a second-tier system to protect innovation below the patentability threshold is based on the idea of retaining such innovations in the public domain. This allows everyone to utilise, exploit and build on such unprotectable subject matter. Again, there is no indication that these concerns may not be relevant in the specific context of Pakistan.

If Pakistan introduces another layer of protection below the thresholds established by traditional patent protection requirements, this would result in the newly protected subject matter to be taken out of the public domain. Thereafter, no one can freely use it without the authorisation of the right holder – except within the boundaries of an applicable exception or limitation to the exclusive right. This is argued to be particularly worrisome since some degree of copying and free riding may be necessary, if not beneficial, for competition and an essential stage in learning to innovate.

Similarly, in its 2001 commission staff working paper containing responses to consultations on the introduction of a community-wide system of utility model protection, the EU Commission mentions that one of the fears expressed was that utility model protection might be used to the detriment of SMEs by larger market players which are familiar with the IP system. The concern was that large (European, Japanese or American) companies would find it easier to protect their products with utility models and thus block access to the market for SMEs.³⁸⁶

On the other hand, the whole idea of introducing utility model protection in Pakistan is premised on the inability of the patent system to protect minor and incremental innovations below the patent level. Especially for SMEs, the existing system does not provide a feasible alternative. Since nevertheless minor and incremental innovations have been identified as particularly vulnerable to appropriation and copying in the relevant industrial sectors of Pakistan, a need to protect them has been identified above. The envisioned positive effects of this policy rationale³⁸⁷ must be weighed against the potential negative impact of taking such sub-patentable innovation out of the public domain and the consequences this has for follow-on innovation and technological learning through imitation and copying as well as competition in the market.

Given the concern identified above in relation to copying and imitation of small, incremental innovation and the detrimental impact this has on SMEs innovative activities, the main question is: is there any indication or evidence that SMEs rely on locally produced existing innovative products to come up with follow-on innovation or to produce value-added

³⁸⁵ *EC Commission, Green Paper on the Protection of Utility Models in the Single Market, 1995 (COM(95) 370 final), p.56.*

³⁸⁶ The Commission however also notes that none of the disadvantages described above has been observed in the Member States where protection by utility model is in place; see *EC Commission, Consultations on the impact of the Community utility model in order to update the Green Paper on the Protection of Utility Models in the Single Market (SEC(2001) 1307), p.6.*

³⁸⁷ See sections 4) a. and especially 4) c. above.

products? The input received suggests that introducing utility model protection is less likely to have an impact on ongoing technological learning – primarily due to the fact that very little such development is taking place. This, in turn, may very well be due to the fact that all those who are second comers which copy or imitate from an original innovator anticipate further copying by others and hence are unlikely or unwilling to engage in innovative activities themselves.³⁸⁸

As has been suggested above, there is no indication that, in the relevant industrial sectors in Pakistan, imitation and copying leads to follow-on innovation: There appears to be no evidence that the benefits for competitors to be able to appropriate the original innovation (either because there is no enforcement in practice or there is no IP protection in the first place) leads to follow-on innovation on their part which would necessitate keeping incremental or minor innovation in the public domain. Moreover, a tailored system of utility protection – as further discussed in section 5 below – can mitigate some of these effects (by carefully drafted exclusions from the protectable subject matter; exceptions and limitations; enforcement checks and balances; and competition law remedies as a last resort).

5. Recommendations

This section contains the recommendations which we, as international and national expert, make with regard to a system for protecting small-scale, incremental innovation in Pakistan. They are framed by the tasks assigned to us (see section 1) i and ii above) and based on the findings about:

- 1) the flexibilities contained in the international IP system with regard to utility model protection (see section 2) a);
 - 2) general legal and economic aspects as well as policy considerations of utility model protection (see section 2) b and c above);
 - 3) key features of utility model systems in selected jurisdictions and their economic impact;
- and are further informed by:
- 4) information on the relevant economic and technological developments in Pakistan, as well as the local IP infrastructure; and
 - 5) input received from stakeholders in Pakistan concerning reasons for and against a system of utility model protection in the domestic law

We have to emphasise the difficulties in obtaining information and especially relevant input from stakeholders, especially SMEs, in Pakistan. The recommendations below are based on what the national expert, within the given timeframe of drafting this study, could reasonably obtain via a questionnaire (see annex one) and especially via extensive telephone interviews with various stakeholders (such as SME representatives, IP lawyers, government departments/agencies dealing with IP issues, manufacturers and IP (patent) holders).

The relevant policy makers in Pakistan may consider undertaking further empirical studies, and especially consultations with the stakeholders mentioned above, to further substantiate the input we were able to obtain. This should support the overall aim of law and policy making in the area of IP on firm evidence.

a. A Tailored Utility Model System suited to the Needs of Pakistan

This section describes the technical legal features of a utility model system we propose for Pakistan. These should – to the extent possible – be tailored to the relevant domestic circumstances and in that regard be designed in light of empirical evidence and consultations with all relevant stakeholders. Accordingly, this section begins by reviewing the rationale for introducing a system of utility model protection in Pakistan.

³⁸⁸ See the arguments made in section 4) a. iii above.

i. *The Rationale for Introducing Utility Model Protection*

Our starting point when we provide our recommendations is that there should be evidence or at least sufficient indications which militate in favour of introducing a system of utility model protection in Pakistan. Unless such evidence is presented, a new IP right should not be introduced (*in dubio contra* new IP rights such as utility models). This is based on the approach taken by the economist F. Machlup in his now famous review of the US patent system: unless evidence suggests that introducing such a system of protection actually does more benefit than harm, one is better off retaining the status quo.³⁸⁹

Therefore the first question is whether the findings of our research support the introduction of a utility model system in Pakistan. This in turn hinges upon the rationale such a system is to achieve. In short: Based on the evidence we were able to gather within the short time available to us and for the reasons given below, we suggest the introduction of a utility model protection as an appropriate means to achieve the ends outlined in the terms of reference. We, however, also recommend to gather further empirical evidence on the issues addressed in section 4), and especially to conduct further consultations with the relevant stakeholders as mentioned in the beginning of this section.

The motive to embark on this study, concerning the feasibility of introducing a system of utility model protection in Pakistan, has been described in the terms of reference as driven by an increasing interest in Pakistan for using utility models to encourage incremental innovation, especially evident in the light engineering sector (e.g., in the automotive sector, agricultural machinery, machine tools). The assumption is that since this small scale innovation is seldom recognized, let alone economically rewarded, utility models could provide the necessary protection and economic incentive to promote innovation at this level. In addition, utility models could also facilitate greater awareness and use of the patent system by local inventors.³⁹⁰

The feedback obtained by the national expert confirms the importance of these industrial sectors (concerning surgical goods, electric fans, machinery for pharmaceuticals, bicycles, motorbikes, basic machinery for textiles, automobile parts, steel structures and prefabricated constructions), and in particular the role of SMEs.³⁹¹ The expert concludes that if legal protection for incremental innovation is provided through utility models, then there is a good chance that most of the aforementioned industries would genuinely focus on achieving such innovation and compete based on innovative products.

The main target group to benefit from a system of utility model protection, therefore, are SMEs which are involved in small-scale, incremental innovative activities in the light-engineering sector (as well as the other industrial sectors mentioned above). The system therefore should be designed with primarily with the interests of this target group in mind – but must keep the interests of other societal groups, especially competitors and consumers, into account as well. It needs to be emphasised again that to the extent these different interests could not be examined in detail in this study (due to limited time and resources to engage in a full-scale empirical analysis about the needs and views of these groups in relation to such a system), a further consultation should be conducted in Pakistan, based on full information provided to the stakeholders via awareness campaigns.

With the main motive to facilitate small-scale and/or incremental innovation by SMEs in mind, the core question is whether copying and imitation is an issue in the relevant Pakistani industries which discourages innovative activities by SMEs. Section 4) a (iii) confirms this to be a very serious issue indeed serving as a disincentive for further innovation – both by the original producers as well as copiers or other second-comers which anticipate further

³⁸⁹ F Machlup, *An Economic Review of the Patent System*, US Senate Subcommittee on Patent, Trademarks and Copyrights – 85th Congress, 2nd Session (1958), at 79-80. See also section 2) c ii. above.

³⁹⁰ See section 1) ii. above.

³⁹¹ See section 4) a. ii. above.

copying by others and hence refrain from investing into own improvements or other incremental innovation.

Accordingly, sections 4) a. iv. & c. i. - iii. conclude that a system for legal protection for small scale/incremental innovation (for example through utility models) would potentially go a very long way in industrial development of Pakistan. In addition to serving as an incentive mechanism, it would raise the level of awareness for using IP, create a sense of ownership for one's own innovative output, and facilitate their exploitation via licensing which can build on recognised IP rights. Sections d i. & ii. show that the arguments against utility model protection – while generally relevant also in the context of Pakistan – do not outweigh the arguments in favour of such a system. As to fears of legal uncertainty and abusive litigation – primarily based on the fact that utility models are registered without a comprehensive substantive examination, those can be addressed by various tools in the technical legal design of the system which will be further addressed below. The danger of blocking or at least unduly curtailing the public domain for follow-on innovation and technological learning by imitation appear not to be too relevant in practice in the industrial sectors in Pakistan: all those who are second comers which do copy or imitate from an original innovator have to anticipate further copying by others and hence are unlikely or unwilling to engage in innovative activities themselves.³⁹² In addition, these concerns can be mitigated to some extent by designing the system accordingly (see below).

Therefore, we conclude that in order to promote small-scale, incremental innovative activities by SMEs in particular, introducing a system of utility model protection in Pakistan is a feasible option. Given the limited amount of input from the domestic stakeholders, we however encourage further consultations, based on informed decisions by stakeholders which, especially in case of SMEs, could be facilitated by awareness campaigns amongst the relevant industries in Pakistan.

In addition, any legislation introducing a system of utility model protection should contain a form of a review clause which after a period of five to ten years examines the operation of the system. To facilitate such a review or impact assessment, the data to be gathered by IPO Pakistan could extend beyond the number of applications and grants and foreign and domestic filings to cover the field of technology/industrial sector to which the applied utility model relates and the size/type of the company registering the utility model. On the basis of this statistical data by IPO Pakistan and a further consultation of all interested parties (especially SMEs), the impact assessment then should focus on whether the introduction of utility model protection has fulfilled its aims to incentivise innovation.

ii. Registration versus Examination System

One of the main questions decisive for the overall design of a system for utility model protection is whether one should opt for a mere registration system or a substantive examination system. This should be answered primarily with the main rationale for protection and the principal beneficiaries of the system in mind.

Given that protection aims at encouraging innovation by SMEs in Pakistan, keeping the system easy to handle and affordable for the target group is a crucial point.³⁹³ It has been generally acknowledged that the cost factor is particularly important for SMEs. This is not only for the obvious reason that they will usually have less financial resources available than bigger firms. It has been observed that SMEs have particular difficulty in determining the sales prospects of new products, and thus the value of inventions, because they have inadequate information from market observation and market research.³⁹⁴ Putting an invention to use can involve a considerable commercial risk, because the new product or

³⁹² See the arguments made in section 4) a. iii. above.

³⁹³ See the arguments in section 2) c. i. and 4) a. and c. above.

³⁹⁴ *EC Commission, Green Paper on the Protection of Utility Models in the Single Market, 1995 (COM(95) 370 final), p.58.*

process will often fail to establish itself on the market. Where the success of an invention is very uncertain, therefore, the low cost of applying for a utility model will be a decisive factor in the choice of this form of protection. Hence, the low costs of a mere registration system are especially relevant for SMEs who will often have difficulties to determine the commercial value of the invention in advance.

The low cost advantage would also be important for companies that need protection that is as complete as possible against copies and imitations and have to apply for a large number of utility models.³⁹⁵ A substantive examination akin to the patent system would not be similarly affordable, since the costs of the novelty searches and reviewing inventiveness by the patent office have to be borne by the applicant.

Furthermore, the system should be easy to handle by SMEs. This involves straightforward and easy-to-provide information which the applicant has to submit. It most likely will involve awareness-building campaigns by the IPO in collaboration with industry associations and local chambers of commerce. It may further involve a form of a 'Utility Model Helpdesk' at the IPO where basic advice on how to use the system should be given to SMEs on request and via an interactive website. One of the possible options to implement this may be to strengthen the IP helpdesk in the Small and Medium Enterprise Development Authority (SMEDA) of Pakistan so that it serves not only as information focal point for SMEs but also provide the registration and related services involving technical knowledge, even if it is on cost recovery basis. The applicant should ideally be required to fill a simple application form and rest should be taken care of by these facilitation measures. Given the complexity of the substantive examination procedure, this point would also speak in favour of a mere registration system.

Finally, the rationale of incentivising innovations by SMEs would call for a system which is quick compared to the time involved in obtaining a patent (which usually lasts several years). Utility model protection can, depending of course on the administrative resources and the specific design of the application system (which should include the option on online applications), be obtained within a few months, maybe even weeks. This first of all allows an applicant to get quick protection against copies and imitations, and this protection serves to strengthen the competitive position of companies, including SMEs, and improve the availability of their products, especially capital goods and consumer goods, on the market.³⁹⁶ Rapid registration also allows speedy economic exploitation of the invention, in particular through the granting of licences. Utility model systems which are based on a full substantive examination will have enhanced legal certainty – but seem to be not popular due to the long waiting periods until protection is granted.³⁹⁷

All these grounds speak strongly in favour of a mere registration system where the IPO will:

- 1) examine an application for a utility model for its compliance with formal requirements (such as name and further relevant details of the applicant; a description and maybe figures of the subject matter registered, as well as the claims of protection).
- 2) in addition, policy makers should consider extending the examination to whether the application relates to non-protectable subject matter (such as subject matter excluded from patent protection; and maybe additional exclusions specific to utility models – such as software, biological/chemical compounds, pharmaceutical products, or processes – for further details see below). Here, an assessment would focus on whether, based on the information contained in the application, the claimed utility model relates to something that generally falls within the subject

³⁹⁵ *EC Commission*, Consultations on the impact of the Community utility model in order to update the Green Paper on the Protection of Utility Models in the Single Market (SEC(2001) 1307), p.4.

³⁹⁶ *Ibid.*

³⁹⁷ See the arguments made in the context of the Malaysian system, discussed in section 3) b. ii. above.

matter of protection and hence *prima facie* can be protected as a utility model.³⁹⁸ Already this *prima facie* examination could be based on the initial screening conducted with the involvement of industry bodies as suggested in section 4) d. i. above.

A mere formality examination system nevertheless must address the key concern expressed against it – the lack of legal certainty and the danger of abuses of the system: The argument of legal uncertainty is based on the fact that one cannot know for sure whether the registered model indeed is valid and will withstand invalidity challenges.³⁹⁹ This is certainly an issue – but even a substantive examination does not guarantee that a utility model granted afterwards will survive further scrutiny in revocation or infringement proceedings. More importantly, some uncertainty can also be mitigated by an examination whether the application does not relate to un-protectable subject matter (i.e., does not cover subject matter excluded from UM protection) – as proposed above.

In addition, the option to request a substantive examination could be included – that would allow those who wish to have greater certainty in their business and investment decisions about marketing goods potentially protected by utility models to receive greater certainty and legal security on the validity of the UM in advance. In light of the system's rationale, the key question is whether the remaining uncertainty will prevent interested parties, especially SMEs, from using the system. Given the experience of various other countries where utility models are merely registered, it seems fair to assume that potential beneficiaries of the system – primarily local applicants – are not prevented from using the system due to the inherent uncertainty over the validity of the utility model granted.⁴⁰⁰

When comparing the positive and negative effects, in light of the overarching objective of promoting incentives for SMEs, the aspect of legal uncertainty does not outweigh the benefits of an affordable, easy-to-use and quick registration system over a comprehensive examination system. As indicated in section 4) d. i. above, the danger of abusing the system could be addressed by the option for revocation proceedings and mandatory novelty examinations in infringing proceedings – the technical legal implementation of these options will be discussed further in section (iv) below. We therefore suggest opting for a mere registration system – covering the two aspects mentioned above.

iii. Scope of Utility Model Protection

This section attempts to provide some more concrete technical legal suggestions on how the scope of a system for protecting utility models in Pakistan may look like. This entails, primarily, a scrutiny of the subject matter protectable (including any specific exclusions thereof), the conditions for protection and the exceptions and limitations to the rights granted to the right holder. Some of these aspects cannot be determined in detail – due to the lack of comprehensive input from the main stakeholders in Pakistan in this regard. Where this is the case, we therefore limit our suggestions to describing the main options available for Pakistani policy makers.

1. The Essential Object of Protection: Invention or Form?

Given the existing diversity in approaches to utility model protection, the first and foremost question on the scope of protection concerns whether to protect the technical *form* or the technical *invention*. As the EU Commission highlighted in its Green Paper on the introduction of a utility model system in the EU, this is more than just a matter of determining

³⁹⁸ Such a system is practiced in Germany (see 3) a (i) 2 for details) and – according to the EU Commission – also in most EU Member States where cursory examination is made at the time of registration to ensure that the invention is *prima facie* protectable. *EC Commission*, Green Paper on the Protection of Utility Models in the Single Market, 1995 (COM(95) 370 final), p.56.

³⁹⁹ See sections 2) c. ii. 1. and 4) d. i. above.

⁴⁰⁰ See the country examples discussed in section 3) and further *EC Commission*, Green Paper on the Protection of Utility Models in the Single Market, 1995 (COM(95) 370 final), p.56.

exactly what is protected: the answer will be a fundamental option for the entire system.⁴⁰¹ In case one decides to protect the technical (three-dimensional) form as such, it is the functional product itself that will be protected. This resembles the early German system described in section 3) a. (i) 1. above where protection was limited to new and innovative working tools or other objects of utilitarian purpose which contained a three-dimensional form in which novelty and inventiveness were embodied.⁴⁰² In a strict sense, such a system implies that there is no protection against other (or even similar) versions of the three-dimensional form – even if they fulfil the same function as the protected form.⁴⁰³ On the other hand, protection will cover the form of the model, tool or product as such and regardless of the function it fulfils.⁴⁰⁴

In case one, however, decides to protect the technical invention, it is not the product, model or form as such which is the object of protection, but rather the underlying utilitarian idea or function for which in effect utility model protection is granted. This functional character is something intangible like directions for a technical process, or the solution to a technical problem.⁴⁰⁵ Perceiving the technical invention at the core of utility model protection appears to be the widely preferred option – even for those countries which contain a three-dimensional form requirement.⁴⁰⁶ It appears to be much better equipped to protect against (slightly) different shaped forms and objects if they fulfil the same function – whereas protection does not extend to identical or similarly shaped objects which perform a distinct function. In light of these considerations, we propose to consider the technical invention (the underlying idea or function a form performs) as the heart of a system for utility model protection in Pakistan – instead of protection a three-dimensional form, object or model as such.

Having clarified the essential object of protection to be an invention, the next question is to decide on the protectable subject matter for protection under a utility model system in Pakistan. Starting from the basic premise to protect all kinds of inventions below the patent threshold, this primarily concerns decisions on what type of specific subject matter should be excluded from protection. In more detail, the questions to be answered are:

- Should all technical inventions be protected (to ensure that all forms of incremental innovative output can – in principle – receive protection)?
- Should one exclude subject matter from specific fields of technology (such as pharmaceutical and/or chemical products) where patent protection is readily available?
- Should processes be excluded from protection?
- Should protection even be limited to inventions embodied in working tools and other three-dimensional models or objects?

The limited input obtained from Pakistan within the short timeframe available for the study does not allow to judge on all these issues in a conclusive manner. In the following, some key parameters, including the policy space available under the existing multilateral framework of IP protection, are highlighted. They should guide policy makers in their

⁴⁰¹ Ibid, at p.55.

⁴⁰² According to the Law of 1891, protection applied to “Modelle von Arbeitsgerätschaften oder Gebrauchsgegenständen oder von Teilen derselben, insoweit sie dem Arbeits- oder Gebrauchszweck durch eine neuen Gestaltung, Anordnung oder Vorrichtung dienen sollen.”

⁴⁰³ Should for example a machine be protected as utility model, protection would not extend to equivalents constructed or built in a different shape. On the other hand, protecting a shape or form as such would also include protection for yet unknown ways of use, something protection for the invention as such could not extend to.

⁴⁰⁴ In order to address this problem, it was later presumed in German law that not the form or shape as such should be the subject-matter of protection, but rather the underlying utilitarian idea or function for which in effect utility model protection was granted; see *C Heath*, *Utility Models in East and West*, in ‘Current Problems of Intellectual Property Law - Writings in honour of Nobuo Monya’ (1998).

⁴⁰⁵ *EC Commission*, Green Paper on the Protection of Utility Models in the Single Market, 1995 (COM(95) 370 final), p.55-56.

⁴⁰⁶ See the discussion on the developments of utility model protection in Germany in section 3) a. (i) 1. above.

decisions – which further should be based on more extensive consultations with all stakeholders involved.

2. Exclusion of Products from certain Fields of Technology and/or Processes

It has been observed above that especially for utility model systems which are designed as mere registration systems, an exclusion of certain fields of technology which are primarily served by the patent system may be an important consideration.⁴⁰⁷ In that way, a second tier protection system can focus on fields of technology and industrial sectors where minor and incremental innovations primarily occur. For Pakistan, tailoring utility model protection to specific fields of technology may be a way of facilitating incremental innovation in the light engineering sector (especially in the automotive sector, agricultural machinery, machine tools) and other sectors where minor or incremental innovation occur.

As stated above,⁴⁰⁸ focusing protection on specific fields of technology where small scale innovation appears particularly vulnerable and in need of protection further prevents any abusive registration behaviour in those sectors excluded from protection: In this regard, software, pharmaceutical and chemical as well as high-tech Information Technology (IT) products may be amongst those to be excluded from utility model protection as the need for substantive examination appears particularly important here to prevent abusive and anti-competitive blocking behaviour. In any case, traditional non-patentable subject matter – such as biological material (except micro-organisms), software as such and business methods – should be excluded from utility model protection. Pakistan should therefore at least exclude those areas from utility model protection which are considered un-patentable subject matter.

At the same time, an overbroad exclusion of subject matter may have the effect of excluding protection also for incremental innovation in areas where policy makers would want to promote it. One should take into account that innovative behaviour of firms entails dynamic processes in response to technological developments and market demands – and policy makers therefore must be willing to reconsider limitations in subject matter as times change.

Overall, the option to exclude certain fields of technology from utility model protection appears as an important element in designing a system that primarily fits domestic needs and responds to demands for encouraging incremental and minor innovations from SMEs. As discussed in detail above, the multilateral IP treaty obligations Pakistan is bound to do not prevent it from designing a system focussed on certain fields of technology or industrial sectors.⁴⁰⁹ In the same way, processes can be excluded from the scope of protection. Whether and where policy makers should make use of this flexibility depends on a more detailed analysis of the domestic innovation landscape and should be open to review in case the latter changes. In general, subject matter exclusions should be considered in order to minimize abusive reliance on the absence of a substantive examination – but approached with caution and subject to change.

3. Limiting Protection to Inventions embodied in Working Tools and other Three-Dimensional Models or Objects?

A further option utilised by several countries – such as China and historical Germany as well as some southern European countries – is to limit utility models to three-dimensional forms,

⁴⁰⁷ See section 2) a. iv. and b. above. Germany for example used to exclude compounds, processes and initially even machines as such from protection (see section 3) a. i.). As an overview of national utility models laws indicates, commonly excluded subject matter may be processes, chemical or biological substances, other substances, compositions or compounds as such, computer programmes, (business) methods, as well as the typical subject matter excluded from patent protection; see *WIPO – CDIP, Patent related Flexibilities in the Multilateral Legal Framework and their Legislative Implementation at the National and Regional Level – Document* prepared by the Secretariat (CDIP/5/4, 1st March 2010), Annex II.

⁴⁰⁸ See sections 2) c. ii. and 4) c. and d. above.

⁴⁰⁹ See section 2) a. i. – iv. for details.

structures, models or other objects.⁴¹⁰ This limitation has its origin in the historical German protection system which was designed to fill a protection-gap for functional designs (embodied in, for example, working tools) that fell through patent- as well as design laws. In essence, protection was limited to new and innovative working tools or other objects of utilitarian purpose which contained a three-dimensional form in which novelty and inventiveness were embodied.⁴¹¹ Utility model protection so conceived is an intermediate between patent- and industrial design protection.

The main question here is whether such a limited scope of protection serves the main rationale for introducing a utility model system in Pakistan – that is to protect small-scale, incremental innovation by SMEs, especially in the light engineering sector. While many or even most of the innovative products developed in these industrial sectors might fulfil the three-dimensional form requirement, it is likely that such a significant a priori limitation may soon be too restrictive to encompass all relevant incremental innovation. It may also be too difficult for SMEs to handle in practice as it may lead to misconceptions about whether the form or the invention is the essential object of protection.⁴¹² Hence we propose not to limit utility model protection to inventions which are embodied in a three-dimensional form.

4. Conditions for Protection (Novelty, Inventive Step)

Utility model systems around the world differ significantly in terms of the conditions required for protection.⁴¹³ No international obligation on this matter exists. Countries can hence freely determine what conditions for protection they see fit in their domestic setting. That means that Pakistan can decide on the ‘degree’ of novelty required – by demanding an invention to be universally, regionally or merely locally new and by determining the mode of disclosure: meaning is that the invention for which protection is claimed may not have been available to the (relevant international, regional or domestic) public (in written form, by use or even including other forms of disclosure) prior to the utility model application.

The manifold options available require further input from the relevant stakeholders in Pakistan in order to identify the option most suitable to achieve the main rationale of incentivising small-scale innovations by SMEs – while at the same time taking further implications into account. Merely demanding local novelty, for example, would further lower the threshold and so make protection available to innovations, which may be already in use elsewhere, but not domestically. While this may be a way to promote local incremental and small-scale innovation, it also carries the danger of unreasonably encroaching upon the public domain.⁴¹⁴ At the other end of the spectrum is the standard of novelty as applied to patent examinations in Pakistan. In between these two poles, the following considerations may provide further guidance to policy makers:

- From the outset it must be taken into account that the examination of novelty of the claimed invention only comes into play when the validity of a UM is challenged – in the course of revocation procedures at the IPO or as a counterclaim in infringement proceedings in courts. This may inform the decision of what novelty standard to choose in favour of a more rigid standard covering also prior art abroad.
- In the era of the Internet, is local novelty still justifiable? At least in terms of written prior art, patent databases and other relevant sources are often available online and hence make a (usually retrospective) universal novelty examination much easier.

⁴¹⁰ In China for example, utility models are limited to ‘the shape, the structure, or their combination, of a product’; see section 3) b. i. above.

⁴¹¹ According to the German Law of 1891, protection applied to “Modelle von Arbeitsgerätschaften oder Gebrauchsgegenständen oder von Teilen derselben, insoweit sie dem Arbeits- oder Gebrauchszweck durch eine neuen Gestaltung, Anordnung oder Vorrichtung dienen sollen“.

⁴¹² See section 5) ii. 1. above.

⁴¹³ See section 2) b. i. and ii. above for details.

⁴¹⁴ See section 2) c. ii. 2. for details.

- Should the novelty standard be the same as that for obtaining a patent? The advantage here is not to have diverging standards which the IPO and courts have to operate. However, given that the novelty standard for utility models in practice is only tested when validity is challenged, creating a coherent standard may not be a core consideration.
- Local novelty increases the chances for small-scale innovations by local SMEs to receive protection – but may equally result in protecting something which already exists abroad and so may encourage abuses by foreign right holders which can block competition on the local Pakistani market for products which are long known abroad.

Overall, these considerations speak in favour of universal novelty – at least with regard to written demonstrations of prior art abroad (and including domestic use). Policy makers may, to make validity challenges less complex and easier to handle, exclude foreign use from the novelty standard. However, more information on the interests of stakeholders may be necessary to make a final decision on the exact delineation of novelty in a system of utility model protection in Pakistan.

Next to the novelty standard, even wider differences exist internationally with regard to the degree of inventiveness required. It ranges from the standard applied to patents, via variations of lower levels of inventiveness (referred to as ‘inventive act’, ‘exceeding the framework of professional skill’, ‘technical addition’ or ‘minimum inventive activity’)⁴¹⁵ to substituting this requirement with others (such as ‘creative effort’)⁴¹⁶ or simply abandoning it altogether. The third criterion for protection, industrial application or utility, can be found in almost all national laws – with the exception of China and Poland for example which instead demand ‘usefulness’; whereas Uruguay and Egypt seem not to foresee this requirement at all.⁴¹⁷

Based on the international legal framework, countries have the flexibility to decide on the level of inventiveness which they wish to require as condition for protection. The same applies to the utility/industrial applicability requirement. Countries could also completely do away with any of these requirements or substitute any of them with other requirements more suitable in the respective domestic setting. In the case of Pakistan, this policy space should be used in a constructive manner in favour of a system tailored towards encouraging local innovation and taking into account any other relevant interests on the domestic level. The following considerations should guide policy makers:

- Should there be an inventive step requirement at all? Focusing on some type of advancement against the current state of the art, the notion of inventive step is notoriously difficult to assess. However, distinct to the patent system, the matter would not raise in every application procedure but only in cases where validity is challenged. SMEs on the other hand cannot be expected to anticipate such complex decisions and hence may be left with too much legal uncertainty to make investment decisions about marketing and/or licensing products potentially protected.
- If one nevertheless wishes to hold on to the inventive step requirement, the question is whether there should be a different level of inventiveness for utility models as opposed to patents? Here the fact that utility model protection is primarily a second-tier protection system which covers inventions below the patent threshold strongly suggests to choose a lower level of inventiveness. This

⁴¹⁵ See the different terms use in Annex II to *WIPO – CDIP*, Patent related Flexibilities in the Multilateral Legal Framework and their Legislative Implementation at the National and Regional Level – Document prepared by the Secretariat (CDIP/5/4, 1st March 2010).

⁴¹⁶ Such as the case in Slovenia and Albania; see Annex II to the *WIPO – CDIP* study.

⁴¹⁷ See Annex II to *WIPO – CDIP*, Patent related Flexibilities in the Multilateral Legal Framework and their Legislative Implementation at the National and Regional Level – Document prepared by the Secretariat (CDIP/5/4, 1st March 2010).

- in turn makes validity proceedings more difficult in practice since IPO and the courts have to differentiate between two different levels of inventive step.
- Depending on the existing standard applied for patents, there may not be a reasonable separate and/or practically distinguishable standard of inventiveness below the patent level that can be operated with sufficient clarity and legal certainty by the patent office or the courts⁴¹⁸ and hence may call for the abolishment of the inventive step requirement.
 - Promoting especially innovative activities by SMEs demands a lower standard of inventiveness or the abolition of this criterion so as to accommodate also minor and incremental innovation.

Taken together, these considerations make the option of doing away with an inventive step criterion as the most feasible and easy-to-handle option in practice. It is certainly also an option which would cover incremental and minor innovations. As to the threat of blocking competition and encroaching upon the public domain, a high universal novelty standard – combined with enforcement checks and balances discussed below – may sufficiently mitigate this risk. Further input from domestic stakeholders and the IPO, however, would be beneficial to come to a more informed decision along the lines of the parameters outlined above.

iv. Exceptions and Limitations (including Compulsory Licensing and Duration of Protection)

Another important area to consider is exceptions and limitations to the exclusive rights, including the option of compulsory licensing. As discussed above,⁴¹⁹ the international IP law framework does not contain provisions comparable to Art.30, 31 TRIPS which would have to be adhered to when policy makers in Pakistan decide on the issue of exceptions and other limitations (such as compulsory licenses) in the context of utility model protection. They can freely determine which type of uses of the protected utility model do not require any authorisation of the right holder, whether any compensation is owed for such a use and what kind of conditions apply for invoking such an exception.

In designing the system of utility model protection in light of its primary objective (to incentivise innovation by SMEs in Pakistan), the exceptions policy makers may wish to consider could address:

- the use of a protected utility model for research or experimental purposes;
- uses which are of private, non-commercial nature;⁴²⁰
- the use of the protected subject matter if so ordered by the state (government use);
- the use by anyone who can show that she/he has used the protected invention prior to its registration in good faith (prior use defense);⁴²¹ and
- other exceptions which apply to patent rights and would need to be extended to utility models in order to ensure coherence of the two systems.

Apart from Art.5A of the Paris Convention which concerns limitations as to granting a compulsory license for local working purposes,⁴²² the multilateral IP law framework does not

⁴¹⁸ See section 3) a. i. 1. and 2. above – especially the difficulties highlighted in the ‘Demonstrationsschrank’ decision of the German Supreme Court.

⁴¹⁹ See section 2) a. iv. above.

⁴²⁰ These uses often may not even need a specific exception as long as the exclusive rights are limited to cover only commercial activities. Nevertheless, an explicit exception may provide additional certainty here.

⁴²¹ The prior use defence should be drafted along the lines of this exception in patent law and generally should depend on a good faith based use of the invention within Pakistan prior to the date of application. If these conditions are met, the prior user can continue to use the invention for her/his own purposes within her/his own (commercial) enterprise.

⁴²² The obligations contained in Art.5 A of the Paris Convention do not apply to compulsory licenses for other reasons – such as to promote public interest or to allow the utilisation of utility models necessary for follow-on innovation. See section 2) a. i. & iv. above.

contain obligations equivalent to Art.31 TRIPS that apply to utility models. Beside the issue of local working,⁴²³ Policy makers in Pakistan thus have all flexibility to design a system of compulsory licenses, in case they consider such as system necessary, in accordance with their domestic needs. It could for example cover

- situations where a user can show that she/he needs to rely on a protected utility model to come up with a value-added product or to implement a follow-on invention;
- scenarios where public interest demands widespread dissemination and availability of products containing inventions protected by a utility model (e.g. in emergency situations such as the 2009 and 2010 floods, a protected invention for producing clean drinking water could be subject to a compulsory license to ensure its widespread production, dissemination and availability in case the right holder is unable to satisfy extraordinary demand in times of crisis); and
- other grounds for which a compulsory license may be granted under the Pakistani patent law.

The process of issuing a compulsory license does not need to be drafted in accordance with Art.31 TRIPS. Nevertheless, it seems reasonable to adopt a procedure which takes into account the interests of the right holder as well as competitors, the general public and other relevant stakeholders. It may preferably require:

- mandatory prior negotiations with the right holder to obtain a (voluntary) license on reasonable terms;
- an obligation to provide adequate remuneration to the right holder which takes into account both the economic value of the exploitation allowed as well as the (public) interest served; and
- be subject to judicial review.

Finally, the question of the most appropriate duration of the protection of utility models arises. Also, here Pakistani policy makers are free from international obligations to foresee a certain minimum period of protection. Given this flexibility, they should design the duration of protection in light of overall objectives pursued with the utility model system. If it is to encourage incremental innovation in certain industrial sectors:

- the average lifecycle of products subject to protection in the relevant sectors; as well as
- the time needed to develop such products,

may be key determining factors. Other countries have terms of protection which vary roughly from 5 years to 25 years.⁴²⁴ As noted already in section 2) b. i. above, the term usually fluctuates between 5 and 15 years (sometimes on a renewable basis), with a significant amount of countries granting protection for about 8-10 years.

In order to make the system affordable for SMEs, an initial protection period of three, to maximum five years is hereby proposed – unless evidence about the normal lifecycles for products in the industrial sectors primarily targeted by the utility model system would suggest otherwise. This initial protection period should be subject to a very low fee in order to prevent costs to serve as barrier for using the system. In this way, especially those SMEs who are uncertain about the commercial viability of their inventions may still consider utility model protection as an option.

After the expiry of the initial protection period of three to maximum five years, an option for extending the protection period for another two or three years should be provided – this time

⁴²³ As discussed above (see section 2) a. i. & iv.), the need to issue a compulsory license to ensure the local working of an invention protected by a utility model in Pakistan seems a rather remote scenario since one can expect most applications for protection coming from local residents which will have a primary interest in serving the local market.

⁴²⁴ *U Suthersanen*, *Utility Models and Innovation in Developing Countries*, ICTSD Issue Paper No.13 (2006), at 2.

subject to a higher fee. The higher fee should be justified in light of the fact that only for commercially successful inventions, an extension will be requested. A final extension for another two – or three years may be available for again a higher fee. In total, a term of about ten to maximum twelve years seems reasonable.

iv. Checks and Balances in the Enforcement System

As it has been observed above, the fact that the utility model regime is based on lowering the patent thresholds for obtaining protection without an appropriate examination system in place may result in legal uncertainty and excessive litigation. Especially larger market players may use utility models as a means of circumventing the more stringent criteria under the patent system and over-use the system in ways that make it hard for SMEs to compete. The other main argument against introducing a second-tier system to protect innovation below the patentability threshold is based on the idea of retaining such innovations in the public domain. The ability of everyone to freely utilise, exploit and build on previously unprotected subject matter is to some extent taken away by introducing utility model protection.

The risks of abuse and of unduly limiting the public domain however can be addressed by several mechanisms. Some of those have already been discussed in relation to the application system, protectable subject matter, the conditions for protection, and exceptions and limitations. In addition, tailored checks and balances in the IP enforcement system are an appropriate response.

In general, the enforcement tools for the utility model rights obtained should be adequate and effective – and hence cover especially injunctive relief as well as the ability to request damages for infringements of utility model rights. As a guiding principle, those remedies available under patent law should apply also in the context of utility model enforcement – unless the nature of an unexamined right and the two concerns addressed above (the risks of abuse and of unduly limiting the public domain) suggest otherwise. Some of the specific enforcement related ‘checks and balances’ to prevent abuses of the system are discussed in the following in more detail:

- 1) **Revocation Proceedings:** Everyone should have the right to initiate revocation procedures at the IPO which aim at the annulment of a registered utility model and its deletion from the registry if the right holder cannot prove that the registered model indeed falls within the protected subject matter and meets all requirements for protection. These proceedings should be available any time during the period of protection and should not involve significant costs. One could further consider whether – similar to the German system⁴²⁵ – an automatic revocation takes place if the right holder does not object to a substantiated revocation request within a specific timeframe – such as three months. In the proceedings, the right holder would need to show that his/her invention falls within the protectable subject matter and especially that it meets the requirements for protection – no presumption of validity should apply to a merely registered right (see further below). There should be an option to appeal any decision of the IPO at the competent judicial authorities.
- 2) **Infringement Proceedings:** Within infringement proceedings initiated by the utility model holder against an alleged infringer, several options are possible to safeguard against abusive enforcement of the registered (but yet not substantially examined) utility model:
 - a. One option would be not to allow the enforcement of a utility model without a mandatory prior examination procedure.⁴²⁶ The rationale here is to make sure that no subject matter is being protected against alleged infringements without having tested whether it actually meets the

⁴²⁵ See section 3) a. i. 3. above.

⁴²⁶ See section b. ii. above.

conditions for utility model protection.⁴²⁷ In order to reduce costs, one could consider prescribing that those for the pre-trial examination are in any case borne by the right holder. This on the other hand may disproportionately affect the claimant who may hence be effectively prevented from enforcing her/his rights. An option may be that the pre-trial examinations are carried out for free (by the IPO) for SMEs (as part of an enabling SME programme), whereas other claimants beyond a specific company size and turnover must bear the costs themselves.

- b. An alternative option would be to allow or encourage the defendant to raise objections against the validity of the utility model. In these cases, the court would have to examine, whether (i) the invention falls within the protectable subject matter for utility models; and (ii) the invention meets the conditions for protection.
- c. In any case, no presumption of validity should apply to utility models which are merely registered and not substantively examined. Such a presumption often applies in the patent enforcement context. As it is based on the comprehensive examination conducted by the patent office, it should not apply where such an examination does not take place.
- d. Finally, another enforcement-related safeguard against abuse may be not to make injunctive relief available as a legal remedy to utility model right holders at all or at least until the right holder has obtained a substantive examination report which validates the claimed innovation as protected utility model.⁴²⁸ Such a limitation of the enforcement options for a utility model holder does not leave her or him without any protection: If – after a substantive examination has taken place – the court finds in favour of the claimant, infringing activity must cease and the defendant should be obliged to pay reasonable compensation for the unauthorised use of the utility model. This effectively turns the exclusive right into a liability rule until (1) the IP office has confirmed that the registered model fulfils the conditions for protection and (2) a court has positively confirmed that the utility model is indeed infringed.
- e. Examinations based on validity challenges could be performed in all cases by IPO – to avoid lengthy court proceedings and ensure IPO is building up experience in assessing utility model validity. In addition, both in revocation proceedings and in case of validity counterclaims in infringement proceedings industry-representatives can be used as technical experts that together with IPO personnel, judges or other legal experts assess the aspects of novelty and, if applicable, of inventiveness.

In case policy makers in Pakistan decide to introduce a utility model system, we propose to include the option of revocation proceedings. In terms of addressing validity challenges within infringement proceedings, we do not make a specific proposal. Choosing amongst the options above depends a lot on the overall functioning of the court system, the ability of SMEs to use the system and other general rule of law factors so that an informed decision should be made taking these aspects into account.

In order to address the abuse of the system, one may also consider mediation and/or arbitration procedures as a form of speedy and less formal remedy which can be tailored to the needs of the parties involved. While a final decision on this option should also be made in light of the wider law enforcement context in Pakistan and the factors mentioned in the preceding paragraph, we nevertheless would like to highlight the following aspects as

⁴²⁷ One should note that even mandatory pre-trial examination does not prevent abusive pre-litigation bullying against competitors (especially SMEs). Potential defendants may still give in and cease the allegedly infringing activity out of fear for any sort of legal action and the costs involved.

⁴²⁸ Since the relevant multilateral treaty obligations concerning IP enforcement (including the availability of injunctive relief) under TRIPS do not apply to utility model protection, countries have sufficient policy space to design the enforcement system outside the obligations contained in part III of TRIPS. See section 2) a. (ii) and (iv) for details.

potential downsides of relying on arbitration and/or mediation to address abuses of the UM system: The main threat of abuse in case of UM protection will result from registering an unexamined 'invention' of questionable novelty as utility model in order to prevent others from utilising and commercialising products involving the same or similar innovative features. Challenging such UMs will generally centre on the question whether the registered UM indeed meets the criteria for UM protection. Any findings on this point should, at least in the last instance, have not only *inter-partes*, but *inter-omnes* effect – that is they should not only apply in relation between the disputants, but to all. This effect however necessitates a decision by a public authority or a court; and one which is available to the public so that others can know about how the validity of the utility model is judged. Arbitration and even more mediation proceedings therefore may not be effective here. They certainly may be a useful tool if controversies arise amongst parties which are in a contractual relationship with another (such as someone licensing a UM-protected technology to a business partner) and want to resolve disputes first and foremost in a self-determined, quick and efficient manner; but even there the difficult question arises on how to deal with validity challenges. Hence we generally do not propose to rely on arbitration and/or mediation proceedings to tackle potential abuses of the UM system. In third party infringement cases (i.e., situations involving a person or entity not contractually related to the utility model holder), the situations where mediation or arbitration may be useful are those which focus on the legality of allegedly infringing conduct: Here, the activities of the alleged infringer are at the forefront (rather than the validity of the registered model) and hence there is less interest of the general public to know about the outcome. In addition, the findings made on the legality of allegedly infringing conduct would have – even in case of ordinary court proceedings – a mere *inter-partes* effect.

Finally, further safeguards against abuse are antitrust remedies and compulsory licensing.⁴²⁹ As mentioned above, it however remains unclear whether either of them can function as a valuable remedy especially for SMEs. Antitrust investigations take time, are expensive and require a functioning Competition Law authority. They usually further depend on the existence of market power (in form of a monopoly or market dominance) and hence do not apply to all market actors.⁴³⁰ Compulsory licensing may be an option where the utility model holder is not willing to license her/his technology and there is a recognised public interest for its use. But as the system is generally based on an individual procedure for each technology to be licensed, it involves lengthy proceedings and does not offer a speedy remedy against abusive reliance on a claimed utility model. This is why we propose the more specific safeguards addressed in this section and in the other sections above.

- v. *Embedding Utility Model Protection in the IP Infrastructure of Pakistan (role of IP office, courts, IP professionals; awareness raising campaigns towards potential beneficiaries)*

In case policy makers in Pakistan decide to adopt a system of utility model protection with the main aim to promote innovations by SMEs, this policy rationale should also drive the way this system is integrated into the IP infrastructure of Pakistan. Hence the main objective in designing the role of the relevant institutions such as IP office, courts, IP professionals, industry association and other government bodies should be to facilitate easy and affordable usability of the system for SMEs – without compromising on general rule of law and due process standards.

This first of all entails that SMEs are made aware of the system of utility model protection and how it works. Hence, information brochures and flyers should be designed which highlight the purpose and main features of the system, the way SMEs can use it and the benefits in terms of marketing and/or licensing protected products. In addition, collaboration

⁴²⁹ A *Odman Boztosun*, Exploring the Utility of Utility Models for Fostering Innovation, *Journal of Intellectual Property Rights*, Vol.15 (2010), at 431.

⁴³⁰ Nevertheless, provisions relating to restriction of competition can well be applicable. For example, if two or more firms enter into agreement to restrict competition, i.e. price fixing or market sharing, can be investigated by competition law authorities.

with industry associations and local chambers of commerce should be utilised as venues to communicate the system to SMEs and other stakeholders.

Further, patent experts from IPO staff, attorneys and judges should be involved in the drafting of the specific technical rules. Subsequently, all those involved in implementing or applying the utility model system should be trained in how to apply and work with the new rules. One more far-reaching option would be to create specialized IP benches in courts along the lines of specialized corporate/company law benches existing in various courts.

One could also consider – as discussed above – to involve the private sector in determination of novelty (or inventiveness) standards. This could be in form of using the respective industry association as a complementary source for verifying the authenticity of utility models in case of *prima-facie* examinations in the registration phase or subsequent in proceedings where validity is challenged. It would help the registration authorities and at the same time create a cooperative mechanism in form of a public-private partnership with genuine involvement of the respective industry sector with delegated and built-in checks and balance mechanism at the industry level.

If it is decided, by the Government of Pakistan, to introduce a utility model system then it has to be implemented through a comprehensive and coordinated approach. Merely legislative and regulatory instruments would not serve the purpose unless the target stakeholders have proper awareness, access and facilitation to use this system; coupled with strong enforcement machinery. This system should be used as a trade and industrial policy tool rather than rolling it out as a mere another form of IP protection.

b. Alternatives to Utility Model Protection in the Pakistani Context

This section briefly reviews some of the alternative options – which are in general discussed in section 2) c. (i) – (iii) above – in the specific context of Pakistan. Given that we consider the introduction of a new system of utility model protection (along the lines proposed above) as the most preferred option, we generally do not consider any of the alternatives as equally effective in achieving the main objective of promoting incentives for innovation by SMEs in Pakistan.

i. Retaining the Status Quo

Retaining the system as it is does not seem a viable option if one wishes to achieve the objective of encouraging innovation by SMEs and other producers in the industrial sectors where minor and incremental innovation is or may take place. As the findings of the national expert indicate, copying and imitation is a serious threat to the type of innovation which the utility model system aims to promote. Patent protection will not be available for most of this type of innovation – either because the criteria for obtaining a patent (novelty, inventive step) are not met; or since the system is too expensive, too time-consuming and too complex to handle by SMEs.

ii. Lowering the Thresholds for Patent Protection

Lowering the existing standards for obtaining a patent to cover minor, incremental innovation is sometimes proposed as alternative to the introduction of utility model protection. In the context of Pakistan, the key legal issue would be to determine whether the level of inventiveness required for a patent can be lowered to encompass such innovative outputs at the heart of the utility model system. Given that per description of inventiveness on the IPO website “Every simple invention so far as it is something new would be an invention”,⁴³¹ it remains doubtful that lowering this standard any further would result in a significant change.

⁴³¹ See Patent Protection, IPO Pakistan, online at <http://www.ipo.gov.pk/patent/Default.aspx>.

Of course, one cannot judge the inventiveness standard applied simply by a brief description on the IPO website. The main reason for not considering lowering patent thresholds as no alternative to utility models lies in the fact that the practical difficulties for SMEs to use the patent system (costs, complexity, time) certainly would remain. Moreover, both the patent and utility model system serve different objectives and goals. Hence in light of the rationale to promote minor, incremental innovation by SMEs in Pakistan, this option is no alternative.

iii. Trade Secret Protection

The trade secret protection system in Pakistan does not exist in standalone statute form – rather it is embedded in the common law system that Pakistan follows. Input obtained by the national expert suggests that there is no such distinguishable case where trade secret protection was sought from any court.

Regardless how the national courts would apply trade secret protection, this system can only be complementary rather than a substitute to utility model protection. This is because for trade secret protection to apply, the information subject to protection must be kept secret or confidential and only disclosed in circumstance in which an obligation of confidentiality can be imported. It would therefore not cover most cases where an innovative product is imitated or copied by a competitor or user.

iv. Protection against Unfair Competition/Passing-Off Tort

The statutory protection available in Pakistan against unfair competition and passing-off is based on common law doctrine. The common use of this system is for trademarks. A suit can be initiated either under the “law of passing off” or infringement under the Trade Marks Ordinance, 2001 depending on whether the trademark is unregistered, pending registration, or registered.

The suit can be filed either at the High Court or at the District Court. The complaint filed by the rights holder should demonstrate that the alleged infringing act involves a mark that is identical or similar to a trademark of the rights holder. It should also specify that the representation of the trademark that is being used in connection with goods or services might confuse the public regarding the origin of the infringing goods/services and that the this act of the infringer has interfered with the trademark holder's rights of exclusive use or has caused the rights holder economic loss. The rights holder can request the Court to grant an order of injunction, damages and delivery of infringing goods, materials or articles. Moreover, where a person is found to have infringed a registered trademark, the Court may make an order to cause the offending trademark to be erased, removed or obliterated from any infringing goods, materials or articles in his possession, custody or control or to secure the destruction of the infringing goods, materials or articles if it is not reasonably practicable for the offending mark to be erased, removed or obliterated.

The Sindh High Court in *M. Sikander Sultan v. Masih Ahmed Shaikh* {2003 C L D (26)} confirmed an order of interim injunction against the Defendants and restrained them from using the trademark SHAN as it was a colorable imitation of the Plaintiff's trademark AALI SHAN and stated that “the registration of trademark is not meant for the benefit of the trader only but also protects the public-at-large and its main object is to secure free enjoyment of the right of manufacturing and marketing of one's products and also to save general public from being deceived by the acts of unscrupulous manufacturers and sellers of goods bearing the fake trademark of others.”

Another case in example is of *Mars Incorporated v. Pakistan Mineral Water Bottling Plant (Pvt.) Ltd.* {2001 M L D 39} where the High Court of Karachi granted an interim injunction restraining the Defendant from using the internationally well-known mark MARS on soft drinks. This injunction was granted despite the fact that Pakistan Mineral Water Bottling Plant (Pvt.) Ltd. had registered the trademark MARS with the Trade Marks Registry.

These cases suggest that the available protection against unfair competition in Pakistan is much focused on (well-known) trademarks. Even if the system can be extended to cover other outputs which have involved substantial investments (such as innovative products in the industrial sectors relevant for this study), unfair competition and passing-off usually involves further elements of unfair conduct. The protection does not apply to the product, but is available against certain (commercial) acts of competitors which may have a reflexive effect of sometimes providing indirect protection to a product. But it is highly unlikely that such protection would encourage local innovation by SMEs – given its uncertainty in application, the additional elements of unfairness required and the fact that it is not constructed as an IP right which can be licensed. Moreover, given the fact that Pakistan has followed Common Law approach relating to the tort of passing off, it very is unlikely that the Pakistani judiciary would embrace a broad misappropriation concept beyond what English Law has developed.⁴³² Also, from an international perspective, there is no consensus on the meaning of the term ‘unfair competition’ although article 10*bis* of Paris Convention sets out some minimum guidelines. These however all involve specific elements of unfair conduct and indicate that protection against unfair competition generally is not perceived as IP-like protection for a specific subject matter.

v. *Industrial Design Protection*

The existing Industrial Design Ordinance 2000 as the applicable law in Pakistan meets international standards as it was promulgated as part of the implementing Pakistan’s obligations under the TRIPS Agreement. From the inputs gathered by the national expert, the system for application and registration is in place and working well. However, it may be early to judge the effectiveness of this system in facilitating innovative designs – since it is rather newly introduced and has not penetrated much into SME sectors.

In order to serve as an alternative to the utility model system, the industrial designs application and registration system in Pakistan would need to be made simpler and faster with less strict standards applied. The most serious limitation of the system however is that it covers “ornamental or aesthetic aspect of an article”⁴³³ in two-or three-dimensional form – but not the functional aspects of such forms. As discussed in section 5) a. ii. 1. above, protection should attach to the technical invention, possibly incorporated in a three-dimensional form. Protection of aesthetic or ornamental features of an article – hence excluding its merely functional aspects – does not amount to an alternative protection regime. It might be relevant for the textiles sector, but would not encompass innovative products in the industrial sectors at the heart of this study.

[Annex follows]

⁴³² See *Warnink Besloten Vennootschap v. J. Towned & Sons (Hull) Ltd. and Other Respondents* (1979) A.C. 731 - “Advocaat” case.

⁴³³ See Design Protection, IPO Pakistan, online available at <http://www.ipa.gov.pk/Designs/Default.aspx>.

Annex – Survey Questionnaire: Utility Model System in Pakistan

What is a Utility Model?

A utility model is an exclusive right granted for an invention, which allows the right holder to prevent others from commercially using the protected invention, without his authorization, for a limited period of time. A **utility model is similar to a patent**. In fact, utility models are sometimes referred to as "petty patents" or "innovation patents."

The main differences between utility models and patents are the following:

- The requirements for acquiring a utility model are less stringent than for patents. While the requirement of "novelty" is always to be met, that of "inventive step" or "non-obviousness" may be much lower or absent altogether. In practice, protection for utility models is often sought for innovations of a rather incremental character which may not meet the patentability criteria.
- The term of protection for utility models is shorter than for patents and varies from country to country (usually between 7 and 10 years without the possibility of extension or renewal).
- In most countries where utility model protection is available, patent offices do not examine applications as to substance prior to registration. This means that the registration process is often significantly simpler and faster, taking, on average, six months.
- Utility models are much cheaper to obtain and to maintain.
- In some countries, utility model protection can only be obtained for certain fields of technology and only for products but not for processes. In Pakistan there is no system for utility models available at present.

Utility models are considered particularly suited for SMEs that make "minor" improvements to, and adaptations of, existing products. Utility models are primarily used for mechanical innovations.

Purpose of Survey

The main purpose of this survey is to assess the need/demand for instituting a utility model system in Pakistan.

Name of the respondent: -----

Company/affiliation:-----

Contact details: ----- (tel, email, etc)

Please tick here if you wish to keep your response anonymous:-----

Factual Questions – Background, MSMEs, Innovation and Imitation

1. To what extent is Pakistan as an Intellectual Property (IP) importing/exporting country? i.e., what kind of IP-protected goods (mainly under the patent and copyright regime) are:
 - i. imported into Pakistan;
 - ii. domestically developed, produced and marketed in Pakistan
 - iii. exported from Pakistan to other countries?

2. What are industrial sectors with innovative activities (*innovation being understood as primarily relating to a process that leads to the introduction of new products or services to the marketplace, or the adoption of new ways of making products or services*)?

3. Which domestic industries/sectors especially engage in small scale or incremental innovative activities?

4. What role do micro, small and medium enterprises (MSMEs) play in these sectors?
 - i. How significant is their presence?
 - ii. What are their characteristics (in terms of size, knowledge of law, ability to rely on IP rights, etc)

5. What role do IP rights play in these sectors, especially for MSMEs?

i.e., are IP rights relied upon to protect the results (good, services, processes) of innovative activities?

- i. If so, what kind of IP rights are relied upon?
- ii. Do MSMEs operating in these sectors equally rely on IP rights? How detailed – if existing – is their knowledge of the IP system?
- iii. Are there any factors outside the IP system which may affect the ability of MSMEs to use the IP system to protect their innovations?

6. To what extent do MSMEs generally use the IP system in Pakistan? In particular:

- i. Are there any awareness programmes by the IP Office (or other institutions) focussing on MSMEs?
- ii. Is there any support for MSMEs in registering or applying for IP rights?
- iii. Do MSMEs use the judicial system to settle IP related disputes; especially do they bring infringement proceedings?
- iv. Are legal services (advice, litigation) from attorneys, etc. affordable to MSMEs?

7. Is copying or imitation an issue in the industrial sectors with small scale or incremental innovative activities which functions as disincentive to innovate or to bring the products resulting from innovative activity onto the market?

8. On the other hand, is there any indication or evidence that MSMEs rely on existing innovative products locally produced to come up with follow-on innovation or to produce value-added products?

Normative Questions – opinions, value judgements

1. Do you think that introducing a system of utility model protection primarily serves the domestic industry or will it rather be foreign right holders which can take advantage of the system?
2. In your opinion, would innovative industries, especially MSMEs benefit from a system of legal protection for small scale/incremental innovation (utility model protection)?
3. What are the benefits of such a system, especially for MSMEs?
4. Do you think that protection of incremental and small innovations not only benefit MSMEs but also large firms?
5. Especially, do you consider a new IP right to protect such small scale/incremental innovation as an incentive mechanism that would encourage more innovation by MSMEs? Please explain!
6. If not, what may be the obstacles that such a new IP right does not function as incentive for MSMEs?

7. What may be downsides, or negative effects, of introducing a new system of protecting small and incremental innovation, especially for MSMEs? In particular:
 - i. Is there a significant threat of legal uncertainty and wasteful litigation due to introducing utility model protection?
 - ii. Can there be an increasing business risk for MSMEs from unnecessary disputes?

8. Is there a realistic danger of blocking the public domain and/or preventing ongoing technological learning by imitation?

9. Can there be a proliferation of low-level technologies registered without examination?

10. What can be done, in your opinion, to facilitate the use of MSMEs of a new system to protect small and incremental innovation?

11. Are there any existing alternatives, either within or outside the IP system, to a system of utility model protection which especially MSMEs can rely on? In particular:
 - i. Is there a legal protection against 'unfair competition', misappropriation of another person's efforts, or passing of (usually in form of a tort)?
 - ii. Can industrial design protection be used, in particular in form of unregistered design right?
 - iii. Is trade secret protection a viable alternative?

- iv. If available, are any of these alternative systems being used by MSMEs?

- v. Do you think that improving that alternative system is a better option than a new utility model right? If so, can you explain why?

[End of annex and document]