1. Introduction and Background

1.1. Research Statement

> *'Innovators are those who see what everyone sees, but think of what no one else thinks. Innovators refuse status quo, they convert inspirations into solutions and ideas into products'.*
> *RA Mashelkar*[1]

The second decade of the twenty first century is witnessing the rise of global innovation competition. Undoubtedly, this century will be the century of knowledge and indeed the century of mind.[2] In a knowledge-based economy,[3] intellectual property (hereinafter 'IP') is considered as a tool for technological and economic development. The protection of IP is one of the building blocks of national innovation policies in many countries.[4] Innovation is not necessarily lacking in developing countries; however, harnessing innovation to generate wealth is a huge challenge for many of them[5] and this task is particularly daunting for most parts of developing economies in the South Asian region where a large part of innovation tends to be based on improvements or derived from traditional knowledge

---

1 RA Mashelkar, 'A Journey from Mind to Market Place' The Financial Express (India, 9 April 2012), available at: <http://www.financialexpress.com/news/a-journey-from-mind-to-marketplace/934242/> (accessed 30 April 2012).

2 RA Mashelkar, 'Intellectual Property Rights and The Third World' (2001) 81/8 Current Science 955, 955, available at: <http://www.iisc.ernet.in/currsci/oct252001/955.pdf> (accessed 20 April 2012).

3 "The phrase 'knowledge-based economy' describes the new economic environment in which the generation and management of knowledge play a predominant part in wealth creation, as compared with the traditional factors of production, namely land, labor and capital". WIPO, 'Intellectual Property (IP) Rights and Innovation in Small and Medium-sized Enterprises' (2004) WIPO Working Paper August 10/2004, 2 available at: <http://www.wipo.int/export/sites/www/sme/en/documents/pdf/iprs_innovation.pdf> (accessed 10 June 2011).

4 R Landry and others, 'Managing the Protection of Inventions and Technological Innovations in Canadian Manufacturing SMEs' (2009) 3/1 International Journal of Intellectual Property Management 57, 58.

5 See generally, U Suthersanen, G Dutfield and KB Chow (eds), *Innovation Without Patents: Harnessing the Creative Spirit in a Diverse World* (Edward Elgar 2007) 5-6.

and often subpatentable. As scholars have pointed out, a vast majority of scientific and cultural creations, if not all, are built on pre-existing creations and discoveries and do not represent giant leaps beyond what we already know.[6] Such innovations can be incremental in nature[7] and they are based on multiple small steps or increments.[8] Not surprisingly, they may not be able to satisfy the 'flash of genius test' in order to qualify for conventional patent protection. Thus, there is a great need to harness innovative potential, especially in developing countries such as Sri Lanka.

Inventions involving small inventive steps and short commercial lifecycles, gain growing importance each day. These innovations are routine and primarily devoted to product improvements or enhanced user-friendliness or searches for new use for those products.[9] More importantly, a large part of such innovations emanate from small and medium-sized enterprises (hereinafter 'SMEs'), which have been recognized as the principal engine of economic growth and technological progress in many countries.[10] Such incremental innovations are usually not protected, or not adequately protected because of the minor nature of the inventive activity involved in their creation. In other words, such innovations are the most vulnerable to unfair copying and misappropriation. In the absence of protection, incentives for investments for SMEs may dissipate. Obviously, there is a need to provide more incentive for such innovations with exclusive rights to commercialize, even though one can conversely argue that what does not qualify for patent protection should not be protected at all.

---

6 Ibid 7.

7 U Suthersanen, 'Incremental Inventions in Europe: A Legal and Economic Appraisal of Second Tier Patents' (2001) July, Journal of Business Law 319, 320.

8 U Suthersanen, G Dutfield and KB Chow (eds), Innovation Without Patents: Harnessing the Creative Spirit in a Diverse World (Edward Elgar 2007) 7.

9 Ibid.

10 The Government of India, *Annual Report of Ministry of Micro, Small and Medium Enterprises 2011-12* (New Delhi) 161 available at: <www.msme.gov.in> (accessed 31 July 2012). M Al-Mahrouq, 'Success Factors of Small and Medium-Sized Enterprises (SMEs): The Case of Jordan' (2010) 10/1 Anadolu University Journal of Social Sciences 1. See also, T Tambunan, 'Micro, Small and Medium Enterprises and Economic Growth (2006) University of Trisakti – Center for Industry and SME Studies Faculty of Economics Working Paper Series No. 14/2006 at 4-7, available at: <http://103.28.161.15/pusatstudi_industri/PUSAT%20STUDY%20TULUS%20TAMBUNAN/Pusat%20Studi/Working%20Paper/WP14.pdf> (accessed 12 January 2012).

In the eyes of conventional patent law, such creeping and incremental innovations are left unprotected being unable to meet stricter novelty and inventive step requirements though they are no less worthy and useful to society.[11] It is, therefore, possible to argue that there is a lack of incentives resulting from the said protection gap for this type of innovations in the existing IP paradigms.[12] While no protection may mean more access in developing countries, but no protection would also lead to dissipation of marketable value in innovation. As a corollary, this may reduce the incentives for investment for local innovation in improvement, in contrast to foreign ownership of major patentable inventions. A specifically designed second-tier protection (hereinafter 'STP') regime such as of a utility model (hereinafter 'UM') or petty patent system may be explored as one possible solution to this conundrum. Most remarkably, an STP regime can coexist with other IP rights which can either be used as an important supplement or even a complement to an existing patent system. By its very nature, an STP system has been a national response to different national circumstances.[13] According to WIPO's World Intellectual Property Indicators 2011, there are currently around sixty countries[14] as well as three regional organizations[15] that provide for such a system of IP protection in one way or another.

---

11 See similar line of argumentation in Department of Industrial Policy and Promotion, Discussion Paper on Utility Models (23 May 2011) para 7, available at: <http://dipp.gov.in/English/Discuss_paper/Utility_Models_13May2011.pdf> (accessed 30 December 2011).

12 U Suthersanen, G Dutfield and KB Chow (eds), *Innovation Without Patents: Harnessing the Creative Spirit in a Diverse World* (Edward Elgar 2007) 5. See also, J Lahore, 'Designs and petty Patents: A Broader Reform Issue' (1996) 7 Australian Intellectual Property Journal 7, 8.

13 Bird and Bird, 'Why have Utility Models?, Legal Commentary: EU Green Paper' (1995) July/August, Managing Intellectual Property 3, 3-4.

14 WIPO, *World Intellectual Property Indicators*, 2011 edition 34, available at: <http://www.wipo.int/ipstats/en/wipi/index.html> (accessed 15 March 2012).

15 The three regional organisations which provide for a system of utility model protection are the Andean Community (comprising Bolivia, Colombia, Ecuador and Peru, OAPI (the African Intellectual Property Organisation) and ARIPO (the African Regional Industrial Property Organisation).

UMs are a form of patent-like protection given to minor and incremental innovations against unfair copying and imitation.[16] There is a plethora of terms used to describe "UMs".[17] The umbrella term "utility model" is used in many parts of the world, even though there is no global consensus on the term. A UM regime has also been given various names in different countries; such as petty patents, utility certificates, simple patents, short term patents, second-class patents, secondary patents, utility solutions, utility innovations, minor inventions, and innovation patents.[18] Nevertheless, policy makers, legislatures and lawyers anchor their definition to a secondary form of protection offering a cheaper, simpler and an easier, no-examination protection regime for minor and incremental innovations, usually characterized by less stringent patentability requirements (such as the degree of novelty and inventiveness required) which is often less than that needed for patent protection.[19]

In stark contrast to the South Asian legal landscape, many East Asian and South East Asian countries such as Japan, China, South Korea, Philippine, Malaysia and Thailand have adopted an STP regime in order to reward, incentivise and protect subpatentable innovations that have achieved remarkable progress in their innovative activities, particularly for local innovations. The evidence from recent scholarly investigations suggests that there is a reasonable nexus between such an STP system and the technological progress of a country. It means that there might have been a significant and positive impact on the country's innovation climate.[20] Per-

16 U Suthersanen, 'Utility Models and Innovation in Developing Countries' (2006) ICTSD Issue Paper No.13, vii, available at: <http://unctad.org/en/docs/iteipc20066_en.pdf> (accessed 15 March 2012).

17 See generally, U Suthersanen, G Dutfield and KB Chow (eds), *Innovation Without Patents: Harnessing the Creative Spirit in a Diverse World* (Edward Elgar 2007) 5.

18 See LH Gee, 'Second Tier Protection for Minor Inventions in Asia: An Appraisal of the Similarities and Differences' (3rd ASLI Conference Shanghai (China), 25-26 May 2006) 1-2.

19 U Suthersanen, 'Utility Models and Innovation in Developing Countries' (2006) ICTSD Issue Paper No.13, vii, available at: <http://unctad.org/en/docs/iteipc20066_en.pdf> (accessed 15 March 2012).

20 YK Kim and others, 'Appropriate Intellectual Property Protection and Economic Growth in Countries at Different levels of Development' (2012) 1/4 Research Policy 358, available at: <http://www.sciencedirect.com/science/article/pii/S0048733311001715> (accessed 2 June 2012). See also, N Kumar, 'Technology and Economic development: Experiences of Asian Countries' (2002) Commission of Intel-

haps even more importantly, some commentators in a most recent study who focused on East Asian countries have strongly argued that different types of IP rights may be more appropriate for countries at different stages of economic development, rather than different levels of strength of IP rights.[21]

In view of the above, this research investigates whether from a legal policy perspective it is desirable for Sri Lanka to foresee a specifically designed STP regime such as a UM or a petty patent system, in addition to the existing patent regime. It also examines whether such a system may be able to offer a solution to the problem of lack of incentives for incremental innovation and to the perceived protection gap without introducing undue costs. Thus, the underlying thesis of this study is that an STP regime, which is based on the legislative examples of other jurisdictions, would provide an efficient and locally accessible incentive system for innovation of SMEs in developing economies such as in Sri Lanka if it is properly tailored to suit the innovation landscape of the country with a mechanism to address the potential abuses.

1.1.1. Objectives

The primary aim of this research is to analyse, taking into account the specific characteristics of innovation landscape of the country, the adequacy of the existing IP paradigm to accommodate minor and incremental innovations and to establish whether Sri Lanka needs an STP regime to promote such innovations in the country. The study also investigates whether an STP system would be more suitable for SMEs as an important supplement to the existing IPRs. This research also aims to find out whether and

---

lectual Property Rights- Study Paper 1b, 4-5, available at: <http://www.twnside.org.sg/title2/FTAs/Intellectual_Property/IP_and_Development/IPR_Technologyand EconomicDevelopment-Nagesh_Kumar.pdf> (accessed 10 January 2011). See generally, KE Maskus and C McDaniel, 'Impacts of the Japanese Patent System on Productivity Growth' (1999) 11/4 Japan and the World Economy 557, available at: <http://www.sciencedirect.com/science/article/pii/S0922142599000122> (accessed 10 January 2011).

21 YK Kim and others, 'Appropriate Intellectual Property Protection and Economic Growth in Countries at Different levels of Development' (2012) 1/4 Research Policy 358, available at: <http://www.sciencedirect.com/science/article/pii/S0048733311001715> (accessed 2 June 2012).

to what extent such a protection helps unleash the innovative potentials of grassroots innovators, especially the traditional knowledge (hereinafter 'TK') based or inspired innovations. Furthermore, it examines and recommends whether such regimes are warranted for other selected South Asian countries in order to further enhance economic and technological progress.

1.1.2. Research Problem

Even though the emerging markets in the East and the South East Asian region appear to have been continuously and effectively benefited from an STP designed to protect minor and incremental innovations,[22] Sri Lanka and other leading South Asian countries have been a notable exception to such regimes, arguably, in spite of the growing importance of creeping and incremental innovations in the technological progress of a developing country. It is of course difficult, if not impossible, to imagine the reason why there is no protection for innovations falling below the threshold required by patent law in view of the fact that a large part of innovations in the region tends to be based on improvements or derived from traditional knowledge and are often subpatentable. It is often claimed that minor and incremental innovations in developing countries are mostly created by individual innovators and SMEs.

1.1.3. Hypothesis and Research Questions

There is a general perception that, in the innovation landscape of South Asia, there is a protection gap in the existing patent laws and IP policies.[23] Apparently, the South Asian region has time and again failed to address

22 Ibid.

23 See generally, AK Gupta, 'Rewarding Traditional Knowledge and Contemporary Grassroots Creativity: The Role of Intellectual Property Protection' (Centre of International Development, Harvard University 2000), available at: <http://www.hks.harvard.edu/sustsci/ists/TWAS_0202/gupta_0500.pdf> (accessed 15 May 2012). See also, N Kumar, 'Technology and Economic development: Experiences of Asian Countries' (2002) Commission of Intellectual Property Rights- Study Paper 1b, 4-5, available at: <http://www.twnside.org.sg/title2/FTAs/Intellectual_Property/IP_and_Development/IPR_TechnologyandEconomicDevelopment-Nagesh_Kumar.pdf> (accessed 10 January 2011).

the issue of improvement innovations and falls short in providing them with an adequate protection mechanism.[24] Many innovations in developing countries such as in Sri Lanka, Pakistan, and of course with some exception in India, do not reach the high level of threshold that is required to secure protection under patent law. The high requirements for patent protection in these countries correspond to the international standards as required by Multinational Agreements. Thus, existing patent and other IP regimes do not adequately protect and incentivise incremental and minor innovations in Sri Lanka and in other South Asian countries and an introduction of an STP regime designed to protect such innovations would have a positive impact on innovations. Moreover, individual innovators and SMEs are more likely to benefit from such a regime.

The following research questions guide the study. First and foremost: what is the applicability of the existing patent system as an appropriate mechanism for the protection of minor and incremental innovations? Should such innovations be left unprotected? Secondly, is there any better way than patent to encourage such innovations? Can the design law successfully fill in the protection gap created by patent law? Would the existing Unfair Competition Law regime as a fallback protection provide an adequate protection for such innovations? Thirdly, is there a need to seek an alternative means of protection found in STP regimes or utility models and what are the lessons that can be learnt from other developed and developing countries? Then, is there a need for Sri Lanka to introduce an STP regime which will provide for minor and incremental innovations which fail to reach the requisite level of inventiveness under the existing patent system?[25] If there is such a need, which has not previously been fulfilled by the use of other forms of protection, can this newly created right be able to fill the protection gap? Is it possible to provide a distinctive rationale for justifying the adoption of such a second-tier protection regime?[26] What would be the implications of adopting such a regime? Would it be more appropriate in application for minor and incremental innovations which are mostly created by small and medium sized firms?

---

24 MD Nair, 'A Case for Grant of 'Petty Patents' *The Hindu* (New Delhi, 10 May 2001), available at: <http://hindu.com/2001/05/10/stories/0610000h.htm> (accessed 15 January 2010).

25 M Llewelyn, Utility Models/Second Tier Protection: A Report on the Proposals of the European Commission (1996) The Intellectual Property Institute 4.

26 Ibid.

Can large enterprises also benefit from this system? Would such a regime be more suited than any other type of IP for protecting TK-inspired innovations? Next, have other countries in the South Asian region felt the need for this form of protection and can they find valid reasons for supporting and adopting such a right? Why is it necessary to have such a drastic departure from the traditional patent threshold for these countries? Should such policy changes be applicable across the South Asian region or should it be addressed at a national level rather than regional level? Finally, what policy options can be recommended for consideration by policymakers in the South Asian countries?

1.1.4. Research Methodology

This research takes the form of a Hypothesis-Testing (Experimentation) Research. It was carried out primarily as a library-based research. In so doing, primary and secondary sources are used extensively. The primary sources consist of relevant Legislative Instruments and Case Law, while secondary sources include various documents such as Text Books, Research Articles, Journals and Annual Reports, and Statistical Data relating to the topic. Field research methodology was also used to ascertain evidence, in particular, from Sri Lanka. Visits and personal interviews of various organizations such as the Judiciary, IP offices, Law firms/IP attorneys, Companies/Industries and other business entities were conducted. Moreover, legal research and analysis concerning international legal framework and comparative legal analysis of STP regimes in selected jurisdictions have been carried out with support of the empirical research and analysis. Last but not least, interpretation methodology was also employed in order to enrich the arguments in the thesis.

1.1.5. How does this Research contribute to the Legal Science?

Limited academic attention has been paid to examine the issue of subpatentable innovations, which remains by and large an unexplored territory of IP law landscape in the South Asian region. Not surprisingly, there is an acute dearth of relevant and helpful scholarly investigations on the protection of incremental and minor innovations which is almost non-existent in Sri Lanka. This research aims at an in-depth understanding of the

usefulness and appropriateness of an STP regime in relation to Sri Lanka. To that extent, this doctoral thesis attempts to fill this gap by contributing towards designing a new legal framework for Sri Lanka which may be used as a model across South Asian countries. It will therefore contribute to advance the legal science in the South Asian region**.**

1.1.6. Limitations

The obvious challenge we face in this research is that there is no experience of a domestic second-tier protection system either in Sri Lanka or any other country in the region. Due to time and space constraints, this study was mainly confined to the Sri Lankan legal landscape. Nevertheless, it has an insight into the recent initiatives undertaken by two leading jurisdictions in the South Asian region, namely, India and Pakistan, to explore the possibility of adopting a UM regime. Nevertheless, perspectives of the other countries in the region were taken into consideration when common policy options are discussed depending on available resources, time and space for this study. Two jurisdictions each from the developed and emerging market countries, along with another developing country are selected for the purposes of comparative analysis.

1.2. Preliminary Thoughts and Definitions

1.2.1. Invention and Innovation

Ideas change the world, innovations shape our lives and improve our quality of life.[27] Innovation is not a new phenomenon. Arguably, it is as old as mankind itself.[28] There seems to be something inherently 'human' about the tendency to think about new and better ways of doing things and try them out in practice. An important distinction is normally made between invention and innovation.[29] Although the term 'innovation' is broadly

27 M Elmslie and S Portman, *Intellectual Property: The Lifeblood of Your Company* (Chandos Publishing Oxford 2006) 1.

28 J Fagerberg, DC Mowery and RR Nelson (eds), *The Oxford Handbook on Innovation* (Oxford University Press 2005) 1-4.

29 Ibid.

used, it is still without consistent definition across relevant disciplines. From a general perspective, innovation refers to the creation of better or more effective products, processes or technologies that are accepted by markets and societies.[30] As interpreted from a linguistic point of view, the term 'innovation' stems from the Latin word *innovare*, meaning to renew, alter, to make new or to introduce as new or change.[31] On the other hand, the term invention stems from Latin *invenire* which emphasizes 'original' rather than renewal or alteration.[32] Even though both terms involve an element of 'newness', there is a distinction between the originality of invention and the renewal of innovation.[33] Whereas the word 'innovation' is not a legal term, invention is legally defined. Therefore, the word invention is more associated with patent law terminology.

The economic literature on innovation has greatly been influenced by the theories of Joseph Schumpeter.[34] He argued that economic development is driven by innovation through a dynamic process in which new technologies replace the old; a process he labeled 'creative destruction'. In Schumpeter's view, 'radical' innovations create major disruptive changes, whereas 'incremental' innovations continuously advance the process of change. Schumpeter proposed a list of five types of innovations; (i) introduction of new products; (ii) introduction of new methods of production; (iii) opening of new markets; (iv) development of new sources of supply for raw materials or other inputs; (v) creation of new market structures in an industry.[35] Furthermore, Michael Porter has also attempted to define innovation from an economic perspective. According to him innovation is defined as "a new way of doing things (termed invention by some authors) that is commercialized".[36] Although there is no uniquely accepted definition, innovation is often defined as the conversion of knowledge into new

30 P Frankelius, 'Questioning Two Myths in Innovation Literature' (2009) 20/1 The Journal of High Technology Management Research, 40, 41.

31 Y Lee and M Langley, 'Invention and Innovation' (2004) August, The CIPA Journal 464.

32 Ibid.

33 Ibid.

34 OECD/Eurostat, *OSLO MANUAL: Guidelines for Using and Interpreting Innovation Data* (3rd edn, The Measurement of Scientific and Technological Activities, OECD Publishing 2005) 29.

35 J Schumpeter, *The Theory of Economic Development* (Harvard University Press 1934) 66.

36 ME Porter, *The Competitive Advantage of Nations* (Free Press 1990) 780.

commercialized technologies, products and processes, and how these are brought to the market.[37] According to OECD's Oslo Manual (2005), there are four types of innovations: product innovation, process innovation, organizational innovation and marketing innovation. For this analysis, product and process innovations warrant discussion. A product innovation is the introduction of a good or service that is new or significantly improved with respect to its characteristics or intended uses.[38] This includes significant improvements in technical specifications, components and materials, incorporated software, user friendliness or other functional characteristics. For example, replacing inputs with materials with improved characteristics (environmentally friendly plastics) or products with significantly reduced energy consumption (energy efficient stoves) and food products with new functional characteristics (margarine that reduces blood cholesterol levels).[39] A process innovation, on the other hand, is the implementation of a new or significantly improved production or delivery method. This includes significant changes in techniques and equipment, installation of new or improved manufacturing technology, such as automation equipment.[40]

Another aspect of innovation that merits discussion is the difference between radical and incremental innovations. Of course, radical innovations are technological breakthroughs that push the boundaries of global technology frontiers, for instance, the invention of the electric light. This kind of innovation can be considered an 'out-of-the-blue' solution to the problems existing in the field of technology which can create a far-reaching impact on our lives. Incremental innovations, on the other hand, take place in industries which continuously innovate to create products, which displace their own products with the fear that otherwise their competitors will do it for them.[41] In comparison, an incremental innovation is more concerned with improvements on an existing product or service, whereas a

37 WIPO, World Intellectual Property Report: The Changing Face of Innovation (2011) WIPO 23.

38 OECD/Eurostat, *OSLO MANUAL: Guidelines for Using and Interpreting Innovation Data* (3rd edn, The Measurement of Scientific and Technological Activities, OECD Publishing 2005) 151.

39 Ibid.

40 Ibid.

41 RA Mashelkar, 'An Eminent Scientist's new Road-map for India' (GoodNewsIndia, November 2000), available at: <http://www.goodnewsindia.com/Pages/content/inspirational/mashelkar.html> (accessed 30 January 2011).

radical innovation is an entirely new product, service or process. Besides, the development and life of an incremental innovation is much more 'predictable' than that of a radical innovation, and it will potentially generate less return and less benefits.[42]

At a very basic level, innovation is all about the practical application of creative ideas to the point it generates value to an organisation.[43] Innovation is key to the production as well as the processing of knowledge. A nation's ability to convert knowledge into wealth and social good through the process of innovation will determine its future.[44] Of course, the ultimate cause of all innovation is human creativity. But innovation does not occur in a vacuum; it requires a workable structure of incentives and institutions.[45] Furthermore, normally when we consider innovation, we refer to only formal systems of innovation; namely that is done in universities, industrial R&D laboratories, etc. Often not recognised is the technology innovation that takes place in an informal system of innovation, be it by artisans, farmers, tribes or other grassroots innovators. Such innovations are also taken into consideration as 'innovations' for purposes of this research.[46]

For the sake of clarity, it is worth drawing a clear distinction between the terms 'invention' and 'innovation'. According to the general understanding, "'invention' is a specific patent law concept and 'innovation' is a broader economic term, encompassing incremental improvements".[47] Obviously, the 'one-size-fits-all' conventional patent system leaves an un-

---

42 UN-ESCAP, Managing Innovation in a Knowledge Economy: A Guidebook for SMEs in Asia and the Pacific (ESCAP 2010) 3.

43 A Dharmasiri, 'The Triple 'I' for Transformation', *Daily FT* (Colombo 20 June 2011), available at: <http://www.ft.lk/2011/06/20/the-triple-%E2%80%98i%E2%80%99s-for-transformation/> (accessed 2 August 2011).

44 RA Mashelkar, 'Intellectual Property Rights and the Third World' (2001) October – 18/8 Current Science 955, 955 available at: <http://www.sristi.org/material/1.2intellectual%20property%20and%20the%20third%20world.pdf> (accessed 30 January 2011).

45 Business and Industry Advisory Committee (BIAC) to OECD, Discussion Paper on 'Creativity, Innovation and Economic Growth in the 21st Century: An Affirmative Case for Intellectual property Rights (BIAC Paris, December 2003) 3.

46 RA Mashelkar, 'Intellectual Property Rights and the Third World' (2001) 18/8 Current Science 955, 956.

47 KF Jorda, Utility Models: The Penacea for our Broken Patent System – Newsletter (Germeshausen Center 2007) 4, available at: <http://www.ipo.org/wp-content/uploads/2013/03/utilitymodels.pdf> (accessed 30 March 2013).

protected class of inventions of a lesser scope, which could not fulfil higher patentability criteria. Such inventions can well be described as 'innovations'. For purposes of this study, I shall therefore use the word 'innovation' to mean minor and incremental technical advances which represent improvements over prior art but with a lower level of inventiveness.

1.2.2. Second-Tier Protection

Even though second-tier protection has been considered a backwater of intellectual property, worldwide interest in such regimes appears to be substantial.[48] More than sixty countries currently offer second-tier patent protection, including key patenting jurisdictions such as Germany, Japan and China.[49] Generally, a second-tier protection (STP) system compliments a patent system to offer a more accessible form of protection for a shorter term, usually characterized by less stringent patentability requirements.[50] Given its origin in the late nineteenth century and the time-tested continuous existence, one can argue that the STP is neither new nor radical.[51] Such a system combines traditional IP protection with a 'lower tier' of previously largely unprotected or loosely protected subject-matter. In other words, a protection system consists of a top tier with a standard form of patent and a lower tier protection with a utility model or petty patent system.[52] In essence, this type of two-layered protection system is used in many regions of the world to provide an additional strategy in which access to the patent system can be enhanced by the expansion (or, in some cases, the creation) of an entirely separate regime of rights.[53]

---

48 MD Janis, 'Second Tier Patent Protection' (1999) 40/1 Harvard Law Journal 151, 152.

49 Ibid.

50 PA Cummings, 'From Germany to Australia: Opportunities for a Second Tier Patent System in the United States' (2010) 18/2 Michigan State Journal of International Law 300.

51 M Crinson, 'Is Some Novel Protection of Invention Needed in Canada' (1998) 12 Intellectual Property Journal 26.

52 A Kur, 'Two Tiered Protection-Designs and Databases as Legislative-Models?' in A Ohly (ed), *Common Principles of European Intellectual Property Law* (Mohr Siebeck, 2012) 99.

53 MD Janis, 'Second Tier Patent Protection' (1999) 40/1 Harvard Law Journal 151, 151.

Perhaps more encouragingly, the experience of different countries, especially those who have lived with STP regimes lend credibility for other countries to experiment with this supplementary protection system to provide a relatively quick, inexpensive, easy to obtain and simple protection mechanism for minor technical advances. Moreover, it is a lesser form of protection for low-level innovations which otherwise fall through the protection net of patent law. The most important advantage of this system is that it can be tailored to suit specific needs and circumstances of each country. While some regimes follow the classic utility model, others can be considered as modern second-tier regimes such as the innovation patent system in Australia that vary from the classic utility model, as exemplified by the original German *Gebrauchsmuster* regime. "Modern second-tier patent regimes are not easily represented by a singular example [single model]".[54] Most notably, neither Sri Lanka nor any other South Asian jurisdiction currently provides any form of STP for subpatentable innovations. Arguably, it may be high time for these countries to experiment with a two-track protection system with one dedicated to conventional patents and the other specifically attuned to incentivise small incremental innovations of SMEs.

For purposes of this study, the term 'second-tier protection regime' is used as a generic label encompassing utility models, petty patents, and other modern regimes such as innovation patents (Australia) or utility innovation (Malaysia) that are comparable to a utility model regime in most respects. For practical purposes, the terms second-tier protection, utility models and petty patents are treated as synonymous in this study. As a general matter, a 'second-tier protection' (STP), refers to a system that provides short-term protection for minor or incremental innovations with varying novelty standards (global, relative or local novelty depending on the jurisdiction) and with a lower level of inventiveness or without any requirement of showing an inventive step, and for which rights are granted without a substantive examination but after merely a check of formalities.

54 K Osenga, 'Entrance Ramps, Tolls, and Express Lanes-Proposals for Decreasing Traffic Congestion in the Patent Office' (2005) 33 Florida State University Law Review 119, 151.

1.2.3. A Developing Country

When it comes to dealing with the classification of countries based on their economic and social achievement, there is a plethora of indicators that have been adopted by different international organisations. As a result, currently, different standards determine whether a country is regarded as 'developing'. The United Nations agencies, the World Bank, the International Monetary Fund (IMF) use relatively different yardsticks in making this determination.[55] According to commentators, there is no generally accepted criterion (either grounded in theory or based on an objective benchmark) for classifying countries according to their level of development. "Classical economists were mostly preoccupied with what is now termed economic development in the sense of sustained increases in per capita real income, and neoclassical economists paid scant attention to the issue altogether".[56] Against this backdrop, the Preamble of the TRIPS Agreement particularly addresses least-developed countries. They comprise some 50 countries as defined by United Nations Economic and Social Council (ECOSOC) Development Committee on the basis of low income per capita under USD 750 to USD 900, weak human assets, measured by a composite Human Assets Index and Economic Vulnerability Index.[57] Most recently, in its country classification, the World Economic Outlook Report 2012 of the IMF has divided the world into three major groups: advanced economies (examples, Germany, Japan) and emerging (examples, Korea, China) and developing economies (examples, India, Thailand).[58]

Moreover, for analytical purposes, the World Bank classifies economies in the world into four groups namely low-income (USD 1,005 or less) lower middle-income (USD 1,006 to USD 3,975) upper middle-income

---

55 S Ragavan, 'Can't We All Get Along? The Case for a Workable Patent Model' (2003) 35 Arizona State Law Journal 117, 124.

56 L Nielsen, 'Classifications of Countries Based on Their Level of Development: How it is Done and How it could be Done' (2011) IMF Working Paper No. 11/31, 3-5.

57 T Cottier and P Véron, Concise International and European IP Law: TRIPS, Paris Convention, European Enforcement and Transfer of Technology (Kluwer Law 2008) 9.

58 IMF, *World Economic Outlook Report* (Washington, April 2012) 177-178, available at: <http://www.imf.org/external/pubs/ft/weo/2012/01/pdf/statapp.pdf> (accessed 10 June 2012).

(USD 3,976 to USD 12,275) and high-income (USD 12,276 or more), based on their gross national income (GNI) per capita.[59] Importantly, under this classification, low and middle income economies are commonly referred to as 'developing economies'.[60] Most strikingly, based on the above benchmarking, all eight countries in the South Asian region can be categorized as 'developing nations'. A closer look at World Bank statistics further reveals that only one country (Maldives) in the region belongs to upper-middle-income economies, while India, Sri Lanka, Pakistan and Bhutan belong to Lower-Middle-Income economies; and all the other countries, namely, Afghanistan, Bangladesh and Nepal are in the group of low-income economies. In essence, no country in the South Asian region has achieved the status of a 'developed economy' although India has in recent years become an emerging economic powerhouse in the global economic arena with a high GDP growth. For purposes of his paper, I shall utilize the same World Bank classification of a 'developing country' which is more acceptable than the other indicators as it has been relied on by IP specialized agencies such as the WIPO.[61]

1.2.4. SMEs

Small and medium-sized enterprises, better known as SMEs, are a very heterogeneous group of enterprises engaged in business activities across a large spectrum of sectors such as agriculture, manufacturing, construction, trade and services.[62] The SME sector is well recognised for its contribution to employment, innovation and economic dynamism and is consid-

---

59 World Bank, *World Development Indicators* (World Bank, 2012), available at: <http://data.worldbank.org/sites/default/files/wdi-2012-ebook.pdf> (accessed 30 June 2012). See also, World Bank, *Changes in Country Classification* (World Bank, 2011), available at: <http://data.worldbank.org/news/2010-GNI-income-classifications> (accessed 30 June 2012).

60 World Bank, *Changes in Country Classification* (2011) <http://data.worldbank.org/news/2010-GNI-income-classifications> (accessed 30 June 2012).

61 WIPO, World Intellectual Property Report: The Changing Face of Innovation (2011) WIPO 5.

62 AL Somaratne, 'Access to Finance by SMEs in Sri Lanka' *The Island* (Colombo, 13 August 2012), available at: <http://www.island.lk/index.php?page_cat=article-details&page=article-details&code_title=59129> (accessed 14 August 2012).

ered as an engine of growth and an essential part of a healthy economy.[63] SMEs are considered to be the backbone of a country and the 'real economy' in terms of economic contribution. This sector plays a very important role in both developed and developing countries.[64] Undoubtedly, the South Asian region is no exception to this reality. Generally speaking, SMEs represent 90 percent of all business operations in many of South Asian Countries. In Sri Lanka, SMEs account for more than 75 percent of the total number of enterprises, provide 45 percent of the employment and contribute to 52 percent of the Gross Domestic Production (GDP).[65]

There is no internationally accepted definition of SMEs. The definition of SMEs varies from country to country due to the diverse nature of economies and also due to the difference in the level of economic development of those economies.[66] Many countries and multilateral development agencies have their own definitions. The definition of SMEs is generally based on one of three criteria namely the annual turnover of the enterprise, number of workers employed or value of assets (investment).[67] For instance, the European definition is based mainly on the number of people employed; accordingly a business that employs fewer than 250 persons is classified as medium-sized, while a business that employs fewer than 50 persons is classified as small, and a business with fewer than 10 employees is considered a micro-sized enterprise.[68] Similarly, "the UK

63 SI Wickremasinghe, 'The Status of SMEs in Sri Lanka and Promotion of Their Innovation Output Through Networking of S&T Institutions' (2011) July-August, Tech Monitor 11, 11, available at: <http://www.techmonitor.net/tm/images/1/1d/11jul_aug_sf1.pdf> (accessed 30 June 2012).

64 AS Gamage, 'Small and Medium Enterprise Development in Sri Lanka: A Review.' Meijo University, Faculty of Business Management, Nagoya, Japan. 133-134, 149, available at: <http://202.11.2.113/SEBM/ronso/no3_4/aruna.pdf> or <http://wwwbiz.meijo-u.ac.jp/SEBM/ronso/no3_4/aruna.pdf (2003)> (accessed 25 January 2012).

65 Ministry of Traditional Industries and Small Enterprise Development & Department of Development Finance of the Ministry of Finance and Planning, *National Policy Framework for Small Medium Enterprise (SME) Development* (Draft SME Policy Framework 2014) 1.

66 AL Somaratne, 'Access to Finance by SMEs in Sri Lanka' *The Island* (Colombo, 13 August 2012), available at: <http://www.island.lk/index.php?page_cat=article-details&page=article-details&code_title=59129> (accessed 14 August 2012).

67 Ibid.

68 European Commission, 'Commission Recommendation concerning the definition of micro, small and medium-sized enterprises' 2003/361/EC of 6 March 2003. Article 2 of the Recommendation states that the category of micro, small and medi-

definition is based on turnover and the US definition is based both on number of employees as well as turnover".[69] Furthermore, "in China the categorization is between the sectors based on number of employees and turnover".[70] The Indian definition is based only on the basis of investment in plant and machinery.[71] In Sri Lanka, there is no clear definition for SMEs and different government institutions use different criteria.[72] The Task Force that prepared the White Paper of the government in 2002 had agreed upon the concept of (a) small scale enterprises, as those with asset values not exceeding Sri Lankan Rupees (SLRs) 20 million and (b) medium-scale enterprises, as those with asset values not exceeding SLRs. 50 million, excluding land and buildings.[73] The Department of Small and Medium Industries defines SMEs as those with a capital investment of less than SLRs. 5 million, and that employ less than 50 persons.[74] However, as per the practice adopted by the Department of Census and Statistics in compiling data relating to the industrial sector, the small-sized establishments are those enterprises that employ between 5 and 29 people, medium 30 and 149 people and large 150 or more.[75] Furthermore, according to the SME Policy Framework (Draft) of 2014, the category of small and medium sized enterprises is made up of enterprises which employ less than 300 employees and which have an annual turnover not exceeding

---

um-sized enterprises (SMEs) is made up of enterprises which employ fewer than 250 persons and which have an annual turnover not exceeding 50 million Euro, and/or an annual balance sheet total not exceeding 43 million Euro.

69 KD Raju, 'Small and Medium Enterprises (SMEs): Past, Present and Future in India' (2008) PHDCCI Working Paper 1-16, available at: <http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1080505> (accessed 3 March 2013).

70 Ibid.

71 Ibid.

72 AS Gamage, 'Small and Medium Enterprise Development in Sri Lanka: A Review.' Meijo University, Faculty of Business Management, Nagoya, Japan. 134, available at: <http://202.11.2.113/SEBM/ronso/no3_4/aruna.pdf> or <http://wwwbiz.meijo-u.ac.jp/SEBM/ronso/no3_4/aruna.pdf (2003)> (accessed 25 January 2012).

73 SI Wickremasinghe, 'The Status of SMEs in Sri Lanka and Promotion of Their Innovation Output Through Networking of S&T Institutions' (2011) July-August, Tech Monitor 11, 12-13, available at: <http://www.techmonitor.net/tm/images/1/1d/11jul_aug_sf1.pdf> (accessed 30 June 2012).

74 Ibid.

75 Ibid.

SLRs. 900 million.[76] For want of a working definition, arguably, the number of employees and annual turnover seem more reasonable and appropriate.

Indeed, SMEs play a strategic role in relation to innovation and rapid response to market requirements.[77] Unfortunately, however, SMEs in developing countries face several challenges such as lack of access to finance, low R&D investment, technological backwardness, low production efficiency and quality of products due to lack of innovation etc.[78] Most notably, despite the growing importance, SMEs remain in technological backwaters for decades resulting in untapped and under-maximised potential. When it comes to IP, according to a recent survey conducted by the UK government, SMEs and micro-enterprises, which form the cradle of IP, are unaware of the IP system.[79] Moreover, a recent study of WIPO has revealed that, in many sectors, innovation by SMEs mainly consists in minor adaptations to existing products, innovation in designs, mode of service delivery or management and marketing practices.[80] Perhaps even

---

76 Ministry of Traditional Industries and Small Enterprise Development & Department of Development Finance of the Ministry of Finance and Planning, *National Policy Framework for Small Medium Enterprise (SME) Development* (Draft SME Policy Framework 2014) 3. Under this Policy Framework, the category of Micro Enterprises is made up of enterprises which employ 1-10 employees and which have an annual turnover SLRs. 1-15 million. Similarly, Small Enterprises are those employ 11-50 employees and which have an annual turnover SLRs. 16-250 million. The category of Medium Enterprises is made up of enterprises which employ 51-300 employees and which have an annual turnover not exceeding SLRs. 900 million.

77 European Commission, 'The amended proposal for a Directive approximating the legal arrangements for the protection of inventions by utility model' COM (1999)309 final, recital 5.

78 See also, SI Wickremasinghe, 'The Status of SMEs in Sri Lanka and Promotion of Their Innovation Output Through Networking of S&T Institutions' (2011) July-August, Tech Monitor 11, 11, available at: <http://www.techmonitor.net/tm/images/1/1d/11jul_aug_sf1.pdf> (accessed 30 June 2012).

79 R Pitkethly, 'The UK Intellectual Property Awareness Survey-(2006)' Intellectual Property Office of the UK, 9, available at: <http://www.ipo.gov.uk/ipsurvey.pdf> (accessed 20 June 2012).

80 WIPO, 'Intellectual Property (IP) Rights and Innovation in Small and Medium-sized Enterprises' (2004) WIPO Working Paper August 10/2004, 5-6, available at: <http://www.wipo.int/export/sites/www/sme/en/documents/pdf/iprs_innovation.pdf> (accessed 10 June 2011).

more importantly, the cost of IP protection erects access barriers for SMEs hindering efficiency and minimum utilization.

For purposes of this research, given that there is no generally accepted international or national definition for SME, the basis on which SMEs are defined depends on the stage of economic development of the country and the broad policy purposes for which the definition is used.[81] In this study, the term 'SME' is used in the sense that prevails in the given jurisdiction as the basis for this analysis. Such an open approach is required to avoid unnecessary confusion.

1.3. Sri Lankan Innovation Landscape

Sri Lanka, formerly known as Ceylon, is an island nation lying off the Southern tip of India. Because of its geographical location it was also known as the 'Pearl of the Indian Ocean'. Sri Lanka is a tropical island home to just over 20 million people.[82] It is a nation with a rich cultural heritage and a written history of over 2,500 years.[83] Sri Lanka was partly ruled by Portuguese and Dutch since 1505 and 1656 respectively. The coastal area of the island fell into the hands of British in 1796. Sri Lanka gained independence from the Great Britain in 1948. It is currently a member of the Commonwealth of Nations as well as the South Asian Association for Regional Cooperation (hereinafter 'SAARC'). Since independence Sri Lanka has achieved considerable progress in the socio-economic field in spite of a three-decades-long civil war which ended in 2009. Interestingly, this tiny island nation has pioneered South Asia's economic liberalization in 1977. In hindsight though, the country has not been able to reach its full potential in terms of economic development.

---

81 SI Wickremasinghe, 'The Status of SMEs in Sri Lanka and Promotion of Their Innovation Output Through Networking of S&T Institutions' (2011) July-August, Tech Monitor 11, 12, available at: <http://www.techmonitor.net/tm/images/1/1d/11jul_aug_sf1.pdf > (accessed 30 June 2012).

82 According to the latest statistics issued in March 2012 by Department of Census and Statistics of Sri Lanka, the country has recorded a total population of 20,277,597.

83 Fox News, 'Sri Lanka, Rising Star of Asian Economy' *The Island* (Colombo, 26 February 2011), available at: <http://pdfs.island.lk/2011/02/26/p2.pdf> (accessed 20 January 2012).

Sri Lanka's legal system has been influenced by several European legal traditions during its development. Nowadays, Sri Lanka's legal system is a rich mix of native laws and two European legal traditions, Roman-Dutch Law and English Law.[84] British laws were introduced to the country through legislation and judicial decisions. One area of the law which was greatly influenced by English law was the commercial law of the country and which is the reason why it has largely inherited IP laws from the UK. With the advent of new technologies and globalization, Sri Lanka has tried to keep up with development and adopted its IP regime to suit the new innovation climate. It has modernized its IP regime in line with TRIPS obligation with the introduction of the new IP Act which came into force in 2003.

On the demographic landscape, as in most parts of the South Asia, Sri Lanka too, has a majority portion of its population living in rural areas which is estimated to be nearly 80 percent of the country's total population.[85] Most industries are located in rural areas the rural economy heavily depends on agriculture and small industries. The technological progress that the country has so far achieved is not at all satisfactory in view of most recent figures and indicators. As a fact, Sri Lanka has fallen far behind in terms of technology and innovation compared with its neighbors, as well as East Asian countries. As pointed out by many, the innovation performance of the country is far from satisfactory. From a policy perspective, many factors influence the innovation landscape of a country, including education policies, a country's technological absorptive capacity, its general institutional base to promote domestic research and development (R&D), and legal and economic incentives particularly in terms of adequate intellectual property and investment regimes.[86] Interestingly

84 A Cooray, 'Oriental and Occidental Laws in Harmonious Co-existence: The Case of Trusts in Sri Lanka' (2008) May 12/1 Electronic Journal of Comparative Law 1,1, available at: <http://www.ejcl.org/121/art121-5.pdf> (accessed 20 January 2012).

85 AS Gamage, 'Small and Medium Enterprise Development in Sri Lanka: A Review.' Meijo University, Faculty of Business Management, Nagoya, Japan. 134, available at: <http://202.11.2.113/SEBM/ronso/no3_4/aruna.pdf> or <http://wwwbiz.meijo-u.ac.jp/SEBM/ronso/no3_4/aruna. pdf (2003)> (accessed 25 January 2012).

86 U Suthersanen, 'Utility Models and Innovation in Developing Countries' (2006) UNCTAD-ICTSD Issue Paper No. 13 Project on IPRs and Sustainable Development, Foreword provided by R Meléndez-Ortiz and S Panitchpakdi vii-viii, avail-

though, the principal argument favoring the introduction of an STP system is based on the specific characteristics of the innovation landscape of Sri Lanka.

1.3.1. Specific Characteristics of the Sri Lankan Innovation Landscape

As observed by commentators, there seems to be a shortage of home-grown creativity in Sri Lanka.[87] As interpreted through the lens of global innovation indicators, the country's performance is not encouraging. Sri Lanka stands in the 94th position out of 141 in the Global Innovation Index 2012.[88] Most notably, Sri Lanka has been sliding in the index from the 82nd position in 2011 and the 79th position in 2010. Moreover, in the Global Competitiveness Index,[89] the Sri Lankan economy was ranked 68th out of 144 countries. According to both innovation measurements, the country lags behind in realizing its innovation potentials. These international benchmarks offer useful insights into the areas in which more improvement is needed, and of the top of this is undoubtedly innovation.

Another striking feature of the Sri Lankan innovation landscape is the large presence of the SME sector. The most frequent type of innovation activity of SMEs is generally characterized by minor or incremental changes, together with innovative applications of existing products or processes.[90] They are technically less complex (easy to copy simple products) and quite often have a short commercial life. Moreover, both large and small industries more often than not use less advanced technology. This might be one of the reasons for a large number of minor and incremental

---

able at: <http://unctad.org/en/docs/iteipc20066_en.pdf> (accessed 15 March 2012).

87 D Llewelyn, Invisible Gold in Asia: Creating Wealth through Intellectual Property (Marshall Cavendish 2010) 241.

88 WIPO, 'Global Innovation Index 2012' (2012) WIPO & INSEAD, available at: <http://www.globalinnovationindex.org/gii/main/fullreport/index.html> (accessed 30 August 2012).

89 K Schwab (ed), 'The Global Competitiveness Report' (2012-2013) World Economic Forum- Insight Report, available at: <http://reports.weforum.org/global-competitiveness-report-2012-2013/> (accessed 10 November 2012).

90 See OECD/Eurostat, *OSLO MANUAL: Guidelines for Using and Interpreting Innovation Data* (3rd edn, The Measurement of Scientific and Technological Activities, OECD Publishing 2005) 138.

technical advances to have a lower level of inventiveness. The country is still in the initial stage of the technological ladder and the industrial sector in general and SME sector in particular has suffered over years due to marginal technological capability.

Even though Sri Lanka is a country well-endowed with natural and remarkable human resources (with a high literacy rate of 92 percent), the country is an exporter of low-value added products and raw materials. According to recent statistics, Sri Lanka's export consists only of 2 percent of high-tech products. This high concentration on low-tech products is evidenced by 43 percent export of garments, 16 percent Tea, 5 percent of rubber products and 3 percent of food and beverages.[91] Looking analytically into industrial geography, the country has, by and large, remained in the stage of value adding rather than value creation.

Sri Lankan is a heavy IP importing country as opposed to IP exporting countries in East Asia such as Japan, South Korea, China and Malaysia, though the country has significantly been transformed from an agrarian economy to a low-industry based economy. Last but not the least, traditional knowledge-based innovation and grassroots innovations have also occupied a significant place in the innovation landscape of the country. Viewed from a comparative perspective of other emerging economies in the Asian region, one can reasonably conclude that the Sri Lankan industrial sector is less innovative, weak and far less satisfactory. An STP may be viewed as a step towards addressing above issues.

1.3.2. The Statistical Story

As adopted by global benchmarks of innovation such as OECD's Oslo Manual,[92] "the number of patent applications filed per year is a good metric of measuring the innovation potential of a country".[93] And it is consid-

---

91 See Ministry of Finance and Planning, *The Emerging Wonder of Asia: Mahinda Chintana Vision for the Future* (2010) 69. These statistics are considered as of 2009.

92 See JWM van Leuven, 'Patent Statistics as Indicators for Innovation' (1996) November/December, Patent World 20, 20.

93 A Aggrawal and B Rawat, 'The Indian Patent System should grant Utility Model Patents' (2011) India Business Review, available at: <http://www.entrepreneurswebsite.com/2011/09/08/the-indian-patent-system-should-grant-utility-model-patents/?goback=%2Egde_3297732_member_69774577> (accessed 3 May 2012).

ered to be a proxy for innovation. Analysing the innovation landscape through the prism of patent statistics of well over a decade suggests that Sri Lanka is a patent granting country as opposed to a patent producing. This empirical evidence as such paints a picture of weak innovation character of the country. As is seen from the figures below, the poor patent filing is perhaps the single most indication of a shortage of home-grown creativity. In recent years, the patent applications filed remain dominated mostly by foreign patent applications.

Table 1.1: Industrial Property Statistics for Patents

Year	Resident Applications	Non Resident Applications	Total Applications	Resident Registrations	Non Resident Registrations	Total Registrations
1999	119	248	367	78	101	179
2000	71	250	321	59	169	228
2001	120	236	356	71	109	175
2002	123	202	325	59	54	113
2003	95	189	284	63	52	115
2004	120	195	315	103	85	188
2005	149	211	360	64	116	180
2006	153	270	423	68	69	137
2007	151	279	430	54	37	91
2008	209	241	450	89	70	159
2009	202	200	402	11	254	365
2010	225	235	220	220	284	504
2011	196	233	429	48	224	272
2012	328	188	516	71	165	236
2013	365	29	394	60	28	88

(Source: National Intellectual Property Office data)[94]

Empirical evidence from these statistics suggests that the gap between foreign patent and domestic ownership is widening yearly. It can also be observed that Sri Lanka has made relatively low level of use of the patent system. Therefore, the important question is, what are the factors that have contributed to this situation? There may be several possible reasons for this. One can of course argue that there have been insufficient patentable innovations and the lack of awareness from the part of individual innova-

94 NIPO, Statistics -National Intellectual Property Office of Sri Lanka (2012) Official website – National Intellectual Property Office of Sri Lanka, available at: <http://www.nipo.gov.lk/about.htm> (accessed 2 November 2012).

tors and firms as the key-factors for this scenario. It is argued that the local markets in developing countries like Sri Lanka tend to be small, sometimes as a result of a less-developed infrastructure, and this reduces the scope of the enterprise's actions and the relevance of actual innovations.[95]

On balance, the Sri Lankan situation is far from satisfactory when compared to the volumes of applications annually filed in other fast-developing countries in the South East Asian region such as Malaysia. A closer analysis of these statistics further reveals that the existing patent regimes have a marginal impact on domestic innovations. This does not, however, imply that Sri Lankan people are less innovative or creative. This can be further exemplified by a comparison of patent statistics between China and Europe. In China, more patents are granted than the European Patent Office. This does not necessarily mean that the Chinese are more innovative than Europeans. As mentioned before, there may be a problem of access to patent protection as a large part of innovation falls short of patent protection on one hand, and on the other hand due to high transaction costs which may be well beyond the means of SMEs making patent protection less attractive. In hindsight, it seems that the architects of IP legislation evidently have paid scant attention to this scenario. IP laws in the country have been shaped viewed through the lens of UK and US models. Thus, the current legislation does not go far enough to incentivise incremental or minor innovations.

One of other possible explanations, Sri Lanka being less innovative evident by low investment in the R&D.[96] According to available statistics it is not more than 0.17 percent (on average) of the GDP.[97] This is of course

---

95 See OECD/Eurostat, *OSLO MANUAL: Guidelines for Using and Interpreting Innovation Data* (3rd edn, The Measurement of Scientific and Technological Activities, OECD Publishing 2005) 137.

96 Ibid. The Oslo Manual notes that the R&D is defined by including the followings: (i) The firm can engage in basic and applied research to acquire new knowledge and direct research towards specific inventions or modifications of existing techniques. (ii) It can develop new product or process concepts or other new methods to assess whether they are feasible and viable, a stage which may involve: (ii-a) development and testing; and (ii-b) further research to modify designs or technical functions.

97 The total expenditure for R&D remains low at less than 0.2 percent of the GDP in Sri Lanka in comparison with nearly 4 percent of the GDP in South Korea and over 2 percent in Singapore. See SS Colombage, 'Sri Lanka is not yet ready for knowledge-driven economic growth' *Sunday Times* (Colombo, 20 July 2014), available at <http://www.sundaytimes.lk/140720/business-times/sri-lanka-not-yet-

grossly inadequate level of investment and is among the lowest in the region which stands at just 0.1 percent (2008) of GDP in Sri Lanka, as compared to 0.8 percent (2008) of GDP in India and 0.67 percent (2008) of GDP in Pakistan.

Table 1.2: A Comparative View of R&D Expenditure of GDP in Selected Countries

Rank	Country	R&D Expenditure (% GDP)	Year
1	Israel	4.74%	2007
4	Japan	3.45%	2007
7	United Sates	2.67%	2007
10	Germany	2.55%	2007
12	Australia	2.17%	2006
21	China	1.49%	2007
38	India	0.8%	2007
41	Pakistan	0.67%	2007
43	Malaysia	0.64%	2006
80	Sri Lanka	0.17%	2006

(Source: United Nations Educational, Scientific, and Cultural Organisation (UNESCO)- Institute for Statistics)[98]

According to the above available empirical evidence, most strikingly, fewer resources are devoted to innovation activities across all industries in Sri Lanka, thereby reducing the innovation potential of enterprises. The government has been a major player in R&D execution and funding, mainly owing to a low level of resources devoted to R&D by businesses.[99] It

ready-for-knowledge-driven-economic-growth-107301.html> (accessed 22 July 2014). PRMP Dilrukshi, 'Science and Technology Indicators of Sri Lanka' (2008), Science and Technology Policy Research Division-National Science Foundation, Colombo, available at: <www.nsf.ac.lk> (accessed 2 May 2012).

98 UNESCO Institute for Statistics, available at: <http://www.nationmaster.com/graph/eco_res_and_dev_exp_of_gdp-economy-research-development-expenditure-gdp> (accessed 30 June 2012).

99 OECD/Eurostat, *OSLO MANUAL: Guidelines for Using and Interpreting Innovation Data* (3rd edn, The Measurement of Scientific and Technological Activities, OECD Publishing 2005) 138.

should nevertheless be mentioned that speculation beyond the limits of the available data would inevitably turn out to be an exercise in futility. In fact, Sri Lanka is not an industrial country and much innovation happens in the agricultural sector and rural hinterland. In terms of industrial structure of the country, the technology level of innovations generated in the country is not very advanced. Besides, at least one economist, based on the latest Economic Complexity Index, has argued that almost 100 percent of products that Sri Lanka produces are simple products which can easily be copied by other competitors. Hence, year after year, Sri Lanka is facing the problem of maintaining and retaining high economic growth.[100] In response, Sri Lanka needs to bring an incentive mechanism to acquire enhanced levels of innovation.

Therefore, it is necessary to reconsider whether the existing IP regimes have served their primary objective of promoting innovations in the country. Given a large part of innovation derive from incremental and TK-based innovations, the current protective measures for minor and incremental innovations are deemed inadequate. It can be argued that neither the patent system nor the design right system can reasonably be viewed as an appropriate method of protecting such innovations. In essence, it may be correct to argue that Sri Lanka is lagging far behind in fostering valuable domestic innovations.

1.3.3. A Lack of Incentives for Innovation?

As Lon Fuller has observed, man is an 'economic animal' constantly seeking his own advantages.[101] Then, the decisive question we need to ask is whether there is a lack of incentives for innovations in Sri Lanka. Un-

---

100 WA Wijewardena, 'Sri Lanka's Future: Convert the Simple Economy into a High-Tech based Complex Economy' *Daily FT* (Colombo, 17 September 2012), available at: <http://www.ft.lk/2012/09/17/sls-future-convert-the-simple-economy-into-a-high-tech-based-complex-economy/> (accessed 3 March 2013). This author has argued quoting Jack Welch's statement 'produce what others cannot copy'. The Economic Complexity Index takes into consideration whether county's production base is composed of complex products. According to this ranking 2010, Japan tops the list followed by Germany and Switzerland. Singapore ranks at No. 7 while China ranked at No. 29. Sri Lanka's ranking in the index is No. 71.

101 LL Fuller, *Legal Fictions* (Stanford University Press 1967) 98.

doubtedly, in the Sri Lankan context, there has been a long-felt need to create a mechanism that would provide adequate incentives for minor and incremental innovations. As interpreted through the lens of the innovation landscape, one can conclude that there may be a lack of rewards and encouragement for innovations in the country. First and foremost, under the current one-size-fits-all patent regime, the patent office and the courts have to make the reward an all-or-nothing proposition where the innovator either receives a certain term of exclusive rights for his invention or if it is of the required standard or he receives nothing.[102] There is no middle path for innovations falling through the protection net of the current single-tier patent system. Arguably, an STP regime may fill this gap in protection making the lesser inventions to receive a lesser form of protection. On the other hand, the one-size-fits-all patent regime may not be able to accommodate the differing needs of the industries of a country like Sri Lanka.

Moreover, the incentive theory advances the argument that the *homo economicus*[103] will tend not to engage in economically valuable creativity and innovation without external rewards.[104] According to basic human sense, external motivational factors such as rewards would also create a psychological effect resulting in intrinsic motivation for further innovations. It is certainly true that there is a system of incentives via current IP paradigms. But the more important question is whether the existing incentive mechanism is adequate, efficient and effective for the kind of innovations that are generated in the country and for all industrial sectors involved in innovation. The answer to this question is probably negative and Sri Lanka would further improve its business climate to attract more investment in innovation if the existing set of incentives is modified to accommodate small and incremental innovations. When there is no appropriate legal framework for providing incentives for innovations, it would lead to discourage innovation.

Secondly, apart from the above incentive-based argument, a growing body of empirical evidence suggests that most innovations generated by SMEs result from adaptation of imported equipments and raw materials to

---

102 LH Gee, 'The Long March-National Laws Travel the Tortuous Route Towards Utility Protection' (1993) May, Managing Intellectual Property 41, 42.

103 The term refers to the concept of a rational, economic-utility-maximizing actor.

104 EE Johnson, 'Intellectual Property and the Incentive Fallacy' (2011) 39 Florida State University Law Review 623, 640.

local conditions.[105] It is indeed undeniable that in many sectors, SME innovations are mainly of an informal nature, without formal R&D investments, R&D laboratories or R&D personnel.[106] In that case, a large part of innovations of SMEs, in spite of being new, may be obvious and fall short of patent protection. Put differently, the absence of other appropriate protection system would lead to create disincentives to local innovators because such innovations are often the prime candidates for free-riding activities by competitors.[107] This argument has been reinforced by the findings of a recent WIPO study, according to which, a large variety of innovations of SMEs may lack the inventive step to be protectable under the patent system or because process innovations or innovations in certain low-technology sectors are less likely to be patented.[108] From an industrial point of view, a firm anticipates a substantial economic return from an investment and when there is no protection it would encourage free-riding resulting in market failures. As has been observed in recent scholarship, one of the main reasons that has been attributed to the technological underdevelopment of SMEs in Sri Lanka are market failures.[109] In such cases, other intellectual property rights (such as utility models) may play a bigger role than patents to recoup investments in innovation, while providing a competitive edge to SMEs.[110]

Thirdly, there is a need to explore an additional strategy to increase access to the patent system, especially for the SME sector. The costs related

---

105 S Chandrasiri, 'Technological Issues of Small and Medium Scale Enterprises in Sri Lanka' (2003) 4/1 Sri Lanka Economic Journal 59, 60.

106 WIPO, 'Intellectual Property (IP) Rights and Innovation in Small and Medium-sized Enterprises' (2004) WIPO Working Paper August 10/2004, 9 available at: <http://www.wipo.int/export/sites/www/sme/en/documents/pdf/iprs_innovation.pdf> (accessed 10 June 2011).

107 U Suthersanen, G Dutfield and KB Chow (eds), Innovation Without Patents: Harnessing the Creative Spirit in a Diverse World (Edward Elgar 2007) 68.

108 WIPO, 'Intellectual Property (IP) Rights and Innovation in Small and Medium-sized Enterprises' (2004) WIPO Working Paper August 10/2004, 5-6, available at: <http://www.wipo.int/export/sites/www/sme/en/documents/pdf/iprs_innovation.pdf> (accessed 10 June 2011).

109 S Chandrasiri, 'Technological Issues of Small and Medium Scale Enterprises in Sri Lanka' (2003) 4/1 Sri Lanka Economic Journal 59, 60.

110 WIPO, 'Intellectual Property (IP) Rights and Innovation in Small and Medium-sized Enterprises' (2004) WIPO Working Paper August 10/2004, 9, available at: <http://www.wipo.int/export/sites/www/sme/en/documents/pdf/iprs_innovation.pdf> (accessed 10 June 2011).

to patent protection will act as a disincentive to patenting whenever firms do not expect to obtain sufficient benefits to cover the expenditure related to patent protection.[111] One of the major challenges for innovators and SMEs is to find a protection system that they can afford. A more accessible IP system would, of course, bring the concept of innovation closer to rural-based enterprises located in the periphery. In fact, Sri Lankan SMEs are at the low end of technological development. What is even more disturbing to learn is that even such marginal technological capacities are limited to Colombo and suburbs fail to reach SMEs operating outside main cities.[112] It is therefore urgently required to promote access to an affordable protection mechanism not only for the formal sector, but also for creative solutions of rural hinterland mainly developed by informal sectors. It would help new technologies and industries to emerge. From a policy perspective, it can be argued that intellectual creations at all levels should be encouraged and rewarded by creating more access to the protection mechanism.[113]

Furthermore, many critics argue that the current patent regime is an inefficient and ineffective means of achieving its desired end; hence it appears appropriate to consider an alternative incentive mechanism with the right checks and balances, in addition to the regular patent system in place in the country. It is undeniable that Sri Lanka needs to re-energize its R&D activities through incentivising minor and incremental innovations. Sri Lanka needs to explore an alternative philosophy in this regard. There is certainly a need to raise the local technological capacity which is still in the initial stage of the technological ladder. As a result, a paradigm shift in technological and incentive mechanism is urgently needed. There is a need to revisit the prevailing wisdom on IP policies in the country. It is certainly true that squeezing today's innovations into yesterday's system simply does not work.[114] And the IP system should be designed to cater to the needs of the country. Obviously, Sri Lanka needs to improve the legal environment in order to remedy the deficiencies of the incentive paradigm.

---

111 Ibid.

112 S Chandrasiri, 'Technological Issues of Small and Medium Scale Enterprises in Sri Lanka' (2003) 4/1 Sri Lanka Economic Journal 59, 91.

113 M Crinson, 'Is Some Novel Protection of Invention Needed in Canada' (1997) 12 Intellectual Property Journal 25, 52.

114 LC Thurow, 'Needed: A New System of Intellectual Property Rights' (1997) 75 Harvard Business Review 95, 95.

1.4. TK-based Innovation

Intellectual creations at all levels should be nurtured so as to develop an innovation culture in a country.[115] TK-based innovation, however, has only received little attention. At least, in the Sri Lankan context, it is high time for Sri Lanka to increase the role of traditional innovators in its development strategy. TK-based innovations are generally characterized by value addition and incremental steps. The incentive theory informs us that, by affording an appropriate intellectual property protection, a society can encourage and promote such innovation. Since the question of protecting TK as an IP right has extensively been dealt with in academic and policy circles, this study is not the place to discuss the same highly controversial issue. For purposes of this research, TK-based or TK-inspired innovations are only address insofar as they meet the general standards of a utility model or a petty patent regime. AN STP is by no means any substitutes for protection of TK as such, and the issue of TK protection is independent from what we discuss in this research.

Figure 1.1: TK-based Innovation

115 Federation of Indian Chamber of Commerce and Industry/Luthra & Luthra, 'FICCI's Suggestions on Proposed National Intellectual Property Policy' (2011) Report – Federation of Indian Chamber of Commerce and Industry (FICCI), available at: <http://www.ficci.com/Sedocument/20170/ip-policy.pdf> (accessed 2 June 2012).

1.4.1. What is it?

Sri Lanka is a country with a rich endowment of TK. Today, as elsewhere in the region, misappropriation of TK has become one of the hottest issues in public discourse in Sri Lanka. In other words, the issue of protecting traditional knowledge is extremely controversial and it produces more heat than light. Before embarking on a further discussion, it is important to outline what TK-based innovations mean. The term 'traditional knowledge' refers to the know-how, skills, innovations, practices, teachings and learning, resulting from intellectual activity and developed within a traditional context.[116] Thus, any new step ahead or improvement on existing TK resulting in a new or valued-added product or process should be considered as a TK-based innovation. For instance, clove oil has been used in TK to help fight germs and prevent tooth decay for ages and an SME trading in TK wants to develop and commercialize a quality enhanced herbal toothpaste that may be considered as an innovation under such definition. As another example, *Kothala Himbatu* (*Salacia reticulate)* is used to reduce diabetes in indigenous medicine and a traditional healer wants to put modern technology touches on TK and develop a user-friendly form of a new capsule or tablet replacing the earlier way of using dried leaves, seeds or roots of the plant. Here the specific improvement through the blending of traditional wisdom with formal science can result in enhancing efficacy, quality and safety of a product and should be rewarded.

1.4.2. A particular Need for Protection?

It is quite often argued that Sri Lanka should be able to reap greater benefit from its rich TK base. At present, such knowledge is not being properly utilized and its potentials remain untapped. However, it is possible to make out a strong case for the protection of TK-based innovations by refashioning the IP system to take advantage of its incentive philosophy. As it has already been observed, the conventional patent regime may find it

116 This definition is adopted by WIPO. See, WIPO, 'Intergovernmental Committee on Intellectual Property and Genetic Resources, Traditional Knowledge and Folklore on the Protection of Traditional Knowledge: Draft Articles' (April 2012) Document prepared by the Secretariat to the WIPO IPO/GRTKF/IC/21/4, available at: <http://www.wipo.int/tk/en> (accessed 2 June 2012).

difficult to accord any protection for minor incremental innovation. The same is certainly true for TK-based innovations because such innovations build upon exiting innovations, and are often without much original contribution though such products may have huge market potentials.[117] In the absence of an effective protection there would be no incentives for innovation on one hand, and on the other such innovation like a crop in an unfenced field would become vulnerable for free-riding activities by competitors once the product appears on the market. In that case, an STP regime would afford short-term protection through low transaction costs that would go a long way in incentivising R&D in local TK-based industries.

Such a regime would, at least, give a window of opportunity for protection or an option for TK innovators to choose if they so decide. Exclusive reliance on the patent regime may create not only substantive legal hurdles, but also practical problems in acquiring a legal right. On the other hand, protection under unfair competition law is not effective as it does not provide a legal title that can be used as a negotiating instrument in licensing etc. Nevertheless, there are many arguments against affording protection for TK-based innovations. This study observes that there are reasonable concerns over creating of IP rights on what would be in public domain. It can further be argued that such a system is prone to be abused by large and multi-national companies. On balance, there is always the possibility that such a system is being abused, and it is important to have safeguards against potential abuses. In sum, Sri Lanka needs innovative ways of preventing erosion of TK by enthusing younger members of communities to remain and contribute to TK-based innovations. Mashelkar argues that "to achieve this goal we [the South Asia] need innovation in the IP system itself".[118]

---

117 KR Srinivas, 'Traditional Knowledge and Intellectual Property Rights: A Note on Issues, Some Solutions and some Suggestions' (2008) 3/1 Asian Journal of WTO & International Health Law and Policy 81, 100-101.

118 RA Mashelkar, 'The New Millennium Challenges for Indian Science and Technology' (CMS Communication Colloquium National Lecture, Centre for Media Studies New Delhi, 23 July 1999), available at: <http://www.hks.harvard.edu/sustsci/ists/TWAS_0202/mashelkar_230799.pdf> (accessed 15 January 2011).

1.5. The South Asian Scenario

As stated earlier, harnessing innovation to generate wealth is a huge challenge for many countries. This task is particularly daunting for the developing economies in South Asian region where a large part of innovation tends to be based on improvements or derived from traditional knowledge and mostly subpatentable. Theoretically, the patent system is conceived as an important tool to stimulate indigenous technological development, promote domestic inventive activity and enhance the exploitation of patented inventions.[119] However, those expectations seem to be far from being realised in many, if not all South Asian countries. The strict patentability criteria (with worldwide novelty and greater degree of inventiveness) in these countries are in line with global standards as defined by TRIPS Agreement and other international IP conventions. It is nevertheless argued that the South Asian region has failed to address the issue of improvement innovations and falls short in providing them with an adequate protection mechanism. Incremental and minor innovations can, even if they are below the level of patentability, contribute significantly to the development of the economy in developing countries. In the absence of a lower level protection system, such innovations would not be recognized and rewarded. Accordingly, there would be no incentives for small and medium-sized enterprises (SMEs) and individual innovators to make sufficient investments in such innovations. Most interestingly, no country in the South Asian region has an STP regime.

A closer look at the innovation climate in the Asian region reveals an innovation gap between South Asian countries on the one hand, and the East and Southeast Asian countries on the other. This situation mirrors a protection gap in the existing patent laws and policies in the region. Not surprisingly, the R&D activities in most countries in the South Asian region are far from satisfactory and fall much below the level of innovation in emerging economies in East Asia. It is barely imaginable as to why such a low level of innovation prevails in the region. As aptly observed by scholars, in most developing countries the innovation systems are fragmented and weak and they overwhelmingly depend on innovations made

119 G Mengistie, 'The patent system in Africa: its contribution and potential in stimulating innovation, technology transfer and fostering science and technology: Part 2' in *International Trade Law and Regulation* (Sweet and Maxwell 2010) 1-2.

abroad.[120] This is certainly true for many South Asian countries with certain exceptions, especially in case of India. Different types of patent statistics and other measurements of innovation can be used to analyse the innovation landscape of the South Asian region. "First and foremost, the statistics on the first patent applications filed after an invention are reliable indications for innovation".[121]

Table 1.3: Comparison of IP Statistics of South & East Asian Countries, 2009-2010

Type of IP	India	Pakistan	Bangladesh	China	Malaysia	S. Korea
Patents						
Applications	34287	1208	330	391177	6464	170101
Registrations	6168	252	130	135110	2177	68843
Utility Models						
Applications	NA	NA	NA	409836	84	13661
Registrations	NA	NA	NA	344472	-	4301
Designs						
Applications	6092	389	992	421273	16677	57187
Registrations	6025	359	394	335243	1598	33136

(Source: Databases of National IP offices and WIPO IP Statistics/Country Profiles)[122]

120 C Correa, 'Designing Patent Policies suited to Developing Countries Needs' (2008) 10/2 Econômica, Rio de Janeiro 82, 89.

121 JWM van Leuven, 'Patent Statistics as Indicators for Innovation' (1996) November/December, Patent World 20, 20.

122 Controller General of Patents Designs and Trademarks/Government of India, 'Annual Reports of Office of CGPDTM' (2009 to 2010) CGPDT official website, available at: <http://ipindia.nic.in/ipr/patent/patents.htm> (accessed 15 April 2012). Intellectual Property Organisation of Pakistan, 'Patents – List of Patents Granted'(2009 to 2010) IPO official website, available at: <http://ipo.gov.pk/Patent/PatentGranted.aspx> (accessed 15 April 2012). State Intellectual Property of the People's Republic of China, 'Grants for Three Kinds of Patents Received from Home and Abroad' (2009 to 2010) SIPO official website, available at: <http://english.sipo.gov.cn/statistics/gnwsqnb/2010/201101/t20110125_570600.html>(accessed 15 April 2012). Intellectual Property Cooperation of Malaysia (MyIPO), 'Application and Granted Patents and Utility Innovations From 1986 –

As this table indicates, South Asian countries have far less number of patent applications when compared to East and Southeast Asian countries. The data suggests that China has as many as 10 times more patent applications per capita (number of patent applications per 1 million people) as India, given its population of 1.2 billion when compared to Chinese population of 1.3 billion in 2010. Similarly, it is also evident that there is a gap between South Asian countries and East Asian countries in terms of patent ownership. When it comes to other South Asian countries such as Pakistan and Bangladesh, the situation is even worse. On the other hand, the R&D spending in many South Asian countries is less than 1 percent of GDP, with India 0.8 percent of GDP and Pakistan 0.67 percent of GDP in 2008 whereas emerging market countries (for example, South Korea 3.39 percent of GDP and China 1.47 percent of GDP) invest relatively more resourses for the R&D than their South Asian counterparts.[123] The following statistics in Table 1.5 give an idea of the current situation of patents landscape in India.

2014' (2009 to 2010) MyIPO official website, available at: < http://www.myipo.gov.my/web/guest/paten-statistik> (accessed 15 April 2012). Statistics of Korean and Bangladesh are available at WIPO – Statistical Country Profiles, available at: <http://www.wipo.int/ipstats/en/statistics/country_profile/> (accessed 15 April 2012).

123 The World Bank, 'Science and Technology-World Development Indicators' (2012) The World Bank official website, available at: <http://data.worldbank.org/topic/science-and-technology> (accessed 15 April 2012).

Table 1.4: Trends in Patent Applications and Grants in India

Year	Filed	Examined	Granted
2003/4	12613	10709	2469
2004/5	17466	14813	1911
2005/6	24505	11569	4320
2006/7	28940	14119	7539
2007/8	35218	11751	15316
2008/9	36812	10296	16061
2009/10	34287	6069	6168
2010/11	39400	11208	7509

(Source: Based on data from Annual Reports of Office of the CGPDTM of India)[124]

According to Annual Reports of IP India, the number of patent applications filed by domestic applicants is between 20-25 percent and in 2010-2011 alone it is 20.46 percent.[125] A vast majority of patent applications and grants are represented by foreign applicants, and thus India can be viewed as a patent granting rather than patent producing nation. This picture is not much different in the case of Pakistan. The following statistics in Table 1.6 provide a glimpse of what the innovation landscape in Pakistan looks like.

124 Controller General of Patents Designs and Trademarks/Government of India, 'Annual Reports of Office of CGPDTM' (2009 to 2011) CGPDT official website, available at: <http://ipindia.nic.in/ipr/patent/patents.htm> (accessed 30 January 2012).

125 Ibid.

Table 1.5: Trends in Patent Applications and Grants in Pakistan

Year	Filed	Granted
2004-05	493	484
2005-06	1406	256
2006-07	1790	299
2007-08	1535	152
2008-09	1365	162
2009-10	1208	252

(Source: Based on data from Annual Reports-IPO Pakistan)[126]

What are we to conclude from all these statistics? One possible and most likely conclusion is that the patent system is not robustly used by local innovators. This conclusion is consistent with recent empirical studies. Most importantly, a recent study by Kardam observes that, "although India has put in place very modern patent and design laws recently, the small scale industry sector and small innovators are still unable to take full advantage of this legislation as under this legislation, the requirements of patenting and registration are very stringent in nature and at the same time, take a lot of time and very expensive. Due to these reasons, these small innovators and small industry sector seem to have lost interest".[127] Moreover, a recent WIPO study finds that a low number of annual patent applications in Pakistan shows a clear disconnect between domestic economic/industrial activity and the corresponding IP protection.[128] This may be due to the fact

126 Intellectual Property Organisation of Pakistan, 'Patents – List of Patents Granted' (2009 to 2010) IPO official website, available at: <http://ipo.gov.pk/Patent/PatentGranted.aspx> (accessed 15 April 2012).

127 KS Kardam, 'Utility Model –A Tool for Economic and Technological Development: A Case Study of Japan' (2007) Final Report in Fulfillment of the Long-term Fellowship Sponsored by World Intellectual Property Office (WIPO) in Collaboration with the Japan Patent Office (from April 2, 2007 to September 28, 2007), 16-17, available at: <http://www.ipindia.nic.in/research_studies/FinalReport_April2007.pdf> (accessed 15 April 2012).

128 HG Ruse-Khan, 'Utility Model Protection in Pakistan-A Feasible Option for Incentivising Incremental Innovation?' (2012), Study conducted for the World Intellectual Property Organisation 77 (copy on file with author).

that patent applications involve very high standards of invention and not many innovative activities would qualify for such protection.[129] In essence, both studies have found that the existing IP regimes are not an adequate and effective means of protecting most innovation that are generated in the region.

From a different perspective, one can of course argue that India is more advanced than most of Southeast Asian countries in terms of technology and innovation. It is certainly true that India has certainly made some impressive strides in the global software market as well as in the pharmaceutical and chemical sector.[130] Even though India has developed its capabilities considerably in certain industrial sectors, engineering industries and others have suffered from not having a mechanism for encouraging minor adaptations made by domestic firms.[131] As Kumar has observed, this difference could perhaps explain the not so encouraging performance of Indian enterprises in other industries.[132] According to some scholars, the time has come for South Asian to revisit their IP regimes and policies. Therefore, we need innovations in the intellectual property system itself.[133] New models and new thinking on IP will have to be envisioned to accomplish this.[134] There is a rising tide of opinion in the South Asian region in favour of adopting an STP, such as that of a UM regime. India has pioneered in this regard by introducing a Discussion Paper on UM in May 2011. Similar situation are being considered in Pakistan and Sri Lanka. It

---

129 Ibid.

130 RA Mashelkar, 'The New Millennium Challenges for Indian Science and Technology'(1999) CMS Communication Colloquium National Lecture-Centre for Media Studies, New Delhi, 23 July 1999, 3-6, available at: <http://www.hks.harvard.edu/sustsci/ists/TWAS_0202/mashelkar_230799.pdf> (accessed 15 April 2012).

131 N Kumar, 'Technology and Economic development: Experiences of Asian Countries' (2002) Commission of Intellectual Property Rights- Study Paper 1b, 6 and 26, available at: <http://www.twnside.org.sg/title2/FTAs/Intellectual_Property/IP_and_Development/IPR_TechnologyandEconomicDevelopment-Nagesh_Kumar.pdf> (accessed 10 January 2011).

132 Ibid.

133 See generally RA Mashelkar, 'Intellectual Property Rights and The Third World' (2001) October -18/8 Current Science 955, para 40, available at: <http://www.srisri.org/material/1.2intellectual%20property%20and%20the%20third%20world.pdf> (accessed 11 January 2011).

134 Ibid.

is encouraging to see that South Asian countries are paying attention to this largely unexplored option for incentivising local innovation.

1.6. Overview of Second-Tier Protection

Second-tier protection (STP) has been considered a backwater of intellectual property law.[135] Seen from a different perspective, patent, copyright and trademark laws are the three accepted bastions of the intellectual property world, with their respective legal satellites of utility models, design and unfair competition laws.[136] As used elsewhere in this paper, the terms STP and utility models are synonymous. As noted above, there is no global acceptance of the term 'utility model' due to there being fundamentally different concepts from one country to another.[137] If one examines national laws, one finds that utility model protection is referred to in Australia as 'innovation patent', in Malaysia as 'utility innovation', in Thailand 'petty patent' and in Belgium as 'short-term patent'. 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 foster local innovations.[138] As commentators argue, the utility model is not an accepted or clearly defined legal concept within the intellectual property paradigm but it is a generic term which refers to subject-matter that hinges between that protectable under patent law and design law.[139] Policy makers, legislatures and legal scholars refer to a second-tier patent system, which offers a cheap, no-ex-

135 MD Janis, 'Second Tier Protection' (1999) 40/1 Harvard International Law Journal 151, 152.

136 U Suthersanen, 'Breaking Down the Intellectual property Barriers' (1998) 3 Intellectual Property Quarterly 267, 267.

137 U Suthersanen, 'Utility Models and Innovation in Developing Countries' (2006) UNCTAD-ICTSD Issue Paper No. 13 Project on IPRs and Sustainable Development 1-2, available at: <http://unctad.org/en/docs/iteipc20066_en.pdf> (accessed 15 March 2012).

138 HG Ruse-Khan, 'Utility Model Protection in Pakistan-A Feasible Option for Incentivising Incremental Innovation?' (2012), Study conducted for the World Intellectual Property Organisation 22 (copy on file with author).

139 U Suthersanen, 'Utility Models and Innovation in Developing Countries' (2006) UNCTAD-ICTSD Issue Paper No. 13 Project on IPRs and Sustainable Development 1, available at: <http://unctad.org/en/docs/iteipc20066_en.pdf> (accessed 15 March 2012).

amination protection regime for technical inventions which would not usually fulfil the strict patentability criteria.[140] Interestingly though, ten of the world's 14 trillion dollar economies alone with South Korea have some form of UM. These are Japan, China, Germany, Japan, France, Italy, Russia, Brazil, Mexico and Australia. The major economies that do not have a similar protection are the USA, the UK, Canada and India.[141]

1.6.1. Common Elements and Divergence

According to Suthersanen, from a global perspective, there are common elements amongst different national STP regimes.[142] They are: (1) all utility model laws confer exclusive rights on the proprietor of the right; (2) novelty is a criterion in all utility model systems, though the standard of novelty varies widely; (3) registration is a requirement but usually there is no substantive examination of applications; (4) most utility model laws protect the technical character of the invention, as opposed to the ornamental function or the appearance of the product.

Even more significantly, there are more differences than similarities in national approaches to STP regimes due to the policy space that countries enjoyed in the implementation of such systems.[143] Such areas of divergence may be summarized as follows:

– *Subject matter under protection:* Some utility model laws protect only the three-dimensional form, while others extend the umbrella of protection to cover technical inventions and processes. In most countries it is narrower than regular patents. A majority of utility model laws sim-

140 NAO Boztosun, 'Exploring the Utility of Utility Models for Fostering Innovation' (2010) 15 Journal of Intellectual Property Rights 429, 434-435.

141 C Thompson and L Dumbrell, 'A really Useful Utility Model' (2010) Issue 220 Patent World 28, 28.

142 U Suthersanen, 'Utility Models and Innovation in Developing Countries' (2006) UNCTAD-ICTSD Issue Paper No. 13 Project on IPRs and Sustainable Development 1, available at: <http://unctad.org/en/docs/iteipc20066_en.pdf> (accessed 15 March 2012).

143 WIPO-CDIP, 'Patent related Flexibilities in the Multilateral Legal Framework and their Legislative Implementation at the National and Regional Level' (2010) The Document prepared by the Secretariat to the WIPO-CDIP/5/4, 1st March 2010, 26-27.

ply adopt the domestic patent law definition of protectable subject matter.[144]

– *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 ranges from universal novelty, to relative novelty, to domestic novelty.[145]

When it comes to inventive step requirement, there is huge variation between different countries. In some countries an inventive step is not a requirement for protection, while many other countries need a lower level of inventiveness. A few countries still insists on the same level of inventive step as that is for patents. Moreover, industrial applicability is generally applicable under every system.

– *Granting procedure:* Many systems adopt a simple registration procedure with cursory examination; while a few implement a detailed examination process.[146]
– *Duration of protection:* The term of protection varies from four years (Somalia) to twenty five years.
– The following table offers a bird's eye view of second-tier protection systems in place in different jurisdictions in the world.

144 U Suthersanen, 'Utility Models and Innovation in Developing Countries' (2006) UNCTAD-ICTSD Issue Paper No. 13 Project on IPRs and Sustainable Development 1-2. available at: <http://unctad.org/en/docs/iteipc20066_en.pdf> (accessed 15 March 2012).

145 HG Ruse-Khan, 'Utility Model Protection in Pakistan-A Feasible Option for Incentivising Incremental Innovation?' (2012), Study conducted for the World Intellectual Property Organisation 24 (copy on file with author).

146 U Suthersanen, 'Utility Models and Innovation in Developing Countries' (2006) UNCTAD-ICTSD Issue Paper No. 13 Project on IPRs and Sustainable Development 1-2, available at: <http://unctad.org/en/docs/iteipc20066_en.pdf> (accessed 15 March 2012).

Table 1.6: Comparison of Second-Tier Protection Regimes in Selected Countries

Country	Name of right	Novelty	Inventive step	Subject matter of protection	Substantive examination	Max. term (yrs)
Australia	Innovation patent	same as patents	lower standard than patents	Same as patents	No	8
China	Utility model	same as patents	lower standard than patents	shape or structure of product	No	10
Germany	Utility model (Gebrauch-smuster)	relative novelty	lower standard than patents	all inventions except processes & methods	No	10
Japan	Utility model	same as patents	lower standard than patents	shape, construction etc. of an article	No	10
Kenya	Utility model	similar to patents	not required	form, configuration utensil, tool and herbal formulations	Yes	10
Malaysia	Utility innovation	same as patents	not required	similar to patents	Yes	20
Philippines	Utility model	local novelty only	not required	any technical solution of a problem in any field of human activity	No	7
Russia	Utility model	relative novelty	not required	any technical solution relating to an apparatus	No	8
Republic of Korea	Utility model	same as patents	inventive step required	shape, construction etc.	Yes	10

(Table is created based on information provided in different publications and personal communication.)[147]

147 Based on, U Suthersanen, G Dutfield and KBB Chow (eds), *Innovation Without Patents: Harnessing the Creative Spirit in a Diverse World* (Edward Elgar 2007) 34. Australian Government's Advisory Council on Intellectual Property, 'Review of the Innovation Patent System' (2011) Issues Paper -August 2011, 7, available at: <http://www.acip.gov.au> (accessed 10 February 2012). Department of Industrial Policy and Promotion/India, 'Utility Models' (2011) Discussion Paper-23 May 2011, para 41, available at: <http://dipp.gov.in/English/Discuss_paper/Utility_Models_13May2011.pdf> (accessed 30 December 2011). J Richards, 'Utility

Viewing through the characteristics of the law, commentators have also classified the national STP systems into two groups (prototypes), namely, *patent-like regimes* and three-*dimensional regime*. According to patent prototype, UM laws mimic the domestic patent law, under which absolute or international novelty and the full inventive step are required.[148] Moreover, there is no three-dimensional or form limitation within the definition.[149] The main difference between the patent and utility model system lies in the fact that the latter provides a shorter period of protection and a quick examination (instead of the normal substantive examination of patents).[150] The STP systems that operate in France and Belgium represent this model. To the contrary, however, the *three-dimensional regime* requires that the protectable innovation must be embodied in three-dimensional form. Usually, the inventive step required is smaller than for patents (a diminished inventive step requirement) though there can be differing standards of novelty), which allows protection to be extended to minor inventions. Nevertheless, within this group, important differences exist from one country to another regarding substantive examination.[151] Countries such as Germany, Italy, Spain, Japan, and China as well as Scandinavian countries use this type of regime. In reality though, many countries use a mixed-strategy drawing experiences from 'best practices' or common elements of other countries to design the most appropriate STP regimes in ac-

---

Model Protection throughout the World' (2010) Internet Publication, available at: <http://www.ipo.org/AM/Template.cfm?Template=/CM/ContentDisplay.cfm&ContentID=25244> (accessed 30 December 2011). Personal communication with Kenyan Intellectual Property Institute (11 September 2012).

148 U Suthersanan, 'A Brief Tour of "Utility Model" Law' (1998) 2 European Intellectual Property Review 44, 45.

149 Ibid.

150 WIPO-CDIP, 'Patent related Flexibilities in the Multilateral Legal Framework and their Legislative Implementation at the National and Regional Level' (2010) Document prepared by the Secretariat (CDIP/5/4, 1st March 2010) para 85.

151 Ibid.

cordance with their domestic needs; for example, Australia, Philippine and Thailand to name but a few.

1.6.2. The Rationale for STP Systems

The accepted rationale for the introduction of the STP is to encourage innovative activity by providing an alternative system of protecting innovations which could not be protected by standard patent system because they fall short of the inventive step and/or novelty bars.[152] Without this protection, innovators who come out with new products involving innovations of smaller importance and lesser technological advance would find rampant copying and competition without any remedy.[153] As a general matter, the STP is to protect modest improvements in technical inventions that may not merit the cost of a patent application, and in so doing encourage innovation in the field of technology to which STP systems apply.[154] One of the other rationales behind STP systems is that such systems improve access to patent protection for individuals and small and medium-sized enterprises (SMEs).[155] Such protection is particularly useful where the lifespan of the product is shorter than the time it takes to obtain a patent. In order to further accelerate the grant the IP right, most countries are dispensing with substantive examination for these patents. However, the protection conferred is less secured.[156] When it comes to dealing with the innovations of developing countries with marginal technological capacities,

---

152 LH Gee, 'The Long March-Utility Model Protection for Minor Inventions' (1993) Managing Intellectual Property 42. U Suthersanen, G Dutfield and KBB Chow (eds), *Innovation Without Patents: Harnessing the Creative Spirit in a Diverse World* (Edward Elgar 2007) 17.

153 LH Gee, 'The Long March-Utility Model Protection for Minor Inventions' (1993) Managing Intellectual Property 42.

154 Advisory Council on Intellectual Property (ACIP) of Australia, Should Plant and Animal subject Matter be excluded from the Protection by Innovation Patent? (2004) 7.

155 AF Christie and SL Morritz, 'Australia's Second-Tier Protection System: A Preliminary Review' (2005) Intellectual Property Research Institute of Australia (IPRIA) Report No. 02/04, 7, available at: <http://www.ipria.org/publications/reports/AU_2nd-tier_Report-revised.pdf> (accessed 30 December 2011).

156 Advisory Council on Intellectual Property (ACIP) of Australia, Should Plant and Animal subject Matter be excluded from the Protection by Innovation Patent? (2004)7.

the utility models are particularly useful for inventions, that have only incremental improvements over prior art. 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. It can well be argued that an STP could benefit individual innovators and SMEs, if a country could sufficiently focus the STP on industries that should be promoted.

1.6.3. Pros and Cons of an STP Regime

There are a number of arguments that strongly speak in favour of UM regime. The main advantages are: (1) Such regimes serve as an incentive mechanism encouraging local and indigenous innovation; (2) it would provide a solution to the problem of unfair copying and prevent free-riding activities on the achievements of others competitors; (3) a utility model right can be used as a bargaining tool in the hands of the right-holder for negotiation and litigation; (4) UMs can provide an easily accessible means of protection for SMEs and individual innovators which can be considered as a 'low-cost entry point into the IP system; (5) such a system can address the perceived protection gap that exists between patent and design regimes by providing protection for innovations falling from the safety net of IP system; (6) it serves the interests of cash-strapped SMEs in gaining access to finance through licensing, venture capitalism and granting security/collaterals for credits; (7) a UM right 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.[157]

There are also several downsides of a UM system. The main disadvantages are: (1) Since UM rights are granted without substantive examination, it would increase business risk and do more harm than good for enterprises, and on the other hand, it would lead to proliferation of unstable rights; (2) generally, there could be an increase of spurious and wasteful

157 U Suthersanen, G Dutfield and KBB Chow (eds), *Innovation Without Patents: Harnessing the Creative Spirit in a Diverse World* (Edward Elgar 2007) 42. HG Ruse-Khan, 'Utility Model Protection in Pakistan-A Feasible Option for Incentivising Incremental Innovation?' (2012), Study conducted for the World Intellectual Property Organisation, 28 (copy on file with author).

litigation; (3) there are also concerns that UM system is prone to be easily abused large companies and create problems for small businesses; (4) such a system would also lead to create a mountain of worthless patents and they may not be worth the papers they were written on;[158] (5) a UM can be a dangerous device as they are like 'minefield' for an unsuspecting manufacturer which is hidden from the view until it explodes;[159] (6) moreover, creating a new right would cause an erosion of public domain and would detrimentally affect downstream innovations.

1.6.4. Policy Considerations to be applied by Legislators

Intellectual property systems are more than just pieces of legislation, and may best be viewed as public policy regulatory institutions.[160] Thus, any policy considerations in relation to an STP regime should mirror domestic needs and circumstances of individual countries. Most importantly, the policymakers in developing countries need to pay attention to the following factors in designing an appropriate IP policy framework for protecting and promoting small and incremental innovations. First and foremost, innovation landscape of the country and the level of domestic innovation. More significantly, whether there is a large part of innovation emanates from SME sector and if such innovations are of lower standards of inventiveness. Secondly, level of the technological development of the country. For instance, the regular patent system may not be of much use for countries that are in the initial stage of technological ladder. Thirdly, whether unfair copying and imitation is a real problem for those who want to develop and commercialize small scale innovation. Fourthly, the availability of alternative IP regimes such as unfair competition, trade secrets and design protection. This is because the creation of new IP right may cause undue social costs. Last but not the least, domestic IP infrastructure is of vital importance for successful implementation any incentive mechanism in

158 P Leith, 'Software Utility Models and SMEs' (2000) 2 Journal of Information Law and Technology 6.

159 Ibid.

160 U Suthersanen, 'Utility Models and Innovation in Developing Countries' (2006) UNCTAD-ICTSD Issue Paper No. 13 Project on IPRs and Sustainable Development 7, available at: <http://unctad.org/en/docs/iteipc20066_en.pdf> (accessed 15 March 2012).

a country. In this regard, strengths and weaknesses of administrative and enforcement agencies need to be properly assessed.

1.7. International Legal Framework

The internationalisation of IP law, regulation and policy began in the eighteenth and nineteenth century, when IPRs appeared in Friendship, Commerce and Navigation (FCN) treaties.[161] Interestingly, the multilateralisation of international IP quickly followed in the latter part of the nineteenth century through the negotiation and adoption of two important treaties; namely, the Paris and the Berne Conventions.[162] Most significantly, in 1994 the TRIPS Agreement established universal minimum standards of IP protection by creating another milestone in the history of IP law. International IP treaties cover various IP rights in varying degrees of detail and comprehensiveness. Hence the treaty obligations that the contracting parties must adhere to equally vary.[163] As is well known, UM or petty patent systems have remained in the backwater of international IP system ignored by major IP treaties. For utility models, international IP law so far contains relatively few provisions and consequently few relevant treaty obligations the contracting States must comply with.[164] As a result, most remarkably, there are no independent and self-standing obligations flowing from leading international treaties leaving a quite broad policy space for countries in crafting their STP regimes suited to domestic needs and objectives.[165] Nevertheless, according to commentators, this policy space is being eroded to some extent due to TRIPS-Plus provisions that now appears in many comprehensive Free Trade Agreements (FTAs) and other

161 B Mercurio, 'Reconceptualising the Debate on Intellectual Property Rights and Economic Development' (2010) 3/1 The Law and Development Review 65, 71.

162 Ibid.

163 HG Ruse-Khan, 'Utility Model Protection in Pakistan-A Feasible Option for Incentivising Incremental Innovation?' (2012), Study conducted for the World Intellectual Property Organisation, 7. (copy on file with author).

164 Ibid.

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

Bilateral Investment Treaties (BITs) negotiated by some countries.[166] In this context, it is worth analyzing the relevant provisions with regard to STP in major international IP conventions.

1.7.1. Obligations under the Paris Convention

The utility model was internationally recognized by the Paris Convention as *modèle d'utilité* by the Revision Conference of Washington on 2nd June 1911.[167] Since then the concept of utility model has gained some legitimacy in intellectual property arena though the Paris Convention which does not explain what a utility model might be. It is also true that, in the international context, the concept of utility models has been enshrined in the Paris Convention, but the Paris Convention seems to be more associated with patents, trademarks and industrial designs.[168] An analysis of provisions of the Paris Convention shows that utility models are recognised as industrial property by virtue of Article 1(2) which states that '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'. Resulting from this definition of industrial property, contracting States, includ-

166 Sri Lanka has entered into Free Trade Agreements (FTAs) with both India and Pakistan and Bilateral Investment Protection Agreements (BITs) with 27 countries**.** According to communication with the Director/Research at the Board of Investment in Sri Lanka, FTAs do not have provision on IP protection but BITs do have a general clause for the protection of IP rights. Most likely, the future agreements which are still under negotiation would containing obligation to protect IP rights but certainly would not go beyond TRIPS standards. See C Correa, 'Designing Patent Policies suited to Developing Countries Needs' (2008) 10/2 Econômica, Rio de Janeiro 82, 95.

167 K Königer, 'Registration without Examination: The Utility Model-A Useful Model?' in W Prinz zu Waldeck und Pyrmont and others (eds), *Patents and Technological Progress in a Globalized World: Liber Amicorum Joseph Straus* (Springer 2009) 17.

168 W Weeraworawit, 'Utility Models in Thailand' in C Heath and A Kamperman Sanders (eds), *Industrial property in the Bio-Medical Age: Challenges for Asia* (Kluwer Law 2003) 269, 269.

ing Sri Lanka,[169] and other and other South Asian countries,[170] are bound by national treatment obligation under Article 2 and right of priority principle under Article 4 of the Convention. As a fact though, other than the inclusion of these two principles, Paris Convention is silent as to the definition and scope of the UM protection.

The national treatment principle is a rule of non-discrimination enshrined in the Paris Convention, ensuring that foreign IP owners will enjoy in the protecting country, at least the same treatment as the protecting country give to its own nationals, without the condition of reciprocity.[171] Pursuant to Article 2(1), each Member States requires to grant nationals of the other member countries states the same protection and same remedies against infringement as available to their own nationals with regard to the protection of industrial property as referred to in Article 1(2). Therefore, a national system of utility model protection may not discriminate against foreign right holders in terms of protection and enforcement.[172] According to scholars, 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.[173] Undoubtedly, Member States such as Sri Lanka remain free not to introduce such a system into their domestic law. If they decide to foresee utility model protection in their national law, they can freely determine the conditions for it; as well as the scope, substance, limitations and duration of utility model

169 Sri Lanka acceded to the most recent Stockholm Act (1967) of the Paris Convention on 20 June 1978.

170 For instance, India acceded to the most recent Stockholm Act (1967) of the Paris Convention on 7 September 1998 while Pakistan acceded on 22 April 2004.

171 Y Li, International and Comparative Intellectual Property: Law, Policy and Practice (Butterworths 2005) 17.

172 HG Ruse-Khan, 'Utility Model Protection in Pakistan-A Feasible Option for Incentivising Incremental Innovation?' (2012), Study conducted for the World Intellectual Property Organisation, 8. (copy on file with author). See also GHC Bodenhausen, *Guide to the Application of the Paris Convention for the Protection of Industrial Property* (BIRPI 1968) 27-29. (Bodenhausen observes that the principle of 'national treatment' or 'assimilation with nationals' embodied in this provision is one of the basic rules of the convention.

173 HG Ruse-Khan, 'Utility Model Protection in Pakistan-A Feasible Option for Incentivising Incremental Innovation?' (2012), Study conducted for the World Intellectual Property Organisation, 7-8. (copy on file with author).

protection.[174] Predictably, 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.[175]

Probably, the other most important provision that creates obligation on its Member States in relation to UM protection is the right of priority embodied in Article 4 of the Paris Convention. According to this Article, 'any person who has duly filed an application for a patent, or for the registration of a utility model, or of an industrial design, or of a trademark, in one of the countries of the Union, or his successor in title, shall enjoy, for the purpose of filing in the other countries, a right of priority during the periods hereinafter fixed'.[176] As a general rule, an application duly filed in one of the countries of the Union (first application) creates a right of priority as regards any subsequent filings in the other countries of the Union.[177] 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.[178] Logically, a period of priority can be secured for an application for an industrial design based[179] on the filing date of a utility model; and a period of priority can be secured for a utility model application by virtue of a right of priority based on a patent application (and *vice versa*).[180]

In addition to the above mentioned obligations, Article 5(A) of the Convention sets certain limits and restrictions to national legislatures providing for the grant of compulsory licenses and the forfeiture of patent rights

174 Ibid.
175 Ibid 8.
176 See Article 4(A)(1) of the Paris Convention.
177 T Cottier and P Véron, Concise International and European IP Law: TRIPS, Paris Convention, European Enforcement and Transfer of Technology (Kluwer Law 2008) 195.
178 HG Ruse-Khan, 'Utility Model Protection in Pakistan-A Feasible Option for Incentivising Incremental Innovation?' (2012), Study conducted for the World Intellectual Property Organisation, 8. (copy on file with author).
179 Compared to patent, industrial designs enjoy a shorter period of 6 months in terms of priority.
180 U Suthersanen, 'Utility Models and Innovation in Developing Countries' (2006) UNCTAD-ICTSD Issue Paper No. 13 Project on IPRs and Sustainable Development 3, available at: <http://unctad.org/en/docs/iteipc20066_en.pdf> (accessed 15 March 2012.).

which is applicable, mutatis mutandis, to utility models by Article 5(A)(5).[181] A plain reading of the provision reveals that there are obligations relating to forfeiture or revocation patents or introduction compulsory licenses, especially in the case of failure to work. Nevertheless, scholars argue that these provisions are primarily relevant in the context of importing protected products and their local working, whereas utility model protection, in all jurisdictions, is primarily utilised by local residents. Thus, the obligations contained in Article 5(A) are most unlikely to play an important role in the practice of utility model protection.[182] The question that arises is whether a Member State who decides to introduce an STP regime is barred by this provision from introducing some form of compulsory licensing if it considers this necessary. The answer to this question lies in Article 5A(2) which 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'.

Scholars argue that the failure to work is mentioned as an example and it is not exhaustive and other forms of abuse can also be addressed by compulsory licensing system.[183] Put differently, 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 or petty patents. Most importantly, the obligations in Article 5(A) (2)-(4) do not apply to measures other than those whose purpose is to prevent abuses.[184] As a result, Member States are free to introduce compulsory licenses (or other limitations to utility model protection) for other reasons such as to promote public interest or to allow the utilisation of utility models necessary for follow-on innovation.[185] In that sense, one can reasonably argue that Article 5(A) of the Paris Convention allows its Member considerable leeway in crafting exceptions and limitations to utility model protection. In the light of the above, one can conclude that under Paris Convention a

181 T Cottier and P Véron, Concise International and European IP Law: TRIPS, Paris Convention, European Enforcement and Transfer of Technology (Kluwer Law 2008) 210.

182 HG Ruse-Khan, 'Utility Model Protection in Pakistan-A Feasible Option for Incentivising Incremental Innovation?' (2012), Study conducted for the World Intellectual Property Organisation, 8. (copy on file with author).

183 Ibid.

184 Ibid.

185 Ibid.

domestic lawmaker enjoys a considerable flexibility to carefully design an STP system to address the goals and concerns of the domestic innovators.

1.7.2. Obligations under TRIPS Agreement

Many, indeed, consider the TRIPS Agreement[186] a 'sea change' or a 'tectonic shift' in international intellectual property law. The TRIPS Agreement establishes minimum substantive standards for each of the major intellectual property regimes, but fails explicitly to mention second tier or utility model protection, thus leaving WTO member countries free to formulate or reject second-tier protection regimes as they see fit.[187] Most strikingly, the substantive scope of TRIPS is defined in its Article 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 and do not in any way refer to utility models.[188] Nevertheless, pursuant to Article 2(1), WTO Members are obliged to 'comply with Articles 1 through 12, and Article 19, of the Paris Convention (1967)'. Arguably, 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.[189] This point has been made clear by the Appellate Body Report in *US Omnibus Appropriations Act* case.[190] According to the WTO panel's finding in this case, the scope of the application with respect to the subject matter extends to those forms of protection covered by the conventions that have been incorporated by

---

186 Agreement on Trade-Related Aspects of Intellectual Property Rights, 15 April, 1994, Marrakesh Agreement Establishing the World Trade Organization, Annex 1C, Legal Instruments-Results of the Uruguay Round, 33 I.L.M. 1197 (1994) (TRIPS Agreement).

187 U Suthersanen, 'Utility Models and Innovation in Developing Countries' (2006) UNCTAD-ICTSD Issue Paper No. 13 Project on IPRs and Sustainable Development 3, available at: <http://unctad.org/en/docs/iteipc20066_en.pdf> (accessed 15 March 2012).

188 HG Ruse-Khan, 'Utility Model Protection in Pakistan-A Feasible Option for Incentivising Incremental Innovation?' (2012), Study conducted for the World Intellectual Property Organisation, 10. (copy on file with author).

189 Ibid.

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

reference in the TRIPS Agreement according to Article 2(1).[191] Thus, compliance with these provisions of the Paris Convention can be tested under the World Trade Organization (WTO) dispute settlement system. For the protection and enforcement of utility models or petty patents, this arguably means that compliance with the core national treatment obligation in Article 2(1) of the Paris Convention can be challenged by a WTO Member in front of a dispute settlement panel established under the Dispute Settlement Understanding (DSU).[192] Sri Lanka ratified the Marrakesh Agreement establishing the WTO in June 1994 and is bound by legal obligations imposed under the TRIPS Agreement.[193] Arguably, the TRIPS Agreement has not really created new obligations on Sri Lanka in relation to UM protection, but confirms the existing obligations it has already undertaken. In other words, as a member of the WTO, Sri Lanka is under obligation to provide national treatments and right of priority for foreign applications for UM or petty patents.

1.7.3. Other Patent Treaties and Agreements

Apart from the above mentioned leading multilateral treaties IP treaties, the Strasbourg Agreement for the International Patent Classification[194] and the Patent Cooperation Treaty (PCT)[195] refer to utility models, without providing any substantive minimum standard of protection. In particular, national utility model systems tend to adopt the International Patent Classification (IPC) as provided by the Strasbourg Agreement concerning the International Patent Classification, which facilitates the retrieval of

191 T Cottier and P Véron, Concise International and European IP Law: TRIPS, Paris Convention, European Enforcement and Transfer of Technology (Kluwer Law 2008)13.

192 HG Ruse-Khan, 'Utility Model Protection in Pakistan-A Feasible Option for Incentivising Incremental Innovation?' (2012), Study conducted for the World Intellectual Property Organisation, 10. (copy on file with author).

193 Agreement on Trade-Related Aspects of Intellectual Property Rights, 15 April, 1994, Marrakesh Agreement Establishing the World Trade Organization, Annex 1C, Legal Instruments-Results of the Uruguay Round, 33 I.L.M. 1197 (1994) (TRIPS Agreement).

194 Strasbourg Agreement Concerning the International Patent Classification on 24 March 1971 as amended on 28 September 1979.

195 The Patent Cooperation Treaty was concluded in Washington on 19 June 1970 and has been amended in 1979, 1984 and 2001.

patent documents in order to conduct effective novelty searches and determine the state of the art.[196] The other significant agreement is the PCT which facilitates patent applications in more than one country. By simplifying and cheapening the process, the treaty encourages patentees to secure protection over a broader geographical range.[197] Instead of filing separately in all countries where protection is desired, applicants may file a single application in one language with a national patent office. By virtue of Article 2, the PCT clarifies that 'application' means an application for the protection of an invention which can be interpreted to include an application for UM or petty patent.[198] Using this route, nationals of Member States can make international applications not only for standard patents but also for second-tier patents such as UMs. Nevertheless, both treaties do not contain any substantive minimum standard of protection. All in all, compared with other IP rights, there remains a great deal of flexibility for a country in designing an appropriate utility model system.

1.7.4. Flexibilities and Policy Space

According to commentators, flexibilities include a range of rights, safeguards and options that WTO Members can exploit in their implementation of the TRIPS Agreement.[199] As we have seen, the policy space that countries enjoy under international IP treaties in the implementation of STP is quite broad. In other words, unlike densely regulated patent protec-

---

196 U Suthersanen, 'Utility Models and Innovation in Developing Countries' (2006) UNCTAD-ICTSD Issue Paper No. 13 Project on IPRs and Sustainable Development 3, available at: <http://unctad.org/en/docs/iteipc20066_en.pdf> (accessed 15 March 2012). Strasbourg Agreement Concerning the International Patent Classification on 24 March 1971 as amended on 28 September 1979. Article 1 states: the countries to which this Agreement applies constitute a Special Union and adopt a common classification for patents for invention, inventors' certificates, utility models and utility certificates, to be known as the "International Patent Classification" that the IPC covers not just 'patents for invention', but also 'inventors' certificates, utility models and utility certificates'.

197 U Suthersanen, 'Utility Models and Innovation in Developing Countries' (2006) UNCTAD-ICTSD Issue Paper No. 13 Project on IPRs and Sustainable Development 3 available at: <http://unctad.org/en/docs/iteipc20066_en.pdf> (accessed 15 March 2012).

198 Ibid.

199 C Deere, *The Implementation Game* (Oxford University Press 2009) 68.

tion, this policy space is almost unlimited.[200] Thus, Sri Lanka and other South Asian countries may be able to use these key flexibilities in line with their domestic economic needs. In evaluating the policy space and flexibilities, it is evident that a country that foresees a UM regime in its domestic law can freely regulate the subject matter it wants to protect, conditions must be attached for a grant of such protection, the exceptions and limitations, term of protection as well as enforcement measures. The obligations multinational legal framework only requires member States to make available the same rights and remedies to nationals of the other WTO members and does not discriminate against foreign nationals or firms. Viewed through the perspectives of these flexibilities, there is a range of options on the table for consideration in designing an appropriate STP regime. Nevertheless, from a practical point of view, one can reasonably argue that, through national treatment obligation and principle against non-discrimination, foreign firms and big players in the market can considerably reduce the benefit that domestic firms can reap under such system. All in all, however, developing countries should be able to better utilize these flexibilities by crafting laws which promote the objectives, including the transfer of technology.[201]

1.8. Conclusion

In sum, a utility model or petty patent system may be viewed as one of the options available within the IP system to promote incremental and minor innovations. Such a system is intended to provide an IP right for innovations whose technical advances are not as great as that should be required for the grant of a regular patent, but there is an improvement over art. From a policy perspective, it is argued that this legal tool would be of an importance for a developing country whose technological capacities are marginal. Indeed, innovation at all level should be encouraged in order to

200 HG Ruse-Khan, 'Utility Model Protection in Pakistan-A Feasible Option for Incentivising Incremental Innovation?' (2012), Study conducted for the World Intellectual Property Organisation, 21-22. (copy on file with author).

201 See also, KE Maskus and JH Reichman (eds), *International Public Goods and Transfer of Technology Under a Globalized Intellectual Property Regime* (Cambridge University Press 2005). RE Evenson and LE Westphal, 'Technological Change and Technology Strategy' in H Chenery and TN Srinivasan (eds), *Handbook of Development Economics* (1988) 2209-2299.

build an innovative culture in a country. Incentive-base theory informs us that without adequate protection, minor and incremental innovations would not be rewarded. In fact, an STP system can be tailored to suit local need and concerns of local industries, especially for those of the SME sector. There is evidence that a UM regime may be more suitable for Sri Lanka, given the specific characteristics of its innovation landscape. Moreover, it is argued that an STP regime is more suitable and comprehensive enough to be used by TK-based innovators because such innovations are made without much original contribution. Perhaps most encouragingly, the policy space left by the multinational legal framework can be used to design a most appropriate form of a second-tier protection that suits the specific needs of an individual country. Countries in the region should be able to experiment this alternative legal approach since one 'size fit for all patent system' has not lived up to its expectation in terms of promoting innovation and inventions. Although, the idea of an STP regime has been in the backwater of IP law for decades in South Asian countries, there is a rising tide of opinion in favour of such as system in recent years. Most notably, the momentum has of course picked up sooner the Indian government introduced the Discussion paper on UM. In light of the above, it seems logical to argue that Sri Lanka and other developing economies in the South Asian region should carefully consider this largely unexplored option of STP in order to stimulate domestic innovations.