

**INTELLECTUAL PROPERTY AND THEIR ECONOMIC IMPORTANCE FOR
DEVELOPING COUNTRIES LIKE PAKISTAN**

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1. INTRODUCTION:

This is an era of science, technology, innovation and booming economies. Since 1970 this world has seen drastic changes as computers and internet has changed the whole outlook of the world. These changes have affected almost every aspect of life as computers are embedded in almost everything that we use today. Intellectual Property is a term that is not new to anyone. These new developments have equally affected the world of intellectual assets and since then jurists, legislators, businesses, scholars, and economists, have been busy discussing how and to what extent these developments have affected Intellectual Property Rights (IPRs) because IP can affect any country's economy. The data on these issues are scarce and even less reliable to derive any perfect conclusions from it but by the establishment of World Intellectual Property

Organization (WIPO)¹ and other independent organizations for example World Bank², World Trade Organization (WTO)³ etc. we have been fortunate to collect some data on developed countries, and by considering that data we can reach some conclusions that can be considered reliable. Unfortunately, the data regarding developing countries is still scarce and unreliable.

Before we start with what impacts IPRs possibly could have on a country's economy, it is pertinent to know what IPRs actually are;

‘Intellectual property (IP) refers to creations of the mind: inventions, literary and artistic works, and symbols, names, images, and designs used in commerce. IP is divided into two categories: Industrial property, which includes inventions (patents), trademarks, industrial designs, and geographic indications of source; and copyright, which includes literary and artistic works such as novels, poems and plays, films, musical works, artistic works such as drawings, paintings, photographs and sculptures, and architectural designs. Rights related to copyright include those of performing artists in their performances, producers of phonograms in their recordings, and those of broadcasters in their radio and television programs, the makers of databases etc.’⁴

1.1 Structure of the paper:

This paper is divided into six Chapters, each addressing different aspects of IPRs highlighting the problems, concluding with some possible solutions that might be able to help in changing the status quo in Pakistan.

1 WIPO was established by WIPO convention 1967, a specialized agency of United Nations.

2 Institution for financial and technical assistance to developing countries.

3 WTO was a result of negotiations called Uruguay round and earlier negotiations under the General Agreement on tariffs and trade (GATT).

4 Intellectual Property as defined by WIPO <http://www.wipo.int/about-ip/en/>

The paper initially highlights the rationale behind the IP system, discusses the effects of Agreement on Trade Related aspects of Intellectual Property Rights (TRIPS)⁵ on developing economies like Pakistan and the elementary economics of IPRs.

Chapter 2 discusses the creation, aims, efforts and programs carried out by the WIPO in regulating the IP world. The role and efforts of WIPO that inter alia includes eradicating counterfeiting, piracy, grey markets and grey goods which is a billion dollar industry in it. The paper also elaborates the reasons why countries like India, Pakistan, China and other parts of Asia are becoming safe haven for counterfeiting industries.

Chapter 3 discusses the factors that can help developing countries to step forward from a status of least developed countries to advanced developing countries in the first stage.

IP alone cannot make that change as other factors are vital as well. Keeping in mind the financial potential IPRs have they alone are ample to give a reasonable financial addition to a countries economy. The chapter also highlights the importance of IPRs in term of their positive impact on Gross Domestic Product (GDP)⁶ to a certain extent.

The factors that are briefly discussed in the paper are Foreign Direct Investment (FDI), tax revenues, technology transfer, global economy, global trade, licensing of technology, quality of goods, joint ventures, job industry and working conditions of a country etc.

⁵ TRIPS is an international agreement administered by WTO that provides standards for different IP regulations for WTO members. Text available at http://www.wto.org/english/docs_e/legal_e/legal_e.htm#TRIPs

⁶ An indicator of country's standard of living

Chapter 4 highlights the effects of digitalization⁷ that has brought a new revolution in the world. Most of the developing countries have failed to keep their laws in accordance with the latest developments. In some cases despite having adequate laws the judicial system is so sluggish or expensive that it made laws ineffective. The fact cannot be ignored that the world of IP is not the same as it was 30 years ago. Computational technologies (computers, networks, and other new media aspects) enable every person to create and distribute content in the ways that were heretofore limited to professional and corporate creative producers and distributors only.⁸ These technologies enable the easy copying and distribution of content in ways that compromise the integrity of intellectual property system.⁹ The IPR regimes across the world are undergoing a change, working together to find the best possible solution to protect IP in this era of information and communications technology (ICT). The solution means a big economic bang to IP industry. On one hand, digitalization has made information available at every door but at the same time, it has made possible to reproduce originals without loss of quality or data. Internet, as it is helping the world, it is also being used as a medium to exploit pirated materials globally compounded with efficiency and with no big investments. Cheap and simple technical devices are available in markets that are making things even easier for the producers of ‘counterfeited products’¹⁰.

Chapter 5 discusses the contemporary legal system, the procedural and substantive laws prevailing in Pakistan and provides a possible solution that can be used to pressurize government to practically step forward and take immediate steps to fight this global problem.

7 When information such as text, sound, image or voice, are converted into a single binary code.

8 Intellectual Property Law & Interactive Media For Free Edward Lee Lamoureux page No.2

9 ib

10 To illegally imitate something.

Chapter 6 concludes this paper by putting all the solutions together which in the eye of the author can help Pakistan for better revenue generation and more effective and sophisticated enforcement of IPR laws.

1.2 Facts about Pakistan:

According to the Central Intelligence Agency (CIA) world fact book 'Pakistan is an impoverished and underdeveloped country. The history of Pakistan reveals that it has suffered from decades of internal political disputes and low levels of foreign investment. Pakistan has sixth largest population i.e. 187,342,721 (July 2011 EST).¹¹

1.3 Geographical Location:

The geographical location of Pakistan makes it significantly important i.e. Southern Asia, bordering the Arabian Sea, between India on the east and Iran and Afghanistan on the west and China in the north.¹²

1.4 Economic Condition:

11 The World Fact book provides information on the history, people, government, economy, geography, communications, transportation, military, and transnational issues for 266 world entities. <https://www.cia.gov/library/publications/the-world-factbook/geos/pk.html>

¹² Ib

During the last decade, Pakistani economy is suffering from constant depressions and extremely low trade flows.¹³

1.5 Map of Pakistan:

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1.6 Rationale Behind IPRs:

The basic rationale of IPRs is that intellectual creations should be given same kind of protection across the globe and the owner/creator of these works should be ensured a satisfactory reward for their efforts and investments that eventually will encourage.

1.7 Legal Issues Argued in Paper:

- i. *Whether the Uruguay round and the Agreement (TRIPS) equally favors developed, developing and least developed countries?*
- ii. *Whether stronger IPR protection, equally helps developed and developing countries?*

- iii. *What benefits if any, developing economies can derive from stronger protection of intellectual property rights?*
- iv. *Whether the problem that developing economies failed to tackle with piracy/counterfeiting lies with the substantive law, judicial system or with the executive that South Asian countries are becoming safe havens for 'grey markets'¹⁴ and grey goods?*

1.8 Elementary Economic of IPRs:

This paper is focused on the legal and economic issues relating to world of IP.. The paper will therefore not go deep into the matters that strictly fall within the domain of elementary economics.

1.9 Importance of calculation of Intangible assets:

The physical assets are sold and bought in the modern market according to some fixed standards that determines their market value. However, IPRs are rarely traded like other tangible goods.¹⁵ This makes it difficult to determine the exact worth of intellectual property in the absence of very detailed firm level data.¹⁶

Accountancy firms across the world have adopted standards that help to measure the actual worth of any intelligible assets because they are related with determining the share price and actual worth of a company, the value of intellectual assets of some companies are actually more than their physical assets.

¹⁴ A market where a product is bought and sold outside of the manufacturer's authorized trading.

¹⁵ The Economics of Intellectual Property: A Review to Identify Themes for Future Research by Hall 2000 Edition p.22

¹⁶ ib

1.10 TRIPS & Developing economies:

For this paper I have divided the countries into two different groups, developed and developing.

Further, the developing economies can further be sub divided three groups:

- i. Developing economies with common-law background, former colonies of Britain e.g. Pakistan.
- ii. Developing economies with civil-law background, former colonies of European countries.
- iii. Developing economies that were never colonized.

TRIPS **was negotiated at the** end of the Uruguay Round of the General Agreement on Tariffs and Trade (GATT) treaty in 1994.¹⁷ Its inclusion was the culmination of a program of intense lobbying by the United States, supported by the European Union, Japan and other developed nations.¹⁸

1.11 Rationale behind TRIPS:

The WTO one-size fits all TRIPS Agreement is an attempt to make IPRs respected equally across the world and to globally harmonize legislation for the IP world. On

¹⁷ Source: http://en.wikipedia.org/wiki/Agreement_on_Trade-Related_Aspects_of_Intellectual_Property_Rights

¹⁸ Ib

the other hand there are lobbies that strictly criticize the TRIPS and regard it against the interests of developing countries.

1.12 Effects of TRIPS:

TRIPS has undoubtedly achieved success as it has brought changes in legislations of its member countries across the world. But this ‘one-size fits all’ approach adopted by the developed countries did not pay considerable attention to the problems developing countries were going through. The agreement to some extent achieved its purposes for the developed countries which were keen to protect their citizens and their assets against any kind of vulnerability on a broader scale. On the other hand, that agreement resulted into a sort of monopolization of developed countries giving them significant power to decide for the developing nations. TRIPS was a standard agreement for all countries that were on different economic and political level at that time.

1.13 TRIPS and Developing Countries:

‘IP justice’¹⁹ in one of its reports narrates that:

‘IP systems need to take into account *different levels of national development* to ensure that the underlying policies that IP seeks to promote are ultimately met.

Both developed and developing countries support this proposition, but some developed countries try to impose a particular view of intellectual property on all, while disregarding history in which today’s “rich” countries became wealthy to a certain extent by refusing to recognize intellectual property and

¹⁹ International civil liberties organization promoting balanced IP laws and free expression
<http://ipjustice.org/>

by granting wider exceptions and limitations to copyright.²⁰

On another occasion the report states that:

‘This view was further supported by the UK delegation. It stated in its submission that harmonization is not necessarily the enemy of development if it takes into account *different levels of development*. The UK recognizes the need to foster sustainable development and the role IP can play, noting that IP can foster development primarily in “*countries which have already developed a scientific and technological infrastructure*.”²¹

Furthermore, the same point was re-affirmed by the delegation of Singapore:

Speaking on behalf of the Asian group, stated that ‘there was not a “one-size-fits-all” approach in implementing IPR commitments, believing that WIPO’s work in implementing the development agenda should be undertaken in a balanced manner, guided by the unique and peculiar circumstances in each country, and based on public policy considerations and national developmental priorities, since the *national policy space of each country should be respected*’.²²

The report further gives some examples from the history by mentioning the countries that today are champions of protecting IPRs.

The report mentions United States, which has always loudly fought against counterfeiting and piracy, but has a long history of not protecting foreign authors to promote its own developmental and self-interest.²³

20 http://ipjustice.org/WIPO/WIPO_DA_IP_Justice_Policy_Paper.shtml: WERO: WIPO evaluation and Research office

21 *Ib* UK PROPOSAL at 2 *supra* notes 3.

22 *Ib* DRAFT REPORT at 14 par. 40, *supra* note 4.

23 *Ib*

The US Congress enacted the first copyright statute in 1790²⁴ i.e. the Copyright Act of 1790 limited to copyright protection which was applicable to “a citizen or citizens of these United States or resident therein.”²⁵

The Act explicitly allowed pirating of foreign published works, stating:

‘[N]othing in this act shall be construed to extend to prohibit the importation or vending, reprinting or publishing within the United States, of any map, chart, book, or books, written, printed, or published by any person not a citizen of the United States, in foreign parts or places without the jurisdiction of the United States.’²⁶

The report by the IP justice system made its conclusion by stating that:

‘WIPO needs to consider the costs of IP systems to developing countries, recognize that countries at different stages of development have different needs, protect flexibilities within the IP system to allow countries to promote their own developmental needs, and generally work to become more transparent and member-driven with ongoing inclusion of NGO’s. IP Justice further endorsed the friends of development (FoD) proposal and fully supports the creation of WIPO Evaluation and Research Office (WERO)’²⁷.

24 Act of 31st May 1790, ch 15, 1 Stat. 124.

25 *Ib.* § 1.

26 *Ib.* § 5.

27 http://ipjustice.org/WIPO/WIPO_DA_IP_Justice_Policy_Paper.shtml: WERO: WIPO evaluation and Research office

Apart from IP justice many other prominent non-governmental organizations, such as Oxfam²⁸, Health Gap²⁹, Global Trade Watch³⁰, International Federation of Library Associations and Institutions (IFLA)³¹ etc. along with developing economies raised their voice against biasness of TRIPS but nothing has been changed due to enormous pressure by investors that shape the world and economies of developed countries.

This same argument was further strengthened by the report that the full implementation of TRIPS will give rise to transfer of wealth from developing countries to the developed world³². The report gives an estimate that United States alone is expected to benefit from enhanced international patent protection by an estimated 19 billion US dollars per year.³³

Secondly TRIPS will increase market power for innovating firms which will increase price and will affect trade volume.³⁴

Lall and Albaladejo conducted a research project and took a sample of 87 countries. Their conclusion was high technology group will benefit most from IPRs and

28 Oxfam is a global movement of people working with others to overcome poverty and suffering.

29 Organization which is working to eliminate barriers to access to life sustaining medicines.

30 Organization working for American economic security <http://www.citizen.org/trade/>

31 IFLA is the leading international body representing the interests of library and information services and their users.

32 Lall 2001, IPR Commission 2002, Dutfield 2005

33 Ib

34 The Economics of Intellectual Property: A Review to Identify Themes for Future Research, Pdraig Dixon and Christine Greenhalgh November 2002

unsurprisingly the poorest countries will get the worst because of higher prices for protected products and technologies.

1.14 How TRIPS can affect country like Pakistan?

Pakistan is a country with a population of over 18 million. According to the Human Development Index (HDI)³⁵, 60.3% of Pakistan's population lives on under \$2 a day.³⁶

Countries like Pakistan are expected to be affected most from this sort of legislation, made by developed nations. For instance the prices of medicines along with other things of daily use have increased manifolds due to stronger IP laws.

Rohit Malpani an Oxfam senior advisor wrote an article titled:

‘Rather than help poor countries address the problem to ensure, safe effective and quality medicines for all, rich countries are putting commercial interests ahead of public health in these countries’.³⁷

³⁵ The Human Development Index (HDI) is a comparative measure of life expectancy, literacy, education and standards of living for countries worldwide.
http://en.wikipedia.org/wiki/Human_Development_Index

³⁶ Poverty in Pakistan http://en.wikipedia.org/wiki/Poverty_in_Pakistan

³⁷ See at <http://www.oxfam.org/en/pressroom/pressrelease/2011-02-02/crisis-poor-quality-medicines-being-used-excuse-push-prices-poor>

The 'Doha Declaration on trips and public health 2001'³⁸ was a step taken by WIPO to redress the issues raised by developing countries. The Doha Declaration helped the countries that have manufacturing capabilities but that step was not helpful for the countries that lack manufacturing capabilities.

Concluding the first argument it is true that TRIPS is not that favorable for the developing countries as it is for the west who are already moving ahead in the world of innovations, but at the same time developing countries should realize that the rules of game have already been defined by the developed nations and developing countries instead of being critical towards the law which most of countries have signed to adopt should come with something that could work. The criticism by individuals and some non-governmental organizations cannot bring any change because US, along with other European companies are determined to protect their interest at any cost. If developing nations will just keep their concentration towards criticism and will not define any proper agenda it is feared that they will be left behind.

In the current situation developing nations may form a united independent body representing their interests. They should define a long term strategically planned steps that will eventually foster research development and innovation in their countries. The body should be comprised of jurists, economists, legislators and people having expertise in the subject. The body should first evaluate where all countries stand and then suggest the steps towards a society where people are ensured reward for their efforts and investments that will eventually result in better economy and a healthy innovative society.

38 See http://www.wto.org/english/tratop_e/dda_e/texts_intro_e.htm

Chapter No.2

2.1 World Intellectual Property Right Organization (WIPO):

WIPO is a specialized agency of the United Nations established by the WIPO Convention in 1967 with a mandate from its Member States to promote the protection of IP throughout the world through cooperation among states and in collaboration with other international organizations.³⁹

2.2 History and background of WIPO:

One of the earliest and noteworthy conventions in IP history is the Paris Convention for the Protection of Industrial Property (1883)⁴⁰ which established reciprocal protection, and also priority rights in respect of patents, trademarks and industrial designs. An International Bureau was also formed at that time for administering the Paris Convention 1883.

Soon after Paris Convention in 1886 famous Berne Convention for the Protection of literary and Artistic Works⁴¹ was presented to give IPR's an international legal recognition, and to harmonize legislation on IPR's. Similarly, a bureau was established to administer the Berne Convention.

In 1983 both of the bureaus merged and emerged as a single independent International Organization called Bureaux Internationaux Réunis pour la Protection de la Propriété Intellectuelle (BIRPI).

39 What is WIPO text taken from http://www.wipo.int/about-wipo/en/what_is_wipo.html

40 Text available at http://www.wipo.int/treaties/en/ip/paris/trtdocs_wo020.html

41 Text available at http://www.wipo.int/treaties/en/ip/berne/trtdocs_wo001.html

Later when IPR regime expanded and became more important for the world BIRPI was converted into a much sophisticated and big organization we see today as WIPO.

Currently WIPO administers 24 international treaties on IP and has 184 countries as members.

2.3 Counterfeiting And Piracy In Developing Economies:

Counterfeit trademark goods shall mean any goods, including packaging, bearing without authorisation a trademark which is identical to the trademark validly registered in respect of such goods, or which cannot be distinguished in its essential aspects from such a trademark, and which thereby infringes the rights of the owner of the trademark in question under the law of the country of importation⁴²

Pirated copyright goods shall mean any goods which are copies made without the consent of the right holder or person duly authorised by the right holder in the country of production and which are made directly or indirectly from an article where the making of that copy would have constituted an infringement of a copyright or a related right under the law of the country of importation.

Piracy, counterfeiting and commercial infringement of intellectual property rights accounts for 5-7 percent of world trade⁴³.

American industries have a keen eye on the statistics for piracy and the results given by those bodies are alarming. The OECD presented a report in the year 1998 disclosed that the US copyright industries motion pictures, software, spare parts, clothing, musical industries are affected most by counterfeiting⁴⁴.

The top five producers of counterfeited products were China, Korea, Chinese Taipei, Hong Kong and Philippines⁴⁵.

⁴² The Economic Impact of Counterfeiting, a report by OECD
<http://www.oecd.org/dataoecd/11/11/2090589.pdf>

⁴³ Ib

⁴⁴ Ib

⁴⁵ Ib

Europe has been facing similar problems because of free flow of goods across their borders. Philippines, Turkey, Poland, US along with some other countries were identified as the biggest exporters of pirated goods to Europe by the OECD.

Moreover, IP world is facing the challenge of parallel trading.

Parallel trading refers to the situations where products are legitimately bought in one country and diverted for sale to another country without the consent of the right holder in the receiving country.⁴⁶ Parallel trading is facilitated by two principles that limit the rights of an IPR owner i.e. the principle of territoriality, the IPR protection is valid only for specific countries or regions; and the principle of exhaustion, and i.e. the right owner has very limited rights to prevent further distribution of a product that is put on the market with his consent.⁴⁷

Over runs and unauthorized productions are also facilitating black markets because courts consider over runs and unauthorized productions as a breach of contract not infringement of trade mark.⁴⁸

TRIPS under Article 42 provides protection for right holders:

‘...that member states shall make available civil judicial procedures to the right holders concerning the enforcement of any intellectual property right...’⁴⁹

46 The Economic Impact of Counterfeiting, a report by OECD
<http://www.oecd.org/dataoecd/11/11/2090589.pdf>

47 Ib

48 Ib

49 Ib

Many countries have made counterfeiting as a criminal offence by regarding it as an attempt to defraud.

Article 61 of the TRIPS agreement provides that:

‘...criminal procedures and penalties to be applied at least in cases of willful trademark counterfeiting or copyright piracy on a commercial scale....’

Article 51 of the TRIPS provides for the administrative remedies to the right holders.⁵⁰

This illegitimate industry is multiplying for multiple reasons.

For example:

What is the incentive of buying branded goods, or who will buy original Microsoft Windows when you can get the pirated version for next to nothing?

Counterfeited and pirated material is readily available across the world. Anyone hardly gets caught for these kinds of white collar crimes.

Counterfeiting is one of the biggest challenges being faced by the IP industries across the globe. Developed countries are concerned about this fastest growing industry which is posing a great risk to job market, R&D, foreign trade, tax collection etc. This industry is creating barriers for the new entrants by lowering the reward or in some cases no reward at all and at the same time causing financial loss and loss of goodwill to genuine legitimate producers.

Asian countries are regarded as the largest producer of the counterfeited products. The legal reasons fostering this phenomenon are discussed in the next chapter but some facts that put Asian countries on the top producers of pirated goods are discussed in this chapter.

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In most of the Asian countries the literacy rate is quite low and they are densely populated. Governments are corrupt and unable to enforce their writ on the people. Judicial systems are slow and expensive. A vast majority of the population is living below poverty line and it is impossible for them to afford even a moderately expensive thing even if it's a lifesaving drug. The first priority when people want to buy something is price, poor people hardly pay any attention to quality; all what they want is cheap goods.

The high demand of cheap products has made Asia the biggest producers of counterfeited products. It's a nice feeling when you can buy counterfeit of Rolex for 10 US dollars or a Microsoft Windows CD for just one US dollar, at least it's tempting.

Developed countries are progressing towards making their IPR systems even more sophisticated. In contrast developing countries, despite having adequate substantive law are still unable to fight grey markets and grey goods.

In 2007; 59.7% of all the pirated goods intercepted at the borders of EU originated in China⁵¹. In 2007 US, EU along with other 14 other countries initiated a WTO dispute resolution process which resulted into some recommendations to China.⁵² But despite of the recommendations the fact remains the same that China still is one of the biggest producers of counterfeited products and surprisingly is one of the fastest growing economies.

It may look attractive that you can buy forged expensive brands for next to nothing, but in a wider perspective these counterfeited products cause colossal losses to national economies. It has also seriously affected the nascent R&D sector in

51 Illicit Tobacco Trade Monitoring and Mitigating Risk in New eland
http://www.ash.org.nz/site_resources/library/Research_commissioned_by_ASH/Illicit_Tobacco_Trade.pdf

52 United States-China Trade Litigation in the WTO by Stuart S. Malawer

developing economies. No one feels safe to invest in R&D in a country where there is no reward for the investments made and that has eventually slow down the process of innovation in developing countries.

What might be the future of developing economies who failed to take necessary steps to fight against piracy? Who should come forward to help those countries? How can this industry affect developed economies?

In the present century, there is a war of economies between the countries. For me the third world war has already been started and this war is between economies. United States is leading the world because they are pioneers of technology and they have attained that status by protecting their assets and by ensuring that their investments remains safe globally. Strong economy can drive a country to a better level. Asian countries are important as large consumer markets. The Pakistani economy is facing instability since the last decade due to its instable political situation. The war against terrorism has badly hampered Pakistani economy. In addition, the Courts in Pakistan are slow in rendering judgments due to heavy case load. The laws have not been updated according to the latest developments to tackle the contemporary situation, if the status quo remains, the future could be even worse.

Many theories have been given by different lawyers, jurists, and economists why IPRs are important and why they should be vigorously protected. The theories *inter alia* include the reward argument, economic argument, incentive argument and the natural justice argument.

WIPO & WTO being the parent bodies in the field of trade and IPRs are burdened with the responsibility to make sure that intellectual assets be respected and protected across the globe. The bodies have so far achieved remarkable success as they are improving the IP standards and trying what possibly could be done for the right holders.

These bodies are busy in conducting surveys in different countries because the results of a study in one country may not necessarily be applicable in other country.

Different factors such as population, level of literacy, skills, industrial policy, political

stability and the like could come into play to alter what otherwise have been a logical conclusion.

There are some further possible actions that these bodies may try for better harmonization of IP standards. After conducting surveys and identification of problems, these bodies in collaboration with the national authorities of member countries may come up with some recommendations, giving them appropriate time to follow the recommendations.

Anti-counterfeiting technologies be given to such countries, they be asked to start a campaign for due diligence to buy originals because it causes economical loses to a country. Foreign producers are hesitant to invest in a country where IP system is not strong. Another aspect is, if the reputation of goods produced in one country is not good it is likely that consumers will be afraid to buy stuff from that country.

WIPO and WTO should give members sufficient time depending upon their current situation to take actions against the wrong doers and if any country failed to take necessary steps, trade sanctions may be proposed for such countries.

Further, a mechanism should be established for exchanging information and cooperation between developed and developing countries. National authorities should be given more independence, budget and power. Stronger IPR will excel Research and development in developing countries which eventually will result into innovation in developing economies. In contrast developing economies should allocate some specific counter-piracy budget to fight this industry. Better and efficient IPR system in developing countries will improve IP world as a whole.

Chapter No.3

EFFECTS OF IPR ON ECONOMIES

3.1 Transfer of Technology (TOT):

Technology is and will always be vital for economic well-being of a country. The United Nation Conference on Trade and Development (UNCTAD) draft International Code on the transfer of technology (the draft TOT Code), defines “*technology transfer*”, and describes “*technology*” as:

“systematic knowledge for the manufacture of a product, for the application of a process or for the rendering of a service”, which does not extend to the transactions involving the mere sale or mere lease of goods”⁵³

“Technology transfer” is the process by which commercial technology is disseminated.

Among the types of transfer transactions that may be used, the draft TOT Code has listed the following:

⁵³ UNCTAD, 1985, chapter 1, para.1.2

- “the assignment, sale and licensing of all forms of industrial Property, except for trademarks, service marks and trade names when they are not part of transfer of technology transactions;
- The provision of know-how and technical expertise in the form of feasibility studies, plans, diagrams, models, instructions, guides, formulae, basic or detailed engineering designs, specifications and equipment for training, services involving technical advisory and managerial personnel, and personnel training;
- The provision of technological knowledge necessary for the installation, operation and functioning of plant and equipment, and turnkey projects;
- The provision of technological knowledge necessary to acquire, install and use machinery, equipment, intermediate goods and/or raw materials which have been acquired by purchase, lease or other means;
- The provision of technological contents of industrial and technical co-operation arrangements”⁵⁴

3.2 How technology is transferred:

Transnational Corporations TNCs transfer technologies directly to foreign host countries in two ways:

- a. Internalized to affiliates under their ownership and control
- b. Externalized to other firms.⁵⁵

3.3 Transfer Of Technology To Developing Countries:

One of important contributions that host developing countries seek from TNCs investing in their economies is technology.

⁵⁴United Nation Conference on Trade And Development, Transfer of Technology (1996a, vol. I, p. 183) <http://www.unctad.org/en/docs/psiteiitd28.en.pdf>

⁵⁵ (UNCTAD, 1999a, p. 203) <http://www.unctad.org/en/docs/psiteiitd28.en.pdf>

The question arises, what is the incentive for technology developers to transfer commercial technology to developing countries? How and what possible affects technology transfer could have on a developing economy?

TNCs are one of the major forces in shaping international markets for technology. The primary and significant feature of the market for commercial technology is that technology should be treated as the private property of its owner and not as a public good available for general use at little or no cost to its user⁵⁶.

Another important fact which is reiterated by different authors in their writings is that mere possession of technology does not result in improved technical development or economic gain: the capacity to understand, interact with and learn from that technology is critical⁵⁷.

Pakistan, like many other developing countries, has so far failed to develop indigenous engineering capabilities, and has not succeeded in adapting its enterprises to meet local needs⁵⁸.

As a whole, developing countries only attract marginal portions of foreign affiliate research, and much of what they get relates to adaptation and technical support rather than innovation⁵⁹.

56 Multinational Enterprises and the Law by Av Peter Muchlinski Ch: Technology Transfer Pg:427

57 Intellectual Property and Computer Software by Alan Story
http://www.iprsonline.org/unctadictsd/docs/CS_Story.pdf

58 Economist Intelligence Unit N.A. Incorporated Baranson, Jack

59 United Nation Conference on Trade And Development, Transfer of Technology

The problem is that majority of the developing countries do not have the technological infrastructure to make it economical for TNCs to set up local R&D facilities⁶⁰. Most developing countries, despite efforts remain net consumers rather than producers of technology, they pay more in royalties and licenses than they earn from their efforts to attract technology.⁶¹

3.4 IPRS and Transfer of Technology:

Commercial technologies are usually exploited through the application of IPRs, which provide the owner legal and exclusive rights over the use and disposal of those rights.

Technology can be transferred by way of protected and restrictive contracts as in the case of non-patentable know-how that is secret. The contract itself may contain provisions that protect the know-how i.e. secret against the abuse by way of adding restrictive clauses that control the recipient's freedom of action when applying the know-how. This process helps to increase the value of the technology to its owner by creating incentive to invest further in technology and creates relative scarcity through legally restricted access to it.

IPRs also give the holder the ability to choose the ways in which technology could be exploited.

Technology is not just information that can easily be communicated; its transfer requires competence to learn and investment to incorporate it into firm's productions system⁶².

⁶⁰ (UNCTAD, 2000a, pp. 173-174)

⁶¹ Ib

⁶² International Public goods and Transfer of Technology under a Globalized Intellectual Property Regime by Av Keith Eugene Maskus Pg:230

Developed countries multinational entrepreneur (MNE) accounts for a huge amount of international technology transfer. Industrialized countries like Korea and Taiwan have been able to benefit more from that mechanism than companies in poor countries⁶³. On the other hand, companies that possess technology often have very little incentive to transfer it to developing countries for the reason innovative firms are particularly reluctant to transfer technology that may help a potential licensee to become competitor in global market or when they have a risk of leakage⁶⁴.

For example US entered into a contract with Pakistan to sell multi-role F-16 aircrafts but now US has some reservations that Pakistan will leak that technology to China⁶⁵. US along with other top manufacturers of weapons and other valuable goods are concerned about the technology leakage because it's the asset worth billions of US dollars.

Whether the strong protection of IPRs can help developing economies to attract transfer of technology?

The fact is quite clear that stronger and effective protection of IPRs will help any country to attract MNE and foreign investors to invest their assets. The availability and enforceability of IPRs alone will, by no means, create a sufficient incentive for the transfer of technology. The companies competing in technology market needs some kind of incentive for transferring technology to third party coupled with assurance that technology will not further be retransferred to any third party without their consent.

63 Ib

64 Ib

65 See <http://www.defence.pk/forums/strategic-geopolitical-issues/1512-pakistan-not-transfer-f-16s-technology-china.html>

In contrast, it has been observed that sometimes stronger IPR's protection can make transfer of technology even more complex.

Under Solow's assumption all countries might share the same pool of technology and, hence should have the same kind of opportunities to grow⁶⁶ but unfortunately that is not the case.

Technology owners prefer to have stronger IPR system in the host country. Stable democratic government and efficient judicial system is another important factor that companies consider while entering into any kind of contract with the party. If there exists, any gap in the form of lack of legislation, that might could might be covered by extensive contractual terms.

3.5 Technology Transfer and National Economy:

Developing countries are facing different acute challenges which they can't fight in isolation and without the help of developed economies. Their economies are facing a constant depression and the people living there are facing economic problems. Due to unstable political infrastructure, rapidly growing population and extreme corruption TNC's and MNE's are afraid to invest in these countries. Since 9/11 many countries in the South Asia e.g. Pakistan and Afghanistan are economically destroyed.

Developing countries in this era of recession should realize the importance of IPRs and the economic benefits that it can bring to their national economy. Companies feel more confident in investing in a country where they know that their assets will remain safe and in case of any infringement they will be compensated in reasonable time. With the transfer of technology a country just not benefit from that technology but that eventually affects other sectors as well like job market, better tax collection and FDI. These few factors alone are sufficient to add a reasonable amount of money to national treasury.

⁶⁶ International Public goods and Transfer of Technology under a Globalized by Av Keith Eugene Maskus

3.6 IPRS & Tax Collection:

What is taxation? Why is taxation so important in a particular nation or state? What makes it a very significant aspect of governance?

- i. Tax: A fee charged (“levied”) by a government on a product, income, or activity. If tax is levied directly on personal or corporate income, then it is a direct tax. If tax is levied on the price of a good or service, then it is called an indirect tax. The purpose of taxation is to finance government expenditure. One of the most important uses of taxes is to finance public goods and services⁶⁷.

3.7 Importance Of Taxation For A Country:

Malcolm explains that taxation is the power vested in the legislature to impose burdens or charges upon persons and property for the purpose of raising revenue for public purposes.⁶⁸

'Government may seem to have a bottomless reserve of money, it needs a good and stable financial resource to manage nation. The revenues from domestic taxes provide this. Without it, the services offered to all citizens could not be effectively managed.⁶⁹

The government uses the revenues to support public healthcare, social security,

67 Definition taken by Investor Words <http://www.investorwords.com/4879/tax.html>

68 Taxation-Why is it important <http://www.lawgiants.com/2010/04/taxation-why-is-it-important/>

national defense, free elementary education, public housing, and many other social services. The taxes citizens pay, fuel society support all needs including police protection, fire emergency services, garbage services, etc.⁷⁰

3.8 Taxation System in Pakistan:

One of other serious problems that Pakistan is facing since 1947 is low tax collection. Federal Board of Revenue (FBR) formerly known as Central Board of Revenue (CBR) is the federal institution responsible for tax collection in Pakistan.

In April 2009 FBR missed the tax collection target. FBR was only able to collect Rupees 14.47 billion, which made difficult for the tax authorities to meet the annual target of Rupees 1.3 trillion at the end of current fiscal year⁷¹.

In an article by Kari Horrigan⁷² on Pakistani tax system he commented 'It's not like Pakistan doesn't have a tax system. In fact, it has lots of tax systems. At least 37 government agencies levy more than 70 separate taxes on various goods and services'. He further commented on the tax system by saying that we could learn a thing or two from Pakistan however Pakistan has not been able to expand its tax net, encompassing rich stratum of society. The poor don't like it, but the rich don't care.

The reasons given by Karin Horrigan are exact and accurate because Pakistan's Parliament is full of rich and influential people, most of them are big feudal lords and government agencies cannot question them. Then he further commented by saying

70 Importance of Tax to Society <http://www.taxified.com/importance-of-tax-to-society.html>

71 See <http://www.nation.com.pk/pakistan-news-newspaper-daily-english-online/Business/06-May-2009/FBR-misses-tax-collection-target-by-Rs1447b-in-April>

72 http://www.stltoday.com/news/opinion/columns/kevin-horrigan/article_3b763d98-c9a5-11df-9e4e-00127992bc8b.html

that most of the people in Pakistan don't pay any attention to taxes and the people who pay attention to the tax system find it so riddled with exemptions that they can safely reduce their legal tax obligation close to zero.

The article shows that Kari Horrigan has a keen eye on Pakistani tax system but the thing that he failed to mention was that the people of Pakistan don't trust government and they don't like to pay money to the government which is not providing citizens with any kind of facility. The government on the other hand is taking loans from International Monetary Fund (IMF) which has resulted into economic destruction.

3.8 Relationship between IPRs and Taxes.

IPRs, broadly consists of patents, designs, trademarks, copyright etc. When a company wants to initiate any kind of business activity in any country it has to fulfill all the legal and statutory requirements laid down by the law of that country.

Multinational entrepreneurs MNE are aware of the risk that investing in the countries with defective and sluggish legal systems, weak IPRs protection could be risky but at the same time they are also aware of the fact that developing countries are big consumer markets with added benefit of cheap labor.

Mostly, all business entities wants to reduce their cost price in order to reap more benefits, additionally in western countries tax percentages are comparatively high and it's hard to evade tax due to sophisticated tax collecting mechanism and proper maintenance of data.

For these reasons many MNE wants to establish their subsidiaries in countries where there assets are comparatively safe, labor is cheap, legal systems are not flimsy. IPRs coupled with relatively stable democratic governments and sophisticated legal

systems can make western companies think to outsource their work to countries like Pakistan and India.

The countries loaded with such benefits are considered to be a perfect place to invest for MNE's.

Foreign office decides the foreign policy including policies regulating national and international trade. Many countries in order to attract international trade, gives extra advantages to MNEs.

Once a company decides to initiate any kind of activity it applies for incorporation and has to pay a certain amount of statutory fee levied by that country. Once the company/firm gets incorporated and the certificate of incorporation is issued it becomes legally eligible to initiate its activities. After incorporation mostly companies applies for registration of its intellectual assets and has to pay fee for registration of its assets. Every registered company is under a statutory obligation to file a tax return at the end of every fiscal year. More the MNEs coming to your country the more tax you can collect. Taxes can be considered as economic backbone for any country.

Since 9/11 Pakistan has suffered most besides Afghanistan as its economy is at halt. In contrast, Indian economy is growing at a reasonably good rate because the MNEs who want to establish their subsidiaries, prefers India over Pakistan due to the current ongoing war situation in Pakistan.

In the contemporary situation, Pakistani government should have to take some extraordinary steps making its institutions stronger, transparent and independent. This fact cannot be denied that better IPRs system will eventually result into better tax collection.

3.9 Intellectual Property Rights and Foreign Direct Investment (FDI):

Foreign Direct Investment (FDI) is a prerequisite for economic analysis and policy making⁷³.

As defined by the OECD, benchmark definition of FDI.

‘Foreign direct investment reflects the objective of obtaining a lasting interest by a resident entity in one economy (“direct investor”) in an entity resident in an economy other than that of the investor (“direct investment enterprise”). The lasting interest implies the existence of a long-term relationship between the direct investor and the enterprise and a significant degree of influence on the management of the enterprise. Direct investment involves both the initial transaction between the two entities and all subsequent capital transactions between them and among affiliated enterprises, both incorporated and unincorporated.’⁷⁴

3.10 FDI & Developing Economies:

The Asian currency crisis that erupted in Thailand in July 1997 and has since spread to other countries, particularly Indonesia, Republic of Korea (Korea), and Malaysia, renewed the significance of prudential management of foreign capital flows in developing countries where domestic financial markets are not yet fully developed.⁷⁵

South Asian countries are struggling for better economic growth. India is one of the largest recipients of foreign direct investment in South Asian region. In contrast, Pakistan is still suffering from low foreign investments due to its underdeveloped and narrow capital market.

⁷³ OECD Benchmark definition of Foreign Direct Investment Third Edition
<http://www.oecd.org/dataoecd/10/16/2090148.pdf>

⁷⁴ *Ib*

⁷⁵ Capital flows and exchange rates: recent Korean and Taiwanese experiences and challenges by Frank S. T. Hsiao and Mei-chu W. Hsiao also Kaufman: pg. 195–6

It is an admitted fact that FDI produces a positive effect on economic growth in host countries, because FDI bring with itself capital, technology management, market access etc. Another benefit of FDI is a confidence building effect, which encourages other entities to invest in that economy.

Policies and laws of host countries have an important influence on foreign investment decisions. Host countries can adopt policies of stimulating foreign investment or they can restrict foreign participation in their economies in various ways.

3.11 FDI & Pakistan:

Pakistan was basically an agricultural economy upon its independence in 1947 and still agriculture contributes a lot to its economy. It is just recently that delivery of services has started playing a vital role in economy of Pakistan. Its industrial capacity was negligible for processing locally produced agricultural raw material even after 63 years of its independence and the amount of FDI is not significant.

3.12 IPRs & FDI:

Much has been written on relationship between IPRs and FDI. Many lawyers, jurist and economist have written about the positive correlation between IPRs and FDI.

Intellectual assets are important for their owners for their high economic value and goodwill. Owners are vigilant about how their intellectual assets are exploited and in case of any infringement they vigorously defend their assets.

TNCs, MNEs and other investing entities while making decisions regarding investing in a particular jurisdiction, give a reasonable importance to the IP system of that particular jurisdiction. It means that in case of any infringement if an entity is ensured that they will be

provided with satisfactory and speedy remedy they feel safe to invest in contrast to a country where they have to wait for quite a while to get a remedy and that remedy too, in certain cases, is not worth the damage done.

IP certainly are not the only factor that entities consider while making decisions to invest. Political stability is another important factor that encourages entities to invest in a country. Unfortunately, Pakistan since 1947 has faced many military coups by its own military chiefs which has not only harmed the political system in Pakistan, but has also affected its image at international arena. Every time there was a coup Pakistani nation was promised a real democracy by the military dictators, but that never happened. Even worse, the political leadership is corrupt and not competent enough to deal with the crisis that Pakistan is facing since last 63 years. This political instability coupled with other factors like interference of executive with judiciary, misbalance of tricotomy of power and, last but not the least, the major factor that has dented Pakistani economy is terrorism.

Here are some examples that has tarnished the image of Pakistan internationally consequently hampering FDI.

In May, 2002 eleven French engineers were killed in the biggest city of Pakistan i.e. Karachi and it is alleged that the current President of Pakistan Mr Asif Ali Zardari and intelligence agencies of Pakistan were part and parcel of that plot.⁷⁶ The matter is in trial stage in France.

China is one of the biggest supporters of Pakistan in the region. Recently, on May 22, 2011 four to six Taliban terrorists entered the Pakistan Naval Airbase, S Mehran, destroying two maritime surveillance aircrafts and killing ten military personnel during their 17-hour siege of the naval air base and it is alleged that their basic target was to kill the Chinese engineers working in that base.⁷⁷

⁷⁶ <http://www.defence.pk/forums/naval-forces/28557-french-submarine-engineers-bombing-kickback-saga.html>

⁷⁷ <http://www.nytimes.com/2011/05/23/world/asia/23pakistan.html>

In 2006 in Pakistan's south-western province of Baluchistan, two vehicles were bombarded killing 3 Chinese engineers. .⁷⁸

Another incident happened in 2002 when a US based journalist Daniel Pearl was beheaded by the militant groups.⁷⁹

In February 2009, a Polish engineer Piotr Stanczak was beheaded by the militant groups in some remote areas of Pakistan.⁸⁰

Recently, Osama Bin Laden who was on the American Federal Bureau of Investigation's FBI lists of ten most wanted fugitives and most wanted terrorists for his involvement in the 1998 U.S. embassy bombings and deadliest attacks on twin towers 9/11. From 2001 to 2011, Bin Laden was a major target of the war on terror, with a US \$25 million reward by the Federal Bureau of Investigation. On May 2, 2011, bin Laden was shot and killed inside a private residential compound in Abbott bad, Pakistan, by U.S. Navy SEALs and CIA operatives in a covert operation ordered by U.S. President Barack Obama.⁸¹

Ilyas Kashmiri, a senior al-Qaeda member connected with the Soviet-Afghan war, the Kashmir conflict and attacks against India, Pakistan and the United States was killed on 3rd June, 2011 in the territory of Pakistan⁸².

78 http://news.xinhuanet.com/english/2006-02/17/content_4194229.htm

79 http://en.wikipedia.org/wiki/Daniel_Pearl

80 http://en.wikipedia.org/wiki/Murder_of_Piotr_Stanczak

81 http://en.wikipedia.org/wiki/Osama_bin_Laden

82 http://en.wikipedia.org/wiki/Ilyas_Kashmiri

All examples narrated above illustrate that the problem Pakistan is going through in having low FDI is not because of poor intellectual property system, which is as good as India or any other country in the South Asian region but the war against terrorism that Pakistan has been a part of has badly affected Pakistan's economy.

Pakistan right now is going through extraordinary circumstances. Pakistani army is still busy fighting insurgency in North Waziristan region. All these groups have been created by the Americans with the help of Pakistani army and intelligence agencies which are now so strong that America and Pakistan together cannot defeat them in ten years.

Pakistan, therefore in order to compete with its rival and neighbour India have to be more careful and diligent while making its foreign policies. Extraordinary importance should be given to TNC and MNE as compared to its indigenous companies. A strong and vigilant IPRs system will definitely help Pakistan to attract more FDI than it is having at the moment.

3.13 Wages Employment and IPRs:

Another matter of considerable importance to economists and policy makers is the effects of IPRs on wages and employment.⁸³ There are two views regarding the effects of IPRs on wages and employment.

One school of thought argues that innovations are expected to cause job losses because of labour saving processes and the other school of thought argues that firms by making huge profits from their innovations are expected to share some of the boon with their workers, for example creating new technologies require R&D staff, launching new products require new production and marketing staff but this situation varies from one jurisdiction to other.

⁸³ The importance of intellectual property for information technology development in the less developed world by James V. Delong

If we look into US IP system we will observe that IP has played a crucial role in the growth of US economy particularly its export.

Greenhalgh and Longland (2001) conducted an empirical analysis of the relationship between intellectual property assets and wages by taking into consideration data of UK based firms. The results showed that extra patents do not induce any changes in relative normal wages, but new trademarks and copyrights have a significant and positive effect on wages.

3.14 IPRs and Job Industry in Pakistan:

The effect of strong IP protection on job industry in Pakistan can be both negative and positive at the same time but in the long run it will definitely have a positive effect on Pakistani job industry.

This fact can be illustrated by an example of Telenor Group that is one of the world's major mobile operators with 120 million mobile subscriptions.⁸⁴ Telenor Pakistan is owned by the Telenor Group, an international provider of high quality voice, data, content and communication services in 14 markets across Europe and Asia.⁸⁵ Telenor Pakistan is the country's single largest European investor, with investments in excess of US\$2 billion. It acquired a GSM license in 2004 and began commercial operations on March 15, 2005. At the end of October 2010 it had a reported subscriber base of 24.12 million, and a market share of 24% making it the country's second largest mobile operator.⁸⁶

⁸⁴ <http://www.telenor.com/en/about-us/telenor-at-a-glance/>

⁸⁵ Ib

⁸⁶ <http://www.telenor.com.pk/about/history.php>

Where Telenor has made a healthy contribution to the telecom industry by making telecom sector more competitive and innovative in Pakistan it also has improved the wages and employment conditions and Pakistan.

Whenever a MNE decides to invest in any country it looks for the best people in that field in that country their Human Resource HR department tries to recruit experienced and qualified people with better incentives and salary packages.

What made companies to invest in a particular jurisdiction is opportunity to reap profits coupled with a guarantee that they will be provided with proper remedy in case of any infringement and safety of their tangible and intangible assets.

Technological innovation is associated with higher firm employment and better wages.⁸⁷ If any entity will earn profits it has to pay taxes to the government. Developing countries like Pakistan which are indebted by different international organizations like International Monetary Fund (IMF), World Bank etc. have a chance to improve their infrastructure which will bring more investments to Pakistan and the local industry will be healthier resulting in better job market.

Pakistan is still facing substantial unemployment i.e. 15%⁸⁸. A large amount of people are living below poverty line. To cope with this kind of situation Pakistan has to work not only on its IP system but every organ of the state has to work in collaboration with each other to fight these extra ordinary circumstances.

3.15 Research and Development & IPRs:

⁸⁷ Economics of innovation and new technology Volume 6 by Bronwyn H. Hall and Francis Kramarz, editors

⁸⁸ <https://www.cia.gov/library/publications/the-world-factbook/fields/2129.html>

Organization for Economic Co-operation and Development (OECD) defines Research and development R&D as:

“Creative work undertaken on a systematic basis in order to increase the stocks of knowledge, including knowledge of man, culture and society, and the use of this stock of knowledge to devise new applications.”⁸⁹

Countries can broadly be divided into different groups for example, industrialized countries, newly industrialized and emerging countries, developing and least developed countries LDC's. Research and Development has the potential to put country where US is today. All the western powers have a long history of spending huge finances on R&D because they know that the next century is of science and technology.

If we compare the spending on R&D sector by different developed countries we can conclude that the developed countries are spending an arm and length on this industry, Israel, Sweden, Finland, Japan, South Korea, Switzerland, Iceland and US are the top eight countries in spending on R&D and all of them have high quality patents to their credit, China the other gigantic economy is spending big money on R&D. Surprisingly, Pakistan is spending on R&D more than some of the European countries but still the process on innovation in Pakistan is slow.

What role IPRs can play in fostering R&D sector in Pakistan?

The phrase “knowledge-based economy” describes the new economic environment in which the generation and management of knowledge play a predominant role in wealth creation, as compared with the traditional factors of production, namely land, labour and capital.⁹⁰ Aply, the 21st century is often labelled as the “century of knowledge”, as the ability to create, access and use of knowledge has become, even more than before, a fundamental determinant of global competitiveness of enterprises and economies.⁹¹

89 <http://puck.sourceoecd.org/vl=13817414/cl=11/nw=1/rpsv/factbook/070101.htm>

90 WIPO 2003, Alikhan 2000

91 ib

Pakistan has faced different extreme situations since its establishment as an independent country. It has been in war twice with its neighbouring country India i.e. 1965 and 1971. The relationship between the two has never been friendly. India accuses Pakistan of terrorism and Pakistan accuses India and its intelligence agencies to aid extremist elements in Pakistan. India admittedly is progressing by leaps and bounds in South Asian region. The two atomic powers in the region are working on their R&D industries to have an edge over another. India is world no. 9 in terms of its spending on R&D, in contrast to Pakistan which occupies 34th position⁹². The difference between the two is alarming for Pakistan. Even the researchers working in Pakistan are not satisfied with their incomes and working atmosphere and a large number of researchers are shifting abroad for better income and work conditions.⁹³

Higher Education Commission, HEC, formerly known as the University Grant Commission, UGC, is the primary regulator of higher education in Pakistan⁹⁴. It facilitates the development of higher educational system in Pakistan with the main purpose of upgrading universities in Pakistan, making them centres of education and ensuring better conditions for research and development.⁹⁵

On 5th April, 2011 HEC was dissolved by the federal government of Pakistan. The reasons given by the government was unavailability of funds to sponsor foreign studies of students.

The dissolution of HEC was criticized by almost every sector of Pakistan. In an article, the Pakistani scientist Pervez Hoodbhoy he argued that dissolution of HEC is not as bad as most

92 http://en.wikipedia.org/wiki/List_of_countries_by_research_and_development_spending

93 Ib

94 <http://www.hec.gov.pk/Pages/main.aspx>

95 Ib

of the people think. He said that the HEC has carried out many mega-projects that ended up with no success.

In contrast he said that the sudden dissolution of HEC has caused a chaos because the Government has offered no alternative, and mere dissolution of HEC will create more problems. He suggested that the few checks and balances that HEC enforced will disappear causing more problems in the education sector. “Creating another bureaucracy or handing over the reins to existing provincial education bureaucracies, which are even more myopic and less competent than those at the federal centre, will negatively impact the quality of university education in Pakistan.”⁹⁶ He further went on to say that all academic decisions would be allowed to be made by those who otherwise had little understanding of how universities should function.⁹⁷

Education is expensive in Pakistan, not everybody is fortunate enough to afford a school. Child labour is common, you can see child of 14 working in garages and other places like that, but still with such conditions Pakistan has produced a number of remarkable researchers in different fields who are known globally. IPRs have an important contribution in helping countries to invest in their R&D by ensuring them proper reward for them stronger and effective protection of IPR’s will help Pakistan to excel its nascent R&D industry.

3.16 IPRs & Competition Laws:

IPRs and competition are normally regarded as areas with conflicting objectives.⁹⁸ Where it is that IPRs creates monopolies, competition law tends to eliminate them.

96 Ib

97 http://en.wikipedia.org/wiki/Higher_Education_Commission_of_Pakistan

98 Intellectual Property Rights and Competition Policy <http://www.cuts-international.org/pdf/VP-IPRs-CompPolicy.pdf>

The reason that IPRs by designating legal exclusivity over the innovation, that appears to be against the principles of static market access and level playing fields sought by competition rules, and in particular the restrictions on horizontal and vertical restraints, or on the abuse of dominant positions.⁹⁹

IPRs have a strong effect on competition. Competition law prevents artificial entry barriers for the new market entrants and aims to remove monopolisation of significant power in market. The objectives of competition policy include the maximisation of consumer and producer welfare, as well as maximising efficiency in production.¹⁰⁰ Competition law is in place to make markets competitive by ensuring that big market players do not obstruct newcomers to enter into market. IPRs, on the other hand, foster the race for innovation by ensuring rewards, as companies compete with each other to be the first in inventing to get a patent and have exclusive rights to use their innovation and reap profits out of them.

Advocates of strong IPRs maintain that they create competition with long-run consumer benefits.¹⁰¹ Survey evidence indicates that patent disclosure requirements are significant mechanisms for diffusing technical information to competitors within a short period¹⁰². Regulatory authorities in every jurisdiction are burdened with a duty to ensure that IPR's are not abused. The TRIPS agreement, Preamble paragraph 1, read with Article 8(2), allows Members to take appropriate measures consistent with the TRIPS to prevent the abuse of intellectual property rights by rights holders.¹⁰³

99 Ib

100 Ib

101 Role of intellectual property rights in innovation published in proceedings of, 2nd International Conference of AGBA South Asia Chapter Nurturing Innovation, Entrepreneurship, Investments, & Public – Private Partnerships – in Global Environment held at Bhurban on July 21-23, 2010

102 Mansfield 1985

103 Intellectual Property Rights and Competition Policy <http://www.cuts-international.org/pdf/VP-IPRs-CompPolicy.pdf>.

‘There are normally two approaches that have been adopted to prevent IPR abuse:

- i. Compulsory licensing: An involuntary contract between a willing buyer and an unwilling seller imposed and enforced by the state.
- ii. Parallel imports: Goods brought into a country without the authorisation of the patent, trademark or copyright holders after those goods were placed legitimately into the market.

Further, TRIPS Article 31 provides for the grant of compulsory licenses, under different circumstances:

- the interest of public health;
- national emergencies;
- nil or inadequate exploitation of the patent in the country;
- Anti-competitive practices by the patentees or their assignees; and overall national interest.’¹⁰⁴

3.17 Competition Laws in Pakistan:

The Competition Commission of Pakistan, CCP, was established on 2nd October 2007 under the Competition Ordinance, 2007 which was later transformed into Competition Act 2010.¹⁰⁵

The Commission was established with the objective of prohibiting abuse of a dominant position in the market, certain types of anti-competitive agreements, and deceptive market

104 Ib

105 Competition Commission of Pakistan <http://www.cc.gov.pk/>

practices.¹⁰⁶ Like in many other developing countries, the competition commission of Pakistan has been working effectively. The competition has taken *suo moto* notices, initiated inquiries against the abuse of dominant position by annulling mergers and acquisitions and has achieved many successes in a short period of time. For any entity Pakistan could be a good choice to invest due to its large population and market conditions. The markets are under-developed, less competitive and the tax percentages are low.

Stronger protection of IPRs may serve as an incentive for individuals and entities to invest in Pakistan, though the competition commission in Pakistan is very vibrant. The monopolisation in Pakistan is not due to stronger protection of IPRs but due to lack of market players making Pakistan a potential place to invest.

3.18 IPRs and Joint Ventures (JVs):

‘A joint venture is an association of firms or individuals formed to undertake a specific business project. It is similar to a partnership, but limited to a specific project such as producing a specific product or doing research in a specific area’¹⁰⁷.

Individuals or companies choose to enter into joint ventures (JVs) in order to share strengths, minimize risks, and increase competitive advantages in the marketplace.¹⁰⁸

Foreign direct investment (FDI) as explained earlier and as defined by OECD is:

‘the objective of obtaining a lasting interest by a resident entity in one economy (“direct investor”) in an entity resident in an economy other than that of the investor (“direct investment enterprise”). The lasting interest implies the existence of a long-

106 Ib

107 Glossary of statistical terms: <http://stats.oecd.org/glossary/detail.asp?ID=3243>

108 <http://legal-dictionary.thefreedictionary.com/Joint+Venture>

term relationship between the direct investor and the enterprise and a significant degree of influence on the management of the enterprise'.¹⁰⁹

FDI can generally be divided into two types, based on the amount of control over the firm, wholly owned affiliates, which give a multinational firm MNE¹¹⁰ 100% control over the firm and joint ventures, which give only partial control.¹¹¹

JVs are becoming more and more common across the globe because of the benefits attached to them. The biggest incentive for entering into joint ventures is to maximization of abilities and sharing. Entering into JVs with local or foreign partners can bring great advantages, such as sharing of risks, skills, technology, production inputs, experience in local markets, and MNE familiarity with local political issues.

Asieudu and Esfahani (2001) showed that MNEs prefer JVs as a technology transfer medium when the partner's assets such as technologies complementary to those of the MNE are of high productivity, or when a host country has weak physical infrastructure, or negative institutional settings such as black markets, weak rule of law, and high risk of expropriation.¹¹² Additionally, if the host countries have abundant and an added advantage of cheap labour chances are that MNE's instead of establishing whole infrastructure will preferably go for JVs with local market players.

109 OECD benchmark definition of Foreign Direct Investment
<http://www.cmfb.org/pdf/1995%20July%20BD3.pdf>

110 MNE Multi National Enterprise is a company or corporation that has its production or services in more than one country. It is also referred as International Corporation
http://en.wikipedia.org/wiki/Multinational_corporation

111 Intellectual Property Rights, International Joint Ventures and FDI: An Empirical Study Jirawat Panpiemras, Thailand Development Research Institute Thitima Puttitanun, San Diego State University,
http://www-rohan.sdsu.edu/dept/econ/WPSeries/06_02.pdf

112 Intellectual Property Rights, International Joint Ventures and FDI: An Empirical Study Jirawat Panpiemras, Thailand Development Research Institute Thitima Puttitanun, San Diego State University, http://www-rohan.sdsu.edu/dept/econ/WPSeries/06_02.pdf

Desai, Foley, and Hines, Jr. (2004), showed that apart from factors such as host country ownership restriction, tax incentives and trade with parent companies or related affiliates, MNEs are less likely to form JVs in situations where their intangible assets could be illegally exploited.

IPRs may have positive or negative effect on industry depending upon the nature of JV. There is a group of people that argue that JVs can be a barrier for foreign companies to establish their whole subsidiary in a country that is more advantageous for a country's economy. The argument given by this group of people is that the stronger IPRs bring a trade-off between a sharing incentive and an internalization incentive.

3.18 Importance of Joint Ventures for Pakistan:

Joint ventures as explained above may serve as a vehicle that brings better job opportunities, better wages, technology, investment and more tax generation. Protection of IPRs like many other factors, are taken into consideration by the entities while entering into joint ventures with a market player in a particular jurisdiction.

Mostly, developing countries have an advantage of having cheap and abundant labour that made them a place to outsource work.

Why entities prefer to invest in India rather than its rival Pakistan?

Entities prefer to enter into JVs with market players in India because of its better and stable political system, literacy rate and more effective judicial system as compared to that of Pakistan.

Pakistan, unfortunately, is not the first choice when any country decides to invest in South Asia. Another reason that makes India a place to invest is its population (almost one billion) making it one of the biggest consumer market around the globe.

In the year 2010, the president of United States, Mr Barrack Obama, visited India and signed deals worth 15 billion US dollars. Thus to compete with India in the existing situation and available resources is tough but possible.

IPR system in Pakistan is stronger as compared to past few years. The government of Pakistan has announced new regulations to fight IPR infringement, and has established the “Intellectual Property Organization of Pakistan” to meet with the requirements of TRIPS and to coordinate enforcement actions, which has so far achieved some notable results, but there is still lot to be done. Pakistan has also initiated the process to accede to World Intellectual Property (WIPO) internet treaties, the World Copyright Treaty, and the World Performance and Phonogram Treaty, these steps and efforts will definitely help Pakistan to improve its image to attract more foreign investments whether in the shape of JVs or wholly owned affiliates.

3.19 IPR and Quality of Goods:

Developing countries are known for imitating products, piracy, counterfeiting and reverse engineering. The pirated materials produced in some cases looks exactly the same compared to the originals, but the quality is unmatched to the originals, as the original producers of the goods have high quality standards that they have to maintain for their goodwill.

The main attraction for buying pirated, counterfeited or imitated product is its price but it's often said that quality never comes cheap, which is true. In the contrast, the object of producers of pirated stuff is to produce goods in lowest possible budget making the end product cheap that is more attractive for the buyer.

In May 2004, two hundred babies died due to fake infant formula sold in Anhui and Shandong provinces.¹¹³ Manufactured counterfeit toys were painted with white lead base paint that is hazardous to health. The citizens of developing countries may benefit from economic improvement but it cannot be worth it if it comes at the cost of others and their health.¹¹⁴ Stronger IPR will no doubt increase the prices of goods in developing countries but that will put those countries on the right track.

West is concerned about stronger protection of IPR across the globe because being the largest patent holders they will benefit the most from stronger IPR protection. It is often said that stronger IPR protection is not beneficial for developing and least developing economies, the fact cannot be rejected that stronger IPR will bring no immediate advantage to the people residing in developing economies, but stronger IPR will on the same time will make markets more competitive will give a chance to local manufacturers to produce high quality products to compete with the foreign brands. At the same time private sector will be encouraged to invest in R&D which may be regarded as backbone for innovation.

113 Dilemma of the Developing Countries: Economic Growth and IPR Protection By Yung Terd Lu

114 Dilemma of the Developing Countries: Economic Growth and IPR Protection available at <http://www.tfasinternational.org/aibe/essaycontest/dilemmaofthedevelopingcountries.pdf>

Chapter No.4

4.1 Judiciary & IPRs in Pakistan:

We live in the century of scientific knowledge and innovation and the race to rule the world is bringing passion to innovation and knowledge. The standing of any country can be determined by its ability to transform knowledge into opportunity, wealth and social welfare through creativity and innovation. Trade and industry are becoming more technology driven than ever. The crucial role played by knowledge and innovation in the development of our world has always called for adequate protection for such new or original knowledge and innovation which have been a key factor in the success achieved by various businesses and enterprises, which in turn has gradually brought about improvement in quality of life¹¹⁵.

4.2 Courts System in Pakistan:

Pakistani Courts system is based on hierarchy and jurisdiction. Like many other countries Supreme Court is the apex court in Pakistan and is also known as the strongest institution of the state.

Article 175 of the Constitution of Islamic Republic of Pakistan 1973 (herein after referred to as 'Constitution') provides that

¹¹⁵ Intellectual Property Rights and Globalization by Hassan Irfan Khan, Advocate High Court of Pakistan <http://www.supremecourt.gov.pk/ijc/Articles/19/3.pdf>

‘There shall be a Supreme Court of Pakistan, a High Court for each Province and a High Court for the Islamabad Capital Territory and such other courts as may be established by law’.

Apart from Supreme Court, there are four provincial high courts for each province headed by a provincial chief justice, district courts for every district.

Being Islamic state a separate Federal Shariat Court FSC was established in 1980 by making an amendment in the constitution:

Article 203C The Federal Shariat Court.

(1) There shall be constituted for the purposes of this Chapter a court to be called the Federal Shariat Court....

The powers and duty of FSC are described in section 204 D of the constitution:

203D Powers, Jurisdiction and Functions of the Court.

(1) The Court may, [either of its own motion or] on the petition of a citizen of Pakistan or the Federal Government or a Provincial Government, examine and decide the question whether or not any law or provision of law is repugnant to the injunctions of Islam, as laid down in the Holy Quran and Sunnah of the Holy Prophet, hereinafter referred to as the Injunctions of Islam.

[(1A) Where the Court takes up the examination of any law or provision of law under clause (1) and such law or provision of law appears to it to be repugnant to the Injunctions of Islam, the Court shall cause to be given to the Federal Government in the case of a law with respect to a matter in the Federal Legislative List [211A], or to the Provincial Government in the case of a law with respect to a matter not enumerated [211B][in the Federal Legislative List], a notice specifying the particular provisions that appear to it to be so repugnant, and afford to such Government adequate opportunity to have its point of view placed before the Court.]

(2) If the Court decides that any law or provision of law is repugnant to the Injunctions of Islam, it shall set out in its decision:

(a) The reasons for its holding that opinion; and

(b) The extent to which such law or provision is so repugnant; and specifies the day on which the decision shall take effect [212] [:]

[213] [Provided that no such decision shall be deemed to take effect before the expiration of the period within which an appeal there from may be preferred to the Supreme Court or, where an appeal has been so preferred, before the disposal of such appeal.]

(3) If any law or provision of law is held by the Court to be repugnant to the Injunctions of Islam,

(a) the President in the case of a law with respect to a matter in the Federal Legislative List [212A] or the Concurrent Legislative List, or the Governor in the case of a law with respect to a matter not enumerated [212A] in either of those Lists, shall take steps to amend the law so as to bring such law or provision into conformity with the Injunctions of Islam; and

(b) Such law or provision shall, to the extent to which it is held to be so repugnant, cease to have effect on the day on which the decision of the Court takes effect.

4.3 Islamabad High Court:

Another high court is established in the federal capital of Pakistan. Islamabad, being capital of Pakistan is not a part of any province. Corporate matters are usually heard by the Islamabad High Court.

4.4 Judicial crisis of 2007 and 2008:

Pakistani judicial history could be divided into two phases, judiciary before the judicial crisis and the judiciary after 2008. Attacks on judiciary by the executive are nothing new for Pakistan. The politicians always want to have judges in their pocket so their powers and corruption remain unchecked. But after the restoration of judges followed by the amendment

in constitution commonly known as 18th amendment,¹¹⁶ judiciary has become independent and strong than ever.

4.5 Division of Tasks:

The IPO for the better and effective control and protection of IPR's has divided the duties as follows:

District Police	overall enforcement
Federal Investigation Agency (FIA)	production control
Pakistan Customs	border control
PEMRA	signal piracy control
Judiciary	litigation management
IPO-Pakistan	overall enforcement coordination

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4.6 History and Preview of IPO:

The Government of Pakistan in order to improve IPR protection in Pakistan took three parallel decisions on the 8th April, 2005;

- Establishment of IPO-Pakistan as a focal organisation for integrated management of intellectual property and enforcement coordination;
- Empowerment of FIA (FIA stands for Federal Investigation Agency which is Pakistan's elite force for control of white collar crime) to eliminate piracy by including the Copyrights Ordinance 1962 (as amended in 2000) in the FIA Act, 1974;
- Activation of Pakistan Customs to effectively interdict import and export of pirated optical discs etc.¹¹⁸

116 Amendment XVIII (the Eighteenth Amendment) of the Constitution of Pakistan passed by the National Assembly of Pakistan on April 8, 2010

117 <http://www.ipo.gov.pk/Contents/EnforcementCommittee.aspx>

118 <http://www.ipo.gov.pk/Contents/AboutIPO.aspx>

IPO, so far has achieved some remarkable results in limited finances and resources.

4.6 IPR Legislation in Pakistan:

In a report¹¹⁹ by International Intellectual Property Alliance (IIPA), it stated that publishers in Pakistan, are competing in a market dominated by piracy and the government of Pakistan is unwilling to impose deterrent remedies to fight piracy. The report also gives brief update about piracy problem, enterprise end user software piracy and highlights the Pakistani court system and enforcing mechanism.

Pakistan has updated laws dealing with IPR to harmonize its legislation according to international standards and the criteria lay down by TRIPS. Despite improvement of laws the situation is not getting any better, piracy industry is still multiplying causing Pakistan colossal economic losses.

One possible reason can be that, there exist loopholes in the legislation coupled with slow enforcement and expensive judicial process. The punishments are not deterrent as they should be, the amount of statutory fines are not enough to curtail the strong industry of piracy. For example if a person gets convicted for an offence under IPR legislation the person can be sentenced to imprisonment for a minimum of two months and a max of 3 years which is a bailable offence¹²⁰. The minimum amount of fine set by the legislation is Rupees 50,000 = around 600 US Dollars. Litigation is long, tiring and expensive. Enforcements mechanisms are weak.

¹¹⁹ special 301 report on copyright protection and enforcement 2011 by International Intellectual Property Alliance IIPA

¹²⁰ A bailable offence is one in which a person can be released on bail on submission of reasonable surety.

The report by IIPA has urged Pakistan and its officials to work in collaboration to combat this industry. IIPA has also requested United States to put pressure on Pakistan in Trade and investment council meeting held under the Investment framework agreement 2003¹²¹ to bring law, judicial and enforcement reforms for better IPR protection.

Another recent study by International Data Corporation (IDC) with the Business Software Alliance stated that a 10% reduction in software piracy during the years 2008 by 2011 i.e. from 86% to 76% would have delivered more than 11,700 new jobs, US 23 million dollars in tax revenues for the Pakistani government and US 160 million dollar in economic growth.¹²²

Pakistan is a densely populated country with a weak economy. If hypothetically we suppose that Pakistani law enforcement agencies eliminates all piracy and counterfeiting, the prices of all commodities will go up thus making life more difficult for people.

Apart from major cities, people are still struggling for basic necessities of life. A large amount of population is illiterate. Poverty is one of the biggest things which Pakistani people are facing today, and poverty eventually leads to corruption. In circumstances like that stronger IPRs will bring no immediate success to the economy of the country, but it is feared that stronger IPRs will result in increase in prices, in job losses and make life more difficult for them.

This is very narrow point of view. If Pakistan has to appear as a better economy in the world, it has to follow the direction which took many countries where they are now.

121 Text available at
http://www.ustr.gov/sites/default/files/uploads/agreements/tifa/asset_upload_file849_9759.pdf

122 Business software Alliance and IDC, The economic benefits of lowering PC Software piracy, Pakistan January 2008

For example the existing laws are sufficient to deal with any kind of situation, if there is any loophole, it can be filled by legal doctrines, but what matters is that instead of moving towards new legislation, the existing laws should be properly enforced.

Pakistan has independent courts and tribunals for IP disputes, these tribunals should be given more powers, and the judges be advised to dispense justice speedily. Effective arbitration tribunals should be established by the National authorities.

The other argument that judicial processes are expensive, does not hold much water as these processes are even more expensive in the west. Entities care less about money when it comes to their good-will; big entities usually have legal budgets and legal teams to defend their assets at any arena.

4.7 Suggested Solutions given by IIPA:

To combat piracy IIPA suggested some sector specific solutions:

Under the heading of enforcement mechanisms it is suggested that significant actions should be taken against the pirated book sellers in Urdu bazaar,¹²³ and strict and deterrent action should be taken against the producers of pirated books. The problems identified and solution presented by IIPA is not something new, but nothing has been done by Pakistani government till date, Urdu bazaar still remains one of the biggest hubs for pirated books.

In the case of software piracy IIPA suggested that a strong action be taken against the business software end users including inspections against businesses suspected to be engaged in unauthorized use of software, and they all should be prosecuted and severely punished. Pakistani authorities are well aware of these solutions but the pirated industries are so strong

¹²³ Urdu bazaar is one of the biggest market of pirated books in the second largest city of Pakistan i.e. Lahore

that no action has been taken against them, and the facts remains the same that Hafeez Centre in Lahore and Rainbow Centre of Karachi are openly selling pirated software's which is known to everybody.

Commenting on the contemporary legislation IIPA suggested that the compulsory license provision under Article 36(3) of the copyright law should be repealed as it is against TRIPS. IIPA further suggested that the sanctions said down in Pakistan Copyright Ordinance are not sufficient, they should be enhanced by including mandatory minimum sentences and the amount of fines should be increased to a reasonable amount, Exclusive rights for sound recordings including an exclusive communication to the public/making available right, should be introduced? Legislation should be made for the protection against circumvention of technology protection measures (TPM), circumvention services and trafficking in circumvention devices.

Apart from that IIPA suggested that Pakistan should join the WIPO copyright treaty (WCT) and the WIPO performances and phonogram treaty (WPPT).

All these solutions given by IIPA are important for Pakistani economy but the point where the report remained silent was the long duration of trials. Justice delayed is justice denied. Courts in Pakistan follow the long and lengthy procedure as laid down by the code of civil procedure 1908, and usually in petty matters it takes almost half a decade to get a judgment, once the case is decreed its enforcement is another lengthy process.

The current status quo is hard but possible to change. There are a lot of factors responsible for current situation. One reason may be the amount of case load in every court. Each court, on the average hears more than 100 cases every day and it's nearly impossible for a judge to write a substantial order in every case, the amount of judges is not proportional to the case load.

In 2009 a new judicial policy was announced by the Registrar of the Supreme Court of Pakistan. In that new policy many judicial reforms were announced by the Supreme Court

registry. Judges were directed by the apex court to decide long pending disputes within 06 months, all judges deputed in different departments were called back.

4.8 Possible Solution to the problem:

The problems have already been identified, by different studies and reports conducted by many national and international organizations. It has also been pointed out that the current political regime is unwilling to act or incapable of taking any positive measures to combat the industry of piracy. The prevailing situation in Pakistan is shaming its image in international community. There is an immediate need that the government should step forward and realize the delicacy of the issue, and should order immediate and strong actions for a better and trade friendly Pakistan. Though the damage has already been done which is evident by the current economic situation in Pakistan, but if the status quo remains, it can make the situation even worse.

If the government wants to see Pakistan in the list of countries where IPR are respected, then the government, in collaboration with IPO and other enforcement agencies e.g. FIA, customs etc., have to work together and may adopt some long term and some immediate measures. The most important thing for any developing country like Pakistan is to educate its people what intellectual property means, why it is important for any country, and what short and long term advantages it may bring to Pakistani economy. The best medium to educate people is the electronic media and schools. IPO can deploy its personnel staff in schools giving youth information about what piracy is and what perils it can get for the country. To make people understand what you are saying, you first need to make them understand the importance of the issue. At the same time the government should encourage local manufacturers and foreign investors to invest in Pakistan by giving them tax deductions as special incentives. If all the pirated goods are eliminated or even reduced to a noticeable extent from the market, it can create a huge vacuum for local and foreign producers it would be a chance for them to get the market share. Once, the government feels confident that it has done its best to educate people, than it can enter into step no.2.

In the next step legislative measures should be taken. The parliament may remove loopholes by new laws and amending the present laws. The Amount of fines should be raised to a minimum of five hundred thousand rupees (approx. 6200 USD), and the minimum level of imprisonment may also be increased to at least six month or one year.

In the third step, government should give total independence with special instructions to its law enforcement agencies like FIA, customs, PEMRA, and police to raid all the markets known for selling pirated materials, register cases against them and to prosecute them. Problems and solutions related to software IT industry are discussed in next chapter.

Another possible solution, which could be used as a last resort, could be that a writ petition be filed against government of Pakistan, IPO, FIA, Pakistan customs, police and the other concerned authorities under Article 184(3) of the constitution by any interest group or any citizen.

Article 184(3) of the Constitution provides:

184. Original Jurisdiction of Supreme Court.

(1)The Supreme Court shall, to the exclusion of every other court, have original jurisdiction in any dispute between any two or more Governments.

Explanation.-In this clause, “Governments” means the Federal Government and the Provincial Governments.

(2) In the exercise of the jurisdiction conferred on it by clause (1), the Supreme Court shall pronounce declaratory judgments only.

(3)Without prejudice to the provisions of Article 199, the Supreme Court shall, if it considers that a question of public importance with reference to the enforcement of any of the Fundamental Rights conferred by Chapter I of Part II is involved have the power to make an order of the nature mentioned in the said Article.

Fundamental rights are defined under chapter 2 of the constitution. Article 24 of the constitution provides:

Article 24: Protection of property rights.

(1) No person shall be compulsorily deprived of his property save in accordance with law...

The word property has not been defined by the Constitution itself but according to the precedents laid down by Honourable Supreme Court of Pakistan it states that the word property includes both tangible and intelligible property.

In the Writ petition Supreme Court may be asked to issue directions to the federal government to increase budget of IPO, directions be issued to IPO and FIA to conduct raids on piracy hubs like Hafeez Centre, Rainbow centre, Urdu bazaar and seize all pirated material, commonly known as pirates ship and other such markets. The owners and producers of pirated stuff should be prosecuted and made subject to deterrent punishments. Directions should be issued to lower courts to understand the gravity and nature of offence and the harm they are causing to Pakistani economy as a whole, and the matters be dispensed as quickly as possible.

Courts can play key role in fighting piracy in Pakistan. Investors prefer to invest in a country which has a sophisticated and efficient judicial system coupled with stable and transparent democratic government. The Supreme Court of Pakistan is famous for judicial activism and has turned down many illegal actions of the government. It has restored the confidence of people in judiciary by its remarkable judgments, if the Court accepts the supra referred petition and issues orders, it is quite possible that it can revolutionize the IP industry in Pakistan.

INTELLECTUAL PROPERTY IN THE DIGITAL ERA AND THE EFFECTS OF DIGITALIZATION ON DEVELOPING ECONOMIES

The society has undergone a change since mid-1970's when the use of computers became common. This change was multiplied with the advent of internet and digitalization.

Converting analogue signals into digital form is known as digitization. It is the process of converting of data into single binary code. The world of cyberspace is composed of bits, and binary code is foundation of computing. In the digital world, images, videos, music and text are reproducible not just once but to an infinite extent. The process of digitalization coupled with internet has revolutionized almost every sector of the world, and it is feared that the countries that fail to accustom their laws in accordance with this development, will be left behind.

In developed countries the revolution was already felt, and since then governments, legislators, think tanks, advisory committees worked in collaboration with each other to tackle the Genie which is already out of the bottle.

Developed countries are moving steadily towards the goal to make themselves the world's favourite destination for investments. Digitization has put the world of IP on a fast track. Digitalization and internet has made data travel fast to all networks. Data can be viewed across the globe.

Digitization and internet has made information readily available. At the same time this development has posed new challenges that legislators are still trying to address.

The laws governing physical world to some extent managed to tackle the new dimension opened by digital era, but could not totally safeguard the interests of right holders.

It is not an easy task to catch up with the rapidly developing technical world. Despite difficulties WIPO and WTO have performed really well. Doctrine of equity and unfair competition helped as well to fill the loop holes, but some extra ordinary steps are needed to reward the people who invest their efforts and finance in bringing something new to the world.

The European commission worked and is still working on new methods in developing the legal, technical, management and administrative regulatory framework necessary to protect those who invest in the creation of new digital value added products and services. A series of directives have been passed, and the latest adopted is Directive 2004/48/EC of the European Parliament and of the Council of 29 April 2004 on the enforcement of intellectual property rights (IPR) Enforcement Directive (IPRED) designed to complement the existing regulatory framework in the light of information, entertainment and knowledge based industrial needs.

Many countries acted through national legislation, Europe reacted by passing directives. The digital revolution has brought greater opportunities to create and disseminate works, but at the same time has increased the risk of piracy, as these materials can be acquired easily and copied and transmitted in perfect form worldwide. Digital communication is becoming primary form of commercial exploitation of works and materials.

The two WIPO treaties,, i.e. Performances and phonogram treaty 1996 and Copyright treaty 1996, have been designed to satisfy the needs by prohibiting the circumvention of technological measures used by authors and related right holders to protect their intellectual

property rights, and the removing or altering of certain electronic right management information attached to a work or subject matter.

However, the situation in developing countries is not the same. The laws and political situation in developing nations, especially in Pakistan, it is feared that the status quo will prevail if no immediate action will be taken. For example, approximately 95% of the Windows users in Pakistan have never paid for the software¹²⁴. One reason might be that the protected goods are expensive, for example if a program costs 10 dollars in US, it has same price in developing countries, there is no price ratio taken into consideration by the producers while fixing prices across the globe, and a person living in a developing country has to pay almost 60 to 70 times as compared to the costs of a pirated program.¹²⁵ If the Pakistanis do not use the pirated software available in almost every market, just a few numbers of people will be IT literate, the economic situation of country is already getting worse but a wrong step will not take the country in right direction.

5.1 Pakistan Software Export Board (PSEB)

In 1995 the Government of Pakistan established (PSEB) a government owned guarantee limited company to nourish and develop the software industry in the country.

The company was burdened with the duties to perform research activities, propose legislation in light of international standards, facilitate IT companies located in Pakistan, facilitate IT industry by negotiating with vendors and to establish IT parks. But till date PSEB has not taken any extraordinary step to stop piracy. The organization was formed to handle the growing rate of software piracy in software sector in Pakistan, but it hasn't done anything impressive yet.

124 Software Piracy in Pakistan Major Causes, Facts and Solutions
<http://www.groupin.pk/blog/software-piracy-in-pakistan-major-causes-facts-solutions>

125 Digital Piracy: Sharing is not stealing
<http://pakistannewsblog.com/2011/06/07/151146/digital-piracy-sharing-is-not-stealing/>

For the high cybercrime, terrorist activities, anti-money laundering, credit card fraud ratio, regulations of State Bank, un-operational Visa cards, hacking and cracking and addressing issues, PayPal showed its reluctance to operate in Pakistan¹²⁶.

It's not only PayPal, many other payment processing companies feel reluctant to operate in conditions that Pakistan have right now.

Software piracy is a reason that is causing colossal financial losses to the Pakistani economy. In a report by International Intellectual Property Alliance (IIPA) it narrates that Pakistan still holds the highest software piracy levels in world. It further says that better protection of software could create 11,700 new jobs and can add 23 million US dollars in tax revenues and in total can help up to 160 million dollar in economic growth of the country. Talking about Internet piracy, the report highlights that Pakistan had 11.5% penetration rate as in June 2010, with more than 20.3 million, according to ITU, with an estimated 320,500 broadband connections in 2009.¹²⁷

5.2 Possible solutions:

Software could be protected by two different ways generally: patent and copyright both provide different kind of protection. The aim is similar as in the physical world - that innovations to be encouraged and the right holder be rewarded for their efforts and investment. Copyright protection provides the right holder protection for the life of the author and for 70 years after his death.¹²⁸ Copyright protects the sequence, structure and

¹²⁶ Getting & Using verified PayPal in Pakistan <http://www.groupin.pk/blog/getting-using-verified-paypal-in-pakistan/>

¹²⁷ Pakistan, International Intellectual Property Alliance (IIPA) 2011 Special 301 Report on Copyright Protection and enforcement.
<http://www.iipa.com/rbc/2011/2011SPEC301PAKISTAN.pdf>

organization to save it from rewriting. On the other hand patent provides patentee with protection for a term of 20 years from the actual date of filing an application.

The laws in Pakistan are similar to any other developed nation, and so far Pakistan has produced remarkable IT consultants serving across the globe. It's not the insufficiency of laws that hinders growth of IT industry in Pakistan or stimulates piracy, one reason that Pakistan has been slow in handling this problem is expensive and time consuming court system, lack of political will also contributes, the government still does not take piracy as a serious problem. It almost takes a decade to get a judgment from a court and the sentences are not that severe as they should be. The IIPA designated Pakistan a priority foreign country in 2004, the most serious level.¹²⁹

The other side of picture is that Pakistan as compared to other developing countries is at a very different level. The interest and motives of developing nations and developed nations are different. Developed nations are trying to let their companies reap profits across the globe, and they can't afford the hole of piracy, whereas developing nations are struggling to improve the quantity and quality of software produced within their borders, if at the current situation the Pakistani government ceases all the pirated material from the markets and take immediate action against the wrong doers that might result into a large divide in the society, people who can access the licensed and original software's and people who cannot. At the same time foreign companies are reluctant to invest in a country creating loss of opportunity for Pakistan and joblessness because the foreign entities are not certain about the legal protection of their physical and intangible assets. That's why the trend has taken a change, countries and companies that were outsourcing their work to India and Pakistan are now moving towards East European countries where they are sure that they will be adequately compensated.

128 Directive 2006/116/EC of the European Parliament and of the Council of 12 December 2006 on the term of protection of copyright and certain related rights.

129 Ethical Challenge of Protecting Software in emerging economies: Copyright law and enforcement in Pakistan

Is it fair to apply similar laws and regulations to all countries which are at different economical levels?

On the face of it, it looks inappropriate to apply similar kind of laws to countries at different economic, political and geographical levels. It seems like the developed countries, to protect their interest, have made these laws and by economic significance are trying to enforce these laws across the globe to protect their assets, interests and companies.

The very basic concept of IPR laws is harmonization across the globe, and they are not made without consultations or in a hurry. IPR has a history, and gradually laws are becoming more sophisticated.

Developing countries, due to their inability or lack of political will, have failed to follow the footsteps that could lead toward better economic situation.

WIPO and WTO are by every day considering of new regulations to protect the rights of right holders by way of legislation, recommendations and different programmes, developing countries like Pakistan are only left with the choice to improve the infrastructure that they already have in the shape of PSEB.

PSEB can play an important role in changing the status quo. PSEB can run a media campaign educating people that illegal copying is a crime and people should read the software license.

Another possible solution could be government should educate people that anyone who cannot afford to buy original software, should move towards Linux or open source. Microsoft sells its products in the Far East Asia markets at a discounted price and probably that's a workable solution for the South Asian markets as well.¹³⁰

130 A Slightly Skeptical View on Usage of Open Source in Developing Countries
http://www.softpanorama.org/Social/oss_in_developing_countries.shtml

Pakistan contemporarily is facing the time where its own investors are moving to other South Asian countries due to inadequate protection of their assets and high corruption which the government is part. The problems have well been identified by different scholars, and experts in this filed but no action has been taken or no plan has been announced till date to carter this problem.

A local Karachi based engineer suggested that government should step forward by giving a legal framework to govern the purchase of software licences. He suggested that the legal framework should contain that software's could only be bought from authorized franchises and agents registered and licenced by the government.

There must be an authentic key for software's and there should be a record of anticipated uses along with the purchase date.

If the government doesn't showed its seriousness to consider piracy as a serious economic threat the economic condition of the country will get worse.

5.3 Media Industries in Pakistan:

Ameed Riaz, a young guy from the biggest city of Pakistan, Karachi, bought EMI Pakistan from its parent company in England in the year 1993 with the expectations of becoming the pioneer in that field. But in a short period of 2 years the man was forced to shut down his company. When he was asked about his experience he quoted that everything from software to video and audio is pirated here. In a news report by BBC it was stated that in the last 25 years Pakistan has become hub of audio and video piracy. International piracy watchdogs rank Pakistan's among the world's top ten pirate nation¹³¹. The International Federation for Phonographic Industries (IFPI) in its letter to former Prime Minister of Pakistan, warned that

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illegal replication facilities are doubling their copying capacity every 18 months. According to IFPI in late 2000, Pakistan replication facilities were producing in excess of 230 million copies a year. IFPI also narrated that the Pakistani pirated industry is responsible for exporting more than 13 million DVDs and CDs to 46 countries. Pakistan is a signatory to TRIPS agreement and they are duty bound by the agreement to take proper measures to tackle the problem that is not affecting the people in their country, but is affecting the rights of people busy with making innovations. If the situation will continue like that it is feared that Pakistan might face trade sanctions in future.¹³²

Conclusion:

Pakistan is world 47th largest economy and 27th largest in terms of purchasing power parity.¹³³ Pakistani economy is facing considerable challenges at the moment due to insurgency, global pressures to fight against terrorism and weak democratic policies coupled with bad governance. Inflation rate is high and it is expected that it might increase due to terrific floods earlier this year (2011) as 20% of the economy depends on agriculture.

Intellectual Property is a term that is not new to Pakistan, but due to the low literacy rate of 58%, the majority of the people don't know what intellectual assets are. What is piracy and what negative impacts do simply copying, or illegally reproducing stuff can bring to a national economy. How jobs could be created by simply stronger protection of some intangible assets? It was only few years back when the legal fraternity decided to introduce Intellectual Property as an optional subject for the final year law students.

On the contrary, the West has been determined in protecting its nationals addressing the current issues by way of new legislation, directives, rules etc. From the entire supra discussions one thing is clear that any country that urges to improve its economic position has

¹³² Pakistan-Copyright Piracy Hub a report by BBC News, purchasing power parity is a condition between countries where the money has same purchasing power in different countries.

¹³³ The economy of Pakistan

to adopt the international standards set by the developed nations decades ago. Pakistan has so far showed some seriousness towards dealing the problem with piracy. The problems have well been highlighted by people associated with this filed and different solutions have been given so the economy of the country may improve. This paper is an effort to identify some major problems that Pakistan is being through and what possible solutions could be. The country has huge potential and talent. The time to argue whether the West is trying to monopolize developing countries has already gone, technology on the other hand is opening new dimensions to this world the need of the time is to simply follow the international standards in a way that doesn't hamper the interests of your country and work on science and technology and be the first to innovate because in this century it's all about economies.

REFERENCES

Conventions:

- The Berne Convention,1971.
- The Hague Convention.
- WIPO Performences and Phonograms Treaty, 1996.

Statues:

- Trademarrk Ordinance 2001

Constitution:

- The Constitution of Islamic Republic of Pakistan, 1973

Directive:

- Directive 2006/116/EC of the European Parliament and of the Council of 12 December 2006 on the term of protection of copyright and certain related rights.

Books:

- Piracy and counterfeiting GATT TRIPS and developing countries by Bankole Sodipo.
- International Public Goods and Transfer of Technology under and Globalized Intellectual Property Regime by Maskus and Reichman.
- Intellectual Property Rights in the WTO and Developing Countries by Jayashree Watal.
- Intellectual Property Law and taxation by Nigel A Eastaway Richard J Gallafent and Victor A F Dauppe.
- Intellectual Property and Human Rights by Paul L.C. Torremans by Walters Kluwer.
- Intellectual Property and International Trade by Carlos M Correa and Abdulqawi A Yusuf.
- Intellectual Property Law & Interactive Media For Free Edward Lee Lamoureux page No.2.
- The Economics of Intellectual Property: A Review to Identify Themes for Future Research by Hall 2000.
- Multinational Enterprises and the Law by Av Peter Muchlinski Ch: Technology Transfer Pg:427.
- International Public goods and Transfer of Technology under a Globalized Intellectual Property Regime by Av Keith Eugene Maskus Pg:230.
- Capital flows and exchange rates: recent Korean and Taiwanese experiences and challenges by Frank S. T. Hsiao and Mei-chu W. Hsiao also Kaufman: pg. 195–6.
- Economics of innovation and new technology Volume 6 by Bronwyn H. Hall and Francis Kramarz, editors.

Websites:

- <http://www.oecd.org/dataoecd/10/16/2090148.pdf>
- <http://www.wipo.int/about-ip/en/>
- <https://www.cia.gov/library/publications/the-world-factbook/geos/pk.html>
- http://en.wikipedia.org/wiki/Agreement_on_Trade-Related_Aspects_of_Intellectual_Property_Rights
- <http://ipjustice.org/>
- <http://www.citizen.org/trade/>
- <http://www.oxfam.org/en/pressroom/pressrelease/2011-02-02/crisis-poor-quality-medicines-being-used-excuse-push-prices-poor>
- http://www.wto.org/english/tratop_e/dda_e/texts_intro_e.htm
- http://www.wipo.int/treaties/en/ip/paris/trtdocs_wo020.html
- http://www.wipo.int/treaties/en/ip/berne/trtdocs_wo001.html
- http://www.wipo.int/about-wipo/en/what_is_wipo.html

- <http://www.defence.pk/forums/strategic-geopolitical-issues/1512-pakistan-not-transfer-f-16s-technology-china.html>
- <http://www.investorwords.com/4879/tax.html>
- <http://www.lawgiants.com/2010/04/taxation-why-is-it-important/>
- <http://www.taxified.com/importance-of-tax-to-society.html>
- <http://www.nation.com.pk/pakistan-news-newspaper-daily-english-online/Business/06-May-2009/FBR-misses-tax-collection-target-by-Rs1447b-in-April>
- http://www.stltoday.com/news/opinion/columns/kevin-horrigan/article_3b763d98-c9a5-11df-9e4e-00127992bc8b.html
- <http://www.nytimes.com/2011/05/23/world/asia/23pakistan.html>
- http://news.xinhuanet.com/english/2006-02/17/content_4194229.htm
- http://en.wikipedia.org/wiki/Daniel_Pearl
- http://en.wikipedia.org/wiki/Murder_of_Piotr_Sta%C5%84czak
- http://en.wikipedia.org/wiki/Osama_bin_Laden
- http://en.wikipedia.org/wiki/Ilyas_Kashmiri
- <http://www.telenor.com/en/about-us/telenor-at-a-glance/>
- <https://www.cia.gov/library/publications/the-world-factbook/fields/2129.html>
- <http://puck.sourceoecd.org/vl=13817414/cl=11/nw=1/rpsv/factbook/070101.htm>
- http://en.wikipedia.org/wiki/List_of_countries_by_research_and_development_spending
- <http://www.hec.gov.pk/Pages/main.aspx>
- <http://www.cc.gov.pk/>
- <http://stats.oecd.org/glossary/detail.asp?ID=3243>
- <http://legal-dictionary.thefreedictionary.com/Joint+Venture>
- <http://www.ipo.gov.pk/Contents/EnforcementCommittee.aspx>
- http://www.ustr.gov/sites/default/files/uploads/agreements/tifa/asset_upload_file849_9759.pdf

Articles:

- The Economics of Intellectual Property: A Review to Identify Themes for Future Research, Pdraig Dixon and Christine Greenhalgh November 2002.

- Illicit Tobacco Trade Monitoring and Mitigating Risk in Newzeland
http://www.ash.org.nz/site_resources/library/Research_commissioned_by_ASH/Illicit_Tobacco_Trade.pdf.
- Intellectual Property and Computer Software by Alan Story
http://www.iprsonline.org/unctadictsd/docs/CS_Story.pdf
- The importance of intellectual property for information technology development in the less developed world by James V. Delong
- United States-China Trade Litigation in the WTO by Stuart S. Malawer
- Economist Intelligence Unit N.A. Incorporated Baranson, Jack
- Dilemma of the Developing Countries: Economic Growth and IPR Protection available at
<http://www.tfasinternational.org/aipe/essaycontest/dilemmaofthedevelopingcountries.pdf>
- Intellectual Property Rights and Globalization by Hassan Irfan Khan, Advocate High Court of Pakistan <http://www.supremecourt.gov.pk/ijc/Articles/19/3.pdf>
- Ethical Challenge of Protecting Software in emerging economies: Copyright law and enforcement in Pakistan
- A Slightly Skeptical View on Usage of Open Source in Developing Countries
http://www.softpanorama.org/Social/oss_in_developing_countries.shtml
- Pakistan-Copyright Piracy Hub a report by BBC News, purchasing power parity is a condition between countries where the money has same purchasing power in different countries.
- Intellectual Property Rights and Competition Policy <http://www.cuts-international.org/pdf/VP-IPRs-CompPolicy.pdf>
- Intellectual Property Rights and Competition Policy <http://www.cuts-international.org/pdf/VP-IPRs-CompPolicy.pdf>
- Business software Alliance and IDC, The economic benefits of lowering PC Software piracy, Pakistan January 2008.
- Software Piracy in Pakistan Major Causes, Facts and Solutions
<http://www.groupin.pk/blog/software-piracy-in-pakistan-major-causes-facts-solutions>
- Digital Piracy: Sharing is not stealing
<http://pakistannewsblog.com/2011/06/07/151146/digital-piracy-sharing-is-not-stealing/>

- Getting & Using verified PayPal in Pakistan <http://www.groupin.pk/blog/getting-using-verified-paypal-in-pakistan/>
- Pakistan, International Intellectual Property Alliance (IIPA) 2011 Special 301 Report on Copyright Protection and enforcement.
<http://www.iipa.com/rbc/2011/2011SPEC301PAKISTAN.pdf>

Reports:

- The Economic Impact of Counterfeiting, a report by OECD
<http://www.oecd.org/dataoecd/11/11/2090589.pdf>
- United Nation Conference on Trade And Development, Transfer of Technology (1996a, vol. I, p. 183) <http://www.unctad.org/en/docs/psiteitd28.en.pdf>
- OECD Benchmark definition of Foreign Direct Investment Third Edition
<http://www.oecd.org/dataoecd/10/16/2090148.pdf>
- WIPO 2003, Alikhan 2000
- Role of intellectual property rights in innovation published in proceedings of, 2nd International Conference of AGBA South Asia Chapter Nurturing Innovation, Entrepreneurship, Investments, & Public – Private Partnerships – in Global Environment held at Bhurban on July 21-23, 2010.
- OECD benchmark definition of Foreign Direct Investment
<http://www.cmfib.org/pdf/1995%20July%20BD3.pdf>
- Intellectual Property Rights, International Joint Ventures and FDI: An Empirical Study Jirawat Panpiemras, Thailand Development Research Institute Thitima Puttitanun, San Diego State University, http://www-rohan.sdsu.edu/dept/econ/WPSeries/06_02.pdf
- Special 301 report on copyright protection and enforcement 2011 by International Intellectual Property Alliance IIPA.
- Pakistan-Copyright Piracy Hub a report by BBC News