

Trade Related Intellectual Property Rights: Impact of Patent Provisions on the Developing Countries Like Bangladesh

Mohammad Kamrul Hasan *

Abstract: We are living in the era of global village. Interdependency among the nation states for various reasons has changed the equation of the world. Conquering a new state and ruling a nation was once in the top priority chart for all most all the developed nations. The warfare with arms and ammunitions has almost come to an end but instead another warfare has started and it is the "Economic Warfare". The priority for developed countries has shifted its paradigm. In lieu of having a huge territorial boundary, trade balance sheet has become the point of concentration. Eventually new imperialism took place in the name of International trade regimes. World Trade Organization (WTO) is one of the most influential among these. Since its inception in the year 1995, the organization regulates the world trade including the services and matter related with intellectual properties. WTO formulates many agreements for its member countries to control its area of concern. Trade Related Intellectual Property Rights (TRIPS) is one of the most important agreements concerning the ownership of innovations for product and processes. The main objectives of the Agreement are to ensure the original ownership and to motivate the innovators and its investors. Although the focus of the agreement looks good in macro view, it overlooks the traditional ownership of the people specially the poor people living in the developing countries. In some way or other the agreement is biased towards the technologically advanced nations. This article tries to cover the major area of concern for the developing countries due to enactment of TRIPS. This endeavor shows the impact of Patent provisions on the majors sectors of the developing countries. It is confined with the general observations for the developing countries as a whole. As a developing country Bangladesh has to face the same challenges as the other developing nations do. Therefore, the article shows nothing with special regard to Bangladesh only.

Introduction:

Trade Related Intellectual Property Right is a comprehensive agreement containing new multilateral rules and disciplines with relatively high standards of intellectual property protection. It has

* Assistant Secretary (OSD), Ministry of Establishment and Research Fellow, Masters of Public Policy and Governance, NSU e-mail [Rahin_risal @yahoo.com](mailto:Rahin_risal@yahoo.com)

linked trade measures to the enforcement of intellectual property rights, requesting Member parties to ensure that their laws conform to the WTO standards. The Agreement requires all WTO Members to provide patent protection for "any inventions, whether products or processes, in all fields of technology", including foods, pharmaceuticals, **micro-organisms**, and microbiological and non-biological processes. However, animals and plants, as well as any essentially biological processes for producing them, can be excluded from patentability. The exclusion may also cover inventions contrary to public order or morality, health or welfare, and medical methods of diagnosis, therapeutics and surgery. Patent protection for both product and process invention must be available for 20 years from the filing date. Member parties are permitted to apply any legal measures, including **compulsory license**, parallel import, and competition law and price control mechanisms, to combat abusive practices or enforce local working of patents, provided that certain conditions stipulated in the Agreement are fulfilled. TRIPS stipulations for patent protection for pharmaceuticals are of particular concern for many developing countries. Pharmaceuticals are basic requirements for the population and stricter protection would allow firms to increase their market share, which, in turn, will lead to overpricing and restricted supply of the essential products in the country. To protect the health of the people, these products must be made available at the lowest possible price.

Definition of Intellectual Property and Intellectual Property Rights:

Ideas and knowledge are an increasingly important part of trade. Most of the value of new medicines and other high technology products lies in the amount of invention, innovation, research, design and testing involved. Films, music recordings, books, computer software and on-line services are bought and sold because of the information and creativity (or, intellect) they contain, not usually because of the plastic, metal, ink or paper used to make them. Therefore, intellectual property (IP) is the property such as an idea, a design, an invention, innovation or creation that has been created, designed or invented by some intellectual or expert and may or may not exist in a physical form.

Alternatively, Intellectual property refers to creations of the mind: inventions, literary and artistic works, and symbols, names, images, and designs used in commerce. Many products that used to be traded as low-technology goods or commodities now contain a higher proportion of invention and design in their value—for example brand named clothing or new varieties of plants. Creators or inventors or designers can be given the right to prevent others from using their inventions, innovations, designs, ideas or other creations. These rights are known as "intellectual property rights (IPRs)".

Intellectual property 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.

(Brief History of Patents, GATT, WTO and TRIPS:

The question why protection and enforcement of IP is necessary? Because the extent of protection and enforcement of these rights varied widely around the world; and as intellectual property became more important in trade, these differences became a source of tension in international economic relations, business transactions, direct foreign investments and technology transfers. New internationally-agreed trade rules for intellectual property rights were seen as a way to introduce more order and predictability, and for disputes to be settled more systematically. However, the history of Patent, GATT, WTO and TRIPS are summarized below:

1. Venetian Law of 1574
2. Paris convention for the protection of intellectual property 1883
 - i. Public interest placed over that of the patent holder;
 - ii. Countries were **free to determine** the areas of non-patentability, duration of patents and the exclusive rights conferred on patent holders;
3. At that time USA refused to respect patent rights in order to further its economic development, much to the chagrin of Britain;
4. Following the Second World War the global economy required three issues to be addressed;
 - i. exchange rates;
 - ii. reconstruction and development; and
 - iii. organization of international trade in goods.
5. The result: Breton Woods Agreements signed by 44 allied nations establishing:
 - i. International Monetary Fund (IMF);
 - ii. World Bank;
 - iii. General Agreements on Tariffs and Trade (GATT);
6. In 1994, the Uruguay Round of trade negotiations culminated in the signature of an agreement instituting the World Trade Organization (WTO). The Organization came into being on January 01, 1995. By November 2000 it had 140 members.
7. The WTO-TRIPS Agreement established minimum standards in the field of intellectual property including an obligation to grant patent protection to all pharmaceutical product and process inventions "invented **after** January 01, 1995"

The agreement on TRIPS covers five broad issues:

- i. how basic principles of the trading system and other international intellectual property agreements should be applied
- ii. how to give adequate protection to intellectual property rights
- iii. how countries should enforce those rights adequately in their own territories
- iv. how to settle disputes on intellectual property between members of the WTO
- v. special transitional arrangements during the period when the new system is being introduced.

Salient Features of TRIPS:

Patents:(Article 27-34)

Inventions will be eligible for **patenting**,if these are **new**,involve an inventive step and are capable of industrial **production**.Both products and processes are eligible for **panteing**.**Besides**,the patent rights will be enjoyed without discrimination regarding the place of invention,the field of technology and whether products are imported or **domestically** produced. Diagnostic, therapeutic and surgical methods, plants and animals and essentially biological processes for the productions of plants and animals need not be patented. Besides, patent can be denied on the ground of public order, morality, protection of **human**, animal and plant life or health, and protection of environment.

Micro-organisms, like bacteria,viruses,fungi,algae,protozoa etc.and non-biological and microbiological processes for production of plants and animals will be eligible for patent. Even though plants are excluded, the plant varieties protected either by patenting or by some **effective sui generis** system.

The minimum term of the patent is for twenty years from the date of filling.

- i. The patent on a product confers the right on the patent-holder to prevent any other person to make, sell or import the product without the consent of the patent-holder. The process patent confers the right to prevent a person, who does not have the consent of the patent-

holder, from using the process and also from using, selling or importing the product produced by the process.

The obligation on the patent-holder is that he or she must disclose all information clearly and completely so that an expert can carry out the same invention.

There can be limited exception the patent right, e.g. for the use of the patented product or process for experimental purpose in pursuit for further scientific development.

There can be non-voluntary licensing, which is also called compulsory licensing, i.e. the license to use the patent without the consent of the patent-holder under certain circumstances, but some conditions will have to be followed, particularly in respect of the compensation to the patent holder.

Copyright and Related Rights (Article 9-14):

Copyright is granted to authors in their literary or artistic work or similar work. The related rights of performing artists in their performances, the right of product of phonogram (i.e., sound recordings) in their phonograms and the right of broadcasting organizations in their radio and television programs. Computer programmes are covered by the discipline of copyright. There are various minimum terms for these rights. For example, the term of copyright is the life of the author and fifty years after his or her death. In the case of cinematographic works, the term is fifty years after the work has been made available of the public with the consent of the author. The term of photographic work is twenty-five years from the making of the work. The term of the portion to performers and producers of phonograms is fifty years from the end of the years of fixation or performance. The term for the broadcasting organization is twenty years from the end of the years of the broadcast. It is permissible to provide for limitations or exceptions to the copyright in special cases.

Trademark (Article 15-21):

‘A trademark is defined as any sign which distinguishes the good or services of one undertaking **from** those of the others. The initial **minimum** term is for seven years. There is a provision for renewal for the same **term** and there is no limitation on the number of the times the renewal can take place.

Geographical Indications (Article 22-24):

Geographical indication identifies a product as originating in a particular place to which its quality, reputation or other characteristics are essentially attributable. It is particularly prevalent in the case of wine and spirits. Members have to provide for the prevention of the use of **means** indicating that a product originates in a place other than the true place of origin, and thereby misleading the public to the true origin of the product.

Industrial Designs (Article 25-26):

Industrial design refers to the features concerning the look of an article for example, the shape, ornamentation, pattern, configuration, etc. Member is required to provide for the protection of industrial design, if these are new and original. Considering the importance of industrial design in the textile sector for developing countries, there is a provision that requirements, particularly is respect of costs, examination or publication, and should not unreasonably impair the opportunity to get protection.

The owners of the industrial design should have the right to prevent the use of the design without their consent. Limited exceptions to the right are permissible.

Layout-Design of Integrated Circuits (Article 35-38):

To qualify for protection, the layout-design has to be original. Reproduction of the layout-design, selling or importing the layout-design, and also selling importing and article containing the layout-design, without the **authorization** of the right-holder will be illegal. There are some exceptions, e.g. reproduction for private purposes or for research etc.

Undisclosed Information (Article 39):

It relates to secret information with a person or affirms, e.g. trade secret, or **information** lodged with government in the case of **pharmaceutical** or agricultural product. The person having the undisclosed information should have the right to prevent the disclosure or acquisition or use of the information without the consent of the person possessing it. However, for the purpose, the **information** must be secret, it must have a commercial value and the person having the possession has taken reasonable steps to keep it a secret.

Some Important Issues applicable to all areas of Intellectual Property Right (IPR):

- "The most favored nation" treatment: all members will be treated equally without any discrimination.
- National Treatment: No discrimination between domestic nationals and nationals of any other members.
- Members may take corrective measures against licensing practices and conditions which restrain competition, as these may have adverse effect on trade and may impede transfer and dissemination of technology.
- Effective Administrative and judicial arrangements have to be made to enforce the IPR.
- The implementation of the Agreement in various countries must be ensured through appropriate domestic legislation.

Impact of Patent on Developing Countries:

In the TRIPS agreement Article 27-34 deals with the subject matter related to Patents. In fact this is the most criticized area from developing nation's perspective. Though it has the objective to motivate the innovation and to recognize the real owner of a innovation, the developing countries considering their economic vulnerability are not ready enough to bear up with the notion of the

agreement. The obligation regarding the patents specially the spirit of article 27.3 (b) has been blamed from various perspectives:

Main feature of the Article 27.3 (b):

- Patents of Plants and animals which are not produced through biological process.
 - Patents on plant varieties.
 - Patent of Micro organism i.e. virus, bacteria, protozoa, fungi etc.
- , • Moral perspective

Any ownership or patents on any living organism (plant or animal) is highly criticized by the scholars of the school of ethics and morality. Their argument is "we cannot produce life so we cannot claim ownership". According to Action Aid (an INGO), "we have moral obligation not to restrict someone **from** extracting benefits from the blessing of nature". For gaining individual interest and profit (company's interest and benefit), we cannot sacrifice the greater interest of the human society in the name of profit made by individuals.

- , • Food security Perspective

Food security is one of the most important issues for both the developed and developing countries. It is a proven fact that the country which gained food sovereignty is less likely to be vulnerable to the super powers. And the past financial recession has proven that country with sufficient food security and export advantage has less affected by world financial crisis i.e. Newzeland. Therefore, food sufficiency is an important issue in term of both upholding sovereignty and sustaining in the long run.

The TRIPS agreement could lead to control of farming being placed firmly in the hands of transnational input suppliers undermining small farmers in developing societies still further. For most small-scale farmers access to land, water, seeds and tools is the basis of their food security. For many, switching to cash crops and depending on the

market to buy their food needs can be a risk too far. They are too **vulnerable**- if market prices fall or sales are **difficult** they have not reserves to fall back on, no money to buy food and face destitution or death. Hundreds of farmers in various Indian states have committed suicide after such experiences. The current market is too unreliable for them.

Let's see how Trips especially Patent provisions affect the developing countries:

- Cost Increase Production Decreases

As the farmers in the **developing countries** are forced to produce more food grains to meet the need of the growing demand of the population, they become more hybrid seeds dependent for more production. And the world hybrid or genetically modified (GM) seed sector is controlled by the TNCs and MNCs. When the patents provisions are become operational, the farmers who purchase the seeds from the companies need to give high royalty to the company. Ultimately, the production cost will go up, as a result the **price** of the food grains will go up. This will send the poor and the ultra poor in a food vulnerable situation. In the developing countries the marginal farmers are not financially sound that's why even the farmers will not be able to invest in the food production. .

Company	Share of Global market		
	Seed	Genetically Modified Crops	Pesticides
Du pont, Monsanto, Syngenta, Aventis, Mitsui	30%	98%	70%

Source: Action Aid, 2007

- Dependency on the Foreign Companies

After enacting the TRIPS agreement the TNCs and the MNCs started the mechanism to gain patents and ownership over the food grains and plants around the world. **As** they (TNC) are involve in modifying the varieties and micro organism process, the farmers around the world are losing their traditional right over the indigenous resources. And more important issue is that the Companies are producing terminator

seeds now a days which means the crops produced by the terminator seeds will not be able to produce fertile seeds for the next production. As a result the farmers will become dependent on the companies for the seeds.

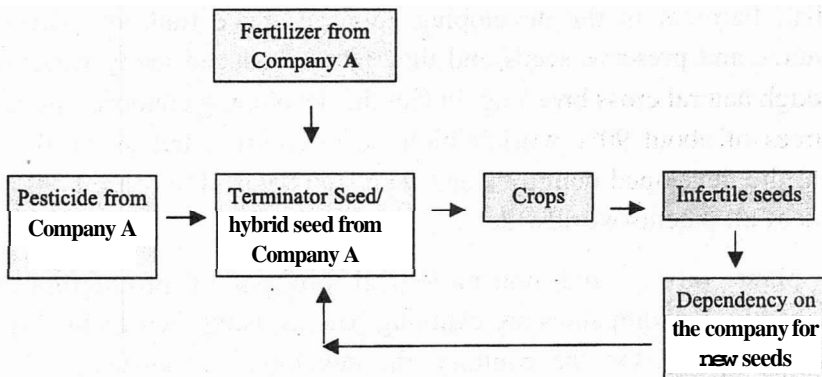


Figure: A Vicious Cycle of Dependency on TNCs and MNCs

Usually the companies are producing special kinds of seeds which requires special kinds of fertilizer to grow and even special kinds of pesticides to resist itself from the insects. And the same company that produced the seed is usually produce the special kind of fertilizer and the pesticides as a kind of package. Therefore, farmer has to purchase all the ingredients from the company as a package for full throttle production. Thus they become fully dependent on the TNCs and MNCs for food production. .

In the recent years it is observed that some NGOs are providing micro credit along with certain conditions to purchase their seeds and pesticides meaning if you want to have micro credit you have to purchase certain companies 's seeds and pesticides. As the other international obligations forced the national government in the developing countries not to subsidize the agriculture sector, poor farmers (majority in developing countries) have become more dependent on the micro credit to bear their production cost and thus they become dependent on the companies indirectly.

a Losing Ownership from Local Indigenous Resources

Patent is a technical issue. It involves a lot of money to complete a patent claiming process as well as to protest against a patent claim legally. For example in USA a patent suit may cost up to millions of dollar. Farmers in the developing countries have tradition way to produce and preserve seeds and they had introduced many varieties through natural cross breeding. In fact the developing countries are the sources of about 90% world's biological resources but in the other hand the developed countries and their TNC and MNCs are holding 97% of all patents worldwide.

As plant variety and non-biological process of production is patentable the companies are claiming patents using their technology and experience. On the contrary, the developing countries are not technically competent enough to ensure their right over their natural and indigenous resources. Therefore, the local farmers are losing their ownership over their aged old tradition resources.

Let's see some worse cases of patent which directly affect the developing country and that over look the indigenous knowledge base:

Basmati Rice Case

Basmati is a fine quality rice variety originally produced in India and Pakistan. India grows **650,000** tones of **basmati** rice annually. And its share in the total land area cultivated in India is **10-15%**. India earned Rs **11.2** billion in the year **1997-98**. But on **2** September **1997** the Texas based Rice **Tec** Inc. was granted US patent **5,663,484** on **basmati** rice lines and grains.

Basmati variety on which Rice **Tec** has claimed patent has been derived from Indian **basmati** crossed with semi-dwarf varieties . It was simply a cross breeding.

NEEM Case

A company of Columbia has been given a US patent right on NEEM for using it as pest and disease controller. But it has been using by the traditional sub-continent farmers for long time as pest and disease controller.

Quinoa Case:

In 1994 two scientists from Colorado State University received US patent on Quinoa which is the staple food in Chile, Bolivia, Peru and Ecuador. And it was a traditional food variety produced by the farmers in the South America

● Bio Diversity Perspective:

In the developing **countries** the farmers usually grow varieties of crops in a single plot of land for adapting with market and to maintain the productivity of land. Thus the bio diversity of an environment is maintained. But the Companies are producing GM crops which are designed for monocropping, thus it destroys the bio diversity of the environment.

If The Terminator Seeds (which is produced by the company for profit maximization and sustainable sales growth) naturally cross breed with the other variety of the same crops and other wild plants, it will create a disaster in the environment. Thus it will facilitate the extinction of different species from the earth.

- Extensive use of Genetically Modified (GM) crops (which are disease and pest resistant) crops always involve the danger of promoting the evolution of resistant strains of pest or pathogens.

Besides these there are other affect on the bio diversity which can be as follows:

● *Biodiversity and the Poor*

One of the key factors affecting the relationship between people living in poverty and the environment is a concept known as 'biodiversity'. Understanding the geography of biodiversity is critical to understand

the politics of control and access to environmental resources, and the role of trade and trade rules. Scientists talk about three types of biodiversity: ecosystem diversity (the variety of different ecosystems in an area), species diversity (the number of species in a given area) and genetic diversity (the variability within a given species).

All biodiversity is richer in the South than in the North. The tropics and sub-tropics of the South have more biological diversity than the temperate North. This is as true for agricultural biodiversity as for 'wild' or biological diversity. In North/South relations regarding biodiversity then, geography has given the South a strategic edge. This is the context for current international policy negotiations relating to access to biodiversity, whether of agricultural crops or medicinal plants or other things.

Maintaining biodiversity and (free/public) access to it, while obviously a planetary public good, is crucial for the poor. The World Health Organization has estimated that 80% of the world's population depends on traditional medicine derived from local plant varieties for their primary health needs. Wild plants, in field and forest, make a significant contribution to the diet of many poor communities. In many developing countries, poor communities are able to draw at least half their food from forest products, and consequently have never faced famine. Agricultural plants in the South, developed by farmers over thousands of years, have been bred and adapted to suit local conditions. For example, of the hundreds varieties of corn grown in Mexico, each has unique characteristics and features: some more adaptable to frost or drought, other grow in higher altitudes, some produce late in the season, others early. The free exchange of this knowledge, as well as local sale and exchange of seeds, has been an essential aspect of food security among the poor. In the developing world, only 10 per cent of seed is bought commercially, and many poor farmers buy seed only every five years.

Thus it is usually the rural poor in developing countries—indigenous peoples and resource-poor farmers—who know most about age-old, time tested seed varieties, medicinal plants and other useful biological

resources, whether cultivated or wild. Like all economic activity, agricultural and forage activity is gendered. Research documents that, both men and women play important and distinct roles in maintenance of biodiversity. In many countries, from the Peruvian highlands to the Solomon Islands, women do much of the seed saving and seed selection in rural communities, particularly for food crops. Hence it is poor women who are often the custodians of agricultural and medicinal resources.

- Biodiversity and Intellectual Property Rights

While geography and biology favour the South in matters of biodiversity, the agro and pharmaceutical corporations that require knowledge of and access to genetic resources for 'product development' are overwhelmingly based in the North. One of the chief ways corporations have tried to secure this access is by extending the use of intellectual property rights (IPRs) into the realm of living things. Intellectual property rights include patents, copyrights and trademarks, whose purpose is to ensure that creators of intellectual property receive adequate recognition and 'protection' in the market place to ensure returns for their investment in research and development. As Canadian Churches have argued, IPRs also "involve a host of ethical concerns because they deal with fundamental questions concerning ownership of knowledge.

An important means by which corporations have succeeded in extending IPRs has been through the Agreement on Trade Related Aspects of Intellectual Property (TRIPS), a precedent-setting agreement successfully concluded by governments as part of the GATT Uruguay round. In many ways, TRIPS is antithetical to the stated purpose of liberalized trade since it is an agreement that facilitates monopoly. Nonetheless, explicit and heavy lobbying from corporations (such as Pfizer in the US as well as others in Europe and Japan) succeeded in bringing the TRIPS agreement about to ensure a move toward global harmonization of legislation for IPR treatment that could be enforcement through trade sanctions. The TRIPS agreement is based on IPR standards of industrialized countries.

Governed by the WTO, it has many components and many implications for development and poverty eradication in the South.

- Health Security Perspective:

Developing countries are vulnerable in health related issues due to lack of financial and technological resources. Moreover the disease like AIDS, Swine flu, Malaria, Plague etc are a threat to the human society. To prevent and control of such diseases is highly dependent on the availability of related medicines. Due to advent of TRIPS especially the patents provision, the production of medicines are subject to pay due royalty to the original inventor. The pharmaceuticals company in the developing countries usually is producing the medicine following the formula of the original companies (most of them are in the north) without the permission of the original company. Thus the patent provision will create major two problems for the developing countries:

- The price of the medicine will go up and the availability of the medicine in the developing countries will **decrease**.
- The export earning in the pharmaceutical sector in the developing country will significantly decrease.

Micro Level Impact:

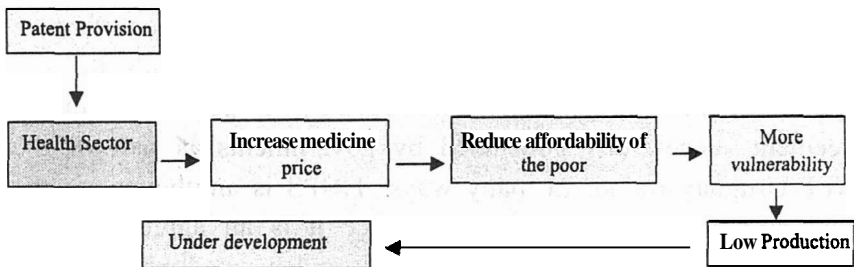


Figure: shows the relationship with patent provision and Underdevelopment at the micro level.

Macro Level Impact:

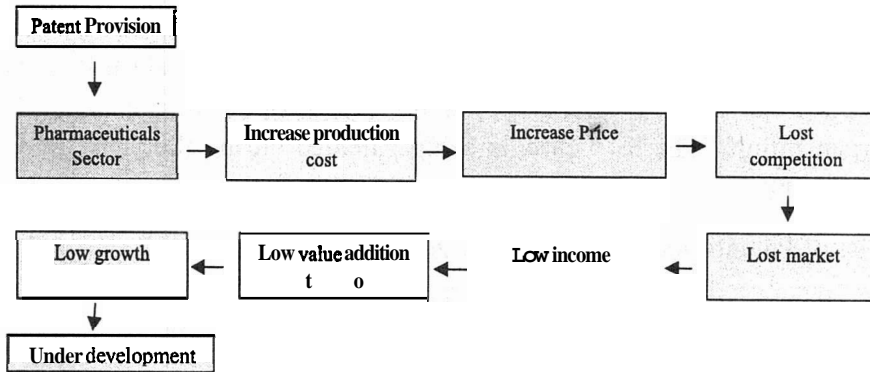


Figure: shows the relationship with patent provision and Underdevelopment at the macro level.

- Bangladesh Patent Law

Bangladesh's patent law is based on the Patent and Designs Act of 1911 and the Patents and Designs Rules of 1933. The law grants both process and product patent rights for Pharmaceutical products. The Patent Office has issued approximately 40 drug formula patents. It issues approximately 300 patents in total per year, 90% of which are held by MNCs (Khan 2006). The patent law in Bangladesh is inconsistent with TRIPS in many ways, the most basic of which is Bangladesh is not required to enact patent legislation of any kind until 2016. The Department of Patent, Designs and Trademarks, within the Ministry of Industries, has been preparing a **Draft Patent Act** since 2006. This draft law, written with the assistance of the World Intellectual Property Organization (WIPO), excludes pharmaceutical patents and includes the Bolar Provision and parallel importation. The current 1911 law already provides a process for compulsory licenses but the option has never been used (VanDuzer 2003). The current compulsory license legislation is extremely cumbersome; a verdict must be obtained from the appellate court, which is a challenge. UNDP's 2001 Human Development Report recommends a streamlined and procedural approach to compulsory licenses. A recent study commissioned by the Embassy of the Kingdom of the Netherlands on Bangladeshi patent law concluded that the current

draft law still needs work. The study also concluded that it is not likely to be passed by the government in the foreseeable future. Thus, the study recommends implementing minor legislation declaring TRIPS to be applicable in Bangladesh. Up to April, 2009 Bangladesh Patent department has given 320 patents to various agencies and organization. The list below is being patented during the year 2008 and 2009:

List of Patents accepted from July 2008 to June 2009

1.	Preparation of Betel Spices from Herbs and Shrubs. 21.07.2008	1004751
2.	A process for the production of palm powder. 11.08.2008	1004768
3.	A process for the production of Aloe vera powder. 15.10.2008	1004785
4.	Preparation of powerful phenyl from petuli oil. 15.10.2008	1004786
5.	Preparation of Fluid disinfectant from castor oil. 15.10.2008	1004787
6.	A process for the production of cracked heel cream. 15.10.2008	1004784
7.	An Improved process for the production of cured beef. 09.11.2008	1004821
8.	A process for the production of Nutritious Palm Bread 30.11.2008	1004830
9.	A process for the production of Nutritious Palm Cake 30.11.2008	1004829
10.	A Process for the production of herbal aloe shampoo. 22.03.2009	1004897
11.	A process for the production of aloe lemon drink. Raj. 08.04.2009	1004905

Source: Department of Patent, Design and Trademark, 2009.

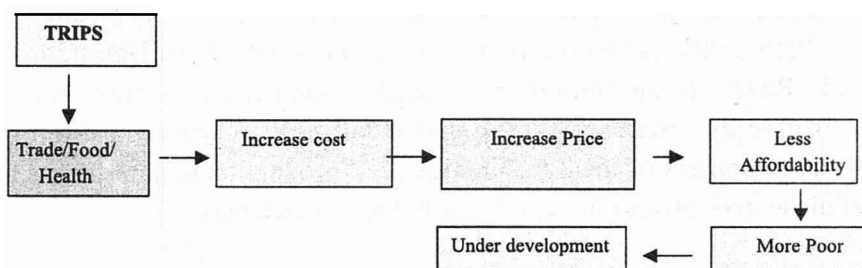
- Evaluation

Several countries see a conflict between the TRIPS agreement and the Convention on Biological Diversity (CBD). TRIPS does not present or promote measures that provide farmers' rights, or sharing of benefits

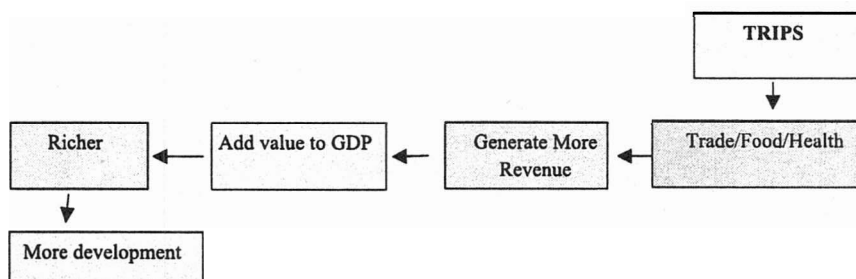
in genetic resources or traditional knowledge with countries or communities, whereas Article 8(j) of CBD encourages equitable sharing of benefits arising from usage of traditional knowledge. In reality, genetic resources and traditional knowledge of developing countries are often used mostly giving no benefit to the owners. It is of significant importance to Bangladesh to amend the TRIPS agreement to accommodate some essential elements of CBD, namely (i) disclosure of the source and country of origin of biological materials and/or traditional knowledge used in the invention; (ii) evidence of prior informed consent through approval of authorities; (iii) evidence of fair and equitable benefit sharing.

In brief the TRIPS agreement has contributed in following two ways:

For Developing Countries and LDCs:



For Developed Countries:



Conclusion

As a developing country we must exercise the options already provided for in TRIPS and other international agreements, free from pressure. We have to reform our national legislation in a manner most conducive for the individual health, economic and development needs of our country putting into effect the compulsory licensing, parallel importing and other options. At the WTO and WHO, as a developing country we will have to fight for our concerns to be effectively and promptly addressed. With respect to the TRIPS Agreement, we have to participate and support the proposals for changes to the agreement, in order to ensure that IPR protection does not undermine our economic and developmental prospects and also to ensure the access to essential and life-saving medicines and their affordability for all. At the same time, we have to gear up our own strategies, from right now, to help flourish our pharmaceutical sector so that it can stand on a firm base before 2016 with emphasis on basic and applied research in this field. Research on **traditional/alternative** medicines to find good alternative treatment system is a demand of time to ensure health for all. Development of local technology (e.g. production of jute-derived cellulose derivatives) in the related fields is also necessary.

Appendix-A

A SUMMARY OF TRIPs ISSUES AND IMPLICATIONS FOR SOUTH ASIA	
TRIPs Obligations	Implications for South Asia
<p>Non-discrimination Policies</p>	<p>Enacting protective legislation cannot discriminate against pharmaceutical exports. In practical terms, there will be an increase in foreign pharmaceutical products. This will require governments in Bangladesh, Sri Lanka and Pakistan to assess the impact on welfare loss and the domestic industries, which currently possess some manufacturing capability. It is unclear as to the extent to which the Indian generic industry will be significantly affected. There will, invariably, be some form of contraction in the industry as well as increase in tie entry into joint ventures or licensing of domestic manufacturers.</p>
<p>Protection to be made available for product and process patents in pharmaceuticals</p>	<p>All countries must now set in place patent protection systems and legislation. This will impose considerable costs on countries like Nepal and Bangladesh who will need to have in place an entirely modern framework. Sri Lanka, which has previously adopted the WIPO model, may have to undertake minor modifications. India, however, has now to amend its legislation to ensure that process patents are protected.</p>
<p>The interface between Article 27(1) and Article 28(a) is at present unclear.</p>	<p>India, which has a substantial generic industry, may be significantly affected if it is unable to exploit the economies of scale. In case parallel imports are prohibited under the agreement. This is the reverse of the 'local working' requirement where foreign multinationals located in developing countries may argue that parallel imports of cheaper versions of patented products produced locally are being discriminated against.</p>
<p>Standard Setting for Issuing of compulsory licenses.</p>	<p>Domestic legislation must enact the standards prescribed by Article 31(f), which restrict the issuance of compulsory license on the grounds stipulated in the section. The requirement that royalty payments are made presupposes that governments have adequate resources to fund the repayments. Also, there is an assumption that in producing the medicines under compulsory licence, domestic manufacturers do not attach any importance to the economies of scale, particularly where the domestic market is small or not viable.</p>
<p>TRIPs recognises that developing countries may not be able to comply with the obligations. Consequently, transition periods are made available.</p>	<p>Almost all the developing countries in South Asia have in place TRIPs compliant legislation, with the exception of Nepal, which is presently being assisted by WIPO.</p>
<p>FDI and Technology Transfer</p>	<p>It remains to be seen, given the complexion of the corporate pharmaceutical model, whether these aspirations are likely to be operationalised. It must be questioned whether any credible benefit is to be gained in the case of Nepal and Bangladesh, in particular.</p>

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