Intellectual Property Rights – Need for Overhaul

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Biotechnology and genetic engineering technology are increasingly gaining vital role in understanding of basic cellular processes and in turn creating designer living organism be it microbes, plants, animals or even human organs. However, progress in modern biotechnology is hampered by two major issues; bio-safety and intellectual property rights (IPR). The public sector made efforts to grasp this new situation but it took them long time and process is painstaking slow (Zafar, 2007). There are nearly 2000 patents only in the field of plant transgenic technology (Hefferon,2010; Yin & Zhang,2010). The famous case of "golden rice" is a vivid example of such legal web of patents and IPR regime.

Despite the revolutionary nature of the biotechnology in creating new products like of Bt cotton the spread and penetration of the new crop biotechnology is limited to few countries, to a very few selected crops and also to few selected traits. This is unlike of 'green revolution' which spread to all countries though impact was lesser in sub-Sahara Africa.

The present Biotech revolution which is almost exclusively driven by private sector (MNCs) is heavily protected by complex and layered patents and various IPR regimes and thus access to knowledge and technology have become 'restrictive'. In the present scenario, the sustainable agriculture and IPR are in logjam if not oppositive to each other (Malik and Zafar 2005).

Major Shift in Life Science

Patent act and copyright act of 1790 enacted by the Senate and House of Representatives of USA were based on the principal to promote the progress of useful arts and for the encouragement of learning respectively. Moreover till 1980s the living organism (animal, plants & microbes) remained out of this regime. The U.S. utility patent law designates four board categories of patent-eligible subject matters: compositions, machines, articles of manufacture, and process. Plants are not expressly included; no biological subject matter is included by express language. However, in 1980, The US Supreme Court construed section 101 to encompass genetically-modified microorganisms (Diamond v. Charabarty 1980). In 1985, the United States Patent and Trademark Office (US PTO) applied the same rationale to extend section 101 to seed-grown plants (Janis 2001).

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The GATT melted into World trade organization (WTO) in 1995 through international treaties in Marrakesh, Morocco. Globalization was the key element and underlying principal of WTO. In fact Globalization is one of the most important issues of the day, and IP is one of the most important aspects of globalization. Among other things trade related intellectual property right system (TRIPS) was an important instrument of this treaty which included agriculture, health and services sector into IPR regime which has changed the every fabric of society. It was a paradigm shift. According to some critique developing countries in fact "signed the death warrants of their own". The historical principal of "public/common good"' was replaced with profits with immense distortions in traditional agriculture and health sectors of developing world.

Concerns of developing countries

The global debate on WTO (Doha rounds) mostly centered around TRIPS. It is now well recognized that present era is of "knowledge economy". How we regulate knowledge and rights to knowledge becomes the center of how well this knowledge economy works. The related aspects to this K-economy are who benefits, distributional issue, and efficiency issues. It was recognized that intellectual property circumscribes its use and thus almost necessarily causes inefficiencies. It is now increasingly been realized that IPR does not recognize difference in circumstances – other than to which profits can be extracted. What separates developing from developed countries is gap in knowledge and resources. TRIPS have made it more difficult to close the gap. (Stiglitz, ,2007)

The net outcome of implementation of WTO regimes since January, 2005 was that not only intellectual property causes distortions by restricting the use of knowledge it does something even worse. It created monopoly power. The social cost of this distortion on inefficiency is particularly high when they impede access to life saving drugs and improved seeds for food security in developing countries. This distortion by helping leverage further strengthens the very same monopoly power. This distortion also allows the monopoly players to set the direction of research. The selection of traits/crops do not correspond to the real need of developing world is a prove to this sad reality.

Biopiracy

The present IP system have also unable to deal with the transfer of rich traditional knowledge and material from developing countries (poor in knowledge/innovation) to the developed world. 'Biopiracy' term was coined to identify such cases and glaring attempts to patent traditional basmati rice, turmeric and neem are few examples of the misuse and liberal disbursement of patent rights by the developed countries. (Malik and Zafar 2005).

Way forward

At present innovation system is relaying too heavily on patents and the patent system is poorly designed, inefficient and proven to distortion. Thus there is a need to overhaul the IP-system and re-design the development oriented IP-regimes. (Ferguson, 2012)

This could only be possible if we consider patent system as only one part of innovation system while strengthening other components of this innovation system such as prizes, public funded research in university and governmental research institutions. This redesigned IPR regime will in turn increase the benefits and reduce the cost.Developing countries have called for a development oriented IP

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The ideas reflected in the article are not in any form are related to organization/country to which author belongs. The purpose of this article is not to advocate a particular course of action but contribute to public debate by setting out some IPR issues of biotechnology confronted by public sector in developing countries.