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Do Intellectual Property Rights Harm Africa?

James S. Shikwati

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Do intellectual property rights harm Africa?

James S. Shikwati

„Imagination is more important than knowledge"
Albert Einstein, Scientist [1879-1955]

Background: Intellectual Property and Development in Africa

Intellectual Property Rights are often considered as serious obstacles to trade and the transfer of technologies related to the conservation of biological diversity.[1] African countries are rich in biodiversity and indigenous knowledge which has flowed freely to the developed countries. However global market trends are such that Africa must urgently address issues pertaining property rights if they have to fit into the global economy and also stimulate inventions and innovations.[2] The challenge facing Africa is how to produce high quality goods and services while at the same time tackling aspects of poverty and unemployment. Africa is seen to participate in IPR as second comers already faced with other priority issues and lacking capacity to enforce IPR regimes.

Stephen Devereux and Simon Maxwell in their book „Food Security in Sub-Saharan Africa" state clearly that nearly half the population of Sub Saharan Africa is living below the international poverty line of US $1 per day. African countries grapple with the challenge of a poorly performing agricultural sector giving rise to food & poverty crises. 70% of the African talent is locked up in peasant farming and rely on „climate fed" agriculture. In Africa, promise and opportunity sit side by side with disease, war and desperate poverty. 70% of Africa's population live in rural areas and depend on subsistence agriculture and 80% of African's expenditure is on food. Africa has invested heavily in seeking donor support and little in ensuring her people become productive.

Third World countries especially in Africa have been on the frontline in arguing that intellectual property rights is a tool used by the West to make them poorer. The HIV-AIDS scourge has brought to the fore debates on whether intel-

1 Illecas M. (1994)
2 www.mcc.org/us/globalization/hough/intellect.html

lectual property rights really help humanity or kill them. Major pharmaceutical companies have been accused of ignoring the plight of the poor in the quest for profits.[3]

In the book „How Europe Underdeveloped Africa", Walter Rodney argues that the Western World engaged in atrocities and looting of the African continent making people desperately poor.[4] 50 years after most African countries gained independence from Europe, the Africans are still queuing for donor funding investing less in homegrown solutions and African talent. The biggest question is why is this happening in Africa, where people are endowed with the human mind that is creative and innovative?

The developed/Western countries did not get wealthy by merely exploiting the Third World. Dennis T. Avery in his paper „Sustaining Both Planet and People" argues that what the West did to get rich was to invent the systematic search for knowledge and then share it broadly.[5] The West has always sought systematic knowledge that can be replicated and refer to that knowledge as „science". It is for this reason that they have moved from focusing on natural resources such as „land" to resources such as transistors, radios, fiber optic cables from sand. Most third world countries on the other hand have focused only on the „visible wealth" and tribal organization. This structure instead of fostering wealth, promotes war over resources.

The developed countries also focused on use of predictable law that would protect the inventions and innovations of individuals hence giving them more incentives. A casual survey of inventions that have changed the course of humanity indicates a marked absence of people from Africa. Such inventors include:

Johannes Gutenberg of Germany invented the printing press
Conrad Gesner of Switzerland the pencil
Maharaja Jai Singh of India, astronomical instruments
Samuel Morse of U.S.A the telegraph and Morse Code
Alfred Nobel of Sweden, dynamite
Alexander Bell of United Kingdom the telephone

3 EAS February 6, 2002 „AIDS patients are turning to herbal medicine" by Beatrice Obwocha- Most Kenyans living with HIV/AIDS cannot afford anti-retroviral drugs due to poverty. About 70% of those living with the pandemic are using alternative therapy allegedly due to high prices.

4 Rodney, W. (1984)

5 Avery, D. T. (2003)

Guglielmo Marconi of Italy the radio
Orville and Wilbur Wright of U.S.A the airplane
Vladimir Zworykin of Russian federation Electronic TV
Ladislo Biro of Argentine/Hungary ballpoint pen
Konrad Zuse from Germany freely programmable computer
Gertrude Elion U.S.A the Immune System Drugs to Fight Cancer and AIDS
James Russell of U.S.A compact Disc

The above list may falsely imply that Africans are not creative and innovative. On the contrary however, long before the colonialists came to Africa, the African people had started ventures in medicine, iron smelting, arts, music, house building, and bead making and carving. The power of innovation was also exhibited in the way they preserved fire for later use and the very fact that they could get a fire by rubbing two sticks together. However the lack of systematic recording and beyond a tribal level of property right recognition, robbed many innovators in Africa the ability to have their contributions improved upon and made economically viable. More so, the lack of a property rights regime that could measure to the countries that later colonized Africa made it easier for both physical and intellectual property to be seized by the occupying powers[6].

What is Intellectual Property Rights

Intellectual Property rights is the term that describes ideas, inventions, technologies, artworks, music and literature that are intangible when first created, but become valuable in tangible forms as products. IP is the commercial application of imaginative thought to solving a technical or artistic challenge. It is not a product itself, but the special idea behind it, the way the idea is expressed, and the distinctive way it is named and described[7].

The word „property" is used to describe this value, because the term applies only to inventions, work and names for which a person or group of persons claim ownership. Ownership is important because experience has shown that potential economic gains provide a powerful incentive to innovate. It is also important to note that IP results from innovation based on existing knowledge. It is the result

6 Looting and arbitrary seizures of property by undisciplined soldiers was not a feature of traditional African society. Even the chief could not dispossess someone of his property without a full council hearing. When disputes pertaining to property arose, a chief's court adjudicated the matter. Ayittey George (1998)"Africa in Chaos"' New York: St. Martin Press pp100-101

7 Idris K. (2003) „Intellectual Property: A Powerful Tool for Economic Growth" WIPO;Geneva

of creative improvements on what has worked well in the past, or of creative new expressions of old ideas and concepts.

The history of human race is a history of application of the imagination, or innovation and creativity, to an existing base of knowledge in order to solve problems. From early writings in Mesopotamia, the Chinese abacus, the Syrian astrolabe, the ancient observatories of India, the Gutenberg printing press, the internal combustion engine, penicillin, plant medicines and cures in South Africa, the transistor, semiconductor nanotechnology, recombinant DNA drugs, and countless other discoveries and innovations, it has been the imagination of the world's creators that has enabled humanity to advance to today's level of technological progress.

The search for new technological solutions and cultural creative activities deserves constant encouragement because, as the history of nations has shown, in addition to spiritual development, inventions and cultural creations are the main sources of social and economic development of mankind. Food, health, communications and other fundamental needs for the survival of the human race have improved, are improving and will improve because of the inventions and creations.[8]

Most common types of Intellectual property defined[9]

Patent

A patent is generally defined as a contract between an inventor and society in which each party must meet some requirements, that is, the society must guarantee the inventor the monopoly of exploitation of the invention and the innovator must disclose his invention.[10] A patent in an exclusive right granted for an invention (a product or a process that provides a new way of doing something, or offers a new technical solution to a problem). It provides the protection for the invention for a limited period, generally 20 years from the filing, in the country or countries in which it is patented, in exchange for the inventor's public disclosure of the invention. A patent owner has the right to decide who may-or who may not- use the patented invention, and may give permission to, or license, other parties to use the invention to someone else, who will then become the new owner of the

8 Source ibid pp8-9&pp16

9 Source ibid pp17-19

10 Illecas, M. (1994)

patent. Once a patent expires, the project ends, and invention may be used by anyone.

Trademark

A trademark or „mark" is a distinctive name, logo or sign identifying the source of goods or services. Trademarks help consumers distinguish a product or service from one source from those produced by another source. A mark provides protection to its owner by preventing confusion as to source in connection with the distribution of goods or services or licensing others to use them. The period of protection varies, but a mark can remain valid indefinitely through continued commercial use or registration and renewal process. Patents and trademarks are often referred to collectively as „industrial property".

Copyright and related Rights

Copyright consists of a bundle of rights given to creators in their literary and artistic works. These creators, their heirs, hold the exclusive right to use or license others to use the work on agreed terms. The creator of the work can prohibit or authorize, for example:

Its reproduction in various forms, such as printed publication or a phono - record;

Its public performance, as in play or musical work;

Its broadcasting, including by radio, television or satellite;

Its translation into other languages, or its adaptation, such as the adaptation of a novel into a screenplay.

Copyright applies to many types of artistic works, including paintings, music, poems, plays, books, architecture and choreography, as well as to works that are generally not considered artistic such as computer software, maps and technical drawings.

Many creative works protected by copyright generally require mass distribution, communication, and financial investment for their dissemination. Hence creators often sell the rights to their works to individuals or companies that can pakkage, market and distribute the works in return for payment (lump sum or royalties). These economic rights have a time limit, according to the relevant WIPO (World Intellectual Property Rights Organization) treaty, of the life of the author plus 50 years after the author's death in some countries that term has been exten-

ded to 70 years. Copyright may also include moral rights, which involve the right to claim authorship of a work, and the right to oppose changes to it that could harm the creator's reputation.

Rationale for Patents

The patent system provides the inventor with an opportunity to gain revenues at three levels:

To begin with, the inventor may recover his costs i.e. the expenses he incurred in developing the invention, usually capital, time, equipment and manpower.

Secondly, the patent system makes it more likely that the inventor will make a profit (a positive return on the investment) from the unit sales of products incorporating the invention. The ability to achieve this profit (through similar product would otherwise have achieved) depends on whether the invention actually enhances the desirability of products, and whether there are substitutes or alternatives to the invention and the products.

Lastly, the patent system gives him the ability to gain revenues from licensing or assigning(selling) the patents to others who will exploit it in markets that the inventor does not have, or combine the invention with other inventions and products to create new inventions and products. Such licensees and assignees pay royalties (payment in form of a share of his sales) and fees to the inventor.

The inventor gains financially and is motivated to invest more in R&D for new inventions. He is also likely to hire and train others, or transact business with others, who will be motivated to create and invent products by the financial gain. R&D will thus stimulate other economic consequences such as increased employment and training, and increased competitiveness of related products.[11]

Trade Related Intellectual Property [TRIPS]

Not all nations protect intellectual property rights to the same degree. Many countries especially developed countries, offer strong intellectual property protection for trademarks, copyrights and both process and product patents.

All members of WTO are bound by TRIPS, which creates minimum standards for patents, copyrights and other forms of intellectual property. Crucially, TRIPS

11 Idris K. (2003) „Intellectual Property: A Powerful Tool for Economic Growth" WIPO; Geneva pp79

requires that by 1stJanuary 2006 all countries must have in place systems for patenting products, including pharmaceutical products.

The rationale for TRIPS is to strike a balance that would encourage future innovations and continued investments in research while enabling people (particularly those in poor countries) to use and exploit beneficial technologies. In essence TRIPS aims to strike a balance by offering protection to innovators, so that they are able to reap the rewards of their investment and thereby have sufficient incentive to continue to engage in innovative research, while simultaneously ensuring that the technologies are disseminated widely.

The agreement also recognizes that IP protection is granted by the governments and that people should have flexibility to tailor their IP systems to suit the needs of the people they govern. Until recently, patent laws of most poor countries exempted pharmaceutical products from protection. As a result, producers of generic pharmaceuticals were able to thrive in such countries by copying drugs developed and patented elsewhere. Many of those generics producers understandably fear implementation of TRIPS, as they will no longer be able to copy on patented pharmaceuticals and their profits will likely fall considerably.

Intellectual Property protection and competition

Of all misconceptions relating to IP, the most pervasive and damaging has been the assertion that IP protection per se is damaging to competition. Those who make such assertions typically make one or more of the following four errors.

First, it is frequently asserted that IP protection creates monopolies. To see why this is mistaken, consider the case of inventions. Suppose that a certain patented invention has a monopoly. Many would argue that the monopoly results from a patent, but in reality the monopoly is created when the idea for an invention occurs to the inventor. From that moment, the inventor has the option of either keeping the invention in his or her mind and not divulging it to the society at large-and remember that the commercial exploitation is in many cases possible without such disclosure - or of patenting the invention and thereby divulging the knowledge to the society. If the inventor chooses the former, the society may be deprived of access to the knowledge underlying the invention. As a result, others will be less able to carry forward the frontiers of human knowledge and new inventions.

Second, it is typically assumed that all monopolies are inherently bad. Howe-

ver, even from the perspective of the consumer, this may not be true. The fallacy results from the standard economics under-graduate comparison between monopoly and ‚perfect competition'. This comparison, useful though it may be for pedagogic purposes, is rarely of use in practice, and may not apply when they are increasing returns to scale, as they typically are in industries where R & D costs are significant.

Third, most analyses are essentially static, which leads to presumption that any monopoly will last indefinitely. Even where a monopoly does exist, however, it will usually be only for a limited period of time. Competition and further investments will eliminate a monopoly - unless there are entry barriers. In most knowledge-based industries, including pharmaceutical industries, product life cycles are typically less than five years. That is precisely the reason why competition policies, typically based on industry structure (market concentration) or performance (prices, profitability) are silly. Rightward movements oft the supply curve – as a result of competition and new investments – will reduce market concentration and bring prices down. Moreover, just as perfect competition rarely exists, pure monopolies rarely exist: for most inventions, there are substitutes.

Fourth, it is presumed that monopolies are the result of market processes. In fact, most monopolies are the result of market processes. In fact, most monopolies can only continue to exist as a result of the erection of artificial entry barriers, such as unfair or restrictive business practices enforced through government-created licensing schemes, import restrictions and such like. Few will object to competition policy measures as long as they focus on such instances of anti-competitive conduct.[12]

IP protection stimulates invention and creativity

Patent and other similar forms of IP protection have two key advantages:

First, by conferring temporary exclusivity on the right holder, patents reduce the costs of protecting the knowledge underlying the inventions and thereby provide increased incentives to the invention. Second, because patents require public disclosure, the knowledge underlying a patented invention can be used for further inventive endeavor, thereby increasing the gains to society.

Imitators have much lower fixed costs than investors, so their products will always be cheaper. Without IP protection, many inventors and creators would

12 Debroy B. (2001)

have too little incentive to invest in the fixed costs of creation/ invention in the first place. Research by economists, in support of this conclusion, show that there is a strong link between patent protection and economic growth, Jeremy Bentham put it nicely 150 years ago; ‚That which one man has invented all the world can imitate. Without assistance of laws, the inventor would almost always be driven out of the market by his rival, who finding himself, without any expense, would be able to deprive him of all the deserved advantages, by selling at a lower price'

Compulsory Licensing Conundrum

Although IP protection covers many different systems, compulsory licensing is invariably identified with pharmaceutical product patents, not with other forms of IP protection or even other types of patent. Compulsory licensing of trademarks is explicitly prohibited under TRIPS and whilst compulsory licensing for copyright is in principle permitted, very few people would seriously suggest that these provisions be invoked. For example, most books connected with the WTO are published by Kluwer International and are exported to India. Although theses books are inordinately expensive for the average Indian, no one seriously suggests that the government of India should mandate a compulsory license in favor of the Indian publisher.

This mindset reflects two fallacies: first, that pharmaceutical producers are monopolists and second, that as multinational companies, they are inherently exploitative. If there is something inherently paradoxical in authors arguing against IP protection (by which they really mean patents) and yet insisting on copyright in their own names on their books, paradox seem to escape them.[13]

Arguments advanced in favor of compulsory licensing.

First, it is argued that ‚essential medicines will no be available in the developing countries and in this context the emotive issue of HIV/AIDS is inevitably raised. The markets, it is said, will be too small for pharmaceutical companies to bother with licensing or distribution arrangements. But this is not so much an argument for compulsory licensing as it is for provision of additional funding for the purchase and distribution of drugs.

Second, even if such essential drugs are available, it is argued that they will

13 Debroy B. (2001)

be extremely expensive. This argument fails to appreciate the point that drug prices are determined by a whole variety of factors and not just cost-plus considerations. For instance, there are issues of what the market can bear with comprehensive medical insurance systems non-existent in most developing countries. Simple business policy would tend to suggest that most firms are likely to indulge in discriminatory pricing, with many fixed costs not being recovered from developing countries. In practice of course, discriminatory pricing may be discouraged *inter alia by*

1 the threat that such discriminatory pricing might be seen as ‚dumping' under the WTO anti-dumping provisions,

2 the threat of re-export of drugs to rich-country markets. But the fact that in practice price discrimination is hindered does not mean that in principle it would not exist. Rather it suggests that policies should focus on removing inhibitors of price discrimination.

Third, it is argued that patents are often granted when they should not be. This applies especially in the field of biotechnology, where the dividing line between discoveries and invention is very thin. It is contended, with some reason, that there are problems with patent examinations in the United States (no third party objections and non-recognition of certain kinds of prior art) and that there are systematic problems, including lack of resources and trained manpower, in developing countries. As a result, the primary means of challenging a patent is in the courts, once it has been granted, which can be very expensive.[14]

Intellectual Property and scenarios in Africa

If Africa is plagued by many problems ranging from social to economic, one can rightly argue that Africa offers a unique market opportunity to innovators. Innovations may not necessarily be triggered by Intellectual Property Rights regime but also by the demand for solutions. It is therefore strategic for Africans to develop a quest within themselves to solve their own problems as a step to reaping benefits from IPR. Below I explore some of the scenarios that mostly feature in Africa on this subject.

14 Debroy B. (2001)

Health sector

Malaria has been identified as the primary cause of poverty that slows down economic growth in Africa by 1.3%. The then Kenya's Health Minister Professor Sam Ongeri estimated that 17 million days at work place are lost every year due to malaria. It is estimated that Kenya spends 780 million shillings every year to control malaria.

HIV/AIDS is devastating the educational, military and agricultural sectors among others in Kenya. According to The National Aids Control Council, Kenya is loosing $2.8 million daily to HIV/AIDS, 17% of the agricultural labor force will be lost to HIV/AIDS. The burden of diseases is weighing down the Kenyan economy.[15]

Most diseases in Africa can be categorized as poverty diseases. This includes malaria, cholera, dysentery and malnutrition related diseases. A study carried out by Amir Attaran on whether patents are blocking poor countries from accessing drugs, indicates that, around 99% of the World Health Organization lists of essential drugs are not on patent and yet are out of reach to African countries. The major barrier to health care includes lack of basic health infrastructure, the poverty in Africa, taxes and tariffs on medical equipment. Poverty makes any health care strategy even more difficult because, people accessing medicines, may still wash them down using unclean water and on an empty stomach.

Intellectual Property ownership becomes a strategic tool in tackling diseases of poverty since no one will be willing to invest in an industry that will give him no returns. To stem the tide of HIV-AIDS and Malaria in Africa, proper incentives for innovators must be put in place in order to save more Africans from dying. Intellectual property rights protection does not stop philanthropists and other people who might want to assist the poor from doing so. It simply meant to provide an avenue that will promote creativity and rewards to innovators.

Brain Drain

Intellectuals from Africa migrate to wealthy countries in search for more rewarding challenges, better pay and recognition. This has been possible due to lack of an effective intellectual property regime that will make them stay home and help their countries create wealth. More often than not, they are harassed and treated

15 Kenya Status of Health Report by IREN Kenya, 2003 [unpublished]

with suspicion for merely being intellectuals. To stem brain drain, it's instructive that Africa builds institutions that will protect intellectual property.

Building such institutions will ensure that the African innovators build upon the already existing knowledge to solve Africa's problems. Africa has become a mining ground for intellectual property with many researchers focusing on the biosphere and culture, without promoting systems that protect property, chances of abuse can be high.

Agriculture

With over 70% of the African population locked up in agriculture, intellectual property regime will spur activity among the scientists and farmers to facilitate new knowledge that will lead to innovations. Such innovations will save Africa from relying on „climate fed" agriculture to intelligently driven agricultural practices. Releasing this population will enhance other areas of the economy such as the tourism industry, the retail industry and other technologically oriented industries. This can also make Africa to effectively join the biotech industry and save her populations from malnutrition and hunger.

Trade in Africa and other third world countries

For the past 40 years, African countries have stuck onto inherited economic systems that rely on production or export of primary resources. Sub-Saharan Africa's share of world trade has declined over this period from 3.1 per cent of world merchandize exports in 1955 to just 1.2 per cent in 1990. The entire continent of Africa accounted for a lesser share of world's export trade than Belgium, 2.3 per cent against 3 per cent. Agricultural goods and unprocessed minerals form the bulk of the exports.

The World Bank's Global Economic Prospects Report for 2002 estimated that over a 10 year period - abolishing all trade barriers could increase global income by $2.8 trillion over half of which would accrue to developing countries, reducing poverty by additional 320 million people by 2015. This cannot happen in a situation where people don't respect intellectual property. Piracy of music CDs and Video and other products will make both business people and investors to shy away from entering markets in poorer countries. It's through protection of intellectual property that goods will flow freely making both the producer and the consumer happy.

However, developed countries have been known to use protection of property rights as a barrier to trade especially in the filed of medicine and arts. Third world countries ought to enforce intellectual property protection for its own good while at the same time allowing more innovators to compete in their own countries in order to facilitate affordable prices.

Conclusion

What belongs to everyone, belongs to no one, and hence falls into disrepair. Africa has this experience and hence it has taken a little longer to join the list of inventors who have made an impact in the world. Africa must urgently seize this opportunity of protecting intellectual property not only in order to protect her own and make her people more innovative and provide solutions to African problems, but also to attract more investment and exchange of goods from other countries. Given the fact that protection of the physical property is a fundamental human right, then the protection of intellectual property right must also be considered in the same vein too.

Intellectual Property Rights are a useful tool in maintaining the innovation process much needed to make Africa industrious. It's only through Intellectual Property that Africa will move from focusing only on the „visible wealth" to the invisible. This will not only improve the economies but also reduce conflicts in the continent.

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