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PATENTING LIFE-FORMS, INTELLECTUAL PROPERTY RIGHTS AND GLOBAL ECONOMIC COMPETITIVENESS IN DEVELOPING COUNTRIES: THE PROSPECT FOR AFRICA

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ABSTRACT: *As development in the world of intellectual property right gives adequate consideration to the issue of restriction of life-forms against the backdrop of its ethico-cultural, innovative and knowledge implications, the paper examines the restriction of life forms as intellectual property rights vis-à-vis its potentials as veritable economic portal for global competitiveness in the present international economic configuration. The paper observes that with increasing and subsequent transformation of life forms into the realm of intellectual property rights, the developing countries are capable of using life forms as intellectual property right to boost their global economic competitiveness. It concludes by identifying what African developing countries should do in order to effectively participate and maximize potentials of patenting life for global economic competiveness*.

KEYWORDS: Life-form, Patent, Property Right, Global Economic Competition

INTRODUCTION

The phenomenon of life-form has been very much discussed in recent times. The approaches are as complex as ever. Donald, (1996) Apart from the issues of bench-marks for an acceptable transition of hitherto sacred life-forms into the domain of private ownership of life forms, other fundamental issues are being raised on patenting life-form. One of the issues that are being raised is the implication of patenting life forms for intellectual property rights Robert, (2011). There is the problem of ethical justification of patenting life-form. Others issues include implication for religion; and the ownership of life and the manner it is going to affect paternity, society, law; culture; sustainable development; knowledge; human rights; regional economic competition etc.

For instance, the ethical problem of patenting-life arose because of the supposed sacred nature of life. Patenting life-form is criticized for going beyond patenting lower life-forms such as insects, goats, dogs, chicken etc. and extending it to include human beings Rebecca, (1988), Shiva, (1998). The legal issue is about whether the exercise of patenting lives does not in any way contradict human nature as a legal entity. From the perspectives of society, human values and social interrelationships, the idea of patenting life is seen as antithetical to traditional family institution. The exercise has been criticized as anti-nature, a celebration of absurdity because it tends to rubbish traditional family value Stephen. (2000).

To the other side of the coin, patenting-life-form is seen as desirable. It is seen an innovation that has enhanced capacity for economic competition. It is also seen as capable of boosting regional economic development by guarantying adequate reward for intellectual efforts. Apart from the fact that patenting life could take care of urgent needs to apportion right value for human intellectual effort, patenting lives is also applauded because of its potential as a good outcome of biotechnology activities.

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The position of this paper is that patenting life form has become a vibrant industry. It is an emerging industrial sub-sector that is strategic to modern productive capacity. Patenting life forms can be used to enhance national and regional economy, through bio-diversity with focus on research, health and human sustainability Zhen et'al (2009). Beyond its expansive research capacity, opinions on patenting-life forms and the phenomenal rise in biotechnology activities have propelled the need to re-examine the issue particularly the economic implications of patenting in general. As living-things become product packaged in manufacturing sense; and the whole exercise is more of a booming global industrial sector, there is urgent need to explore patenting life-forms in the context of its competitive economic capacity in the present global market configuration. Against these backdrops, this study examines patenting life forms as intellectual property rights in the context of emerging global economic competitiveness. It attempts to dissect how intellectual property rights through patenting-lives can be used as means of enhancing global economic competitiveness and subsequently solves the excruciating poverty, squalor and other problems of under-development in African counties.

ASCENDANCY OF PATENTING-LIVES INTO THE REALM OF INTELLECTUAL PROPERTY RIGHTS

The journey of patenting life-forms into the realm of intellectual property rights is both intense and tortuous. It is trailed with bagful controversies. From discussion on the categories of life-forms that should be patented, to the implication of patenting life at all. There is also the issue of whether in addition to lower animal, and plants; human genome should also be patented. These controversies are highly vociferous both from human right angle, religious propositions, legal technicalities, social interpretation and the seemingly offensiveness of patenting lives to human sensibility.

Be that as it may, the fundamental concern of intellectual property right is predicated on patent. A patent is granted to an innovator. It is granted when an innovator innovates something new that has industrial or commercial value. The essence is to prevent other people access to such invention without paying appropriate royalties to the innovator in time and efforts. Patent exists to protect innovators right. Such right often last for appreciable time to allow fair return on innovator's investment. The patenting system and its attendant intellectual property right posture have developed over time. Over the past years, it has covered different kinds or inventions, designs, products and services.

Until 1980, products of nature were strictly excluded from patenting system. But with the giant stride in the practice of biotechnology, another twist of patenting system was introduced. With further explosive developments in biotechnology research and the needs to protect research efforts, there were pressure from companies and researchers to protect and push for patent regulation. For instance, the European Union (EU). directive, which was passed in 1998 was a landmark as it makes anything biological almost patentable in other to ensure competitive biotechnology. Specifically, the European Union (EU) directive 98/44.EC on the legal protection of biotechnological inventions seeks to establish harmonized standards to foster innovative potential. It also seeks to enforce competitiveness of research in particular and the industry in general. The directive also set out which inventions involving plants, animals and human parts may or may not be patented.

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In the course of gradual ascendancy to the realm of intellectual property rights, patenting lives is punctuated by admixture of antagonism and tacit support. To the antagonists there is problem with the right claimed by inventors. This is because people believed that genetics does not create anything but merely rearrange or organize what was already in existence. For this reason, life form as patent is rather perceived as mere discovery. Other concern is predicated on the position that patenting lives is anti-nature; a step taken too far. Patenting life implies that life is owned by researchers which are tantamount to owning lives. This is an affront to God. An act that is ethically detestable. Patenting is seen to be meant originally for machines and any attempt to extend it to human genomes is seen as a celebration of absurdity in grand design. On the other hand, the apologists of patenting-lives admonish it as purely legal matter in which intellectual property right should be given due acknowledgements. This position maintains that research inventions must be prevented from unfair exploitation. If someone has worked assiduously to invent by investing appreciable time and efforts, there is need for such inventor to have right value for his effort. Patenting-lives and allied biotechnology activities therefore can be regarded as the new phase of vibrant industry. It is an emerging industrial sub-sector in the present knowledge-based global economic arrangement.

Amidst these controversies, patenting-lives have gradually metamorphosed into stronger realm of intellectual property rights. Apart from the lure of appreciable benefits that are accruable from biotechnology and patenting lives activities particularly in the arrears of medicine, pharmacy, agriculture etc., the need to enlarge the frontiers of human knowledge and acknowledge innovations that impact human development have made patenting lives resilient. Although, the directives of European Union (EU) on the legitimacy of patenting lives has not been fully implemented in most member states, there are now threats of court actions against nations that refused to translate the directive into law. With these, the ascendancy of patenting-lives into the realm of full intellectual property rights is already here with us in grand design.

PATENTING LIFE-FORMS, INTELLECTUAL PROPERTY RIGHTS AND GLOBAL ECONOMIC COMPETITIVENESS

Given the degree of advancement in biotechnology, various aspects of plants, animals and human genome are being scientifically discovered and re-arranged for the purpose of developments. On account of this, the resilience of patenting-life as a category of intellectual property right has been firmly rooted. The support for this arose because of challenge of research efforts in human genome project. There are pressures to deepen this important area of "expert activities" and at the same time protect the rights of those who made discoveries. There is also the need to protect financial benefits that are accruable to the innovator and by extension to national economies.

In the field of intellectual property right, the underlying assumption is that issues of discoveries, innovations and creativity should be accorded appropriate right. Discoverers and innovators should be protected from undue plagiarism while the innovator should also be appropriately rewarded in a manner that is commensurate with his or her efforts. In this context, intellectual property right has succeeded in pushing innovations, discoveries and other creative efforts to higher pedestal both in physical and financial sense. In the last couple of years, intellectual property right has made appreciable in-roads. Activities in industry, manufacturing, mechanics, food, pharmacy, information technology, clothing, designs, books and other categories of human products have benefited from assured security and the guaranteed of rewards that were provided by intellectual property rights benchmarks.

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The implication of this is that as researchers make new discoveries, they are also assured of protection and financial rewards for their efforts. The personal financial reward is expected to ultimately rob on the national economy of individual researcher. With these incentives, researchers are running over themselves to partake in human genome project as means of personal and national economic upliftments. By so doing, global economic configuration is assured of being sustained by impetus that is provided by intellectual property rights. The market is being made more attractive by multitudes of enabling international frameworks for vibrant intellectual property market. For instance, World Trade Organization (WTO), World Intellectual Property Organization (WIPO), and other multilateral and bilateral institutions are helping to institutionalize intellectual property market.

From the perspectives of global economic competition and world economic development nexus, the intellectual property right has remained a veritable economic mainstream of developed countries. The key positive aspects of Intellectual Property (IP) have long been established. The frequently mentioned benefits include: providing guarantee regarding the quality and safety of products, enabling indirect exploitation, cost free mechanism for dissemination of technical information, facilitating technology transfer and reliance of intellectual property rights on open sourcing. Some countries of the world that have impressive records of innovation, discoveries and creative activities are enjoying protection in addition to earning fantastic money for their intellectual excogitations. While intellectual property rights issues are contributing substantially to Gross National Product (GNP) of most developed countries, poor countries of the world that does not have something to offer in that regard are losing out completely.

The recognition of multiple advantages of innovations, creativity in the context of its intellectual property right and its attendant economic potentials have led to conscious policies by governments all over the world to enhance capacity of their researcher for a piece of the action. Research capacities of people in the developed world are being boosted, while conducive environments and other incentives that are germane to sprawling intellectual and innovative prowess in the field of biotechnology and genetic research are being encouraged. Developed countries of the world are more visible and are committed to full participation in the present global economic configuration in which intellectual property right has become one of the key honey-pot. New colonies are being carved out according to Shiva, (1998) while western powers using patenting and genetic engineering to re-colonize developing countries
The global market and economic implication of this emerging scenario are many. First, it indicates that intellectual property right through innovative activities has become an important investment portfolio. Although the capital outlay is expensive, experience has shown that the return on investment is huge, attractive and worth all the effort. The intellectual property right is an investment portfolio in the present global economic system which is propelled by comparative advantage and competitiveness. It is a good investment portfolio in line with global economic trend. It is also in consonance with essential ingredient of modern economic system in which global market competition, privatization and commercialization have become the essential attributes. The emerging global economy is also about comodification or monetization of goods, services and products.

Secondly, as the global economic configuration thrives based on free flow of resources; increase volumes of activities and individual ownership of property, it makes good economic sense that individual private ownership of tissues, genes or life-forms become part of the

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business opportunities that can be harnessed Dasilva,(1998). This particular aspect makes intellectual property right one of the potential driving force of world economic landscape. The implication of this is that new avenue for wealth creation has been created for optimization.

Thirdly, the sprawling activities and developments in patenting lives and other biotechnology issues have shown that massive investments are being encouraged in the sector. The benefits accruable are fantastic given the experience of most developed countries. The whole idea of biotechnology therefore has become a key economic variable in the present global economic configuration. The global economic market offers people greater opportunity to tap more into larger market around the world. It enhances exposure into new ideas, greater specialization and thereby boosting world productivity. Based on this understanding, life-forms intellectual property right is expected to enhance exportable products or ideas in order to boost capacities for global economic competitiveness.

Finally, Patenting life and its intellectual property rights enhances advancement in science, medicine, agriculture, pharmacy and it helps to instigate overall economic well-being of both researchers and economies of countries. It has also boosts activities in industries, creates new products and services thereby helping to spur world global economic development momentum.

CHALLENGE OF PATENTING LIVES AND INTELLECTUAL PROPERTY RIGHTS FOR DEVELOPING COUNTRIES

The developing countries are underdeveloped countries of the world. They have neither reached nor attained desirable stage of economic development. These countries are different national species in emerging world economic order. Apart from the fact that developing countries are characteristically poor, they are also victims of imperialistic machinations. Other characteristics of developing countries include political instability, monolithic economic system, illiteracy, high level ignorance, unchecked population explosion, low-life expectancy and huge percentage of people groaning under heavy yoke of poverty Asolo, (2002).

The developing countries are scattered across Asia, Latin America and Africa. Due to their development problems, they are confronted with urgent needs to put in place radical structural policies that would help them redress their developments complications. Efforts in this direction include policies that include opening up economic landscape for micro and macroeconomic management. It also includes re-packaging national development strategies in a way that would make their respective country more competitive in global economic configuration.

In the emerging global world where economic infrastructures are driven by innovation, creativity, knowledge and where intellectual property rights have become veritable economic portals; and also where patenting lives plays major financial honey-pot for individual scientist and national economies, there is need for developing countries to rise up to the opportunities. The global economic configuration has provided windows of opportunities for developing countries. These opportunities are in areas of innovative excogitations, intellectual and property rights particularly those provided by patenting life-forms.

The implications of leveraging on patenting life form for participation in global economic competition by developing countries are many. First, the patenting life form is an economic variable that gives wider opportunity for specializations which pay off over a longer period of time. Incomes and royalties from patenting life occur over a long period. In this case, the

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developing countries would be able to compete more favorably through patenting life forms with assurances of return on investments over a longer period.

Secondly, patenting life offers unique opportunity for competition in global economic sense for the third world countries in an economic space where there is less saturation. Edgar et al (2002). Unlike other products in supply/demand chain, which can easily be imitated, the patenting lives are propelled by intellectualism and can be developed and protected for greater profits. Essentially, patenting lives belong to the realm of specialty product of intellectual property. It also enjoys the full support of enabling legal framework. The enabling legal framework in intellectual property rights gives adequate protection to patenting lives.

Thirdly, unlike other economic products which give room for manipulation by market forces, the patenting life form does not give room for sharp practices. The innovator assumes full ownership after invention. Innovator is protected and he gets his due without much hassles. The foreign exchange that accrued from royalties and other dues to inventors is necessary impetus to boost the economy of developing countries. Foreign exchange either in forms of earned resources or foreign direct accruable are key elements in global economic calculation. Royalties that are gotten by researchers helps boost aggregate national and global economic productivity. The developing countries as a matter of fact need adequate injection of foreign exchange that could be gotten from patenting lives and other kinds of inventions in order to fast track their economic development.

Fourthly, patenting lives is capable of bringing about real economic development to poor countries of the world if properly harnessed. Patenting lives have the propensity for impacting on economic indices of developing countries. Increased researches can also help to promotes and support other sub-sector such as manufacturing, agriculture, trading etc, while the foreign exchange earnings are capable of assisting poor countries out of their debt crisis.
It therefore implies that avenue for participation in the present global economic system has been created through investment in patenting lives innovations, intellectual property rights and creativity. These are parts of the dimensions of emerging global economic competitiveness. Patenting lives have become important area where developing countries can effectively participate through intellectual property rights for increased earning in global economic space that rewards creativity both vertically and horizontally.

PROSPECTS FOR AFRICA

Africa is an important continent of the world. Africa is the world's second largest region, approximately population of 1.1billion people. The region is made up of emerging nations that have not yet reached their development potentials. The regions face critical challenge of development. While other region particularly Europe, America, Australia and Asia have enjoyed increased growth and wealth, the sub-Sahara Africa have never been so lucky due to various factors. Even with globalization that has benefited other regions of the world by helping to reduce poverty and improve the standard of living, Africa was left behind Akani, (2004). Poverty has continued to ravage the continent. The standard of living is generally low. The Gross Domestic Products (GDP) of most countries in Africa is below average. There are low infrastructures to drive sustainable development. Per capital income of most nations in Africa are far below globally acceptable standards for ensuring quality living among citizens of most African countries.

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With the ravaging poverty, African continent is in dire needs of new initiatives to boost her economic and social development. Africa requires new initiatives to increase her foreign exchange earnings in order to invest massively in infrastructure and human capacity development. Africa needs avenues to participate in global economy. The continent requires new ways where she can enjoy comparative economic advantage in global market. While other sectors such as technology, improved agriculture, industrial goods, consumer items etc. are already saturated because of ingenuity of developed countries in global economic activities, the specialized areas of intellectual property rights and other related specialties are ways by which African can enjoy comparative advantage Peter. D & Mayne . K (2002).

Economically speaking, Africa continent is monolithic. Such condition is not the best for any meaningful growth and sustainable development in the present global economic calculation. In view of this, Africa is faced with the challenge of diversifying her economic base so as to participate actively in the present global economic system. Since the present global economic system is anchored on innovation, creativity, competition and intellectual right; patenting life form promises veritable mechanism for the attainment of this. What is required in the circumstance is for Africa continent to boost her capacity for maximizing patenting life opportunities. This can be achieved by encouraging massive investment in intellectual property right particularly life-forms Belinda, (2002). The position of this paper is that African should brace-up and take-up the challenge that is provided by patenting life forms intellectual property right windfall to shore up her global economic competitiveness. African can use the opportunity of intellectual property right in patenting life form shore to her economic well-being and utilize the windfall to solve her development challenge

CONCLUSION

In as much as global economic configuration is piloted by innovation, knowledge, and intellectual property rights, the patenting lives would remain critical driver of economic engine both in developed and developing countries. There are so many things Africa need to do in order to maximize the sprawling opportunities in the field of patenting life as a way of boosting economic development. African should enhance and develop full capacities for innovative research in the areas of patenting life-forms and genetic engineering.. Appropriate incentives should be provided to educational institutions to perform optimally in this critical research area. Researchers should also be encouraged to intensify efforts at research excellence in patenting life forms for global economic competiveness. The net effect in terms of financial windfall for individual researcher and the aggregate potential for national economic growth and global competitiveness makes it a worthwhile venture for enhancing Africa economic growth and development.

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