

LLB DISSERTATION

INVESTIGATING IF PATENTS ARE REALLY  
USEFUL: A BRIEF STUDY

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## **ABSTRACT**

The objectives of this research project are to highlight the key objectives of patent protection, to investigate if attempts at patent use have been beneficial and review the reasons behind its underutilisation, and to research on possible remedies to increase patent use.

The research was hinged more towards qualitative study, with very little or no aspects of quantitative character. On the task of identifying the objectives of IP rights, the study involved reviewing early scholarly literature on IP theory, development and jurisprudence. Studying the extent of patent use in Kenya involved accessing relevant databases and undertaking patents searches in the sector of technology. The research also consisted of carrying out interviews with a number of enterprises whose core product is a technological innovation. These interviews' intention was to probe as to whether or not these enterprises have utilised patent protection for their product, the reasons attributed to this, and the impact patents have had to their business. In-depth research was also be conducted to analyse the effects patent-related monopolies have had, and their impact on patent protection.

The paper found that patents are severely underutilised in Kenya, largely due to a lack of awareness. It further found that the market monopoly of 20 years that patents secure often leads to negative effects with grave consequences. These challenges may be ameliorated by increasing public awareness and advocating for policy reform.

## INTRODUCTION

### Legal history of patent law in Kenya

The pre-2010 Constitution of Kenya<sup>1</sup> established the protection for the privacy of an individual's property. Additionally, section 75 of the same highlights the protection from the deprivation of property. However, as much as the Previous Constitution provided for property rights, it failed in defining the term 'property' and did not specifically recognise intellectual property, let alone intellectual property rights.

The first patent registered in the Kenya was in 1912, though effectuated using the Laws of England. Up until 1989, Kenya's patent system was wholly dependent on England's – registered patents in England would automatically qualify as registrable in Kenya.<sup>2</sup> Only a person who was a grantee of a patent in the UK (or deriving his right from a grantee by assignment or any other operation by law in the UK) could apply to have his patent registered.<sup>3</sup> Post-independence, through an Act of Parliament, The Industrial Property Act<sup>4</sup> was put into effect in 1990. It established the Kenya Industrial Property Office<sup>5</sup> as the institution responsible for the management and administration of property rights.

Empowered by section 30 of the pre-2010 constitution, the Industrial Property Act was assented and enacted in 2001 in order to meet obligatory duties under the TRIPS<sup>6</sup> Agreement.<sup>7</sup> The aim of this Act is to promote inventive and innovative activities as well as the acquisition of technology through various intellectual property models<sup>8</sup>. The spectrum of the Act stretches to patents, utility models, technovations and industrial designs. It excludes seeds from patentability as they are catered for under the Seeds and Plant Varieties Act.<sup>9</sup> Further, the Kenya Industrial Property Office has since been transformed to the Kenya Industrial Property Institute (KIPI) under the Act.<sup>10</sup>

In effect, the Industrial Property Act (2001) additionally domesticates the Patent Co-operation Treaty<sup>11</sup>.

In the current Constitution<sup>12</sup>, section 260 defines the term "property" to be inclusive of a vested right in intellectual property. It has not gone a step ahead to further define "intellectual property", but the

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<sup>1</sup> S.70 (c)

<sup>2</sup> Wekesa M, Sihanya B, *'Intellectual Property Rights in Kenya'*, Konrad-Adeneur-Stiftung, Nairobi, 2009 at 6

<sup>3</sup> S.54, Patents Registration Act Cap. 508 (Repealed) (1933)

<sup>4</sup> The Industrial Property Act, 1990 (Repealed)

<sup>5</sup> S.3

<sup>6</sup> Trade Related Aspects of Intellectual Property Rights

<sup>7</sup> Article 1, *Agreement on Trade Related Aspects of Intellectual Property Rights*, 1995

<sup>8</sup> Preamble, *Industrial Property Act* (Cap. 509), Act No. 1 of 2001

<sup>9</sup> Cap. 326 of the Laws of Kenya

<sup>10</sup> S.3, *Industrial Property Act* (Cap. 509), Act No. 1 of 2001

<sup>11</sup> S. 49 – 52, *Industrial Property Act*, 2001

<sup>12</sup> Constitution of Kenya – 2010

express recognition of intellectual property and the mandate of the state to support, promote and protect intellectual property rights<sup>13</sup> is a considerable paradigm shift.

### **Theories behind the justification of Intellectual Property Rights**

Simply, put, Intellectual Property refers to creations of the mind<sup>14</sup>. It refers to rights that arise from intellectual activity in various fields such as science, literature, commercial industry, music, art, technology, among others.

#### i. Unjust enrichment theory

The theory stems from the argument that if an unauthorised user of a work receives benefit from its use, he/she consequently ‘reaps where they do not sow’ – a morally frowned upon behaviour.<sup>15</sup> This theory is fundamentally grounded on the rejection of imitation of original work. However, to stifle imitation is to stifle development and condemn us to a world of self-efficiency, instead of collaborative innovation.

The theory also does not explain why the ‘sower’ has a right to that which is ‘reaped’. One begs the question: Why does the creator have stronger claim to that which is reaped, compared to others?

#### ii. Natural rights theory

As John Locke elaborated in his work<sup>16</sup>, every man has property in his own person, and the “labour of his body” and “work of his hands” justly belong to him. Whatsoever man takes out of Nature and mixes with his own labour, he creates something that is his own, and thus his own property. By adding something more (labour) to what Nature has spontaneously provided, property is created and with it certain rights arise.

Though Locke’s work in the literal sense refers to tangible property, the fundamental ideals of his theory of property can be applied with regards to intellectual property.<sup>17</sup> It can be argued that every person has property in their intellectual labour, and thus whenever an individual combines their intellectual labour with something from the commons (e.g. ideas, a body of knowledge, raw materials etc.), he/she has property in the product. Intellectual Property Rights are therefore a reward of the author’s intellectual labour.

#### iii. Personality theory

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<sup>13</sup> S. 40 (5)

<sup>14</sup> <http://www.wipo.int/about-ip/en/> on 7<sup>th</sup> March 2015

<sup>15</sup> M. Spence, ‘*Justifying Copyright*’ Manchester: Readinghouse at 395-396

<sup>16</sup> Locke J, ‘Property’ in ‘*The Second Treatise of Government*’, London: Printed for R. Butler, etc., 1821

<sup>17</sup> Aplin T, Davis J, ‘*Intellectual Property Law: Texts, Cases and Materials*’, Oxford University Press, 2009

According to Hughes, to achieve development as a person, one needs to exhibit certain control over the resources in his external environment.<sup>18</sup>

The Personality Theory argues that property provides a unique mechanism for self-actualisation and personal expression. Thus, an idea as well as the expression of that idea belongs to a person, since an idea is an expression of the person himself.

iv. Human rights theory

This theory goes to show that IP Rights are to be treated as human rights based on their endorsement contained international conventions. Most recently, this has been demonstrated in The Charter for Fundamental Rights of the EU<sup>19</sup>. Article 17 stipulates that every natural or legal person is entitled to the peaceful enjoyment of his possessions. The Universal Declaration on Human Rights<sup>20</sup> states that everyone has right to the protection of the moral and material interests resulting from any scientific, literary, or artistic production of which he is the author.

This theory has been criticised in that IP Rights, compared to other fundamental human rights such as access to food and water, are trivial. To place them on the same platform would undermine human rights.

v. Utilitarian justification

The strongest and most widely accepted justification for IP Rights is the utilitarian approach based on providing incentives. If there were no IP Rights, there would not be any incentives to create intellectual property in the first place. Nobody would engage in original creation since competitors could easily copy the work and reproduce it.<sup>21</sup>

However, IP Rights (such as patents) today may be used as a means of monopolising industries by suppressing competition instead of encouraging it.

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Whatever theory is adopted, consensus has been reached that intellectual property is indeed property, and with it comes certain rights attached. These rights manifest themselves in various intellectual property models such as – trademarks, copyright, patents, utility models, industrial designs, etc. This paper shall focus on patents.

### **International legal framework for patent law applicable in Kenya**

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<sup>18</sup> Hughes J, 'The Philosophy of Intellectual Property', *Georgetown Law Journal* (1988), 77

<sup>19</sup> 2000/C 364/01

<sup>20</sup> Article 27

<sup>21</sup> C. Hettinger, 'Justifying Intellectual Property', Vol. 18 *Philosophy & Public Affairs* (1989) at 31

i. The Paris Convention for the Protection of Industrial Property

The Paris Convention is one of the first international treaties relating to industrial property (1883), which entered into force in 1965 in Kenya.<sup>22</sup> It did not establish any criteria on patentability or minimum duration for patent protection.

It was eventually embodied into the 'Convention Establishing the World Intellectual Property Organisation' – which was signed in 1967 and came into force in 1970. It created WIPO – a specialized agency of the United Nations.

ii. Trade Related Aspects of Intellectual Property Rights Agreement (TRIPS)

This agreement is administered by the World Trade Organisation (WTO). It came into force in 1995 and for the first time, introduced intellectual property law into the international trading system. It requires member states of the WTO to adopt certain minimum legislative mechanisms for IP protection. Kenya became a WTO member in 1995<sup>23</sup> and the TRIPS Agreement took effect in 1996 domestically.

Unlike the Paris Convention, the TRIPS Agreement is compulsory for its members and has a mechanism of sanctions for non-compliance.

iii. Patent Cooperation Treaty (PCT)

The PCT is administered by the World Intellectual Property Organisation (WIPO) and was concluded in 1970. It facilitates an international patent application system. In Kenya, it entered into force in 1994.<sup>24</sup>

iv. The Harare Protocol on Patents and Industrial Designs within the Framework of the African Regional Industrial Property Organisation (ARIPO)

The Agreement was concluded in 1976 and membership is open to member states of either the African Union (AU) or the United Nations Economic Commission for Africa (ECA).<sup>25</sup>

Kenya became a member state in 1984. There are currently only 19 states that are members of ARIPO. The ARIPO system is complimentary to the national industrial property system of its Member States. Applicants are empowered to choose between either the ARIPO route or the domestic national route for patent application to determine their extent of protection.

### Statistical Data

<sup>22</sup> <http://www.wipo.int/wipolex/en/profile.jsp?code=KE> on 11<sup>th</sup> Nov 2015

<sup>23</sup> [https://www.wto.org/english/thewto\\_e/whatis\\_e/tif\\_e/org6\\_e.htm](https://www.wto.org/english/thewto_e/whatis_e/tif_e/org6_e.htm) on 11<sup>th</sup> Nov 2015

<sup>24</sup> <http://www.wipo.int/wipolex/en/profile.jsp?code=KE> on 11<sup>th</sup> Nov 2015

<sup>25</sup> Article IV, *Lusaka Agreement*, 1976

Worldwide, there were approximately 2.5 million patent applications in 2013. The number of patent applications has been gradually increasing from approx.1.5 million in 2004. Out of this 2.5 million, Africa accounted for only 14,773. America accounted for the largest number of application, at 6.1 million. Europe followed with approx. 3.5 million applications. Globally, the larger share of patent applications is held by the upper middle-income and high-income classes.<sup>26</sup>

The number of patent applications in Kenya has seen a steady increase from 23 in 2002 to 127 in 2013. The number of patent applications is directly proportional to the Country's GDP; GDP growth has shown a simultaneous increase in patent applications. Applications were largely made by the Pharmaceutical Industry. In 2013, only 1 patent was granted in Kenya. From 2009 up till 2013, there has been a decrease in patent grants.<sup>27</sup>

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Considering the legislative framework put in place, one might ask themselves why patent protection is so scarce in Kenya, especially since Kenya's economy was projected to be the third fastest growing economy in the world in 2015.<sup>28</sup>

This paper hopes to examine whether patents have achieved their objectives and created an environment to promote growth, innovation and economic sustainability.

It will first comprehensively assess and describe the objectives of intellectual property rights, and the value and importance of these objectives to a society. Highlighting and profiling various technological innovations in Kenya (their description, how they work and the potential impact they may have), the paper will critically evaluate patent use in Kenya, and whether it has successfully achieved the objectives of IP rights and if not, the positive and/or negative effects of a lack thereof.

The following are the research questions of this paper:

- What are the objectives Patents hope to achieve?
- What are some of the most notable and influential technological innovations in Nairobi at the moment?
- What is the description of their innovation(s)? Has any IP model been used to protect it/them? If so, which one? If not, what are the reasons behind this?
- If patent protection was attempted, what assessable benefits were gained/intended to be gained?

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<sup>26</sup> WIPO IP Statistics Data Center – last updated in March 2015

<sup>27</sup> WIPO IP Statistics Database – last updated in December 2014

<sup>28</sup> <http://www.bloomberg.com/news/articles/2015-02-25/the-20-fastest-growing-economies-this-year> on Feb 25th 2015



- Were there any shortcomings / challenges regarding the patent application process? If so, what were they and are there any available remedies to address them?
- In light of the above, have patents thus achieved their objectives?

## DEFINITION OF TERMS

‘Intellectual Property’ shall be used to mean creations of the mind<sup>29</sup> and further abbreviated as ‘IP’.

‘Patents’ shall have the meaning of a grant conferring property rights over an invention.<sup>30</sup>

‘Property’ shall be used to mean rights attached to the product arising from the input of labour upon naturally occurring resources.<sup>31</sup>

## PRELIMINARY LITERATURE SURVEY

This section has been divided into themes as follows:

### I. Awareness of Intellectual Property in Kenya

Moraa investigates whether IP stifles or spurs creativity and innovation by interviewing 15 Kenyan small enterprises in the technology sector<sup>32</sup>.

It would appear from this paper that technological innovations, especially at their initial stages of development and refinement, have had no contact with IP – especially patents. The article does not, however, dig into the question of whether the objectives of IP Rights have been achieved and the net effect of this.

### II. Review of regulatory framework of IP in Kenya

Mbote<sup>33</sup> highlights that whereas most patent applications emanate from North America and Europe, Africa accounts for less than 2% of the patent applications worldwide. It thus seeks to inquire whether the investment African countries (with a focus on Kenya) have made to create IP Rights is justified, and whether IP Rights have actually contributed to development in these regions.

<sup>29</sup> [http://www.wipo.int/edocs/pubdocs/en/intproperty/450/wipo\\_pub\\_450.pdf](http://www.wipo.int/edocs/pubdocs/en/intproperty/450/wipo_pub_450.pdf) on 7th March 2015

<sup>30</sup> S. 21, *Industrial Property Act* (Cap. 509), Act No. 1 of 2001

<sup>31</sup> Locke J, *The Second Treatise of Government*

<sup>32</sup> Moraa H, ‘Intellectual Property in Technological Innovations – perceptions from Tech start-ups in Kenyan ICT Hubs’, *iHub Research*, 2012

<sup>33</sup> Mbote P, ‘Intellectual Property in Africa – an assessment of the Status of the Laws, Research and Policy Analysis on Intellectual Property Rights in Kenya’, *International Environmental Law Research Centre*, 2005

The objective of the study is to thus provide an in-depth analysis of IP issues and contribute to the conversation on policy-design concerning IP Rights management in Kenya, and how it can equip the country and other developing countries with economic leverage on a global platform.

This article may prove useful in shedding light on whether IP has contributed to national development in Kenya.

The paper has not specifically touched on the applicability of IP Law with keen focus on technological innovations – and the role it plays in the innovation and business management process.

### **III. Relationship between IP and innovation**

Njogah and Gatumu's<sup>34</sup> main theme is providing evidence pointing towards a link between the protection of IP Rights, economic growth and technology diffusion in Kenya.

It does not dwell on the objectives of IP Rights and whether or not technological innovations are in a position to meet these objectives.

### **PROPOSED STRUCTURE**

The paper shall be divided into chapters as per the following format:

#### **I. Introduction**

This will include an outline of the paper's main themes, an overview of its objectives of study and a description of how this study shall be carried out.

#### **II. Theoretical framework and Literature review**

A thematic description of relevant literature used as sources for this paper and a logical depiction of the main ideas to be discussed.

#### **III. Objectives of Patent Rights**

This section will dig into the history and development of patents, its justifications, and the objectives tied to the creation and implementation of patent rights.

#### **IV. Patent Acquisition in practice**

This will contain the study of certain technological innovations in Kenya, to assess whether Patent Law has been in efficient use and preserved the objectives it originally sought after.

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<sup>34</sup> Njogah M, Gatumu N, 'The role of Intellectual Property Rights in Technology transfer and economic growth in Kenya', *Jomo Kenyatta University of Agriculture and Technology Journal of Agriculture, Science and Technology*, 2013

V. Twenty years – a hindrance to innovation?

This chapter will shed light on the effects patent-related monopolies have, and whether or not they are beneficial.

VI. Suggestions on how the use and value of patents can be enhanced in Kenya

Based on the findings of Chapter IV, this section shall highlight gaps existing in patent protection and implementation in Kenya. It will additionally theorise solutions to fill in these gaps.

VII. Conclusion

The conclusion shall be a summary of the paper's findings and recommendations.

**LIMITATIONS OF STUDY**

The study shall be limited to Nairobi. Due to logistical and time constraints, it will not be possible to carry out any field research outside Nairobi.

## **CHAPTER 2: THEORETICAL FRAMEWORK AND LITERATURE REVIEW**

In Kenya, patent use is comparatively low, yet there are vast technological innovations taking place. Further, Kenya is party to major international patent conventions, and one would anticipate that this would increase patent use – with harmonized patent administration targeting a larger scope of protection over a wider geographical area. However, becoming a member state to these conventions has not seen a notable hike in patent protection. It would appear that these conventions have failed to achieve sufficient patent protection in Kenya.

Lack of awareness on the role of patents, high cost of obtaining patent protection, lack of specialised legal skills in patent drafting and poor administration of patent offices may be some of the reasons that contribute to this.

### **Objectives of Patents**

In the current global economy, wealth is defined by knowledge – a drift away from the traditional material wealth, as is discussed in Adebambo Adewopo's article – *Developments in Intellectual Property in Africa*. This has seen a greater importance being placed on Intellectual Property, and the rights that come with it. The author discusses the regional systems for IP administration in Africa – highlighting the role of African Intellectual Property Organisation (AIPO), African Regional Intellectual Property Organisation (ARIPO), Organisation Africaine de la Propriete (OAPI) and accompanying regional treaties such as the Harare and Banjul Protocol.

The paper delves into the cooperation between regional institutions ARIPO and OAPI. This cooperation is key to ensure economic integration in the continent and exchange of technical information to aid economic development. Considering that Africa has 54 countries, and only 19 are members of ARIPO and 17 to OAPI, investigating the collaboration between the two regional institutions might shed some light on the steps being taken to achieve a wider scope of IP awareness, participation and protection; especially since Kenya is a member of ARIPO. Adewopo points out that even the strongest economies in the country (Nigeria, South Africa and Egypt) are not members to either organisation.

In Joseph Wekunda's article '*IP in different African countries*', the evolution of IP in Eastern and Southern African countries (including Kenya) was due to global pressure to enable African products to have a global market.

### **Patent use in Kenya**

In '*Intellectual Property Rights in Sub-Saharan Africa*' by Sopefolu O. Adegoke, the author profiles the framework of IP rights in select sub-Saharan countries – Kenya, Nigeria and South Africa.

Adegoke observes that many innovators in Sub-Saharan Africa are unaware of the applicable IP rights to protect their inventions. This means several inventions and creative works are left unprotected and vulnerable to counterfeiting and piracy. The author, however, does not provide evidence to supplement this claim.

The report on *Patents and Clean Energy Technologies in Africa* by UNEP has found that there is very little evidence of trans-African co-invention and cross-border patenting. Every country in Africa seems to be an island, with links outside the continent but not within.

### **The role of regional patent systems**

The paper '*The Advantages and Disadvantages of the harmonisation of the patent system*' by Nalini Kanta Mohanty studies various aspects of harmonised patent systems – their history and mode of application. It then goes on to investigate the necessity of the harmonisation from different user perspectives (IP experts and industries).

The author describes one advantage of the harmonisation of patent systems as a simplification of the process of obtaining a patent. However, as a member of ARIPO, evidence goes to show that the general perception in Kenya is that the process of obtaining a patent is highly complicated.<sup>35</sup> It would seem that harmonisation has not done much to improve the patent application process.

Another advantage cited is that it reduces the workload of the patent office. In Kenya, however, the number of patent applications have been increasing since the PCT came into force in 1994, contradicting the notion that the workload of patent offices has been reduced.

Mohanty writes that harmonisation reduces the overall cost of patent acquisition. Data shows that the larger share of patent applications emerged from upper middle-income and upper-income classes. Also, studies have shown that the cost of acquiring a patent is still too high for relevant parties in Kenya.<sup>36</sup>

A disadvantage of harmonisation brought out by the author is that often, established policy may not be applicable to developing countries. As Kenya is a developing country, and member to a number of regional and international patent systems, perhaps the fact that most of the applicable patent policy has been created to meet objectives of developed countries could be the reason as to why Patent protection is greatly underutilised.

Mohanty's paper inspires further research as to whether regional and international patent law is practically relevant to the needs of a developing society and economy.

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<sup>35</sup> Moraa H., 'Intellectual Property in technological innovations – Perceptions from Tech Startups in Kenyan ICT Hubs', *iHub Research*, 2012

<sup>36</sup> *Ibid.*

Adewopo's article<sup>37</sup> concludes that regional inter-institutional cooperation has failed, stating that their activities have not been integrated and merged. The *Report on Patents and Clean Energy Technologies in Africa* by UNEP concludes the same.

He also mentions that the regional bodies are motivated by political ambitions more than anything, failing to meet their mandated objectives. The author, however, does not provide evidence to illustrate this further.

Adewopo's paper was useful in identifying that there is still much to be done to harmonise patent systems regionally in Africa, and with the dynamic nature of multilateral trade, this might contribute to the underutilisation of patents in Kenya.

### **Challenges facing patent use in Kenya**

Wekunda, in his article, points out IP offices in Kenya are not as efficient as they should be in the administration of IP protection. This has not been studied further in the paper, and could potentially be an area of research.

The Paper '*IP Protection in Africa – Status of Laws, Research and Policy in Ghana, Kenya, Nigeria, South Africa and Uganda*' by George M. Sikoyo, Elvin Nyukuri, Judi Wakhungu looks at problems facing the administration and enforcement of IP in these countries. It studies the inter-phase between IPR and other developmental aspects such as industrial growth, economic empowerment and enhanced technological capabilities. It also highlights some challenges facing IP administration in Kenya: inadequacy of awareness, absence of coordination between the national and regional level and the absence of administrative framework to coordinate activities at the regional level.

It was interesting that the paper concludes that Kenya demonstrates very little participation in the international process of negotiations for IP policies. It attributed this due to the lack of specialised skills in IP and scarcity of resources. Another challenge pointed out in the paper is that there is a lack of research documenting the role of IP in economic development and planning. It would be imperative for further study to be done in this area to influence effective policy making.

### **Preliminary proposed recommendations to challenges facing patent use in Kenya**

Adegoke in '*IP Rights in Sub-saharan Africa*' recommends for sub-Saharan countries to provide for alternative forms of protection for local innovation. However, no specific proposal of an alternative means of protection was suggested.

The paper '*IP Protection in Africa – Status of Laws, Research and Policy in Ghana, Kenya, Nigeria, South Africa and Uganda*' recommends the training of personnel in IP offices to enable them to absorb

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<sup>37</sup> Adewopo, 'Developments in Intellectual Property in Africa'

the complexity of patent applications. It also recommends specialised IP legal practices in these countries. It may be important to investigate if Kenya has any specialised IP Legal institutions already in place.

## History

The patent system can be dated back to the 15<sup>th</sup> century in Greek civilization, where a Florentine architect - Filippo Brunellesch - was awarded a 3-year patent for the invention of a crane system of shipping and transporting marble. In 1449, Englishman John of Utynam acquired a 20-year monopoly of producing stained glass.

In 1474, the Republic of Venice enacted a law that stated that any **new** and **inventive** devices should be communicated to the State Authority to ensure that others are prevented from using them, thus granting the inventor a monopoly. We see the first instance where novelty emerges as a prerequisite for the grant of a patent.

In 1623, England subsequently followed with enacting its first official patent law – ‘The Statute of Monopolies’ which also insisted that patents could only be granted to projects of new invention.

With the industrial revolution taking place (between the mid-eighteenth and mid-nineteenth century), patent systems that had developed individually in different countries across the world changed. New manufacturing processes that drove the industrial revolution meant that the value of patent protection exponentially increased. The globalisation of trade and the growth of international commerce heavily influenced the formation of international agreements such as the Paris Convention Treaty.

The following graph demonstrates that the value placed in patent acquisition has steadily grown globally since then.<sup>38</sup>



## Objectives of Patents

<sup>38</sup> <http://kk.org/thetechnium/the-expansion-o/> on 13<sup>th</sup> December 2015



i. Protection of intellectual property

As discussed in Chapter 1, every person has property in their intellectual labour, and it is a natural right to enjoy peaceful use and possession of one's property. Every person has the right to protect the moral or material interests in their intellectual property. Patents protect the inventor's property rights to an invention.

An invention is born out of the creation of the mind. As creations of the mind are classified as intangible property, certain rights come into play. These rights include (but are not limited to) the right to possession, the right to own, the right to peaceful use and the right to transfer. Patents thus aim at safeguarding these rights.

Property rights are crucial in satisfying certain fundamental human needs. They reinforce self-actualisation and self-expression as intellectual property is an expression of the author's mind - and therefore his/her personhood/personality.

ii. Incentive for innovation

Economic incentives are certain actions that motivate market players to act in a particular way. For example, imposing a fine for public littering to discourage citizens from littering in public spaces. Another example is the German government obliging grid-operators to pay producers of solar electricity a fixed remuneration to increase the construction of solar panels on homes.

Innovation fuels economic growth and development. Research activities geared towards novel functional ideas are an expensive undertaking, and without any guarantee of return on the investment made, would not be a commercially viable pursuit.

The role of patents, therefore, is to incentivise innovative endeavours since they ensure that the inventor has monopoly over the novel product/idea for a period of 20 years. The inventor is assured that no imitation of his/her idea without prior consent will take place by another party. The inventor also has the option of commercially exploiting the idea, consequently recovering costs put in into the research.

Invention is not solely driven by genius. It is driven by markets and the anticipation of obtaining profits from the acquisition of patent protection; either through monopoly enjoyed, licensing or selling the proprietorship rights to the technology.

iii. Creating certainty

Patent systems create a reliable mechanism that identifies the patent holders of specific technology; eliminating any sense of doubt and potential conflict.

iv. Promote technology dissemination / transfer

Stronger patent protection increases the propensity to have a technology licensed by the patent owner(s). A good patent system gives incentives for firms to transfer technological knowledge via license agreements. Firms from industrialized regions especially license their technology to firms from developing areas. With licenses, developing countries are able to increase their exports, thus enhancing their economic performance.<sup>39</sup>

Further, patenting an innovation is concurrent with the disclosure of scientific findings from research as well as the publication of such, available for public access. This facilitates a formal transfer of new discoveries, which may inspire further innovation. Firms or individuals rely on information disclosed by patents to keep up with technology advances.

v. Promotes competition

Patent laws should ideally prevent the occurrence of imitation and copying of protected technology. This works alongside fundamental competition law principles – whose objective is to promote fair market practices.

## **CHAPTER FOUR: PATENT ACQUISITION IN PRACTICE**

### **1. VILLGRO KENYA**

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<sup>39</sup> Hall, Bronwyn H. and Christian Helmers, 'The Role of Patent Protection in (Clean/Green) Technology Transfer', *Santa Clara Computer and High Technology Law Journal* at 26

## **Description**

*Villgro Kenya* is a social enterprise incubator that invests in early stage, invention-based start-ups with a global health impact.

Founded in 2001, *Villgro Innovations Foundation* is India's largest and oldest social enterprise incubator. Over the years, it has supported 109 enterprises, who have gone on to generate around 4,000 jobs and secure USD 17.8 million in follow-on funding.

Motivated by their track record, it was inspired to replicate its incubation model in Kenya. *Villgro's* programs immerse, inspire, mentor and fund early-stage innovative for-profit enterprises that seek to address some of the world's most pressing problems using market-based approaches. Its integrated incubation support offers end-to-end support to entrepreneurs in a continuum from idea stage, pre-product, pre-revenue all the way to scale.

*Villgro Kenya* hopes to inspire a new wave of innovative thinking around solving some of the specific challenges within the Kenyan health ecosystem. Incoming entrepreneurs are coached and immersed in business model best practices while sharpening their innovative ideas. *Villgro Kenya* is building partnerships between health professionals with entrepreneurial aspirations, the private sector, NGOs, academic institutions who wish to provide access to market for innovations, and government who appreciate that increased health of citizens is the foundation for greater economic opportunities.

## **Findings**

Given the fact that *Villgro's* core business is within the realm of novel inventions, it was surprising to discover that patents play an insignificant role with regards to the operation of this business incubator.

Speaking with the co-founder and Chief Financial Officer<sup>40</sup> - whose mandate is to carry out business development analyses to assess which ideas have adequate business potential for incubation – it was established that since the beginning of *Villgro's* operation, no successful application for a patent has been achieved by any of the businesses incubated. The CFO has over ten years' worth of experience managing successful technology, manufacturing and logistics businesses in Kenya. His strengths as an entrepreneur lie in start-ups, networking and forging long-term, mutually beneficial partnerships, and understanding local and international markets.

He reiterated that the journey of acquiring patent protection is too long for most start-ups to pursue. At early-stage, small and medium enterprises are keen to focus all of their time, energy and resources in upscaling their business, and consequently, acquiring patent protection does not feature at all in their list of priorities.

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<sup>40</sup> Mr. Mutugi M'Narobi

Further, the process of obtaining a patent was observed as too slow and too tedious. For this reason, this discouraged most start-up enterprises from considering patents as an option for IP protection. *Villgro Kenya* undertakes to advise its incubating start-ups to only obtain IP models that are relatively easier and more straight-forward to obtain. This would largely mean trademarks for their business logos.

Not only did *Villgro Kenya* perceive patent acquisition to be too long and too slow of a process, it also observed that patents were too expensive for early stage start-ups to justify as economically viable. This was a major contributory factor as to why little attention was paid to patent protection.

## 2. ENEZA

### **Description**

*Eneza* offers a virtual tutor and teacher's assistant – it is a way for both students and teachers to access valuable courses and assessments while interacting with live instructors, all through a low-cost mobile phone. Students can access locally-aligned tutorials, tips and assessments, as well as a leader board, Wikipedia text and live teacher chat through USSD/SMS, an online web app, an offline desktop app and an Android app. Individual parents, students or teachers can buy a subscription to certain courses for a low weekly or monthly fee.

To date, it has reached over 460,000 unique users across over 8,000 schools in Kenya.

A study done to evaluate the impact of *Eneza* showed an increase in student performance.<sup>41</sup>The treatment group included 90 class 7 students from 2 different schools in Meru, Kenya. The control group included 63 class 7 students from 2 schools a few kilometres from the treatment schools. Teachers at these schools did not receive any training on the SMS product.

The study concluded that student performance increased by 22.7% on average. This goes to show the potential in this idea (of easily accessible educational resources powered by telecommunication platforms and easily accessed by low-cost mobile phones) for industrial application, given the widespread problem of grossly under-resourced schools in Kenya.

### **Findings**

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<sup>41</sup> <https://docs.google.com/viewerng/viewer?url=http://enezaeducation.com/wp-content/uploads/2014/11/2014-Impact-Study-Graphic.pdf> on 4th January 2016

I carried out an email correspondence with the co-founder and Chief Technical Officer.<sup>42</sup> During his time with *Eneza*, he has created a mobile platform software, from scratch, with the ability to create SMS-gated content, send and receive SMS quizzes, and see visual reports on student data. He has re-designed the product through many iterations to add new features based on market research and feedback. He is also responsible for establishing and executing product vision and recruiting and managing the development team.

*Eneza* currently has no patent protection for its software, neither has it attempted to obtain a patent. *Eneza* similarly found that obtaining a patent was too expensive to be a financially viable decision to make at such a pre-mature stage of the enterprise.

The business development team at *Eneza* was also initially unsure of whether it was possible to patent software in Kenya. This points to a lack of sufficient awareness regarding patenting especially in the ICT sector. Asked whether it had conducted a search to investigate if their idea was truly novel, and that a similar idea had not been patented already, the response was that the start-up was unaware that a search of such nature could even be conducted. It consequently was not aware of how to conduct a patent search at KIPi.

It was interesting to note that *Eneza* observed that obtaining a patent for their software did little to increase the overall perceived value of their start-up within the context of attracting potential investors. This was attributed to the perception that patent-acquisition is still at an insignificant stage in Kenya, limited only to big corporate multi-national pharmaceutical companies.

The lack of knowledge on patent searches also means that it is unlikely start-ups such as *Eneza* are able to engage with the material disclosed in patent applications or patent documents. This would include findings from research which would facilitate a formal transfer of new discoveries which may inspire further innovation.

### 3. MAWINGU

#### **Description**

*Mawingu* is a start-up helping with the challenge of making affordable access a reality for over half the world's people. It uses high-performance low-cost technology and solar power to build fast internet networks in rural regions. It employs unique technology to enable a world-class scalable network, with open and secure internet access in a highly challenging geographical environment. *Mawingu Networks Ltd* combines solar power technology with TV whitespace, microwaves and solar powered network to deliver internet to people and businesses. Currently, *Mawingu's* users are

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<sup>42</sup> Mr. Kago Kagichiri

accessing the internet at speeds of 15 Mbps and have their solar-powered devices charged at three dollars per month.

The US government's Development Finance Institution said it has the potential to provide a loan of four million dollars that will commercially expand the connectivity for off grid Internet access.

To quote Elizabeth Littlefield, the The Overseas Private Investment Corporation President at the Global Entrepreneurship Summit held in July 2015 in Nairobi:

*"By leveraging technology and ingenuity, Mawingu's massive reach to connect rural African communities to the internet is just beginning and I look toward to the growth and scalability of this model that OPIC financing can unlock."*

### **Findings**

Similar to *Villgro* and *Eneza*, *Mawingu* had not acquired any patent protection for any of their solar technology. They also had not made any attempt to obtain a patent.

They cited similar reasons as to this: patenting was too long and too expensive for a small enterprise as theirs. The start-up was also unaware of the procedure involved for acquiring a patent.

## CHAPTER FIVE: TWENTY YEARS – A HINDRANCE TO INNOVATION?

Under Kenyan Law, the validity of a patent expires after twenty years.<sup>43</sup> Further, an annual maintenance fee is expected to be made in order to maintain the patent's validity, failure of which will result in the lapse of the patent or the patent application shall be considered to have been withdrawn.<sup>44</sup>

This guaranteed monopoly is put in place so as to give the inventor sufficient time to further develop the patented product without other parties unfairly using his/her technology. However, is 20 years too long? Do two decades of having technology lying in the same hands improve or stifle the innovative process?

### **The detrimental effects of the monopoly incentive**

In the American case of *Association for Molecular Pathology v. Myriad Genetics*<sup>45</sup>, the defendants were sued on the basis that patenting genes associated with breast cancer is unconstitutional. In the 1990s, Myriad Genetics isolated and sequenced<sup>46</sup> two genes largely associated with increasing the risk of breast cancer in women. Myriad Genetics went on to acquire patent protection for them both. Later, the company created and launched a product (referred to as the 'Myriad Test') that was able to detect any variations in these genes, consequently improving the process of diagnosis.

The Myriad Tests were made available to clinicians and patients at an average cost of \$3,000 per test. By 2008, since it declined from licensing its patent(s) to any other third parties, the Company had made a profit to the tune of \$222 Million. In places where the patents to the genes were ignored (such as Ontario), the test was conducted at a third of the cost originally offered by Myriad Genetics. By 2012, Myriad Genetics had a revenue of about \$500 Million and was listed publicly on the stock exchange.

The Plaintiffs to the case argued that the existence of the patents and their rigorous enforcement by Myriad Genetics hindered scientific advancement. To quote Mary-Claire King, a professor of medicine and genome sciences at the University of Washington:

*“A fuller testing process would include more than one technology, and competition would enable that to develop.”*

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<sup>43</sup> S.60, *the Industrial Property Act* (Cap 509) Act No. 1 of 2001

<sup>44</sup> S.61 (3), *the Industrial Property Act* (Cap 509) Act No. 1, 2001

<sup>45</sup> *Association for Molecular Pathology et al. v. Myriad Genetics Inc. et al.* (2012) USSC No. 12-398

<sup>46</sup> DNA sequencing means determining the structure and make-up of a particular DNA molecule. See [http://www.genomenewsnetwork.org/resources/whats\\_a\\_genome/Chp2\\_1.shtml](http://www.genomenewsnetwork.org/resources/whats_a_genome/Chp2_1.shtml) accessed on 21st January 2016

Because Myriad Genetics was determined to eliminate any competition, developing a more reliable testing process proved to be difficult. Other labs were in a position to offer more comprehensive testing with better quality and efficiency but could not because of patent restrictions.

Additionally, the refusal to grant any licenses meant that the Myriad Test had not been scientifically verified. Myriad Genetics successfully prevented any independent analysis on the isolated genes, thus undermining its value within the scientific community. Patients or doctors could not get a second opinion on the results of the Myriad Test; since Myriad Genetics had absolute monopoly over providing the test. Consequently, no confirmatory tests could be performed by another laboratory to enhance the objective merit of the diagnosis.

It is for these reasons that the plaintiff maintained patent protection was responsible for unjustly hindering access to quality healthcare.

The case culminated at the Supreme Court, where Justice Clarence Thomas delivered the opinion of the court. The majority opinion held that merely isolating a gene did not make it patentable. Therefore, the patents Myriad Genetics held were invalid as the genes were naturally occurring and as a result, were not patentable.

Aside from the patentability of genes, this case draws a lot of attention to the ethical dilemma brought about by the monopoly patents secure. It is clear that in this case, instead of igniting innovation, patent protection nipped it in the bud. It monopolized a product, denied any third party access to its technology and as a result, eliminated any chance of collaborative innovation or peer-reviewed criticism. It considerably down-sized the product's room for improvement; and in the process denied women from receiving adequate medical attention. Since Myriad Genetics had the market monopoly, it was free to set any price as it had no competitors to rival with.

The Myriad Genetics case is not an exceptional one. There are a considerable number of cases where patent-related monopolies bring more harm than good. Only recently, Turing Pharmaceuticals<sup>47</sup> acquired the patent rights to a drug commonly used in the treatment of cancer and HIV/AIDS. Upon acquisition, the company hiked the price of the drug from \$13.50 a tablet to \$750 a tablet.<sup>48</sup> Clearly motivated by profit, Turing's price hike is likely to impact thousands – considering the large volumes of people affected by cancer and HIV who can't afford such exorbitant costs.

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<sup>47</sup> See <http://www.bloomberg.com/profiles/companies/1084278D:US-turing-pharmaceuticals-llc> accessed on 21<sup>st</sup> January 2016

<sup>48</sup> <http://www.nytimes.com/2015/09/21/business/a-huge-overnight-increase-in-a-drugs-price-raises-protests.html> accessed on 21st January 2016



In August 2015, Valeant Pharmaceuticals<sup>49</sup> acquired patent rights to two drugs used to treat heart disease. The Company promptly increased the prices of these drugs by 525% and 212% respectively. Valeant had acquired the rights from a company called Marathon, which had also bought the rights from another third company before quintupling the prices of the drugs. Enjoying a market monopoly is a benefit that drives private firms to engage in a vicious cycle of patent and license trade-offs, at the expense of the consumer.

### **The Tragedy of the Anti-commons**

By definition, in a commons, multiple owners each have the right to utilize a specific resource, and no single individual has the right to exclude another. However, this kind of arrangement often leads to the over-use and consequent depreciation of the resource. This has been commonly referred to as the *tragedy of the commons*. On the other hand, in an anti-commons, multiple owners each have the right to exclude another from utilising a given resource. In effect, no single individual is able to effectively make use of the resource. This is the *tragedy of the anti-commons*.<sup>50</sup>

In an anti-commons regime, each owner has a vested right in the property in question; and this right functions as a right to exclude. Further, there exists no particular hierarchy of rights amongst the multiple owners. This means that for anti-commons property, each owner has the right to exclude other owners from its use. Therefore, unlike a private property regime, the multiple owners are forced to reach a joint agreement where the property in question can be used without infringing on anyone's individual rights; otherwise the property remains unavailable for productive use.

The first disadvantage associated with the tragedy of the anti-commons is that the transaction costs involved in putting the property to good use are high. This is because owners are forced to identify co-owners and their respective vested interests in the property. They must further negotiate with them in order to reach an amiable agreement as to how the property shall be used without unapproved infringement.

Second, as has been briefly mentioned, since each owner can exclude all other joint-owners from use, the property suffers from under-utilisation. Each owner benefits from the insistence on exclusion because it increases the value of this right. This is based on the assumption that there is a considerable demand for the use of the property. This demand places a price on this right – its value depending on the severity of the demand.

### **The Tragedy of the Anti-commons and patent protection**

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<sup>49</sup> A pharmaceutical company listed on the New York Stock Exchange with a stock value of \$88. See <http://quotes.wsj.com/VRX> accessed on 21st January 2016

<sup>50</sup> Heller, 'The Tragedy of the Anti-commons: Property in the Transition from Marx to Markets', Vol. 111 *Harvard Law Review* (1998) at 621-688

The tragedy of the anti-commons occurs when a large number of patents to different elements making up a commercial product are held by different entities.<sup>51</sup> Conflicting interests of the various IP owners as well as high transaction costs retard the provision of this product, thus hindering further innovation.

In jurisdictions where the term of a patent is 20 years, like Kenya, this makes for an outstanding lapse of time where a certain resource could be put to better use.

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<sup>51</sup> Mossof, 'The Rise and Fall of the First American Patent Thicket: The Sewing Machine War of the 1850s', Vol. 53 *Arizona Law Review* (2011) at 165-211

## CHAPTER 6: SUGGESTIONS ON HOW THE USE AND VALUE OF PATENTS CAN BE ENHANCED IN KENYA

Have patents succeeded in protecting intellectual property (within the context of the start-ups interviewed above)? It would appear they have not. The following are some recommendations on the way forward to improve the value and use of patents.

### 1. Enhancing legal awareness

The Kenya Law Society and the Council for Legal Education should continue to show keen interest in investing in continuing legal education in IP, with a specific focus on patents.

As IP is an emerging legal field and relatively new, the capacity of the judiciary to deal with IP issues may be limited by the lack of judicial officers well acquainted with IP issues. There is need, therefore, to train judges to such a level that they are adequately versed in crucial principles of IP.

IP lawyers or officers should also take more time to understand the backgrounds of tech start-ups. A problem highlighted was that the IP experts consulted fail to understand the context within which tech start-ups operate, giving generic solutions that do not address specific problems the start-ups actually have.

### 2. Enhancing public awareness of IP

*“A society that strives to realize people's dreams through the understanding and respect for IP Culture will naturally head in the direction of stability, and enables not only sustainable economic development to be realized but also invention and innovation to contribute to solving the problems which threaten the whole of society in current and future generations, resulting in the prosperity of humankind.*

*It is therefore necessary that IP Culture be nurtured by society as a whole.”*

*-Anonymous*

Creating public awareness is vital to cultivate an IP culture. Mechanisms should be set up for publicizing information about patents, led by the government and supported by the media, in which the public widely participates.

Of all the start-ups interviewed, none had attended any seminar or workshop on Intellectual Property. It was observed that strategic effort should be put into creating more awareness on the following issues:

- The different types of Intellectual Property protection models, their nature and their legal implications. Most of the start-ups had difficulty differentiating between certain types of IP models, such as patents and trademarks. Gaining a firm grasp on this would empower them to determine what means of protection would be most suited for their enterprise.
- Institutions or firms that can provide consultancy or advice on patent issues. The start-ups were unaware about where they could go to seek legal counsel on how they could protect their ideas to better leverage their business.
- The value of patent protection to a tech enterprise. Start-ups should be educated on the importance of pursuing patent protection, and the benefits that come with it. The effectiveness of intellectual property protection depends not only on the extent to which intellectual property law can provide protection but also on what the public perceives as the benefits acquired from protection.
- A simplified breakdown of costs involved in obtaining different types of patent protection. This assists in assessing the economic viability of pursuing this avenue.

This can be done in a number of ways:

- ✓ By organising exhibitions open to the public that are geared towards raising public awareness on matters IP. For example, *IP Australia*<sup>52</sup> sponsored the ‘*Wallace and Gromit: World of Invention*’ exhibition which showcased a myriad of inventions. This increased IP awareness, with a special focus on patents, among the general public and attracted more than 200,000 visitors.

In Malaysia, National Intellectual Property Day is celebrated every year in the month of April. During National Intellectual Property Day, many activities are held to educate and inform the public on the importance of intellectual property as a means of economic as well as social development. Amongst the activities are exhibitions, invention competitions as well as the National Intellectual Property Award. The National Intellectual Property Award is a form of recognition and appreciation given by the Government to successful inventors and innovators.

- ✓ By creating content that simplifies principles of different types of IP and making it available to the public. For example, *IP Australia* supports a project that helps to raise business owners’ understanding of IP by demonstrating its benefits through the presentation of relevant business case studies via DVD and YouTube channels. Another example is in the United Kingdom, where access to online training in intellectual property issues for business advisors

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<sup>52</sup> The governmental institution that administers national legislation on different types of IP in Australia

is also provided at two levels. For the basic level, it is for free, but for the advanced level it is charged at a commercial rate.<sup>53</sup>

- ✓ Aggressive campaigns should also be conducted to raise public awareness of IP. In the United Kingdom, for example, the Government has developed and delivered a campaign to cultivate interest, understanding and respect for intellectual property amongst the public especially the young generation. Campaigns are conducted through media and campaign-related web pages which reached at least four million people.<sup>54</sup>
- ✓ By holding seminars and explanatory meetings concerning intellectual property systems to promote awareness and use of patent rights. These seminars should include the latest information including legal amendments to patent law. The seminars should also be tailored according to the target audience to make the content delivered more relevant in application. For example, seminars targeting specific groups such as university researchers, managers to small or medium enterprises, venture companies, venture capitalists, technical consultants or students.

Seminars for small and medium enterprises and venture capitalists should provide examples of use of intellectual property rights for products. It should address strategic ways of using patent information in order to inform participants about strategic means of obtaining intellectual property rights that play an important role in creating venture businesses.

They should provide insight on the strategic use of IP rights, including how to evaluate intellectual property rights, how to deal with patent disputes and how to carry out licensing and technology transfer.

Further, there needs to be coordination of these seminars to encourage communication between participants.

- ✓ Providing the necessary support to students of professional and higher education. The government should commit itself to ensuring students acquire basic knowledge and skills concerning industrial property rights, especially in industrial high schools. It can do this by providing standard reading material that comprehensively explains patents, patent licensing and technology transfer.

Teachers should also receive the support they require in acquiring basic knowledge of industrial property systems and skills for properly exercising rights to teach this new subject without trouble. Further, more universities and technical colleges should be equally provided with well-trained lecturers in IP and relevant teaching materials.

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<sup>53</sup> Sahlan, Rahman, Amin, 'Intellectual Property Awareness amongst the Public: Comparative study between Malaysia and the United Kingdom', Issue 10 *International Journal of Technical Research and Applications* at 2014

<sup>54</sup> *Ibid.*

- ✓ Another way to increase the level of intellectual property awareness is through conducting workshops. Workshops should be conducted to provide hands-on training to researchers and inventors. Intellectual property practitioners, intellectual property examiners as well as officers from intellectual property offices to provide adequate training to researchers and inventors.
- ✓ Creative strategies that make use of technology should be employed. A good example is in Malaysia, where an organisation called MyIPO<sup>55</sup> has conducted an extensive outreach program via the IP Mobile Clinic, which is a custom built vehicle having a similar concept to that of a mobile library. The IP Mobile Clinic functions as a vehicle which travels to public spaces to disseminate information and knowledge on intellectual property.

### 3. Establishing technology parks

A technology park is an organisation that is managed by professionals with specialized skills whose goal is to promote economic growth by fuelling innovation within a competitive culture. It manages the dissemination and exchange of knowledge and technology among universities, relevant institutions, companies and markets. Innovation-based companies are able to flourish in such an environment through incubation and spin-off processes and access to other value added services such as legal advice and training on patent protection and use.

Within the framework of a technology park, an intense atmosphere of innovation is cultivated on a large scale, resulting in the attraction of high technology industries and the creation of large networks of organisations that increase innovative capacity in the region. This high concentration of innovation may create the necessary demand to have effective and adequate patent protection,<sup>56</sup> as competition, as well as the need to be novel in product-creation intensifies.

A good example is the Silicon Valley. It is the home to the world's largest tech-corporations, and the leading start-up ecosystem for innovation and development. It accounts for up to a third of the venture capital investments made in the United States. One in ten patents in the United States originates from the Silicon Valley and in October 2015, a local U.S. Patent office was opened in Silicon Valley to meet the demand of patent protection that had built up in the region. This is expected to raise the awareness of patent use even more, and give incentive to legal professionals to pursue a specialized career in patent protection – making patent protection services more available, and of better quality.

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<sup>55</sup> An agency under the Malaysian Ministry of Domestic Trade, Co-operatives and Consumerism

<sup>56</sup> Jaffe, Trajtenberg, Henderson, 'Geographic Localization of Knowledge Spillovers as Evidenced by Patent Citations', Vol. CVIII *The Quarterly Journal of Economics*, 1992 at 577

The same could be applied in Kenya, as is even evidenced in Kenya’s Strategic Plan<sup>57</sup> to create *Konza Tech City* - a sustainable technology hub whose success would bring the value of patent use into the limelight.

4. Reducing the cost of obtaining patent protection

The following are the costs involved for obtaining a patent at the KIPi offices<sup>58</sup>:

Process	Fee
Processing patent application	KES 3,000
Searching fee	KES 2,000
Examination fee	KES 5,000
Registration fee	KES 3,000
Publication fee	KES 3,000
Maintenance fee	Between KES 2,000 and KES 50,000
TENTATIVE TOTAL	Between KES 18,000 and KES 66,000

All the respondents in the study felt that the costs of obtaining patent protection were too high for an enterprise at its early stages, and putting in this investment when the business was still young is not of high priority. They did not consider patent protection to be an economically viable option.

The Government should look into reducing the fee structure for acquiring a patent so as to make it a more viable option for small and medium enterprises.

5. Considering policy reform

Privatisation of intellectual property through patents must be more carefully designed to ensure that the public goals of technological research are met. Restrictive licensing practices should be brought to minimal levels so as not to interfere with product development.<sup>59</sup>

Policy-makers should also reconsider the term of patent –protection. Perhaps a shorter term would serve as a better option in addressing the investment costs of an inventor, as well as ensuring the social welfare (access to health care, for example) of a country is not diluted.

<sup>57</sup> <http://www.vision2030.go.ke/> on 4<sup>th</sup> January 2016

<sup>58</sup> [http://www.kipi.go.ke/images/forms/patent\\_forms/fees.pdf](http://www.kipi.go.ke/images/forms/patent_forms/fees.pdf) on 5<sup>th</sup> January 2016

<sup>59</sup> Heller, Eisenberg, ‘Can Patents Deter Innovation? The Anti-commons in Biomedical Research’, Vol. 280 *Science* (1998) at 698-701

## **CONCLUSION**

The biggest challenge facing small enterprises with regards to acquiring patents for their technological innovation(s) is the lack of adequate awareness. Start-ups were unfamiliar with the process of acquiring a patent, its value to their enterprise and the specifics of what type of protection patents offer.

Another challenge observed is the cost of acquiring a patent. Start-ups found it too expensive. Perhaps if the perception of the value of patents is changed, more start-ups will begin to consider patent acquisition as a worthy investment to make.



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