



Intellectual Property Rights perspectives: Bridging the entrepreneurial knowledge gap in creative solutions:

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This paper provides insight and extends the debate on the rights of IPRs emanating from innovative and creative works by entrepreneurs in Africa. Entrepreneurs in the Small and Medium Enterprise sectors are the backbone of most African economies and the bedrock of our prosperity. The present crop of players in the sector—the majority of the entrepreneurs are not privy to IPR episteme. The paper argues that most small and medium enterprises around the world and Africa included display a significant lack of knowledge about how to monetize their intellectual assets. Indeed, stories about failures of IP management abound, and certainly, they are not limited to the developing world alone. The paper further argues that the average entrepreneur falling in the small and medium enterprise is less knowledgeable to the laws and regulations governing creative works. The biggest challenge is ignorance within the entrepreneurial society to protect their intellectual rights on their creative works, resulting in ideas stolen by that privy to the processes of patent protection. There are few researches conducted in this knowledge domain, to share with the upcoming entrepreneurs on what kind of knowledge they need to have and how this knowledge can help them to protect their business ideas. Controversies on intellectual property surround the subject matter of coverage in this review to get further insights on key IPRs protocols. The study is conducted through a review of existing literature complemented with experiential knowledge, empirical snapshot survey of six entrepreneurs in the small and medium enterprise sector and observation protocols on Africa's entrepreneurial capacity and IPR protective strategies. The major revelations and evidence from the literature and snapshot empirical survey shows that the majority of entrepreneurs in Africa are handicapped by lack of knowledge on IP value, the prohibitive costs of registering their patents, trademarks, copyrights and other necessary processes which appear to be cumbersome. At the end of the day, its business as usual but this catches up with them in the long term as their ideas and creative works is exposed and stolen with those who are always on the predatory side. This affects their profits and growth—a very undesirable outcome resulting for IPR knowledge deficiency. The paper recommends that African entrepreneurs should embrace a IPRs strategy in their business plans. The involvement of policy makers, government and legal institutions in supporting IPRs strategy and encouraging African entrepreneurs to register their rights is critical.

The paper suggest for a broader empirical based study across African entrepreneurs to interrogate their IPRs strategies

Key words: intellectual property right, patent, trademark, copyright, beach, and entrepreneur

1.1 Introduction

Over a century, industrial and entrepreneurship developments have given rise to various Intellectual Property Rights (IPRs), which mainly include copyrights, topography, patents, trade and service marks, rights in performances, designs, plant breeders' rights, utility models, appellations of origins and layout designs (Arrow, 1962; Harroch, 2017; Rikon, 2015 and WIPO, 2003). Over the years, IPRs have gained prominence and dominated in the post-industrial age, where the manufacture and manipulation of goods and services has given way to the production of knowledge and application of the same in innovation and entrepreneurship (WIPO, 2003; Fisher, 2001). Intellectual Property (IP) protection has gained prominence since they are viewed as a tool through which countries can attain industrial and technological development. The interface between IPR and trade, economic development and competition has taken center stage especially as far as developing countries are concerned (Coy, 2007). There is generally a conspiracy, a kind of stereotype by the Western countries supported by their Eastern Countries counterparts that Africans cannot produce, innovate or create anything new, rendering IPRs not an important subject from their likelihood of misplaced perspectives. The exploitation and discrimination of indigenous knowledge, which most of it requires these kinds of intervention is a case in point (Mpeirwe, 2004; Kameri-Mbote, 2003). The African history of subjugation and suppression by colonialists ensured that original science by Africans did not qualify for any form of protection. Hence the resultant effect being that indigenous inventions and innovations were not regarded as worthy of protection hence discouraged. This is not even for the colonial period alone, to date the same mindsets prevail and any discovery by the indigenous blacks is seen to be unscientific and hence not worth pursuing. The present COVID-19 saga of Madagascar claimed vaccine on the Corona Virus is receiving (at the time of the study) negative pictures from the West, indicating the difficulties of IPRs in Africa. However, this is not the primary thrust for the

present study but serve to say it provide insights on why it is necessary to institute IPRs for African works. Management of intellectual property in an organization consists of the development of intellectual property, market analysis, and protection of intellectual property rights, actions aimed at commercialization, sharing the know-how and selling of the rights in possession (Truskolaski, 2014). Narrowing down to entrepreneurship and IPR, it is argued that there is a strong link between entrepreneurship and IPR. Africa is a developing economy with its economies characterized with many entrepreneurs who belong to the Small and Medium enterprise in their 2011 book entitled *Entrepreneurship, Innovation and Economic Development*, Szirmai, Naudé, and Goedhuys conclude that "the distinction between entrepreneurship and innovation is hard to make. The literature on entrepreneurship also confirms the importance of IPR. For instance, the article on "Entrepreneurship in Economic Development" for the World Institute for Development Economics Research of the United Nations University concludes that where

"Property rights cannot be strongly enforced...there will be many individuals with high entrepreneurial ability, but there will not be many profitable opportunities to exploit that would result in economic growth."

Of course, the importance of entrepreneurship and new technologies to economic growth extend beyond this case study of the app sector. The contributions of IP to entrepreneur-driven growth are felt in many sectors and in many countries around the world (Gordon, 1993; Breschi et al., 2018). The relevance of IP today is enormous; yet SMEs hardly take into account the strategic value of their IPRs (WIPO, 2003; Holgersson et al., 2018). In the European Union, the Office for Harmonization in the Internal Market (OHIM) released a study in 2015 that shows a meager 9% of European SMEs being IP owners; however, on average, such IP owners generate 32% more revenue per employee than those that do not. In a similar fashion, the UN (2011: 11) notes the following:

"[...] all available studies confirm that the [patent] value distribution is highly skewed, i.e. that there is a small number of very valuable patents, while the vast majority of patents turn out to have little or no value. As a result, most patents are allowed to expire long before their statutory maximum lifetime, simply because their holders consider the renewal fees too high compared to the value of the patent. This process is expensive and usually not assumed by most entrepreneurs, due to its sophisticated nature".

Study after study has demonstrated that companies that create and successfully leverage knowledge and innovation (intellectual property) consistently and significantly outperform their competitors and create lasting shareholder value (Gottlieb, 2000; Fisher, 2003; Biskupski,

2017). Most entrepreneurs often are unaware of their IP's worth in the critical launch phase of a startup. According to a 2010 awareness survey conducted by the UK Intellectual Property Office, SMIEs know very little about why knowledge of IP is relevant to their business. Entrepreneurs that fail to utilize IP effectively inevitably face increasing competition, declining margins and tolling from companies that own key industry innovations. Tomas Sowell expressed in his 1980 book "Knowledge and Decisions" that

"Ideas are everywhere, but knowledge is rare"; they only become knowledge once we have transformed them through a validation set of rules or system. Information is not inherent in an isolated message, but the product of an interpretation derived from supposedly relevant knowledge. It follows that the contextual knowledge against which information is interpreted, is as important as the information itself" (sowell, 1980)

. This study argues that this knowldges is what is missing among African entrepreneurs. Ideas they have but knowledge is limited. The present study, though more discussive in nature creates a platform for debate among African entrepreneurs-sharing with them some of the key copyrights areas that they need to acquaint themselves with.

1.2 Problematization of the study and the research questions

Property rights are a key indicator of economic success and political stability. The emergence and development of new ideas and technologies are of significance and importance to developing economies. Protecting these creations of the mind through an intellectual property system is just as vital as it is maintaining it. A comprehensive package of the significance of IPRs has direct relevance to developing countries, especially SSA countries, where the debate on IP protection of indigenous knowledge is raging. The works of creators and innovators through granting them necessary IPRs protect them from misappropriation or copying by unauthorized parties. The protection does benefit the individual creators, consumers and have positive impact on the socio-economic development. The accelerated number of piracy and counterfeiting affect a huge spectrum of different goods, from detergents, alcohol, perfumes to security holograms. A quick survey on this occurrence shows that no industry is spared. Literary all sorts of goods including pegs and toothpaste are copied and young, upcoming and seasoned entrepreneurs are exposed as the bulky of their products are not protected at all. It is undisputable that the knowledge about the protection of intellectual property in enterprises is rather low among African entrepreneurs. There is no doubt that Intellectual Property Protection in Africa is lagging behind and the need to share knowldges available episteme in terms of regulations and laws of the land that govern the

processes in acquiring the said rights cannot be overemphasized. Available data shows that African countries lack capacity to effectively implement and harness these norms for national development. There is lack of expertise and dearth of knowledge on the state of IPRs and policy analysis by many small businesses or young entrepreneurs who do not understand various types of intellectual property and the protection that can be ensured for their products and services. This is a challenge to African entrepreneurs and scientists seeking to domesticate and acculturated the protection of individual works. Our young entrepreneurs, women and men-young and old, graduates and non-graduates and scientist in Africa have limited understanding of IPRs and the implications of instituting effective IP protection systems. There are very few people and institutions in the continent with experience and capacity to handle IPRs, especially with respect to trade, competition, investment and other recent global imperatives. The study therefore attempts to present in the simplest form possible critical knowledge areas that society need to know and apply for developmental purposes and initiatives. The study primary research question is centered on the fundamental structure of Intellectual Property Rights which embraces IPR tenets, registration, protection, administration and enforcement. Complementing this is the question on how individuals can engage in the protection and acquisition of these rights.

1.3 Significance of the study

The study will go a long way in de-mystifying the subject of IPRs in Africa and specifically to African entrepreneurs. It will take stock and provides a conceptual review of the information on current IP practices, research and policy analysis capacity in African countries. Young entrepreneurs, women and men and African institutions with own new innovations and ideas will draw a leaf from the study by interpreting the practical lessons from it. African continent and various governments and policy makers can also draws insights from this study. The study acknowledges that several articles and scholarly work is available for reference but this study comes in context to address some of the gaps and short comings prevailing in those prior works. The study therefore, adds on to the existing body of knowledge and theory on IPRs and the African context.

1.4 Methodology

This study relied primarily on reviewing existing related literature chosen and selected to provide ontological and epistemological insights on IPRs focusing mainly on African entrepreneurs in the SMEs. A literature discussive and narrative style has been adopted in data disaggregation (Yin, 2008). The review of secondary data was carefully crafted to allow for presenting simplified strato-structures by those who may intend to use the study for policy formulation and or implementation of relevant areas identified from it. Data obtained from this review was analyzed through grouping of emerging themes from the study-thus like in phenomenology, content analysis of previous works enabled emerging themes to be grouped together –leading to thematic analysis of the results (Baumol, 1998). This was supported with a mini snap -survey of six entrepreneurs together with an observational and experiential knowledge paradigm cooption on the processes of IPRs structures and adoption. As already raised in the background of this paper, research on IPRs has been conducted globally but there are knowledge gaps in Africa on the literature on IPRs.

1.5 Literature

Research on IPRs is critical for enhancing the performance of entrepreneurs. Despite limited research focusing on SMEs in Africa, several authors in Africa and beyond have involved themselves in exploring on how entrepreneurs should buy into IPRs discourse for their long-term benefit (WIPO, 2003; Musungu, 2004; WTO, 2016). Before taking a step towards focusing on the major scholarly work on the IPRs, I draw your attention to the quotes below for gaining broader insights into the IPRs discipline. The table below contains the alluded quotes.

Table 1 Popular quotes –IPR related

- “What rights society has, in ideas, which they did not produce, and have never purchased, it would probably be very difficult to define; and equally difficult to explain *how* society became possessed of those rights. It certainly requires something more than assertion, to prove that by simply coming to a knowledge of certain ideas—the products of individual labor—society acquires any valid title to them, or, consequently, any *rights* in them” (Spooner 1855).
- “Knowledge- is a social product. Individuals should not have exclusive and perpetual ownership of the works that they create because these works are built upon the shared knowledge of society. Allowing rights to intellectual works would be similar to granting ownership to the individual who placed the last brick in a public works dam. The dam is a social product, built up by the efforts of hundreds, and knowledge, upon which all intellectual works are built, is built up in a similar fashion” (Proudhon 1840) re-quoted by (Grant 1987; Shapiro 1991; Simmons 1992, Boyle 1997).
- “Weak property rights systems not only blind economies from realizing the immense hidden capital of their entrepreneurs, but they withhold them from other benefits as evidenced through the powerful correlations in this year’s index: human freedom, economic liberty, perception of corruption, civic activism, and even the ability to be connected to the internet, to name a few.” (renowned economist Hernando de soto).
- "Every man has the right to turn his will upon a thing or make the thing an object of his will, that is to say, to set aside the mere thing and recreate it as his own" (Hegel).
- "that a man has a natural and absolute right—and if a natural and absolute, then necessarily a perpetual, right—of property, in the ideas, of which he is the discoverer or creator; that his right of property, in ideas, is intrinsically the same as, and stands on identically the same grounds with, his right of property in material things; that no distinction, of principle, exists between the two cases" (Lysander Spooner , 1855)
- “That the protection of intellectual property is essentially a moral issue. The belief is that the human mind itself is the source of wealth and survival and that all property at its base is intellectual property. To violate intellectual property is therefore no different morally than violating other property rights which compromises the very processes of survival and therefore constitutes an immoral act (Writer Ayn Rand argued in her book Capitalism: The Unknown Ideal).
- Thomas Jefferson once said in a letter to Isaac McPherson on August 13, 1813: "If nature has made any one thing less susceptible than all others of exclusive property, it is the action of the thinking power called an idea, which an individual may exclusively possess as long as he keeps it to himself; but the moment it is divulged, it forces itself into the possession of every one, and the receiver cannot dispossess himself of it. Its peculiar character, too, is that no one possesses the less, because every other possesses the whole of it. He, who receives an idea from me, receives instruction himself without lessening mine; as he who lights his taper at mine, receives light without darkening me."

Source: Compiled by Researcher

Understanding IPRs at the point of departures requires an earnest focus on the various definitions provided for by various scholars and researchers. A number of definitions are discussed by as many authors as they are writers. The World Intellectual Property Organization (2003) defines intellectual property as creations of the mind or intellect, including inventions, literary and artistic works, designs, symbols, names and images used in commerce. Another version of Intellectual Property Rights is that—these are rights given to any particular person or organization for their new creations based on their minds for a certain period of time with an exclusive right over the use of their creation. Intellectual property (IP) is also regarded as any original creation of the human mind and intellect such as artistic, literary, technical, or scientific creation (Schultz and Madigan, 2016; Barlow, 1994). What this definition implies is that intellectual property rights are like any other property right as they also allow creators, or owners, of patents, trademarks or copyrighted works to benefit from their own work or investment in a creation. According to Baer (1995) and Farre-Mensa et al., (2015) Intellectual property rights (IPR) refers to the legal rights given to the inventor or creator to protect his invention or creation for a certain period of time. These legal rights confer an exclusive right to the inventor/creator or his assignee to fully utilize his invention/creation for a given period of time. The United Nations (2011: 7) defines intellectual property rights (IPRs) as: “the rights to use and sell (or otherwise dispose of) creations of the mind: inventions, literary and artistic works, and symbols, names, images, and designs used in commerce for the firms owning them. From this definition, one concludes that IPRs is generally characterized as non-physical property that is the product of original thought and also that rights do not surround the abstract non-physical entity; rather, intellectual property rights surround the control of physical manifestations or expressions of ideas of individuals or entities. Important to note is that these rights enshrined in Article 27 of the Universal Declaration of Human Rights, which provides for the right to benefit from the protection of moral and material interests resulting from authorship of scientific, literary or artistic productions. Based on these definitions, the study argues that Intellectual property rights (IPR) enable the private appropriation of economically useful knowledge and thus should be viewed as stimuli for invention and innovation earmarked for socio-economic prosperity and development—a missing link in African entrepreneurship spectrum. The major forms of IPRs, which are of concern for this study are mainly patents, trademarks, copyrights, trade secrets,

utility models, designs and plant breeders' rights. Table 1, shown after historical perspective provides details of the tenets alluded to.

1.5.1 Historical perspective of IPR

The birth of IPR can be traced back to the period beginning of the 19th century just after the industrial revolution (WTO, 2016; WIPO, 2003). Legal protections for intellectual property have a rich history that stretches back to ancient Greece and before. As different legal systems matured in protecting intellectual works, there was a refinement of what was being protected within different areas. Historically, one of the first known references to intellectual property protection can be traced to 500 B.C.E., when chefs in the Greek colony of Sybaris were granted year-long monopolies for creating particular culinary delights (WTO,2016; Wolson,2001). Notable references to intellectual property in ancient times—are highlighted in cases cited in Bruce Bugbee's formidable work *The Genesis of American Patent and Copyright Law* (Bugbee 1967) with first case, Vitruvius (257–180 B.C.E.) argued to have said and revealed intellectual property theft during a literary contest in Alexandria then. It is argued that Vitruvius exposed the false poets who were then tried, convicted, and disgraced for stealing the words and phrases of others while serving as a judge. Although there is no known Roman law protecting intellectual property, Roman jurists did discuss the different ownership interests associated with an intellectual work and how the work was codified- for example the ownership of a painting and the ownership of a table upon which the painting appears. There is also reference to literary piracy by the Roman epigrammatist Martial. In this case, Fidentinus is caught reciting the works of Martial without citing the source. The first main activities to protect creators in countries abroad started in 1883 when Paris Convention for the protection of intellectual property was signed. The International Intellectual Property Protection was created at various assemblies held in Vienna and Europe. A number of countries became members of Paris Convention, and at a later stage special unions and arrangements were created which made the beginning of protection of international trademarks as well-known marks internationally. In Central Asia, the history of intellectual property rights started during soviet period, which has different priorities in collective isolated economies. In the year 1967, World Intellectual Property Organization (WIPO) was started and its formation was based on the Paris Convention template. A new organization was again born in 1977; the World Trade Organization (WTO) –closely connected to WIPO.

1.5.2 Historical perspectives of origin of Laws governing IPRs

IPRs law fosters an environment where creativity and innovation are incentivized, protecting the exclusive control of an intangible asset (WIPO, 2003). In their simplest form copyright law protects the expression of your idea (Harroch, 2017). Patent law protects the process and method of your concept, and trademark law protects the actual name and branding of your creation. A fundamental aspect of IPRs is that it is intricately related to trade, competition, industrial growth and economic development. The World Intellectual Property Organization (WIPO), established in 1970, is an international organization dedicated to helping ensure that the rights of creators and owners of intellectual property are protected worldwide, and that inventors and authors are therefore recognized and rewarded for their ingenuity. Fundamentally, it is pragmatic to alert an interested beneficiary to the present study that WIPO works closely with its Member States and other constituents to ensure the intellectual property system remains a supple and adaptable tool for prosperity and well-being, crafted to help realize the full potential of created works for present and future generations. Furthermore, WIPO serves as a forum for its Member States to establish and harmonize rules and practices for the protection of intellectual property rights. In addition to the aforementioned roles, WIPO also services global registration systems for trademarks, industrial designs and appellations of origin, and a global filing system for patents.

The creation of the World Trade Organization (WTO) in 1995 and the consequent formulation of the Agreement on Trade Related Aspects of Intellectual Property Rights (TRIPS) have generated new challenges for Sub-Saharan African (SSA) countries, particularly as far as IP protection in these countries are concerned. The TRIPS agreement is the most over-arching instrument on the regulation and protection of all types of intellectual property (Sikoyo, 2006). All countries signatory to the WTO must comply with. Thus all SSA countries have to comply with the agreement, which amount to the need to remodel their IP laws and policies along the provisions of TRIPS. A right to property is recognized in Article 17 of the Universal Declaration of Human Rights (“UDHR”) which provides as follows:

- Everyone has the right to own property alone as well as in association with others.
- No one shall be arbitrarily deprived of his property.

The right to peaceful enjoyment is found in article 1 of protocol 1 of European Convention of Human Rights.

Anglo-American systems of copyright, patent, trade secret, and trademark, along with certain continental doctrines, provide a rich starting point for understanding intellectual property (Moore 1998a). Thus the subject matter of intellectual property is largely codified in Anglo-American copyright, patent, and trade secret law, as well as in the moral rights granted to authors and inventors within the continental European doctrine. Although these systems of property encompass much of what is thought to count as intellectual property, they do not map out the entire landscape. Additional evidence of source of law is also obtainable from the British statutes. The Statute of Monopolies (1624) and the British Statute of Anne (1710) are seen as the origins of patent law and copyright respectively, firmly establishing the concept of intellectual property. "Literary property" was the term predominantly used in the British legal debates of the 1760s and 1770s over the extent to which authors and publishers of works also had rights deriving from the common law of property such as in *Millar v Taylor* (1769) and *Hinton v Donaldson* (1773). "The history of patents does not begin with inventions, but rather with royal grants by Queen Elizabeth 1 (1558-1603). From back then one concludes that, according to present patents laws across the globe, a patent represents a legal right obtained by an inventor providing for exclusive control over the production and sale of his mechanical or scientific invention demonstrating the evolution of patents from royal prerogative to common-law doctrine.

1.5.3 Forms of Intellectual Properties

The main purpose of intellectual property law is to encourage the creation of a wide variety of intellectual goods for consumers. To achieve this, the law gives people and businesses property rights to the information and intellectual goods they create, usually for a limited period of time. Because they can then profit from them, this gives economic incentive for their creation. Table 2 below gives full details of each form of right and the associated advantages they carry.

Table 2 Forms of Intellectual Property

<p>Copy Right</p>	<ul style="list-style-type: none"> • Copyrights protect original works of authorship and usually protect the original expression of an idea [copyright ensures protection of various types of works, awarding protection to individual data as long as they are original and can be expressed in a material, concrete form] • Copyright work it must be original, meaning it is the author's own original creation and reflects his/her personality, where he/she has been able to express his/her creative freedom by making free and creative choices and thus stamping his/her personal touch onto the work. • Works covered by copyright include, but are not limited to: novels, poems, plays, reference works, newspapers, advertisements, computer programs, databases, films, musical compositions, choreography, paintings, drawings, photographs, sculpture, architecture • Copyright laws grant authors, artists and other creators' protection for their literary and artistic creations, generally referred to as "works". • Copyright and rights-related copyrights are the rights of authors for their artistic and literary work [books and other writings, musical compositions, paintings, sculpture, computer programs and films protected mainly for a period of 50 years after the death of the author under this copyright • The beneficiaries of related rights are: performers (such as actors and musicians) in their performances; producers of phonograms (for example, compact discs) in their sound recordings; and broadcasting organizations in their radio and television programs. • Copyrights are a frequently overlooked IP asset that is of obvious importance when dealing with computer software companies and content providers (such as publishers of music, movies, books, etc.). • For a work to be protected, it must be fixed in some material (concrete) form. In this context, 'fixation', in a data context, would mean that the specific information needs to be saved in a tangible form • Generally, the creator owns the copyright. In an employer-employee agreement, the copyright belongs to the employer. • Whether or not you choose to use these copyright markings you will still receive the full level of copyright protection as an automatic right. • In public, the authors have the right to prohibit the commercial rental of their copyright works like computer programme and sound recording procedures. Films also have this copyright as an exclusive right, where commercial rental has managed to be widespread • An example is the prohibition of reproduction of recording and broadcast of live performance are protected for performers • The advantages of copyrights include the fact that they give the owner the right to reproduce the same work and a derivative of the same, to distribute copies of, and to publish, display and perform original works of authorship. Copyrights last the duration of the life of the author plus an added 50 years in some countries <p>The copyright holder is granted several exclusive economic rights that allow controlling the protected work's use and facilitate enforcement in case a third party uses the work without authorization.</p>
<p>Trade mark</p>	<ul style="list-style-type: none"> • Does extend protection to brand names and symbols adopted and used by a company to identify its products in the market. The primary purpose of trademarks is to prevent consumers from being confused about the source/origin of the product • A trademark is a distinctive sign that identifies certain goods or services produced or provided by an individual or a company. • A trademark is any word, name, symbol, or device, or any combination thereof, adopted by a manufacturer or merchant to identify her goods and distinguish them from goods produced by others (15 U.S.C, 1988) • Rights related to sign or any combination of sign for any goods or services to make a distinguishing mark [trademarks simply distinguish the goods or services from other goods or services] or a registered trade mark protects your brand, e.g. the name of your product(s) or service(s). • Trademarks may be one or a combination of words, letters and numerals. They may consist of

	<ul style="list-style-type: none"> • drawings, symbols or three-dimensional signs, such as the shape and packaging of goods • In some countries, non-traditional marks may be registered for distinguishing features such as holograms, motion, color and non-visible signs (sound, smell or taste) • Ownership of a trademark confers upon the property holder the right to use a particular mark or symbol and the right to exclude others from using the same (or similar) mark or symbol. The duration of these rights is limited only in cases where the mark or symbol ceases to represent a company or interest, or becomes entrenched as part of the common language or culture • As consumers become familiar with particular trademarks and the goods they represent, the trademarks then become an indicator of quality. • While rights in trademarks are acquired by use, registration certainly makes it easier to enforce those rights. Valuable trademark rights can be easily lost. All that needs to happen is that the proprietor allows the mark to lose its ability to distinguish its goods from competitors' goods. • The system helps consumers to identify and purchase a product or service based on whether its specific characteristics and quality – as indicated by its unique trademark – meet their needs. • Trademark protection is legally enforced by courts that, in most systems, have the authority to stop trademark infringement • Trademark protection ensures that the owners of marks have the exclusive right to use them to identify goods or services, or to authorize others to use them in return for payment • Trademark protection also hinders the efforts of unfair competitors, such as counterfeiters, to use similar distinctive signs to market inferior or different products or services • Almost all countries in the world register and protect trademarks
<p>Patent</p>	<ul style="list-style-type: none"> • A Patent provide its owner a monopoly of limited duration (usually 20 years), for exploiting the patented invention as an incentive for disclosure [Should provide exclusive right for a stated period to exclude others, from making, using, selling and importing the patented product or process producing that product [exclusive right to make, use and sell the invention] • Patents are rights under Intellectual Property Rights related to an invention for which patent has been given by the government/statute to the patentee in exchange of full disclosure of their invention either an individual or a company [patents on the other hand protect inventions in processes and products] • Patent licenses are often part of a "technology" license, which includes technology exchange, technical assistance, and transfers of know how. Patent licenses can also be used to gain access to valuable technology of others through cross licensing, especially where the licensor has a dominant patent position which can be used to leverage valuable rights to improvement technologies developed by others. • Patents are granted for patentable inventions, which satisfy the requirements of <i>novelty</i> and <i>utility</i> under the stringent examination and opposition procedures prescribed in the law • Patents can be granted for products and processes. • A patentable invention must novel, must constitute a non-obvious improvement to previous inventions and must have an industrial application • Patent owners may give permission to, or license, other parties to use their inventions on mutually agreed terms. • Owners may also sell their invention rights to someone else, who then becomes the new owner of the patent. \ • A patent owner has the right to decide who may – or may not – use the patented invention for the period during which it is protected. • Patents are advantageous too when an invention can be easily copied and thus acts as a deterrent from reverse engineering. • There are three types of patents recognized by patent law: utility patents, design patents, and plant patents. Utility patents protect any new, useful, and nonobvious process, machine, article of manufacture, or composition of matter, as well as any new and useful improvement thereof

	<ul style="list-style-type: none"> • In return for patent protection, all patent owners are obliged to publicly disclose information on their inventions in order to enrich the total body of technical knowledge in the world
Trade secrets	<ul style="list-style-type: none"> • Trade secrets protect a variety of confidential and business information • A trade secret is any information that can be used in the operation of a business or other enterprise and that is sufficiently valuable and secret to afford an actual or potential economic advantage over others” (U.S. Legal Code, The Restatement (Third) of Unfair Competition, 1995, §39) • Only protect the improper acquisition of this information, which must generally not be known in the industry • Trade secrets • The objective of trade secret protection is to keep commercially valuable information confidential or secret. • Protecting undisclosed know-how and business information enables its creator to transform the effort invested in generating this know-how and information into a competitive advantage • A trade secret does not require disclosure and that it involves less cost than acquiring and defending a patent • In the event that one may rely on trade secret protection, the holder of a trade secret cannot prevent competitors from copying and using the same solutions – reverse engineering (i.e. the process of discovering the technological principles of a device, object or system through analysis of its structure, function and operation) is entirely lawful. Trade secrets are only legally protected in instances where someone has obtained the confidential information by illegitimate means (e.g. through spying, theft or bribery) • Protection of undisclosed information is least known to players of IPR and also least talked about, although it is perhaps the most important form of protection for industries, R&D institutions and other agencies dealing with IPR • The two major restrictions on the domain of trade secrets are the requirements of secrecy and competitive advantage. An intellectual work is not a secret if it is generally known within the industry, published in trade journals, reference books, etc., or readily copyable from products on the market • Formulations, such as the concentrate for Coca-Cola, may be immensely valuable trade secrets • The processes used by an enterprise to make products or to manage itself may qualify as trade secrets. For example, material sources, marketing plans, distribution techniques, customer information, product specification/tolerances, best methods and practices, franchise management protocols, all qualify as trade secrets
Geographical indications	<ul style="list-style-type: none"> • Geographical indications are rights in the aspect of industrial property under Intellectual • Property Rights related to geographical indication situated being the country or place or the origin of that product • A geographical indication is a sign used on goods that have a specific geographical origin and possess qualities or a reputation due to that place of origin. Most commonly, a geographical indication consists of the name of the place of origin of the goods. • Agricultural products typically have qualities that derive from their place of production and are influenced by specific local geographical factors, such as climate and soil • products are originated from a specific geographical location, which has definite qualities and reputation for its quality due to its place of origin • An appellation of origin is a special kind of geographical indication used on products that have a specific quality exclusively or essentially due to the geographical environment in which the products are produced. • Place name generally indicates where the product has been made as product identification. • The place of origin may be a village or town, a region or a country. An example of the latter is “Switzerland” or “Swiss”, perceived as a geographical indication in many countries for products made in Switzerland and, in particular, for watches • Geographical indications are understood by consumers to denote the origin and quality of products. Many of them have acquired valuable reputations which, if not adequately protected, may be misrepresented by commercial operators
Protecting	<ul style="list-style-type: none"> • Outside of the regimes of copyright, patent, trade secret, and trademark, there is a substantial set

Mere Ideas	<p>of case law that allows individuals to protect mere ideas as personal property. This system of property is typically called the “law of ideas” (Epstein 1992).</p> <ul style="list-style-type: none"> • A highly publicized case in this area is <i>Buchwald v. Paramount Pictures</i> (13 U.S.P.Q. 2d 1497 (Cal. Super. Ct. 1990)), concerning the Eddie Murphy movie <i>Coming to America</i>. • The law of ideas is typically applied in cases where individuals produce ideas and submit them to corporations expecting to be compensated. In certain cases, when these ideas are used by the corporation (or anyone) without authorization, compensation may be required
Industrial design	<ul style="list-style-type: none"> • Rights related to any ornamental or aesthetic which have any three-dimensional features - the shape or surface of the article or any two-dimensional features such as patterns, lines or colour • Are rights that can be applied to a wide variety of products made from industry or handicraft which include watches, jewellery, leisure items fashion, other luxury items, house ware, furniture, electrical appliances, architectural structures, practical goods, textile designs • the person or entity that has registered the design – is assured an exclusive right and protection against unauthorized copying or imitation of the design by third parties • An industrial design refers to the ornamental or aesthetic aspects of an article. A design may consist of three-dimensional features, such as the shape or surface of an article, or two-dimensional features, such as patterns, lines or color • Industrial designs are applied to a wide variety of industrial products and handicrafts: from technical and medical instruments to watches, jewelry and other luxury items; from house wares and electrical appliances to vehicles and architectural structures; from textile designs to leisure goods • Industrial designs are what make an article attractive and appealing; hence, they add to the commercial value of a product and increase its marketability. • Protecting industrial designs helps to promote economic development by encouraging creativity in the industrial and manufacturing sectors, as well as in traditional arts and crafts • In most countries, an industrial design must be registered in order to be protected under industrial design law. As a rule, to be registrable, the design must be “new” or “original
Layout designs	<ul style="list-style-type: none"> • Rights related to interconnections of an integrated circuit or three-dimensional disposition prepared for an integrated circuit intended for manufacture
Plant varieties	<ul style="list-style-type: none"> • The protection of new plant varieties. Plant variety protection is given to the breeders as an exclusive right for a limited period to the breeders to acknowledge the achievements of new plant varieties with the satisfaction of specific criteria • New plant variety is defined as a plant grouping within a single botanical taxon of the lowest known rank provided that the plant/herb should be new or novel, distinct, uniform, stable and have a satisfactory denomination <p>(WIPO,2003; Glasgow,2001; Glossary of Terms,2016; Black’s Law Dictionary,2014; Gottlier,2000; Liebowitz,2008;Kingstone,2001;Kameri-Mbote,1994; Mrundula et al.,2009; Coy,2007; Calandrilla,1998; Biskupski,2017; Barlow,1997; Arrow,1962; Singh,2004; Musungu,2004; Musungu,2014).</p>

Source: Compiled by Researcher

1.5.4 Non-patentable inventions

The mere discovery of a new form of a known substance which does not result in the enhancement of the known efficacy of that substance or the mere discovery of any new property or new use for a known substance or of the mere use of a known process, machine or apparatus unless such known process results in a new product or employs at least one new reactant is not an invention (WIPO, 2003, Hegel, 1821; Farre-Mensa, 2015). In most countries, ideas, concepts, discoveries, scientific theories, study practices, organizational operational sequences,

mathematical methods and aesthetic creations of form are not patentable. Table 4 below gives a summary of the non-patentable inventions.

Table 3 Non-patentable inventions within the meaning of the Patent Act

- Any invention that is against the established natural law
- Any invention that leads to commercial exploitation or harms any life, whether animal, plant or human, or the environment
- It is not possible to get patents for inventions which are contrary to public order or morality
- Any discovery that already exists or scientific principle
- The mere discovery of any new use for a known substance or any unexpected property or just use of a known process, machine or apparatus unless such known process leads to a new product or employs at least one new reactant
- A mere arrangement or re-arrangement or duplication of a known device each functioning independently of one another in its own way
- A method of agriculture or horticulture
- Any process for the medicinal, surgical, curative, prophylactic diagnostic, therapeutic or other treatment of human beings or any process for a similar treatment of animals to render them free of disease or to increase their economic value or that of their products
- An invention relating to atomic energy
- Any product obtained in just mixing any two substances
- A method of agriculture or horticulture
- Treatment to patients for medicinal, surgical, curative, prophylactic purpose to render them free of disease
- Plants, animals in whole or any part thereof other than microorganisms
- A mathematical or business method or a computer programme per se or algorithms
- A literary, dramatic, musical or artistic work or any other aesthetic creation whatsoever including cinematographic works and television productions
- A divulging of information
- A discovery, scientific theory, or mathematical method
- A mere discovery of any new property or new use for a known substance or of the mere use of a known process, machine, or apparatus unless such known process results in a new product or employs at least one new reactant
- A substance obtained by a mere admixture resulting only in the aggregation of the properties of the components thereof or a process for producing such substance
- Topography of integrated circuits
- An invention which, in effect, is traditional knowledge or which is an aggregation or duplication of known properties of traditionally known component or components.
- An invention, which is frivolous or which claims anything obvious or contrary to the well-established natural law.
- An invention, the primary or intended use of which would be contrary to law or morality or injurious to public health
- Critics argue that information is not the kind of thing that can be owned or possessed and is not something that can be property, as that notion is typically defined. Information objects, such as numbers and propositions are abstract objects, which cannot causally interact with material objects, and hence cannot be owned or possessed
- An invention, which is in effect, is traditional knowledge

(WIPO, 2003; Black's Law Dictionary,2014; Gottlier,2000;Lie bowtitz,2008;Kingstone,2001;Kameri-Mbote,1994; Mrundula et al.,2009; Coy,2007; Calandrilla,1998)

Source: Researched data (2020)

1.5.5 Infringements of IPRs

Violation of intellectual property rights, called "infringement" with respect to patents, copyright, and trademarks, and "misappropriation" with respect to trade secrets, may be a breach of civil law or criminal law, depending on the type of intellectual property involved, jurisdiction, and the nature of the action (WIPO, 2003). Table 3 below is a summary of the common breaches experienced on IP protection, not only in Africa but across the globe.

Table 4 Forms of infringements on IPs

Form of IPR	Content (s)
Patent infringement	<ul style="list-style-type: none"> • Patent infringement typically is caused by using or selling a patented invention without permission from the patent holder • The scope of the patented invention or the extent of protection is defined in the claims of the granted patent • A patent provides patent owners with protection for their inventions • Patent protection means an invention cannot be commercially made, used, distributed or sold without the patent owner's consent • It directly states that the third party has willfully or intentionally stole the technology from the inventor without his prior permission. • Patents provide incentives to individuals by recognizing their creativity and offering the possibility of material reward for their marketable inventions • A huge barrier for independent innovation; Great challenge to the social civilization and sanctity of the law, A damage to the economic laws and law of value, An illegal behavior that destroys the fair and orderly market competitive order
Copyright infringement	<ul style="list-style-type: none"> • Copyright infringement is reproducing, distributing, displaying or performing a work, or to make derivative works, without permission from the copyright holder, which is typically a publisher or other business representing or assigned by the work's creator. It is often called "piracy". • While copyright is created the instant a work is fixed, generally the copyright holder can only get money damages if the owner registers the copyright • Enforcement of copyright is generally the responsibility of the copyright holder
Trademark infringement	<ul style="list-style-type: none"> • Trademark infringement occurs when one party uses a trademark that is identical or confusingly similar to a trademark owned by another party, in relation to products or services which are identical or similar to the products or services of the other party • In many countries, a trademark receives protection without registration, but registering a trademark provides legal advantages for enforcement • Infringement can be addressed by civil litigation and, in several jurisdictions, under criminal law
Trade secret misappropriation	<ul style="list-style-type: none"> • Trade secret misappropriation is different from violations of other intellectual property laws, since by definition trade secrets are secret, while patents and registered copyrights and trademarks are publicly available • Common law jurisdictions, confidentiality and trade secrets are regarded as an equitable right rather than a property right but penalties for theft are roughly the same as in the United States <p>(Wolson, 2001; Fisher, 2001; Holggerson, 2018; WTO, 2016; Breschi et al.,2018)</p>

Source: Researched data

1.5.6 Benefits of IPRs

As highlighted in the introductory part of this paper, intellectual property refers to any new idea or invention created by an individual or a business. It is essentially an invention that has both commercial and moral value (Coy, 2007; Holggerson et al., 2018). Such inventions that are new, innovative and life-changing can be protected by the individual who came up with the concept or product under intellectual property rights and laws that govern the country. Research has shown that there are several advantages associated with creating a portfolio of these rights to an entrepreneur. Table 6 below provides a summary of benefits researchers commonly discusses.

Table 5 Benefits of IPRs

- It is an incentive to invent and innovate, as a tool for ensuring equitable and fair utilization of genetic resources and finally as a tool for the promotion of the conservation of biological diversity and the sustainable use of their components
- intellectual property system helps strike a balance between the interests of innovators and the public interest, providing an environment in which creativity and invention can flourish, for the benefit of all
- The progress and well-being of humanity rest on its capacity to create and invent new works in the areas of technology and culture.
- The legal protection of new creations encourages the commitment of additional resources for further innovation.
- Intellectual property rights reward creativity and human endeavor, which fuel the progress of humankind.
- Intellectual property protection (IPP) is increasingly sought by firms as a source of competitive advantage, as a mechanism for market protection, and as a bargaining currency to prevent being “locked-out” from using technology held by competitors.
- Protect trade name, products and services from being copied unnecessarily
- It is easier to take enforcement action if one’s intellectual property is registered
- A cost-cutting measure in future [avoid a defensive strategy]
- The enhancement of productive activity is based on the use of new knowledge
- The motivation for innovations by other enterprises
- Promotion and protection of intellectual property spurs economic growth, creates new jobs and industries, and enhances the quality and enjoyment of life.
- An efficient and equitable intellectual property system can help all countries to realize intellectual property’s potential as a catalyst for economic development and social and cultural well-being
- The multibillion dollar film, recording, publishing and software industries – which bring pleasure to millions of people worldwide – would not exist without copyright protection
- Without the rewards provided by the patent system, researchers and inventors would have little incentive to continue producing better and more efficient products for consumers
- Consumers would have no means to confidently buy products or services without reliable, international trademark protection and enforcement mechanisms to discourage counterfeiting and piracy.

(Glossary of Terms,2016; Black’s Law Dictionary,2014; Gottlier,2000;Lie bowtitz,2008;Kingstone,2001;Kameri-Mbote,1994; Mrundula et al.,2009; Coy,2007; Calandrilla,1998; Biskupski,2017; Barlow,1997; Arrow,1962; Singh,2004)

Source: Compiled from the study (2020)

Table 6 Creation and Ownership Challenges of IPRs

- Currently, in order to be protected under copyright law, work must originate from an author's own sufficient skills, labor, and judgment. This law poses a great challenge when trying to determine whether or not AI has used these factors sufficiently to produce such work
- Intellectual property rights are controversial because their stronger international protection may come at the expense of higher prices and reduced availability of products, particularly in developing countries.
- The protection of intellectual property is still rather expensive. The costs include mainly the designing and implementation of a management strategy regarding industrial property protection, the costs of legal services related with obtaining exclusive rights, administration fees, costs of legal disputes, in and out of court
- Counterfeiters are getting cleverer. They are exploiting technological advances to produce copies hardly distinguishable from the originals, in some cases even outsmarting the proprietors
- Fundamental shifts in technology and in the economic landscape are rapidly making the current system of intellectual property rights unworkable and ineffective.
- The intangible nature of intellectual property presents difficulties when compared with traditional property like land or goods
- Unlike traditional property, intellectual property is indivisible – an unlimited number of people can "consume" an intellectual good without it being depleted.
- Investments in intellectual goods suffer from problems of appropriation – while a landowner can surround their land with a robust fence and hire armed guards to protect it, a producer of information or an intellectual good can usually do
- Very little is done to stop buyers from replicating products or services and selling it at a lower price
- Novelty is a patentability requirement. An invention is not new and therefore not patentable if it was known to the public before the date of filing of the patent application, or before its date of priority if the priority of an earlier patent application is claimed. The purpose of the novelty requirement is to prevent the prior art from being patented again
- Criticism of the term *intellectual property* ranges from discussing its vagueness and abstract overreach to direct contention to the semantic validity of using words like *property* and *rights* in fashions that contradict practice and law
- A case referring to one dominant challenge facing African entrepreneurs on exploitation of indigenous innovations
-

*The Kenyan example occurred in the 1970s when the US National Cancer Institute (NCI) collected the *Maytenusbuchananii* plant from the Shimba Hills of Kenya. The NCI collected tons of the shrub based on the knowledge of the Digo community who predominantly live around this area and have used this knowledge for years to treat cancerous conditions. The shrub contains maytansine, which is considered as a potential treatment for pancreatic cancer. All the material collected was traded without the consent of the Digo, neither was there any recognition of their knowledge of the plant and its medicinal properties.*

(WIPO, 2003; Black's Law Dictionary, 2014; Gottlier, 2000; Liebowitz, 2008; Kingstone, 2001; Kameri-Mbote, 1994; Mrundula et al., 2009; Coy, 2007; Calandrilla, 1998)

Source: Compiled by Researcher (2020)

1.6 Results and discussions

Available literature and observed evidence show is that there is very little evidence of IPRs understanding and adoption in Africa (Musungu, 2014; Mpeirwa, 2004; WIPO, 2003). In a period of globalization, developing competitive and innovative economies through improving the intellectual property protection can provide better results for common activities resulting in institutional and global efficiency. Previously studies (WTO,2016; Harroch,2017; Pikon, 2015; Mrudula,2009) confirm vividly what the theoretical and empirical literature amply demonstrates, that is, intellectual property rights play a critical role in delivering on the promise of the world's entrepreneurs, whose innovative new technologies fuel domestic and international economic growth, and help raise global standards of living. The quality of entrepreneurial ability can be improved through incentives that will entice those individuals with the highest entrepreneurial ability to become entrepreneurs. Intellectual property rights provide precisely the kind of incentives that can enhance the quality of entrepreneurship. Literature studied shows that entrepreneurs play a significant role in bringing emerging technologies to the market, but quite often young firms have a limited awareness of the role that IP plays in commercializing their ideas (WTO, 2016; Biskupski, 2017; Breschi et al., 2018). Intellectual property policy is a key component of growth strategies for the development of innovations. It should be noted that patents are granted by national patent offices or by regional offices that carry out examination work for a group of countries – for example, the European Patent Office (EPO) and the African Intellectual Property Organization (OAPI). IP management is most helpful to SMIEs at their earliest stage of development; that is, before the firm gains traction and starts making revenues. Indeed, during this period, IP is the only real asset available to these companies, which in some cases conditions their business model. Entrepreneurs increasingly recognize IP as a key business asset. IP is the basis for a significant portion of venture capital investments. Building patent portfolios around the core capabilities allows businesses to control sectors of technology, adding increasing value through new products and services associated with it. At the same time, such strategy prevents competitors from developing parallel technologies. This is critical for a startup, as the competitor may be better positioned to exploit his incumbent market position, or his cost-advantage (attained through imitation, rather than R&D), thereby displacing the pioneering firm, if the latter has his core unprotected. Getting the right mix of IP protection, therefore, involves not only an assessment of how much protection the institutional setting provides to IP owners, it

also includes selecting the right mix of IPRs that best suits the entrepreneur. In terms of failure to protect property rights, a number of reasons came out as to why start up business found cumbersome to protect their creative work. Among the stated reasons include the need to avoid start-up costs if one was to pursue the IPRs, with or without the right business can operate, lack of knowledge of what exactly is required in seeking for IPRs. New enterprises have to decide on the intellectual property management strategies, and this strategy is recommended to be active. On the one hand, this way of protection can be costly and demanding. SMIEs' perception about the irrelevance of learning how to use IP is not only a problem of personal sheer ignorance or lack of acumen, but stems from the institutional milieu where they operate (BRESCHI ET AL., 2018).

Table 7 Snapshot survey: Empirical results

A snappy survey of six young entrepreneurs in the city of Francistown in Botswana and Bulawayo in Zimbabwe on their IPRs status presented the researcher with shocking results. The study sought to find whether these entrepreneurs had registered their companies, together with the registrations of their trademark, copyrights and trade secrets. None of the six entrepreneurs understood what IPRs are. 80% of them acknowledged they know about patents, trademarks and trade secrets but could not align these to their businesses. The two who understood the issue of patents and claimed to have originality in the products they were offering expressed the cumbersome process of securing patent rights and one professed ignorance of where the patent offices were located in the country. Asked on what they would do if another company infringes and imitate their innovations, 68% indicated that that would be unfortunate but would not do anything except to remodify and change the design of their product. The result from the snap survey resembles deep-seated challenges faced by entrepreneurs in Africa and lack of knowledge is predominant. The same gap is seen in those who are expected to disseminate knowledge and conscientise the SMEs sector to be wary of co-opting an IPR strategy in their planning. An empirical study, through the ministry responsible for SMEs is proposed to examine circumstances of IPRs from the African entrepreneurial perspective. Ignorance has no defense; hence lack of knowledge on IPR on the part of entrepreneurs in Africa cannot be used to justify their failure.

1.7 Recommendations

The importance of strategic thinking on IP for SMEs and entrepreneurs as they set out to commercialize their ideas in the global economy cannot be overemphasized. Innovation should not be viewed within the narrow prism of intellectual property monopolies but framed within a holistic, knowledge ecosystem that includes open innovation, open knowledge approaches and de-linkage of R&D costs from product prices. Protection of IPR issues and how this meets national priorities is a necessary consideration in achieving IPRs efficiency. Instituting an IPRs strategy requires that the intellectual assets once they have undergone a process of transformation through validation protocols that include IP legislation, but also other rules

emerging from the way the ecosystem is structured: case law, technical standards, professional guidelines, and IP auditing and valuation to name a few becomes valuable. Devising and managing these rules is the purpose of IP management. For entrepreneurs a viable IP strategy is therefore important both for identifying and managing their IP assets as well as for understanding the legal and regulatory frameworks by which these assets might be protected and enforced. The study recommended that when an individual or institution develop an innovative product, it is critical to engage a patent attorney or specialists to verify whether the product or service qualifies for patent protection (in other countries only attorneys who will have passed a separate patent bar exam are qualified to work with patents). In circumstances where the product or service fails to qualify for a patent, it is fundamental to find other ways to make the product or service stand out, such as strong trademark branding and enforcement. The study reiterates that where copying is a very common issue for your product or service –and restricting other players from selling the same type of product may not be possible, institutions should develop a distinct trademark-eligible name the institution, register the trademark, and adopt the usage of that trademark name in all institutional events-from packaging to marketing. An owner of copyright or trademark should adopt the use “notice symbols” on their products, such as © and ®. Thus for copyrightable works, the owner can proceed and place the copyright designation – the “C in a circle” © - on their work from the time the work is created. The other recommendation is that there is need of concerted effort to protect a business’s intellectual property. There is need to have member agreement contracts which should state that all intellectual property developed by employees staff or members, shareholders, and other interested stakeholders belongs purely and absolutely to the institution and that those who develop any intellectual property will execute knowing that any and all documents necessary to protect the company’s rights belong to the company. This is more so very relevant and useful to smaller and medium enterprise sector businesses where the owners are the ones developing most or all of the creative ideas. It is prudent to ensure that any independent contractors and employees involved in the trade secrets make-up appendure their signatures of non-disclosure and non-competition agreements. Effective management of intellectual property should be one of the basic elements of the company’s development policy, which may significantly influence its increase in competitiveness in the market. Mechanisms for measuring alternative rights as opposed to current IPR system that does not capture local innovativeness. There is also need to put effective

strategies for increasing information flow and awareness on IPR at both national and regional levels. African countries need to re-engineer foundations for intellectual property rights, evaluate present policies from various angles with purposes to change local thinking and approaches of international community and inspire them to respect African dignity on her indigenous creative works. A coordinated and multi-sectoral approach involving all interested parties is needed. All this needs to be supported by resources and adequate knowledge dissemination, awareness and campaigns programmes and specific training on the discourse of IPRs for individuals and institutions intending to do so.

1.8 Conclusions

By making the company's intellectual assets the focus of its strategic planning, new opportunities are likely to be identified. Of significance to draw from this study is the need for a comprehensive system of law, which protects intellectual property rights of our people by providing creators of ideas a safe and conducive atmosphere in which to develop those ideas. The study advances the notion that there is if a product is new, it is necessary to seek for a patent as this is critical to compete and stand out from competitors. The management of IP and IPR is a multidimensional task and calls for many different actions and strategies which need to be aligned with national laws puts off majority of SMEs, African entrepreneurs need to be supported and get exposed to the commercial value of IPRs. Researchers and other stakeholders have to deepen their role in bringing to the surface the fundamental benefits of mentoring entrepreneurs to begin to respect and bend to the requirements of IPRs for them to be competitive and sustain their business-making Africa a better place for business.

1.9 References

- Arrow, K.J. (1962). "Economic Welfare and Allocation of Resources for Invention. The Rate and Direction of Inventive Activity: Economic and Social Factors." New York. National Bureau of Economic Research, pp. 609-625
- Baer, K.W. (1995). A Theory of Intellectual Property and the Biodiversity Treaty, 21 SYRACUSE J. INT'L L. & COM. 259.
- Barlow, J.P. (1994). The Economy of Ideas: A Framework for Rethinking Patents and Copyrights in the Digital Age, 2.03 WIRED 83 and Margaret Jane Radin, Property at the Crossroads: Two Paradigms in Need of Reinterpretation (mimeographed / work in progress).
- Barlow, John Perry, 1997, "The Economy of Ideas: Everything You Know about Intellectual Property is Wrong," in Intellectual Property: Moral, Legal, and International Dilemmas, A. Moore (ed.), Lanham, MD: Rowman and Littlefield, p. 359
- Biskupski, Z. (2017). WizjaPolskistartupowej [Polish startup vision].KwartalnikUrzęduPatentowego, 33(3), 18-19.
- Breschi, S., Lassébie, J., & Menon, C. (2018).A portrait of innovative start-ups across countries. Paris, France: OECD Publishing
- Calandrillo, Steve P.,(1998), "An Economic Analysis of Intellectual Property Rights: Justifications and Problems of Exclusive Rights, Incentives to Generate Information, and the Alternative of a Government-Run Reward System," *Fordham Intellectual Property, Media, & Entertainment Law Journal*, 9: 301-360.
- Coy, W. (2007). "On Sharing Intellectual Properties in Global Communities," in J. Fruhbauer, R. Capurro, and T. Hassmanninger (eds.), *Localizing the Internet: Ethics Issues in Intercultural Perspective*
- Farre-Mensa, J., Hegde, D., &Ljungqvist, A. (2015). What is a Patent Worth? Evidence from the U.S. Patent "Lottery".The Bright Side of Patents. USPTO Economic Working Paper, 2015(5), 1-48.
- Fisher, William, (2001), "Intellectual Property and Innovation: Theoretical, Empirical, and Historical Perspectives," in *New Essays in the Legal and Political Theory of Property*, S. Munzer (ed.), Cambridge: Cambridge University Press.
- Glasgow LJ.(2001). Stretching the limits of intellectual property rights: Has the pharmaceutical industry gone too far? *IDEA J Law Technol.*;41:227–58

Glossary of Terms (2016) The National Institute of Intellectual Property.

Gordon, Wendy J., (1993), "Property Right in Self Expression: Equality and Individualism in the Natural Law of Intellectual Property," *Yale Law Journal*, 102: 1533–1609.

Gottlieb S.(2000). Drug firms use legal loopholes to safeguard brand names. *BMJ*. ;321:320.

Harroch, R. (2017). Intellectual Property strategies for technology Startups. *Forbes Magazine*. Retrieved from <https://www.forbes.com/sites/allbusiness/2017/06/06/10-intellectual-property-strategies-for-technology-startups/#348d1fc9ab1b>

Hegel, G.W.F., (1821), *Elements of the Philosophy of Right*, Allen Wood (ed.), Cambridge: Cambridge University Press, 1991.

Holgersson, M., Granstrand, O., & Bogers, M. (2018). The evolution of intellectual property strategy in innovation ecosystems: Uncovering complementary and substitute appropriability regimes. *Long Range Planning*, 51(2), 303-319.

Black's Law Dictionary, 10th ed. (2014). "Intellectual property",

International Bureau of WIPO(2003), World Intellectual Property Organization: General Information WIPO Pub No. 400. 18. International Bureau of WIPO (2003), What Is Intellectual Property?

Kameri-Mbote, P. (1994). 'Patents and Development', in Yash Vyas Et. Al., *Law and Development in the Third World*, Faculty of Law, University of Nairobi, Nairobi, Kenya. Kameri-Mbote, P.(2003).. *Linking Intellectual Property Rights with Biodiversity Management: An African Perspective*. Faculty of Law, University of Nairobi, Kenya, pp 8-15.

Kingston, W.(2001). "Innovation Needs Patents Reform." *Research Policy* 30, 403-423

Liebowitz S (2008) "Intellectual Property". *The Concise Encyclopedia of Economics*. Library of Economics and Liberty.

Michael Rikon,(2015). "Property Rights as Defined and Protected by International Courts," which was presented at Brigham-Kanner Property Rights Conference, The Hague, Netherlands,

Mpeirwe, A. (2004). "Intellectual Property Protection in Africa: An Assessment of the Status of Laws, Research and Policy Analysis on Intellectual Property Rights in Uganda.

Mrudula BS, Durgadevi NK, Madhavi BR, Tejeswi B, Durga PV. Intellectual property rights pinpoint at IPR spotlights coveted R and D. Drug Inv Today. 2009;2:197–201

Musungu, S.S.(2004). "General Trends in the Field of Intellectual Property: Issues and Challenges for the Establishment of a Development Oriented Framework, Regional Dialogue on Intellectual Property Right, Innovation and Sustainable Development in Eastern and Southern Africa, Organized by the International Centre for Trade & Sustainable Development (ICTSD), the United Nations Conference on Trade and Sustainable Development (UNCTAD) and Trade and Industrial Policy Strategies (TIPS), 29 June-1July , Cape Town, South Africa.

Schultz, M., & Madigan, K. (2016). The Long Wait for Innovation: The Global Patent Pendency Problem. Arlington, USA: Center for the Protection of Intellectual Property.

Singh R. (2004).. Law relating to intellectual property (A complete comprehensive material on intellectual property covering acts, rules, conventions, treaties, agreements, case-Law and much more) ; Vol. 1. New Delhi: Universal Law Publishing Co. Pvt. Ltd.

The Right of Property (Article 1 of Protocol 1 of ECHR. <http://echr-online.info>

What are intellectual property rights?"(2016). World Trade Organization.World Trade Organization.

WIPO (2016) What is Intellectual Property? WIPO Publication 1: 450 (E). 2.

Wolson, R. (2001) Towards TRIPS Compliance: South Africa's Experience and Legislative Reforms, ICTSD, ACTS & QUNO. Yankey, G.S. 1987. International Patents and Transfer of Technology to Less Developed Countries: the case of Ghana and Nigeria, Aldershot: Avebury, 1987.