

**EXAMINING THE ROLE OF INTELLECTUAL PROPERTY LAW IN KENYA'S  
OIL AND GAS SECTOR**

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SUBMITTED TO THE UNIVERSITY OF CAPE TOWN

In fulfilment of the requirements for the degree of Doctor of Philosophy

FACULTY OF LAW: UNIVERSITY OF CAPE TOWN

September 2019

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## **ACKNOWLEDGEMENTS**

I am grateful to my supervisor, Professor Caroline Ncube, for her guidance and support.

I am also grateful to my parents for their support and inspiration.

I thank my siblings and friends for their support.

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## ABBREVIATIONS

ADR	Alternative Dispute Resolution
CBD	Convention on Biological Diversity 1992, 1760 UNTS 79.
CFI	Court of First Instance
CMA	Capital Markets Authority
CDPA	The Copyright, Designs and Patents Act 1988 (Chapter 48).
CSIR	Council for Scientific and Industrial Research
ECJ	European Court of Justice
EIA	Environmental Impact Assessment
EMCA	The Environmental Management and Coordination Act Number 8 of 1999
EU	European Union
FDI	Foreign Direct Investment
ICT	Information and Communication Technology
IP	Intellectual Property
IPA	The Industrial Property Act, 2001
IPRs	Intellectual Property Rights
KECOBO	Kenya Copyright Board
KIPI	Kenya Industrial Property Institute
MNC	Multinational company
MPSR Act	The Movable Property Security Rights Act Number 13 of 2017
MTA	Material Transfer Agreement
NDAs	Non-Disclosure Agreements
OFT	Office of Fair Trading
PTK Act	The Protection of Traditional Knowledge and Cultural Expressions Act, 2016
SMEs	Small and Medium Enterprises
TK	Traditional Knowledge
TKDL	Traditional Knowledge Digital Library
TKDR	Traditional Knowledge Digital Repository
TRIPS	Agreement on Trade Related Aspects of Intellectual Property Rights 1994, 1869 UNTS 299

UK	United Kingdom
UKUDR	United Kingdom Unregistered Design Rights
USA	United States of America
WIPO	World Intellectual Property Organisation
WTO	World Trade Organisation

## ABSTRACT

This thesis analyses how Kenya should apply intellectual property (IP) law in the country's oil and gas sector to foster innovation and support economic growth within the context of the country's development plan, Kenya Vision 2030. Specifically, the thesis considers the possible influence of IP law on innovation, investment and economic growth in the oil and gas sector in Kenya. Using doctrinal methodology, the thesis examines legislation and case law from Kenya, South Africa and the United Kingdom relating to competition and protection of patents, copyright, trade marks, trade secrets and industrial designs. This examination is based on a public interest approach to IP law and competition law and seeks to determine the possible effect of Kenya's IP laws on investment and innovation in the sector.

The study finds that IP law and competition law reflect an attempt to accommodate public interest and the interests of investors. It argues that regulation of Kenya's oil and gas sector using IP law is likely to enhance innovation and support economic growth if relevant IP laws provide for protection of IP whilst safeguarding public interest. The thesis also finds that protection of traditional knowledge (TK) is likely to be relevant to the upstream oil and gas sector in Kenya for environmental resource management. It argues that optimal management of TK is likely to entail collaborative work between indigenous communities, public institutions and private enterprises, as provided for in Kenya's Environmental Management and Coordination Act (Number 8 of 1999).

The thesis makes proposals for a regulatory environment that is likely to provide a firmer basis for investment in the country's oil and gas industry, promote competition in markets for IP in Kenya, provide a sustainable IP law framework for the sector for economic growth in Kenya, preserve TK of local communities and enhance equitable sharing of benefits related to TK in the context of the country's oil and gas industry. The thesis contributes to literature on Kenya's oil and gas industry by filling the apparent gap in analysing the possible effect of the country's IP law on investment in the industry and public interest.

## CHAPTER ONE: INTRODUCTION

‘Intellectual [p]roperty [r]ights are not an end in themselves but only a means towards greater economic welfare for all.’<sup>1</sup>

### 1. Background of the Study

In 2013 oil reserves were discovered in the Turkana region of Kenya.<sup>2</sup> The following year saw the discovery of oil and gas reserves in the country’s Lamu basin region.<sup>3</sup> In 2018, the first consignment of crude oil was transported from Turkana to Mombasa, the country’s coastal city, for storage and export.<sup>4</sup> These developments in the country’s energy sector appear to forecast a positive change in its economic growth by providing an alternative to importation of the two products. Crude oil and refined oil products account for approximately 25 per cent of Kenya’s imports.<sup>5</sup> Currently, all of Kenya’s petroleum requirements are served by imports.<sup>6</sup>

Petroleum products in the country are principally used by the road and air transport sectors, industrial, commercial and domestic consumers.<sup>7</sup> Based on these diverse uses for petroleum products, it is usually the case that increments in the price of a product such as petrol will have a domino effect and push prices of goods and services upwards. Exploration for oil and gas is continuing and it is projected that it will take a number of years before Kenya becomes an

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<sup>1</sup> Dean Baker, Arjun Jayadev & Joseph Stiglitz, ‘Innovation, intellectual property and development: a better set of approaches for the 21st century,’<sup>70</sup>. Available at [ip-unit.org/wp-content/uploads/2017/07/IP-for-21st-Century-EN.pdf](http://ip-unit.org/wp-content/uploads/2017/07/IP-for-21st-Century-EN.pdf), accessed on 25 January 2019. (Hereafter Baker, Jayadev and Stiglitz 2017).

<sup>2</sup>George Omondi ‘Tullow strikes new oil deposits in Turkana’ available at <http://www.businessdailyafrica.com>, accessed on 4 June 2015.

<sup>3</sup>Zeddy Sambu ‘British company discovers oil, gas in Lamu’ available at <http://www.nation.co.ke/business>, accessed on 4 June 2015. (Hereafter Sambu 2015).

<sup>4</sup> Neville Otuki ‘Cost of Turkana oil pipeline now drops by Sh. 100 billion’ available at <https://www.businessdailyafrica.com/news/Cost-of-Turkana-oil-pipeline--now-drops/539546-4588006-y2sbmjz/index.html>, accessed on 21 July 2018. (Hereafter Otuki 2018).

<sup>5</sup>Institute of Economic Affairs ‘Situational analysis of energy industry, policy and strategy for Kenya’ (2015) 27 available at <http://www.ieakenya.or.ke/publications>, accessed on 18 June 2015 (Hereafter Situational Analysis of Kenya’s Energy Industry, 2015).

<sup>6</sup>Ibid.

<sup>7</sup>Situational Analysis of Kenya’s Energy Industry 2015 at 30.

oil producing country.<sup>8</sup> In the meantime, international oil and gas companies have established exploration and mining operations in Kenya as a result of the oil and gas finds.<sup>9</sup>

Generally, exploitation of oil and gas resources requires large investments in capital and infrastructure before revenue generation can be realised.<sup>10</sup> This means that an investor would need to anticipate a profit – making operation before incurring the various risks that are attendant to committing resources to an enterprise of that nature. Previously, multinational companies in the oil and gas industry have set up operations in Kenya to handle distribution of imported oil and gas products.

Economic competitiveness and environmental sustainability have been cited as drivers for innovation in the energy sector.<sup>11</sup> Innovation in the oil and gas industry has not only focused on increasing production, by changing the manner in which companies explore, drill, produce, process and distribute oil and gas but also by improving operational safety for those working in the industry.<sup>12</sup> It has also been noted that much of the recent technology development in the oil and gas sector is focused on reducing the environmental impact of oil exploration.<sup>13</sup>

Whereas individual companies have engaged in innovative activities that serve their unique needs, models of innovation such as open innovation are emerging in the oil and gas sector.<sup>14</sup> Traditionally, the approach taken by enterprises has been to shield themselves against competition in the market instead of working with their competitors to achieve collective improved output.<sup>15</sup> However, open innovation has increasingly been adopted through the use of concerted effort among competing business organisations in aspects such as product

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<sup>8</sup> Situational Analysis of Kenya's Energy Industry 2015 at 27.

<sup>9</sup> Kenya Institute of Public Policy Analysis 'Kenya Economic Report 2013' (2013) 144 available at <http://www.kippra.org/downloads/Kenya%20Economic%20Report%202013.pdf>, accessed on 18 June 2015. (Hereafter Kenya Economic Report 2013).

<sup>10</sup> Ibid at 145.

<sup>11</sup> Laura Diaz Anadon, et al 'Transforming U.S. Energy Innovation' (2011) 19 available at <http://nrs.harvard.edu/urn-3:HUL.InstRepos:10594301>, accessed on 15 June 2015. (Hereafter, Anadon et al 2011).

<sup>12</sup> PWC 'Gateway to Growth: Innovation in the Oil and Gas Industry' (2013) 2 and 13 available at [http://www.pwc.com/en\\_GX/gx/oil-gas-energy/publications/pdfs/pwc-gateway-to-growth-innovation-in-the-oil-and-gas-industry.pdf](http://www.pwc.com/en_GX/gx/oil-gas-energy/publications/pdfs/pwc-gateway-to-growth-innovation-in-the-oil-and-gas-industry.pdf), accessed on 15 June 2015. (Hereafter PWC 2013).

<sup>13</sup> Situational Analysis of Kenya's Energy Industry 2015 at 145.

<sup>14</sup> (Situational Analysis of Kenya's Energy Industry 2015) at 10.

<sup>15</sup> Henry W Chesbrough and Melissa M Appleyard 'Open innovation and strategy' *California Management Review* 50 (2007) 57. (Hereafter Chesbrough and Appleyard 2007).

development.<sup>16</sup>Collaborating with companies in the same industry has the benefit of consolidating resources especially where breakthrough innovations, which require extensive research, are required.<sup>17</sup>In light of this, it is noteworthy that the difficulty in protecting intellectual property (IP) has been identified as one of the factors which hamper international cooperation in energy research and development.<sup>18</sup> In Kenya's oil and gas sector, if IP protection is prioritised by firms to maintain their competitive advantage, there may be reluctance by the firms to enter into collaborative work arrangements with their competitors. This may however be influenced by the nature of the work proposed to be done in such arrangements and if protected IP features in the work. The interplay between open innovation and economic growth will be studied further in the second chapter of this work.

This thesis will examine the role of Kenya's IP laws in the country's oil and gas industry. In order to achieve this, a main research question and its sub-questions will indicate the aspects that the work will examine. This is based on the potential link between IP, IP protection and economic growth, which will be considered in this section of this chapter and in the second chapter of the thesis. The main research question is: how should Kenya apply IP law in the country's oil and gas sector to foster innovation and support economic growth? To address the question, the thesis will consider the expected outcome(s) of the application of Kenya's IP laws in the context of the growth of Kenya's economy to achieve the objective of regulating the industry.

The supply chain in the oil and gas industry consists of upstream components – exploration and production and downstream components – refining and retail.<sup>19</sup> The mid-stream segment of the industry, which includes storage, refining and transportation, is usually clustered with the downstream sector.<sup>20</sup>The thesis will consider IP in both upstream and downstream elements of the sector in Kenya. This is because there is an already established downstream sector in the country which will form the basis of examining the oil and gas industry *vis – a – vis*

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<sup>16</sup> Ibid.

<sup>17</sup> Ibid.

<sup>18</sup> Ibid at 44.

<sup>19</sup> African Development Bank and the African Union, Oil and gas in Africa: Joint study of the African Development Bank and the African Union, (2009) 35.(Hereafter ADB and the AU – Oil and Gas in Africa, 2009).

<sup>20</sup> Ministry of Energy and Petroleum, Republic of Kenya, 'National energy and petroleum policy – final draft' (2015) 24. Available at <https://www.ketraco.co.ke>, accessed on 12 December 2018. (Hereafter National Energy and Petroleum Policy 2015).

IP protection from a historical and current perspective. The upcoming upstream sector will together with the downstream sector, form a basis for study of the industry in future.

Statutory provisions in Kenya's IP laws that are relevant to the oil and gas industry will also underlie the study in this thesis. These are: the law relating to patent protection, trade mark and trade secret protection, industrial design, copyright and traditional knowledge (TK) protection. The interpretation and application of these provisions in Kenya's courts will also be studied, where reported cases that are relevant to the IP in the study are available. South Africa's and the United Kingdom's statutes relating to the IP above will also feature in the study, together with case law from the two jurisdictions that relates to the IP. Where available, cases relating to the oil and gas or mining sectors will be used to underline the principles applied in the cases.

The choice of South Africa and the United Kingdom (UK) as jurisdictions for study of statutory provisions and case law relating to the IP that is relevant to the oil and gas industry is guided by the use of English common law as a source of law in the two countries. This is similar to its use in Kenya. Similarity in some statutory provisions relevant to the IP (owing to the membership of the three countries in the Agreement on Trade Related aspects of Intellectual Property Rights (TRIPS)) will be studied in chapter four of the thesis.

Although the economic circumstances between the UK and Kenya are different, with, for instance, Kenya having a lower middle income economy<sup>21</sup> whilst the UK has a high income one<sup>22</sup>, the UK's well – established oil and gas industry will serve as a useful reference point from a comparative perspective. Therefore, application of laws relating to IP in South Africa and the UK, where there is case law related to IP that is specific to commercial mining, is a relevant reference point for this thesis. According to the UK Onshore Oil and Gas, the representative body for the UK onshore oil and gas industry, oil was discovered in Scotland in 1851.<sup>23</sup> Gas was thereafter discovered in England in 1896.<sup>24</sup> In 2015, a significant discovery of oil in Southern England was made.<sup>25</sup> The location of this latest oil find in residential and protected environmental areas has raised questions about the substitution of fossil fuel energy with clean

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<sup>21</sup> <https://data.worldbank.org/country/kenya>, accessed on 8 July 2019.

<sup>22</sup> Available at <https://data.worldbank.org/country/united-kingdom>, accessed on 8 July 2019.

<sup>23</sup> Available at <http://www.ukoog.org.uk/onshore-extraction/history>, accessed on 26 August 2016.

<sup>24</sup> Ibid.

<sup>25</sup> Available at <http://www.bbc.com/news/business-32229794>, accessed on 26 August 2016.

energy.<sup>26</sup> The length of time during which oil and gas exploration has taken place in the UK makes it a reference point from which Kenya may draw some lessons in terms of the functioning of the oil and gas industry in that legal framework.

Economically, Kenya and South Africa are not similarly situated. Kenya is currently categorised as a lower middle income country<sup>27</sup> whereas South Africa is in the upper middle income category<sup>28</sup>. South Africa's Intellectual Property Policy Phase I, 2018 (hereafter South Africa's IP Policy 2018) provides insight into how the country seeks to develop its IP laws to foster investment and economic growth and Kenya can derive insights into policies that may drive its development agenda from South Africa. Both Kenya and South Africa currently target investment in their respective economies with a view to becoming preferred investment destinations.<sup>29</sup> This is intended to realise economic growth. It has been reported that offshore exploration of South Africa's oil and gas reserves has been undertaken and that the country's Karoo basin may contain substantial quantities of shale gas reserves.<sup>30</sup> This provides a basis for comparison of Kenya's and South Africa's respective approaches from a legal perspective regarding regulation of the oil and gas industry.

South Africa's largest indigenous energy resource is coal.<sup>31</sup> The country's shale gas reserve is a prospective resource whose economic potential will be fully determined once tests have been conducted.<sup>32</sup> Further, it will be necessary to have large investments in infrastructure before the country can become a major shale gas producer.<sup>33</sup> The potential for mining coal – bed methane gas in South Africa is currently under exploration.<sup>34</sup> Although the country's oil reserves are limited,<sup>35</sup> its experiences in exploration and production of mineral reserves will be an important source of information with regard to potential occurrences and interactions between

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<sup>26</sup> Ibid.

<sup>27</sup> Available at <https://data.worldbank.org/country/kenya>, accessed on 26 January 2019.

<sup>28</sup> Available at <https://data.worldbank.org/country/south-africa>, accessed on 26 January 2019.

<sup>29</sup> See, for example <http://invest.go.ke/>, accessed on 26 January 2019 and [https://www.thedti.gov.za/trade\\_investment/why\\_invest\\_insa.jsp](https://www.thedti.gov.za/trade_investment/why_invest_insa.jsp), accessed on 26 January 2019.

<sup>30</sup> Lizel Oberholzer 'Oil and gas regulation in South Africa: overview' available at <https://uk.practicallaw.thomsonreuters.com/>, accessed on 26 January 2019.

<sup>31</sup> Government of South Africa, 'South Africa Yearbook 2014/15' (2015) 143. (Hereafter SA Yearbook 2014/15).

<sup>32</sup> Available at <http://www.petroleumagency.com/index.php/petroleum-geology-resources/frontier-geology>, accessed on 26 August 2016.

<sup>33</sup> Ibid.

<sup>34</sup> SA Yearbook 2014/15 at 142.

<sup>35</sup> Ibid.

the mining sector and its legal framework. Further, given that it was ranked as one of Africa's leading investment destinations in 2015,<sup>36</sup> it will be useful to assess the factors which have contributed to this position.

Legal risk management related to IP protection for persons engaged in the oil and gas industry can be aided by knowledge of the application of statutory provisions by courts. Therefore, a study of the application of the IP laws through the court systems in the three jurisdictions will be a useful follow-up to statutory provisions which will be highlighted in the thesis to form a clear picture of the legal environment in the IP protection context for oil and gas industry players. An assumption underlying the approach taken by the thesis in studying the legal environment is that it will reveal the relative certainty created by statutes and case law related to IP protection in Kenya for the benefit of the industry.

The preservation of competitive market conditions in the oil and gas industry in Kenya in the face of the exercise of IP will be considered by the thesis through the study of provisions in Kenya's laws that are intended to meet this objective. A comparative examination of South Africa's and the UK's laws in this regard will provide a basis for making projections on how aspects of competition law related to IPRs that may not have been applied by Kenya's courts are likely to be applied in future.

Sustainability of the role played by Kenya's IP laws in the oil and gas sector *vis a vis* the country's economic growth will feature in the thesis. This will be through the conclusions and recommendations that will be based on the findings in the thesis that relate to what effect the IP laws are likely to have on the sector. Previous study of the role of Kenya's IP laws has included an examination of access to medicines and access to materials protected by copyright.<sup>37</sup>

Other research conducted on the country's IP laws has been about *inter alia* patent subject matter exclusions in Kenya,<sup>38</sup> assessment of the laws, research and policy analysis on

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<sup>36</sup> African Development Bank, Organization for Economic Co-operation and Development and United Nations Development Programme, 'African Economic Outlook 2016' (2016) 53.

<sup>37</sup> See for example, Moni Wekesa and Ben Sihanya (eds) '*Intellectual Property Rights in Kenya*' (2009). (Hereafter Wekesa and Sihanya 2009). See also Ben Sihanya, 'Patents, parallel importation and compulsory licensing of HIV/AIDS drugs: The experience of Kenya.' Available at [https://www.wto.org/english/res\\_e/booksp\\_e/casestudies\\_e/case19\\_e.htm](https://www.wto.org/english/res_e/booksp_e/casestudies_e/case19_e.htm), accessed 1 January 2020.

<sup>38</sup> For example, Victor Nzomo and Isaac Rutenberg 'Patenting the unpatentable: Lessons for African Patent Systems from a review of patent subject matter exclusions in Kenya' (2017) 58 *South African Intellectual Property Law Journal* (Hereafter Nzomo and Rutenberg 2017).

IPRs in Kenya<sup>39</sup> and the role of IP in innovation and socio-economic development in Kenya.<sup>40</sup> This thesis seeks to fill the gap in research pertaining to the application and potential application of the country's IP laws to its oil and gas sector. It will also consider the potential effect of the application of the laws on Kenya's economy as a result of the laws' potential effects on investors in the oil and gas industry.

### **1.1 The Role of IP Laws in Kenya's Oil and Gas Sector**

The role played by IP laws in Kenya in the oil and gas sector will be considered from four points, which are based on roles that IP laws can play in relation to economic growth. The link between IP laws and economic growth has been contested based on the argument that IP laws may influence such growth in addition to other laws.<sup>41</sup> This position is valid given that there are various aspects of firms' operations regulated by different laws, including those that provide for a firm's formation. As seen below, IP protection may provide an advantage to IPR holders but it may also limit access to information for training in some industries and negatively affect competition in a market.

It emerged in a study that in the informal sector in Kenya, specifically among some metalworkers, that secrecy has been used to maintain a competitive advantage.<sup>42</sup> Other reasons cited by the workers in the study for use of secrecy were costs and time incurred by processes leading to formal IP protection.<sup>43</sup> The study also found that secrecy was discouraged among some groups of the workers in which training was undertaken as work continued.<sup>44</sup> Other methods such as being the first to market a product were also used by the workers to attain a competitive advantage in the market.<sup>45</sup>

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<sup>39</sup> Dr. Patricia Kameri-Mbote 'Intellectual property protection in Africa: an assessment of laws, research and policy analysis on intellectual property rights in Kenya' IELRC Working Paper (2005). (Hereafter Kameri-Mbote 2005).

<sup>40</sup> Ben Sihanya 'Intellectual property and mentoring for innovation and industrialization in Kenya' (2008) 4 *University of Nairobi Law Journal* 20.

<sup>41</sup> C B Ncube 'Harnessing intellectual property for development: some thoughts on an appropriate theoretical framework' (2013) 16 *Potchefstroom Electronic Law Journal* 371. (Hereafter, Ncube 2013).

<sup>42</sup> Christopher Bull et al 'Country study on innovation, intellectual property and the informal sector in Kenya: The informal metalworking sector in Kenya' World Intellectual Property Organization Committee on Development and Intellectual Property (2014) 32. (Hereafter, Bull et al 2014).

<sup>43</sup> Bull et al 2014 at 32.

<sup>44</sup> Bull et al 2014 at 32.

<sup>45</sup> Bull et al 2014 at 31.

The findings in the above study indicate that there is awareness in Kenya's informal sector about the possibility of IP protection giving workers an advantage in the market but also acting as a barrier in circumstances in which availability of information would be important to facilitate training.

The use of secrecy by workers in informal sector automotive engineering was also found by a study in Uganda.<sup>46</sup> The method of IP protection was aimed at customer retention.<sup>47</sup> The study also found that the possibility of using the method was in some cases prevented by the open air workspace in which the workers were based.<sup>48</sup>

It has been noted that patents may indicate technical competence and legitimacy in science – based industries.<sup>49</sup> Such credibility may then be used by organisations in seeking collaborative research arrangements with institutions such as universities.<sup>50</sup> The arrangements may in turn lead to innovation. Given that some of the work done in the oil and gas industry is science-based, award of patents to firms may positively influence collaborative work in the industry and possibly lead to innovations that benefit the industry in Kenya and elsewhere.

Possible anti-competitive effects of granting patents for subject matter that is not eligible for such protection has been noted.<sup>51</sup> It has however been indicated that the legal and socio-economic contexts within which IPRs apply will influence the impact of the rights on markets.<sup>52</sup> To counter the negative effect of such patent grant in Kenya, invalidation and revocation proceedings in the patent office or courts have been proposed as a channel that would provide opportunities for another level of review of patents.<sup>53</sup>

The four points below, which are drawn from benefits that can be derived from IP protection, will be linked to the country's economic growth in chapter 2 of the thesis. These points are:

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<sup>46</sup> Dick Kawooya 'Informal – formal sector interactions in automotive engineering, Kampala' in Jeremy de Beer et al (eds) *Innovation and Intellectual Property: Collaborative Dynamics in Africa* (2014) 71. (Hereafter, Kawooya 2014).

<sup>47</sup> Kawooya 2014 at 71.

<sup>48</sup> Kawooya 2014 at 71.

<sup>49</sup> Helena Barnard and Tracy Bromfield 'The development and management of an intellectual property strategy in a developing country context: The case of Sasol' in *The Economics of Intellectual Property in South Africa* (2009) 84-5. (Hereafter Barnard and Bromfield 2009).

<sup>50</sup> Ibid at 96.

<sup>51</sup> Correa 2007 at 6.

<sup>52</sup> Ibid.

<sup>53</sup> Nzomo and Rutenberg 2017 at 74.

### **1.1.1 Provision of a Basis for Investment**

To encourage investment in the oil and gas sector by firms, a regulatory environment that protects investors' IP is essential. Although other elements of an environment in which a firm would like to set up its operations may influence its decision to begin operations there, the protection of its IP is likely to be a primary consideration. Enterprises may use capital for a number of production inputs, some which may be acquired from external sources and others which may be generated from internal resources. Where the inputs used in an enterprise are IP – related, their protection may be essential to the continued existence and success of a business from a profit-making angle. Chapters two and four of the thesis will look at IP – related assets in general and those in the oil and gas industry in particular in order to contextualise the role played or likely to be played by IP laws in Kenya from a business perspective.

The relative certainty provided by the IP laws in dealing with aspects related to IP, such as requirements for registration of IP and the rights that accrue to IP owners is important for planning by firms. The management of a firm's IP may require pursuing and renewing protection of the IP and dispute management related to IP. Statutory and judicial authorities that are relevant to the IP are useful in this regard. These will be studied in chapters two, four and five of the thesis.

### **1.1.2 Preservation of the Traditional Knowledge (TK) of Local Communities**

The Protection of Traditional Knowledge and Cultural Expressions Act, 2016 (Number 33 of 2016) (PTK Act) and the Environmental Management and Co-ordination Act, 1999 (Number 8 of 1999) (EMCA) promote this function of Kenya's IP laws as will be seen in chapter three of the thesis.

Turkana, the region of Kenya from which the extraction of petroleum started in 2018, is inhabited by communities which have lived there for generations. Studies conducted among the Turkana people who live in the region have found that they have in-depth traditional ecological knowledge that is relevant to river-related forest research and management.<sup>54</sup> This knowledge may prove useful in the management of the environmental resources in the area in circumstances where oil extraction may have an impact on the environment. Thus, the possible impact of the

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<sup>54</sup> Jon Stave et al 'Traditional ecological knowledge of a riverine forest in Turkana, Kenya: implications for research and management' (2007) 16 *Biodiversity and Conservation* 1485. (Hereafter, Stave 2007).

PTK Act and the EMCA on the possible use of TK that has been generated by the Turkana people in oil mining will be considered in chapter three of the thesis.

### **1.1.3 Promotion of competition in Kenya's markets**

As chapter five of the thesis will indicate, pro-competitive provisions in Kenya's IP laws and also in the Competition Act Number 12 of 2010 limit the manner in which the rights granted by IP can be exercised by right holders, for the benefit of the relevant market(s). A study of the role of Kenya's competition law in the context of IPRs in the oil and gas industry is important because of the law's intended purpose in promoting the public interest. This thesis defines public interest as the economic and social welfare of people. The definition is derived from the intended purpose of Kenya's long-term national planning strategy, Kenya Vision 2030 (hereafter Vision 2030) – the attainment of middle-income status by the country with consequent improvement in quality of life by its citizens.<sup>55</sup> A further discussion of public interest will be undertaken by section 2.6 of chapter two of the thesis.

In the industry, the existence of competitive markets is likely to have the effect of achieving price levels for IP – protected assets that may enable more access to the assets through tools such as IP licences. IP licences enable authorised exercise of IPRs by a licensee. Increased accessibility to those assets may in turn enhance oil and gas production. Public interest may be served by increased production of the two natural resources through revenue-generating sale of the commodity. Conversely, public interest in this context may be curtailed by unchecked exercise of IPRs in the industry.

### **1.1.4 Provision of a sustainable IP legal framework for the oil and gas sector for economic growth in Kenya**

Chapter six of the thesis will assess the findings in chapters two to five of the thesis and determine whether Kenya's IP law framework is likely to meet objectives (i) to (iii) above in a manner that will support and enable the achievement of the economic growth goal of Vision

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<sup>55</sup>Government of the Republic of Kenya 'Kenya Vision 2030' (2007) 1, available at [http://www.vision2030.go.ke/wp-content/uploads/2015/06/Vision2030\\_Popular\\_version\\_final2.pdf](http://www.vision2030.go.ke/wp-content/uploads/2015/06/Vision2030_Popular_version_final2.pdf), accessed on 15 June 2015. (Hereafter Vision 2030).

2030. It will make recommendations to address the shortcomings of the laws studied in chapter two to chapter five of the thesis.

This thesis' main perspective is that of the enterprises operating in the sector on the one hand and the Kenyan public on the other. This is informed by the importance of having an IP legal framework that is responsive to the needs of businesses in the industry and the general public in the country, as economic growth will depend upon the activities undertaken by both parties and the effect that the law will have in relation to the parties' interests. The respective parties' interests in relation to Kenya's IP laws will be studied in detail in chapters two to five of the thesis. However, in order to establish the basis upon which chapter six of the thesis will propose a sustainable approach to the enactment and application of Kenya's IP laws in the oil and gas industry to achieve economic growth, these interests are noted below, briefly.

As seen above, firms may seek protection of their IP in order to start and sustain the firms. The general public looks to the country's IP regime to protect investments by firms started by members of the public, to create employment opportunities in established firms and to enable access to IP – related assets generated by others. The general public also depends on such a regime to protect TK generated and preserved by communities. At a glance, the ability of an IP regime to advance these respective interests should have the overall effects of income generation by firms and the public. Ideally, these effects, maintained over a period of time within an economy, are likely to result in the growth of an economy. It is appreciated that an IP regime is only one ingredient in Kenya's economy that is necessary for the fulfilment of the economic growth objective. This thesis uses the assumption that Kenya's IP regime is an important basis for meeting that objective. This is premised upon the identification of science, technology and innovation as two of the support bases of Vision 2030.<sup>56</sup> Kenya's constitutional provision for the support, promotion and protection of the IPRs of the people of Kenya by the State<sup>57</sup> is an indicator of the importance of IPRs in the country's economic growth agenda.

### **1.1 Research questions**

Once the four roles of Kenya's IP laws in the oil and gas industry have been indicated and described by respective chapters of the thesis as described above, the answers to the following

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<sup>56</sup> Vision 2030 at 6.

<sup>57</sup> Article 40(5) of the Constitution of Kenya, 2010.

questions will determine whether Kenya's IP laws which pertain to the oil and gas sector are likely to achieve the indicated objectives. As earlier noted, the main research question is: how should Kenya apply intellectual property law in the country's oil and gas sector to foster innovation and support economic growth? This question will be answered by probing the following sub-questions:

1. What, if any, role can IP play in achieving the national policy goals related to the sector?
2. How, if at all, is IP currently being leveraged in Kenya?
3. How can such use or leverage be improved?
4. How does having IP law in Kenya as a regulatory tool in the oil and gas sector interact with Kenya's competition law to create an enabling environment for innovation in Kenya?
5. How, if at all, is the application of IP law in Kenya to the oil and gas sector likely to advance the country's economic growth agenda?
6. Which lessons from Kenya, South Africa and the UK can apply to enhance the effective use of IP law in the regulation of Kenya's oil and gas industry to advance national economic growth?

From the above questions, the thesis also seeks to make proposals for optimal achievement of the identified roles of Kenya's IP laws through the country's IP law framework.

## **1.2 Justification of the Study**

The demand for energy in Kenya is expected to increase as development projects aimed at attaining a middle-income status for the country by 2030 are undertaken.<sup>58</sup> Lower cost energy production is required in order to maximise output in such projects.<sup>59</sup> In light of the projected impact that the oil and gas finds will have on Kenya's economy and the importance of innovation in the industry, a study focused on the interaction between the country's IP laws and the oil and gas industry is relevant. The importance of innovation in the country's development blueprint is

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<sup>58</sup>Vision 2030 at 8.

<sup>59</sup>Ibid.

underscored by the identification of innovation as a tool that will enhance productivity in various segments of the economy.<sup>60</sup>

Kenya's development agenda is premised upon economic growth which will partially be achieved by increasing investment in income generating segments of its economy.<sup>61</sup> It has been argued that a weak IP rights (IPRs) system deters foreign direct investment (FDI) because of the increased likelihood of unauthorised imitation and breaching of IP licensing agreements.<sup>62</sup> However, given that IPR systems are just one component of a country's regulatory system which includes its taxation, investment regulations, production incentives and trade policies, strong IPRs alone do not generate incentives that are strong enough for firms to invest in a country.<sup>63</sup> It has also been argued that middle and high income countries are more likely to benefit from strong IP regimes due to enhanced ability to exploit the advantages offered by imported technology.<sup>64</sup> Thus, the link between IP protection and FDI is arguably unclear. The research will therefore seek to identify any impact that Kenya's IP laws may have on investment in the country's oil and gas industry.

### 1.3 Statement of the Problem

As noted in section 1 of this chapter, the possible influence of IP law on investment decisions and economic growth is debatable.<sup>65</sup> This thesis studies the possible influence of Kenya's IP law on the country's oil and gas sector in relation to the country's economic growth. This section of the chapter will *inter alia*, continue with the examination of competing interests related to IPRs that was introduced by section 1.1 of this chapter. This will provide a basis upon which the possibility that IP protection in Kenya's oil and gas sector could lead to economic growth can be assessed by the thesis.

The legal environment within which enterprises operate is a determining factor when they make their investment decisions. Where the law provides an enabling environment for firms to

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<sup>60</sup>Ibid.

<sup>61</sup>Ibid at 1.

<sup>62</sup> Beata Smarzynska Javorcik 'The composition of foreign direct investment and protection of intellectual property rights: evidence from transition economies' (2004) 48 *European Economic Review* 41.

<sup>63</sup>Keith E Maskus 'The role of intellectual property rights in encouraging foreign direct investment and technology transfer' (1998) 9 *Duke Journal of Comparative and International Law* 128 – 9.

<sup>64</sup> James Thuo Gathii, 'Strength in intellectual property protection and foreign direct investment flows in least developed countries' 44 *Georgia Journal of International and Comparative Law* (2016) 526 (Hereafter, Gathii, 2016).

<sup>65</sup> See, for example, Ncube 2013 and Gathii 2016.

be set up and conduct their operations, it increases the possibility that a country's economy will realise the benefits which arise from having an active enterprise sector. Although the laws which guide the form in which a business organisation will be formed, how it will obtain necessary licences to run its operations and pay taxes to the state will be of paramount importance at the beginning of its existence, laws which guide the management of the firm's assets will acquire greater priority as it begins its income-generating activities.

Given that it is projected that Kenya's extractives industry will soon feature oil and gas as locally produced commodities, the on-going investment by companies in the upstream oil and gas sector will need to take into account the preservation of their IP within the context of Kenya's IP law landscape. Further, it will be important to assess the types of IPRs that are held within the oil and gas industry and how these are generated. The outcome of such analysis will enable conclusions to be reached about any role that Kenya's IP laws will have in encouraging investment and innovation in the country's oil and gas industry.

The relationship between IP laws in Kenya and the country's competition law regime will also feature in such a study in light of the (mostly limited time-frame) market power likely to be generated by IPRs. Further, the research will assess the possibility of finding a balance between oil companies' IPRs and the public interest. Recommendations made will address the provisions in Kenya's IP and competition laws and the jurisprudence that has emerged in cases where the subject matter has been IPRs.

Innovation has been defined as the conversion of knowledge into new commercialised technologies, products and processes, and how these are brought to market.<sup>66</sup> Additional definitions of the term will be examined in the second chapter of this thesis. It requires the transformation of capital, such as equipment, research and development (R&D), IP and training into outcomes such as new products, improved quality and new production processes.<sup>67</sup>

The importance of innovation in increasing economic productivity has been cited in studies which then link increased production with increment in a country's gross domestic

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<sup>66</sup> World Intellectual Property Organisation '2011 World intellectual property report: the changing face of innovation' (2012) 23.

<sup>67</sup>Xavier Cirera, 'Catching up to the technological frontier? Understanding firm – level innovation and productivity in Kenya' (2013) I available at <https://openknowledge.worldbank.org/handle/10986/21684>, accessed on 14 June 2015.(Hereafter Cirera 2013).

product per capita.<sup>68</sup> FDI, licensing and joint ventures have served as solutions to reduction of the resultant income gaps between high and low income countries which are partly generated by technology gaps.<sup>69</sup> The exchange of information that occurs where such interactions between countries take place means that IP protection becomes a necessary tool in facilitating an optimal degree of information – sharing whilst securing the advantaged position of the more technologically – advanced party.

In Kenya, most innovations within firms consist of small improvements to existing products and processes, or the incorporation of products that are already produced by other enterprises in the domestic market.<sup>70</sup> Therefore, overall, levels of what have been referred to as radical innovations (those new in international markets) in the country are lower than in industrialised countries.<sup>71</sup> Appropriation of IP by firms in Kenya through registration of trade marks has been found to be more prevalent than through registration of patents.<sup>72</sup> This is a pointer to the fact that it is likely that technology transfer will be required where a major innovation in a local enterprise is required.

However, it has been argued that using the number of patents issued as the only measure of innovation is a flawed method, owing to the varied contexts within which innovation takes place.<sup>73</sup> For example, where innovation takes place in formal sectors of the economy, documentation of such a development is more likely to take place than in informal sectors of the economy.<sup>74</sup> Therefore, research that is focused on innovation in such formal sectors may be misleading where such limited information is the basis of making conclusions about overall innovation within a country's economy.<sup>75</sup> The two perspectives highlighted below provide a preview of aspects that are relevant to this study.

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<sup>68</sup>World Intellectual Property Organization, 'World IP Report 2011' (2011) 25 available at [http://www.wipo.int/econ\\_stat/en/economics/wipr/](http://www.wipo.int/econ_stat/en/economics/wipr/), accessed on 14 June 2015.

<sup>69</sup>Ibid at 26.

<sup>70</sup>Cirera 2013 at 9.

<sup>71</sup>Ibid.

<sup>72</sup>Ibid at 10.

<sup>73</sup>Jeremy de Beer, Chidi Oguamanam & Tobias Schonwetter 'Innovation, Intellectual Property and Development Narratives in Africa' in Jeremy de Beer et al (eds) *Innovation and Intellectual Property: Collaborative Dynamics in Africa* (2014) 6-7.

<sup>74</sup>Ibid at 7.

<sup>75</sup>Ibid.

### **i) Balancing IPRs with the Public Interest**

Excessive protection of IP by legal regimes is associated with high costs and therefore, the inaccessibility of technology to those who cannot afford to pay such amounts.<sup>76</sup> Such over – protection may arise as a result of long terms of protection by the law which limit the ability of those who are not IP owners to deal with the protected IP in a commercial manner. Another ‘road – block’ to such investors would feature where they seek licences from the IP owners but face the limitation of inadequate funds to pay for the licences in order to use protected technology. The end result of such barriers would likely be decreased economic activity which would then lead to less economic growth.

On the other hand, a country’s economic growth may be compromised where there is under-protection of IP by a country’s legal regime as such limited protection may serve as a deterrent to innovators.<sup>77</sup> A balanced protection of the rights of IP owners and non-owners therefore becomes a goal where economic growth in a country is targeted. The *Halliburton Energy Services Inc. v Smith International (North Sea) Limited and others*<sup>78</sup> case illustrates the point about having a balanced IP protection system. The court stated that *inter alia*, a patent is intended to teach people how to perform the invention and that in the absence of necessary information for such performance in the invention, a skilled person must be given a clear direction of where to get it.

Through the disclosure requirement that is provided for in Kenya’s, South Africa’s and the UK’s patent laws, it is intended that an increase in the knowledge in the public domain regarding the invention should occur. This has the potential of enabling further invention in circumstances where the knowledge is used for that purpose. It then acts as a limitation on a patent holder’s rights because the law makes it a pre-requisite for patent grant. On the other hand, it may function as a benefit to those in search of information related to the patent for purposes of invention.

Balanced IP protection may then be achieved through the functioning of such a legal requirement to limit a patentee’s rights whilst providing more information to the public regarding the invention. Where collaboration between enterprises is the innovation model adopted by

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<sup>76</sup>Ibid at 2.

<sup>77</sup>Ibid.

<sup>78</sup> (2006) EWCA Civ 1715 para. 7.

enterprises in order to achieve breakthroughs, as is currently the trend in the oil and gas industry,<sup>79</sup> the balancing of the interests of the collaborating parties will be important. Essentially, this would depend on, among other elements, the negotiating strengths of the parties involved and the terms of eventual agreements reached which guide such engagement.

The use of secrecy is considered advantageous as a means of protecting TK due to the already established custom among some communities of having certain sacred rites or practices known only to selected members of the community.<sup>80</sup> Further, for protection of secret information which is of commercial value, there is no requirement for registration procedures to formalise its protection and there is no time limit, such as would apply for patent protection, within which the trade secret would be protected.<sup>81</sup>

Limitations such as whether or not such concepts as fiduciary duty or unlawful competition apply when there has been unauthorised disclosure of TK bring into question the effectiveness of protection of TK using trade secrets.<sup>82</sup> However, trade secret protection is still, despite such shortcomings, considered to be an option that would serve the purpose of assisting in the preservation of the confidential nature of information that is held by indigenous and local communities.<sup>83</sup>

A number of reported cases<sup>84</sup> in Kenya have addressed the question of the manner in which employees have dealt with information that is regarded and treated by an enterprise as providing it with a competitive advantage over its competitors. It is noteworthy that in most reported cases Kenyan courts have made determinations regarding the aforementioned quality of the information in question at the interlocutory stage where an injunction has been sought to prevent the disclosure of the information. The courts, in these instances, have referred to the English common law position on determining whether information qualifies as confidential information and is therefore deserving of protection that should be afforded to such information.

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<sup>79</sup> PWC 2013 at 13.

<sup>80</sup>L A Tong 'Protecting traditional knowledge – does secrecy offer a solution?'(2010) 4 *Potchefstroom Electronic Law Journal* 161.

<sup>81</sup>*Ibid.*

<sup>82</sup>*Ibid* at 162.

<sup>83</sup>*Ibid* at 175.

<sup>84</sup>For example, *SBI International Holdings AG (Kenya) v Amos Hadar* (2015) eKLR and *Leland Selano v Intercontinental Hotel* (2013) eKLR.

In *Lansing Linde Limited v Kerr*<sup>85</sup> the Court of Appeal in England stated that trade secrets amounted to:

- a) information used in a trade or business<sup>86</sup>;
- b) of which the owner limits the dissemination or at least does not encourage or permit widespread publication<sup>87</sup>; and
- c) which if disclosed to a competitor would be liable to cause real or significant harm to the owner of the secret<sup>88</sup>.

Trade secret protection has also featured in conflict between the right of a firm to withhold information that confers a competitive advantage upon it and the right to information by members of the public. In the United States of America (US), this contest can be seen in the resistance displayed by natural gas companies to releasing information regarding chemicals used in fracking (a method of natural gas extraction from shale) on the one hand, and the public's demand for information regarding chemicals used in the process.<sup>89</sup> Concerns that contamination of drinking water and other environmental pollution may have occurred have been the reason for the demand for information in that context.<sup>90</sup>

Regarding TK, it has been argued that access to TK enhances collaborative creativity and open innovation and that digitisation of TK is likely to encourage the sharing of information which would be useful in a development context.<sup>91</sup> It would also facilitate the preservation of such knowledge especially in view of the decreasing intergenerational transfer of cultural practises.<sup>92</sup> In view of the geographical location of the identified oil and gas reserves in Kenya in parts of the country that are a considerable distance from major towns, it would be useful to investigate whether some knowledge held by local communities in those areas may contribute to the oil and gas industry.

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<sup>85</sup>(1991) 1 All ER 418.

<sup>86</sup> Ibid.

<sup>87</sup> Ibid.

<sup>88</sup> Ibid.

<sup>89</sup> Hannah Wiseman 'Trade secrets, disclosure and dissent in a fracturing energy revolution' *111 Columbia Law Review* Sidebar 1 (2011) 8-9.

<sup>90</sup>Ibid at 9.

<sup>91</sup>Ibid.

<sup>92</sup>Ibid.

TK has been acknowledged as having played a role in decision – making processes related to the environment.<sup>93</sup> It has been suggested that integrating traditional ecological knowledge in determining mining closure criteria is likely to lead to successful rehabilitation of mines after they are closed.<sup>94</sup> Further, one study found that a recommendation form signed by aboriginal authorities was required prior to the issuance of a wildlife research permit in Canada.<sup>95</sup> In light of the human interaction with the environment which takes place during the extraction of oil and gas, this thesis will study the possibility of using TK in a manner that will enable conservation of environmental resources before, during and after such mining activities.

TK has in some instances been appropriated by persons who derive monetary benefit from such knowledge without sharing it with the community from which it was obtained. The novelty of oil and gas extraction as an economic activity in Kenya will serve to provide a new angle from which Kenya’s benefit sharing laws and policies can be studied.<sup>96</sup>

## **ii) Competition Law and IP Law**

The interaction between competition law and IP law is evident in Kenya’s Competition Act, 2010. Section 24 of the Act provides for the abuse of an IPR as an activity that amounts to abuse of a dominant position in a market in Kenya. The section does not however elaborate on the type of conduct that would fall under such abuse. Whereas s21 of the Act prohibits restrictive trade practices and agreements which prevent or lessen competition in trade within the country, s28 of the Act gives the Competition Authority leeway to grant an exemption to an applicant to enter into an agreement which prevents or lessens competition or indeed, engage in a restrictive trade practice that entails the exercise of IPRs. These provisions seem not to have been applied by Kenyan courts and therefore a gap exists with regard to jurisprudence on the same.

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<sup>93</sup> Stephen E Ellis ‘Meaningful consideration? A review of traditional knowledge in environmental decision making’ 58 *Arctic* (2005) 66. (Hereafter Ellis 2005).

<sup>94</sup> A R Butler, I Toh and D Wagambie ‘The integration of indigenous knowledge in mine site rehabilitation and closure planning’ in A B Fourie and M Tibbett (eds) *Mine Closure* (2012) 625. (Hereafter Butler Toh and Wagambie 2012). See also H D Smith ‘Using traditional ecological knowledge to develop closure criteria in tropical Australia’ Proceedings of the third international seminar on mine closure, 14 – 17 October 2008, Johannesburg, South Africa 56.

<sup>95</sup> Butler, Toh and Wagambie 2012 at 625.

<sup>96</sup> Two such Kenyan statutes include The Protection of Traditional Knowledge and Cultural Expressions Act, 2016 and The Environmental Management and Coordination (Conservation of Biological Diversity and Resources, Access to Genetic Resources and Benefit Sharing) Regulations, 2006 (Legal Notice Number 160 of 2006).

In South Africa, the interaction between the two laws can be seen through the lens of the essential facilities doctrine. Section 1 of the country's Competition Act Number 89 of 1998 defines an essential facility as an infrastructure or resource that cannot reasonably be duplicated and without access to which competitors cannot reasonably provide goods or services to their customers. Section 8(b) of the Act provides that a firm should not refuse to give access to an essential facility when it is economically feasible to do so.

A prohibition against refusal to supply scarce goods to a competitor when supplying those goods is economically feasible is provided for under section 8(d)(ii) of the Act. It has been argued that sections 8(b) and 8(d)(ii) can prohibit anti-competitive refusals to grant IP licences.<sup>97</sup> In *DW Integrators CC v SAS Institute (Pty) Limited*<sup>98</sup>, the Competition Tribunal held that there was no basis for examining the complainant's allegation of abuse of dominance as dominance in the relevant markets for information delivery software was not established.<sup>99</sup> Therefore, the application of the essential facilities doctrine was not tested in the case.

In *Glaxo Wellcome (Pty) Limited and Others v National Association of Pharmaceutical Wholesalers and Others*<sup>100</sup> the court stated that pharmaceutical products did not qualify as an essential facility for anti-trust purposes as they were not resources.<sup>101</sup> It has been argued that the court's statement in the case suggests that it would not accept broad definitions of 'infrastructure' or 'resource' which would include IP.<sup>102</sup> This arguably points to a preference for applying compulsory licensing of IP on the basis of the essential facilities doctrine in exceptional circumstances only under South African law.<sup>103</sup>

Under English law, denial of essential facilities may amount to the abuse of a dominant position by an enterprise. The Court of Appeal in England, when rendering its decision in *Attheraces Limited v British Horseracing Board*<sup>104</sup> stated the following:

[a]buse of a dominant position by refusal to supply may occur...as a result of the cutting off of an existing customer, or refusing to grant access to an essential facility, unless the

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<sup>97</sup>James Brand 'Intellectual property and the abuse of dominant position in South African competition law' 122 *South African Law Journal* (2005) 910. (Hereafter Brand 2013).

<sup>98</sup>(14/IR/Nov99) [2000] ZACT 16 (1 May 2000).

<sup>99</sup>Ibid at 23.

<sup>100</sup>(15/CAC/Feb02) [2002] ZACAC 3 (21 October 2002)

<sup>101</sup>Brand 2013 at 912.

<sup>102</sup>Ibid.

<sup>103</sup>Ibid.

<sup>104</sup>(2007) EWHC (Civ) 38.

act or refusal is objectively justified. It may also consist of the refusal to grant a licence of an IP right.<sup>105</sup>

The position taken by the English high court in *Software Cellular Network Limited v T-Mobile (UK) Limited*<sup>106</sup> in granting a mandatory injunction also illustrates the application of the doctrine in England. Therefore, the approach in the United Kingdom is that the denial of IPR licences to competitors may, in certain circumstances, amount to abuse of dominance.

The application of the doctrine has been in decline in the US.<sup>107</sup> This has been based on the potential for misuse of the doctrine in a manner that may force enterprises to share their resources and by so doing remove incentives for investment in the resources.<sup>108</sup> A balance between the rights of new market entrants and established enterprises is therefore necessary in this context for investment and therefore, economic growth. This study will assess competition laws in Kenya, South Africa and the UK to find the legal principles that guide promotion of competitive markets with a view to determining their relevance to Kenya's oil and gas industry in an IP protection context.

#### **1.4 Research Method**

Desk research will be used for this study. The upstream oil and gas sector in Kenya is in its initial growth stages. Therefore, the four roles that Kenya's IP laws can play in relation to oil and gas production in the country as indicated in section 1.1 of this chapter are based on information derived from studies about the actual or potential role of IP law in other industries. The thesis will therefore derive information that is necessary to deal with the four roles through the research questions in the thesis chapters from available literature about Kenya's, South Africa's and the UK's IP laws.

South Africa and the UK, which already have established mining industries and are common law jurisdictions, will provide relevant reference points for the study. Analysis of findings from the literature will provide a basis upon which answers to the research questions will be sought from thesis chapters. Although reviewing currently available literature on the subject matter of the thesis may not enable access to all information that is required for the

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<sup>105</sup>Ibid at para 108.

<sup>106</sup> (2007) EWHC 1790 (Ch).

<sup>107</sup>Ibid at 743.

<sup>108</sup>Ibid at 762.

research, the writer will endeavour to acquire all available relevant written material to answer the research questions herein. An empirical study of the country's oil and gas industry would likely determine the actual effect(s) of the laws on - the industry's growth. However, given the initial growth stage of the industry, information about the impact of IP laws on the industry's growth in Kenya is currently not available. The thesis will therefore seek to establish the potential effects of the laws on industrial and economic growth in the country.

### **1.5 Structure of the Thesis**

The thesis' structure will be based on the main research question and sub-questions. Summarised, the questions are:

#### **Main research question**

How can Kenya apply intellectual property law to regulate the country's oil and gas sector in order to foster innovation and support economic growth?

#### **Sub-questions**

1. What, if any, role can IP play in achieving the national policy goals related to the sector?
2. How, if at all, is IP currently being leveraged in Kenya?
3. How can such use or leverage be improved?
4. How, if at all, is the application of IP law in Kenya to the oil and gas sector likely to advance the country's economic growth agenda?
5. How does having IP law in Kenya as a regulatory tool in the oil and gas sector interact with Kenya's competition law to create an enabling environment for innovation in Kenya?
6. Which lessons from Kenya, South Africa and the UK can apply to enhance the effective use of IP law in the regulation of Kenya's oil and gas industry to advance national economic growth?

In order to answer the above questions, this thesis will be structured as follows:

This chapter introduces the topic of the thesis and establishes a basis upon which answers to the main question and sub-questions will be sought by the chapters in the thesis. Chapter two will establish the theoretical framework of the thesis. It will do so by looking at the relationship between IP, FDI, public interest, innovation and economic growth. The chapter will consider FDI as an aspect of economic growth and study its link with IPRs. Further, the chapter will analyse the concept of innovation and models of innovation in relation to IPRs. It will also introduce Kenya's IP law framework. The chapter will seek to answer the main question and questions 1, 2, 3 and 4.

Chapter three will consider question 4 by looking at Kenya's legal provisions regarding TK, with a focus on benefit-sharing. It will also delve into any role that TK may have in the extractives and energy industries.

Chapter four will also deal with question 4. It will examine the application of IP law that is relevant to the oil and gas sector by courts in Kenya, South Africa and the U K, whilst also analysing the public interest angle in IP protection.

Chapter five will consider the role played by competition law principles in IP law and vice-versa, with a focus on Kenya, South Africa and the UK. It will aim to answer question 5 and will consider public interest from a competition law perspective. Chapter six will contain conclusions reached from the findings in previous chapters and make recommendations. Thus, it will seek to answer question 6.

This thesis contributes to the literature on Kenya's oil and gas industry by analysing the likely effect of Kenya's IP and competition laws on investment by companies in the oil and gas sector. The thesis also studies the apportionment of rights between IP owners and members of the public in the oil and gas industry within the context of Kenya's IP laws and competition laws. Thus, it also addresses the gap in literature regarding public interest that is related to IPRs in Kenya's oil and gas industry.

From research conducted on the National Research Foundation website on 25 November 2018, the subject matter of this thesis is not the subject of any completed or on-going research in another South African university.

## **CHAPTER TWO: IP, FDI, ECONOMIC GROWTH AND PUBLIC INTEREST – A THEORETICAL FRAMEWORK FOR KENYA’S IP LAW AND ITS OIL AND GAS SECTOR**

### **2.1 Introduction**

The goal of this chapter is to provide a basis upon which the role of IP laws in Kenya’s oil and gas industry can be identified. This will entail considering economic growth, the primary policy goal of Vision 2030<sup>1</sup> and examining whether the primary factor related to the realisation of economic growth under the policy, investment,<sup>2</sup> can be achieved using IP as a tool. Further, it will involve studying the extent to which IP protection can contribute to attracting investment in a country, and specifically, the possibility that IP protection in Kenya could provide an incentive to investment in the country’s oil and gas industry.

To achieve the goal, the chapter will begin by outlining the aspects of oil and gas production that involve the application of IP. This will narrow the chapter’s focus to the IP that will form the basis of this study. A more in-depth study of the production of oil and gas products will feature in the fourth chapter of this thesis whilst studying the production processes that have been used and are currently used in oil and gas production. The chapter will then study how IP that is relevant to the oil and gas industry is currently being produced, used and protected in Kenya and the manner in which the production, protection and use of IP can be improved with a view to achieving economic growth.

The focus on IP in the chapter will then turn to Kenya’s legal framework in respect of the IP that is relevant to the country’s oil and gas industry. It will outline the country’s legal framework in order to contextualise the study of IP in the relevant legal environment. In the context of the legal environment, the chapter will study the role played by procedural reforms in Kenyan courts and any role that these may have in influencing the country’s overall investment environment. The chapter will then seek to determine whether there is a relationship between Kenya’s IP laws and the country’s investment environment. It will also examine whether there is an association between IPRs and FDI.

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<sup>1</sup> Vision 2030 at 2.

<sup>2</sup> Ibid at 10.

The chapter will then consider Kenya's national policy goals as they relate to the country's oil and gas sector. It will look at the role that IP currently plays in relation to the sector and the role that it can play in the sector in future. In order to study these aspects, the chapter will analyse the concepts of public interest, innovation and models of innovation. It takes into account the protection of IP and studies the optimal mode of protection in the context of innovation models adopted by firms. Given the exclusionary role of IPRs, the chapter will also test the relevance of this particular characteristic against the backdrop of innovation models which favour collaborative activity, which is an approach that the chapter will show has been adopted by firms in the oil and gas industry.

As noted in the first chapter of the thesis, this chapter will seek answers to the following research questions:

1. How should Kenya apply intellectual property law to regulate in the country's oil and gas sector to foster innovation and support economic growth?
2. What, if any, role can IP play in achieving the national policy goals related to the sector?
3. How, if at all, is IP currently being leveraged in Kenya?
4. How can such use or leverage be improved?
5. How, if at all, is the application of IP law in Kenya to the oil and gas sector likely to advance the country's economic growth agenda?

## **2.2 IP in the Oil and Gas Industry**

IP in the industry may include plant machinery (protected or protectable by patents, trade marks, industrial designs and /or copyright for drawings of the machinery), software (protected or protectable by copyright and/or trade marks) production processes (protected or protectable by patents, trade marks and/or trade secrets) and goodwill (protected or protectable by trade marks).

IP features as an asset in the financial statements of some oil and gas enterprises.<sup>3</sup> Trade marks may be included among a firm's intangible assets in those statements.<sup>4</sup> Patents may also feature in the companies' annual reports to show their ownership of technology that is valuable

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<sup>3</sup>Royal Dutch Shell plc 'Annual report and Form 20-F for the year ended December 31, 2016' 123.

<sup>4</sup> Ibid.

to their operations.<sup>5</sup> Some firms in the industry have indicated that they applied for and obtained thousands of patents in 2016.<sup>6</sup> Firms are also engaged in developing technology that is focused on the conservation of the environment.<sup>7</sup> Resources have been allocated to the development of technology that will be used in making clean fuels.<sup>8</sup> Reported transactions involving the sale of IP among petroleum companies also indicate the value that has been attached to IP.<sup>9</sup>

One source of information about IP produced and protected in Kenya is the Kenya Industrial Property Institute (KIPI). The October 2018 edition of the KIPI's Industrial Property Journal includes information about patent applications and applications for industrial design, utility model and trade mark registration.<sup>10</sup> Patent applications in that journal include those related to chemical compounds and mechanical devices.<sup>11</sup> The journal also contains applications for renewal of registration of industrial designs.<sup>12</sup> With regard to utility models, the applications for registration in the journal include those for inventions that are chemical compounds and mechanical devices.<sup>13</sup> The journal also contains information about trade marks accepted for registration by KIPI.<sup>14</sup>

The IP described above falls into the category of IP that has undergone registration using patent, trade mark, utility model and industrial design laws which have been in existence in Kenya for almost twenty years at the time of writing. During that time, registration of the IP has been undertaken and the statutes have been used in some cases to determine disputes related to IP by courts in Kenya. The laws will be outlined in section 2.1 of this chapter. The laws' registration and infringement provisions will be studied in chapter four of the thesis. The PTK Act, which provides for the protection of TK, has been in existence for two years at the time of

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<sup>5</sup> Ibid at 10.

<sup>6</sup> China National Petroleum Corporation '2016 Annual report' 25.

<sup>7</sup> ExxonMobil '2016 financial statements and supplemental information for the fiscal year ended December 31, 2016,' 21.

<sup>8</sup> Ibid.

<sup>9</sup> For example, the sale of drilling technology by Shell Oil Company to Weatherford International plc for US\$140 million. Available at <https://www.bcg.com/publications/2013/innovation-strategy-sparking-intellectual-property-engine-energy-companies.aspx>, accessed on 6 December 2018.

<sup>10</sup> Kenya Industrial Property Institute, Industrial property journal (journal of patents, industrial designs, utility models and trade marks), (Number 2018/10) (2018). (Hereafter KIPI Journal October 2018). Available at <http://www.kipi.go.ke/>, accessed on 30 November 2018.

<sup>11</sup> Ibid.

<sup>12</sup> Ibid.

<sup>13</sup> Ibid at 17-18.

<sup>14</sup> Ibid at 20.

writing. There does not appear to be any literature on the registration of TK using the Traditional Knowledge Digital Repository (TKDR) which is provided for under the Act.<sup>15</sup> It is therefore difficult to determine whether the TKDR has been used for that purpose and if so, the kind of TK that has been registered. Transactions related to IP, for example assignment of IP may also be reflected in the KIPI journal.<sup>16</sup>

The information available in the above KIPI journal is an indication of the presence of inventive activity, awareness of the possibility of obtaining IP protection and pursuit of IP protection by individuals and firms interested in accessing benefits related to such protection in Kenya. Benefits include proof of ownership of IP assets; which may enhance valuation of firms, provide a firmer basis for instituting legal action in case of infringement and a basis for use of IP assets as collateral for loans.

The realisation of these benefits is supported by developments that have occurred in Kenya's legal framework in the last decade. Developments of this nature include the enactment of the Constitution of Kenya, 2010, which contains the provision cited in chapter one of the thesis, regarding the support, promotion and protection of IPRs by the State<sup>17</sup> and coming into force of legislation such as the Movable Property Security Rights Act (Number 13 of 2017) (MPSR Act). Provision for registration of security rights in intangible assets by the MPSR Act supports the above Constitutional provision and Kenya's IP laws. This is by providing a channel through which IPRs can be used for the benefit of right holders as tools for financing.

A firm's approach to the IP asset angle of its operations is likely to be determined by its business model, which is the base for determining the way in which the firm's resources are used. For example, it has been found that the priority areas for those engaged in social entrepreneurship may include a focus on using open source designs and thereafter, sharing designs that are developed from the use of the open source designs with the public.<sup>18</sup> Social entrepreneurship has been described as combining the goals of making profits and attaining

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<sup>15</sup> Section 8(3).

<sup>16</sup> See, for example, KIPI Journal October 2018 at 20.

<sup>17</sup> Article 40(5).

<sup>18</sup> Tobias Schonwetter and Bran Van Wiele '3D Printing: enabler of social entrepreneurship in Africa? The roles of Fablabs and low- cost 3D printers' *openAIR Working Paper 18* (2018) 33. (Hereafter Schonwetter and Van Wiele, 2018). Available at <http://www.openair.org.za/publications/3d-printing-enabler-of-social-entrepreneurship-in-africa-the-roles-of-fablabs-and-low-cost-3d-printers/>, accessed on 30 November 2018.

positive social impact.<sup>19</sup> On the other hand, for-profit enterprises are likely to adopt an approach more oriented towards retaining the competitive advantage derived from the IP that they produce. Such an approach is likely to entail protection of IP that is intended to limit the exposure of information that may negatively affect that advantage. It is also likely to be focused on production or acquisition of IP that is intended to exploit advantages likely to accrue to first movers. Generally, firms engaged in the exploration and extraction of oil and gas resources are profit-oriented. Thus, in answering the research questions in this chapter, firm-related analysis takes the perspective of such firms.

In the downstream oil and gas sector in Kenya, there are locally well known registered trade marks owned by local and international companies engaged in the sale of oil and gas products. These trade marks are useful for selling the products because they enable customers to identify them. At the time of writing, there does not seem to be information available regarding patents and industrial designs registered by KIPi which pertain to the downstream segment of the sector. It is however likely that entities engaged in the exploration and extraction of oil and gas resources in Kenya are using IP that is relevant to those activities.

It has been reported that in relation to patents related to the oil and gas industry which are registered at the United States Patents and Trademarks Office, a significant number of patents related to earth drilling and activities related to earth drilling have been granted since 2012.<sup>20</sup> Another trend identified in relation to inventions related to the industry is the combining of existing technologies to create new ones.<sup>21</sup>

It has been noted that patent filings by companies are more likely to occur in larger economies, with the effect that low and middle-income countries, with the exception of China, have relatively fewer filings.<sup>22</sup> Decisions of that nature may, however, also depend on the nature of firms' IP and business models.<sup>23</sup> Kenya is currently categorised as a lower middle income

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<sup>19</sup> Ibid at 9.

<sup>20</sup> Deloitte 'Charting growth: a look at the growth trajectory of oil and gas patent filings' available at <https://www2.deloitte.com/us/en/pages/energy-and-resources/articles/tracking-innovation-in-oil-and-gas-patents.html>-, accessed on 2 December 2018.

<sup>21</sup> Ibid.

<sup>22</sup> World Intellectual Property Organisation 'World intellectual property report 2017: intangible capital in global value chains' (2017) 33 – 4. (Hereafter, WIPO IP Report 2017).

<sup>23</sup> Ibid.

country.<sup>24</sup> Therefore, it is likely that there may be a lower number of applications for patents compared to those in high income countries, depending on the strategies adopted by firms operating in the country.

The general approach taken by multi-national companies in knowledge asset<sup>25</sup> transfer has been to transfer older technologies in order to minimise the threat that may be posed by recipients of the knowledge who may use it to become competitors.<sup>26</sup> In other instances, firms may engage in open sharing of IP in order to facilitate the adoption of new technology and obtain access to other firms' technology, in circumstances where their patents are included in patent pools.<sup>27</sup> It has been suggested that protected IPRs may encourage technology transfer by firms and enable outsourcing of production processes.<sup>28</sup> Four methods of knowledge asset diffusion from firms in more industrialised to less industrialised economies have been identified: reverse engineering, partnerships, importation of capital goods and movement of skilled workers.<sup>29</sup> IP may be transferred or generated in the course of using these mechanisms.

It has been reported that as part of commercialising oil reserves in Turkana, projects aimed at designing oil production and export infrastructure, including a pipeline, are planned and expected to be completed by 2022.<sup>30</sup> Additionally, it has been reported that a firm involved in providing technology related to oil and gas production has been engaged by Kenya's national oil company to provide input in oil field development.<sup>31</sup>

Skills transfer, which has been planned to include learning technical skills by local graduate trainees, is part of the input expected from the firm from the arrangement.<sup>32</sup> Although there does not appear to be literature that is available for study regarding any IP that will be handled in the course of the developments described above, it may be a component in the activities described. Other activities that have been reported in relation to the extraction of crude

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<sup>24</sup> Available at <https://data.worldbank.org/country/kenya>, accessed on 6 December 2018.

<sup>25</sup> Defined by the Cambridge dictionary as information or skills within a business that make it more valuable or competitive. Available at <https://dictionary.cambridge.org/dictionary/english/knowledge-asset>, accessed on 7 December 2018.

<sup>26</sup> WIPO IP Report 2017 at 33.

<sup>27</sup> Ibid.

<sup>28</sup> Ibid.

<sup>29</sup> Ibid at 35.

<sup>30</sup> George Wachira 'Why setting up oil infrastructure is key in achieving exports goal' Available at <https://www.businessdailyafrica.com/analysis/ideas/oil-infrastructure-is-key-in-achieving-exports-goal/4259414-4668366-5h5sj0z/index.html>, accessed on 8 December 2018.

<sup>31</sup> Available at <https://nationaloil.co.ke/news/press-release/>, accessed on 8 December 2018.

<sup>32</sup> Ibid.

oil in Turkana and its subsequent exportation include the upgrade of an existing pipeline that would enable transportation of the crude oil from Mombasa, where storage tanks of the crude oil are located, to the ship-loading area.<sup>33</sup> The modification of the pipeline is intended to enable the movement of the oil, which is waxy in nature, to the ships for export.<sup>34</sup> Similarly, there does not appear to be literature referring to any IP that will be used in the modification of the pipeline.

The current technical needs in the upstream oil and gas sector in Kenya that are cited in this section of the chapter are indicators of opportunities for application or development of inventions already protected or protectable under IP law. For IP that already exists and is protected, one of the available options related to accessing the IP may involve licensing. Where the IP required to handle the challenges identified would need to be developed, those involved in its development could look at ways in which they can protect the IP and optimise their benefits from the same. This may involve an assessment of the IP involved and the protection and optimisation options that exist under Kenya's IP laws.

The sector's requirements in terms of resources in Kenya have been identified as not only applying to the extraction and exportation process of the petroleum but also to environmental management post-extraction.<sup>35</sup> This may create further opportunities for use or development of IP that already exists or which may be developed.

Using IP as security for loans in Kenya has been enabled by the MPSR Act. The statute provides for registration of security rights in intangible assets.<sup>36</sup> This increases options available to firms in the oil and gas industry in the country to access financing for their operations because of the possibility of using not only tangible assets but also intangible ones for that purpose. It can also be argued that the possibility of using intangible assets as collateral for loans formalises an expansion in the focus of the Kenyan economy from tangible to intangible assets. This development may therefore encourage more enterprises in the country to engage in production of IP as a core business. Firms may be set up specifically to create IP that is intended for

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<sup>33</sup> Available at <https://www.theeastafrican.co.ke/business/Kenya-invites-tenders-in-readiness-for-early-oil-export/2560-4361430-11so55oz/index.html>, accessed on 8 December 2018.

<sup>34</sup> Ibid.

<sup>35</sup> Ministry of Energy and Petroleum 'Strategic environmental and social assessment of the petroleum sector in Kenya' (2016) 145. Available at <http://documents.worldbank.org/curated/en/186991495657679496/Strategic-environmental-and-social-assessment-final-report>, accessed on 8 December 2018.

<sup>36</sup> Section 3.

transactions such as sale or licensing to industries, including the oil and gas industry. This may in turn, attract investors to those firms.<sup>37</sup>

A potential challenge in using IP as collateral may be encountered by firms due to the possibility that the value of the IP may be dependent on the presence of other factors in a firm, such as specific employees who deal with the IP.<sup>38</sup> This may have the effect of negatively impacting the value of the IP or render it impossible to transact with the IP in instances where the firm would like to transact in the IP without the other factors which add to its value, for example by selling it.<sup>39</sup>

It has been noted that small and medium enterprises (SMEs) may be more likely to depend on unregistered IPRs, such as trade secrets, rather than registered ones due to factors such as registration expenses.<sup>40</sup> It is also noteworthy that other factors not related to IP as collateral for loans, such as banks' concerns regarding the possibility of enforcing contracts entered into with SMEs, can be a hindrance to banks' lending to firms in that segment.<sup>41</sup> Taking into account the challenges cited regarding the securitisation of IP, an evaluation of the actual impact of having the MPSR Act on firms will only be possible after it has been in operation for a longer time than it has been as the time of writing (almost two years). However, other means of financing a firm's operations, such as internal funding or investments from investment firms may be pursued by firms in place of debt financing.<sup>42</sup>

It has been noted that the participation of SMEs in the upstream segment of the oil and gas sector in Kenya would be limited by the high levels of capital investment technology required, which are unlikely to be available to firms in that segment of the economy.<sup>43</sup> Another limitation might be low skills levels that are relevant to the use and development of technology.<sup>44</sup> A study on SMEs operating in Nigeria's oil and gas sector also identified poor innovation

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<sup>37</sup>OECD 'Enquiries into intellectual property's economic impact' (2015) 464. Available at <http://www.oecd.org/sti/ieconomy/intellectual-property-economic-impact.htm>, accessed on 10 December 2018. (Hereafter OECD 2015).

<sup>38</sup> Ibid at 465.

<sup>39</sup> Ibid.

<sup>40</sup> Ibid.

<sup>41</sup> Pietro Calice, Victor M Chando and Sofiane Sekioua 'Bank financing to small and medium enterprises in East Africa: finding of a survey in Kenya, Tanzania, Uganda and Zambia' African Development Bank Working Paper Series Number 146 March 2012. Available at <http://www.afdb.org/>, accessed on 12 December 2018.

<sup>42</sup> OECD 2015 at 463.

<sup>43</sup> Winnie W Wairimu 'Micro, small and medium enterprises (MSMEs) as suppliers to the extractive industry' Report (2015) 38. Available at [www.ke.undp.org](http://www.ke.undp.org), accessed on 11 December 2018.

<sup>44</sup> Ibid at 54.

capacity in the firms due to limitations of a financial and human resource nature.<sup>45</sup> Although the study posited that open innovation, which is discussed in section 2.4 of this chapter, may assist in overcoming the cited resource – related challenges, the same resource constraints, such as limited skill levels among workers may make it difficult for the firms to be engaged in open innovation.<sup>46</sup>

The study found that collaboration among SMEs may facilitate access to and development of advanced technology by participating firms.<sup>47</sup> Additionally, it proposed that in the earlier stages of innovation development by SMEs in the petroleum industry in Nigeria, collaboration with other smaller firms may be more beneficial than collaboration with larger firms.<sup>48</sup> Reasons cited for this proposal were flexibility and low risks associated with such arrangements.<sup>49</sup> Collaborations between SMEs in the sector and universities were also recommended by the study, with the expected outcome of enabling access to new technology by the firms.<sup>50</sup>

### 2.3 Kenya's IP Law Framework

The Constitution of Kenya, 2010, provides for the protection of the IPRs of the people of Kenya.<sup>51</sup> The inclusion of this provision in the country's supreme law demonstrates the changes that have taken place in terms of the perceived importance of real property *vis-à-vis* intangible property and the place of inventions and creativity as drivers of the economy since the time of the enactment of the previous constitution.

The Industrial Property Act, 2001 (IPA) provides for the registration of patents, utility models and industrial designs. The statute was enacted after the Industrial Property Act of 1989 was repealed to align Kenya's IP laws to TRIPS, which is binding on Kenya as a member of the World Trade Organisation (WTO).<sup>52</sup> Trade marks, copyright and plant varieties are protected under the Trade Marks Act (Chapter 506 of the Laws of Kenya), the Copyright Act, 2001 and the

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<sup>45</sup> Yusuf O Okinwale 'Empirical analysis of inbound open innovation and small and medium enterprises' performance: evidence from oil and gas industry' (2018) 21(1) *South African Journal of Economic and Management Sciences* 3.(Hereafter, Okinwale 2018),

<sup>46</sup> Ibid.

<sup>47</sup> Ibid.

<sup>48</sup> Ibid at 8.

<sup>49</sup> Ibid.

<sup>50</sup> Ibid.

<sup>51</sup> Article 11 (c).

<sup>52</sup> Kameri-Mbote 2005 at 6.

Seeds and Plant Varieties Act (Chapter 326 of the Laws of Kenya) respectively. The Copyright Act, 2001 was the result of amendments to make Kenya's copyright law TRIPS-compliant.<sup>53</sup> Although registration of copyright is not required for ownership of copyright in works protected under Kenya's copyright law, the certificate of registration issued by KECOBO serves to document the ownership of copyright in a work. This may be useful where copyright ownership is the subject of a dispute.<sup>54</sup>

TRIPs – compliant laws increase the likelihood that an economy will benefit from technology that is current, owing to the likelihood that IPR owners will be more inclined to make technology available through methods such as licensing in a country where the law would deter and / or sanction infringement of IP.<sup>55</sup> Therefore, it is possible that FDI in Kenya has been enhanced and will continue to be enhanced by its IP legal framework.

It has however been noted, as will be seen in section 2.5 of this chapter, that as also noted in chapter one of the thesis, Gathii states that other factors that may provide favourable conditions for FDI include the regulatory landscape and infrastructural development.<sup>56</sup> Further, he argues that strong IP protection regimes may favour licensing by foreign firms to local firms due to the possibility of accessing remedies if infringement occurs, rather than setting up their operations locally.<sup>57</sup> The next section of the chapter will consider arguments made regarding the link between innovation and IP laws in general.

## 2.4 Introduction to Innovation

The term 'innovation' is used to refer to an implementation of a new or significantly improved product or process, a new marketing method or a new organisational method in business practices, workplace organisation or external relations.<sup>58</sup> Generally, the term 'innovation' refers

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<sup>53</sup> Ibid at 7.

<sup>54</sup> See for example *The Riara Group of Schools Limited v Lucas Kimani (Civil Case Number 704 of 2012)*. In the case, the court referred to a certificate of registration of copyright registered in the name of the defendant as a factor that weakened the plaintiff's case with regard to proving ownership of copyright in a computer program.

<sup>55</sup> Keith Maskus 'Intellectual property rights and economic development' 32 *Case Western Reserve Journal of International Law* (2000) 485. (Hereafter Maskus 2000).

<sup>56</sup> Gathii 2016 at 533.

<sup>57</sup> Ibid.

<sup>58</sup> Organisation for Economic Co-operation and Development 'Oslo Manual: guidelines for collecting and interpreting innovation data' (2005) 46. Available at <http://ec.europa.eu/eurostat/documents/3859598/5889925/OSLO-EN.PDF> Accessed on 30 July 2016.

to developing an idea and putting it into practice.<sup>59</sup> The context in which the word ‘new’ is used in the first definition above may be worldwide or firm – based.<sup>60</sup> Improved functional or user characteristics in goods or services compared to existing goods or services are termed as product innovations.<sup>61</sup> The digital camera is an example of a significant product innovation.<sup>62</sup>

Innovation has been described as creation of usefulness in phenomena.<sup>63</sup> Creation of such usefulness provides economic value and therefore, a resource.<sup>64</sup> It has been described as an activity that alters resources’ capacity to produce wealth.<sup>65</sup> In an organisational context, innovation may incorporate changes that are informed by factors such as an organisation’s strategy or resources.<sup>66</sup>

The difference between innovation and invention is that invention is the conception of an idea whereas innovation entails the commercial and practical application of inventions.<sup>67</sup>

A central theme of the innovation concept is improvement. This can be gleaned from looking at activities that are related to innovation. These include the acquisition of various inputs which play a role in the production process.<sup>68</sup> Software, R&D, machinery and licensing are examples of these inputs.<sup>69</sup> Additionally, the improvement angle can be seen from the objectives of innovation. Generally, these include improvement of product range, increasing the capacity to produce new goods and increasing market share.<sup>70</sup> However, not all improvements in goods or services are regarded as innovations. For example, the use of existing marketing methods to

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<sup>59</sup> Christopher Kalanje ‘Role of intellectual property in innovation and new product development’ 1. Available at [http://www.wipo.int/sme/en/documents/ip\\_innovation\\_development\\_fulltext.html](http://www.wipo.int/sme/en/documents/ip_innovation_development_fulltext.html). Accessed on 6 June 2015. (Hereafter Kalanje).

<sup>60</sup> Paul H Jensen and Elizabeth Webster ‘Firm size and the use of intellectual property rights’ 82 (2006) *The Economic Record* 46.

<sup>61</sup> *Ibid* at 54.

<sup>62</sup> Paul Trott *Innovation Management and New Product Development* 5 ed (2012) 17. (Hereafter Trott 2012).

<sup>63</sup> Peter F. Drucker *Innovation and Entrepreneurship* (2002) 30. (Hereafter Drucker 2002).

<sup>64</sup> *Ibid*.

<sup>65</sup> Drucker 2002 at 31.

<sup>66</sup> Anahita Baregeh, Jennifer Riley and Sally Sambrook ‘Towards a multidisciplinary definition of innovation’ 47 (2009) *Management Decision* 1324.

<sup>67</sup> Trott 2012 at 15.

<sup>68</sup> Jeremy De Beer, Kun Fu and Sacha Wunsch – Vincent ‘The informal economy, innovation and intellectual property – concepts, metrics and policy considerations’ (2013) Economic Research Working Paper No. 10, 17. (Hereafter De Beer, Fu and Wunsch 2013).

<sup>69</sup> *Ibid*.

<sup>70</sup> *Ibid*.

target a new market segment or changes in business practices based on organisational methods already in use in a firm do not respectively count as marketing and organisational innovation.<sup>71</sup>

Innovation may be disruptive or incremental.<sup>72</sup> Disruption has been said to describe a process by which a smaller company with fewer resources succeeds in challenging established firms by *inter alia* serving overlooked market segments with products which work better for those segments, usually at a lower price.<sup>73</sup> One observation made regarding disruptive innovations is that they generally reduce prices in an industry once the higher end consumers in a market start using them owing to improved quality of the products over time.<sup>74</sup>

Radical or disruptive innovations produce new markets and new industrial branches for a new product.<sup>75</sup> Improvement or incremental innovations, on the other hand, lead to improved products in terms of such elements as quality, environmental protection and labour cost.<sup>76</sup> Continuous and discontinuous innovations refer to the approach taken by innovators in product development.<sup>77</sup> Continuous innovations involve sequential progress from existing products.<sup>78</sup> Discontinuous innovations involve pattern – breaking from previously developed products.<sup>79</sup> Open innovation and closed innovation respectively entail the generation of innovation externally and internally in a firm's context and will be studied in detail later in this chapter.

In the oil and gas industry, there have been relatively recent reports of innovation which may be classified as radical owing to its actual and potential impact on oil and gas production.<sup>80</sup> One of these is the use of improved drill bits and remote, real-time control of oil drilling and production equipment in the shale oil industry in the US.<sup>81</sup> Gains made in oil production

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<sup>71</sup> Trott 2012 at 52.

<sup>72</sup> Clayton M Christensen, Michael E Raynor and Rory McDonald, 'What is disruptive innovation?' 2015 Harvard Business Review 47.

<sup>73</sup> *Ibid* at 45.

<sup>74</sup> *Ibid* at 47.

<sup>75</sup> Trott 2012 at 3.

<sup>76</sup> *Ibid*.

<sup>77</sup> Shirin Elahi et al 'Knowledge and innovation in Africa: scenarios for the future' (2013) 17. (Hereafter Elahi et al 2013).

<sup>78</sup> Elahi et al 2013 at 17.

<sup>79</sup> *Ibid*.

<sup>80</sup> Richard Martin, Big data will keep the shale boom rolling. Available at <https://www.technologyreview.com/>, accessed on 17 August 2016.

<sup>81</sup> *Ibid*.

efficiency have been reported as a result of this.<sup>82</sup> Additionally, improvements in the generation of data produced during shale drilling has resulted in an exponential increase in available data which can be used in improving drill bit location with resultant improvements in shale oil production and transportation efficiency.<sup>83</sup> Another reported development is the creation of electromagnetic technology which enables more accurate detection of oil reserves thus improving decision – making on whether or not to proceed with drilling.<sup>84</sup> Increased efficiency in oil exploration and production is the expected outcome from this development.<sup>85</sup>

In addition to technical innovation, it has been projected that organisations in the oil and gas sector are likely gain a competitive advantage through innovations related to their business models.<sup>86</sup> These innovations will be necessary to counter changes that have occurred in the industry over time, including changes in oil prices and technology.<sup>87</sup> Business model innovation has been noted to include changes in organisational structure and products or services offered.<sup>88</sup> In Kenya, business models do not qualify for patent protection.<sup>89</sup> Trade marks may however be used to protect names of enterprises that are used to name business models.

It has been noted that there are differences between what motivates and has an impact on innovation in the formal and informal sectors of an economy.<sup>90</sup> In the informal economy, studies have shown that innovation is mostly geared towards adaptation of equipment already produced by firms in the formal economy rather than the creation of original components of machines.<sup>91</sup> It is however unclear whether product or process innovation is dominant in that economy.<sup>92</sup>

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<sup>82</sup> Ibid.

<sup>83</sup> Ibid.

<sup>84</sup> Bill Tucker, Innovation thrives in the oil and gas industry. Available at <http://www.forbes.com/sites/billtucker/2015/09/23/innovation-thrives-in-the-oil-gas-industry/2/#6072cd8e724f>, accessed 17 August 2016.

<sup>85</sup> Ibid.

<sup>86</sup> Christopher Handscomb, Scott Sharabura and Jannik Woxholth ‘The oil and gas organisation of the future.’ Available at <https://www.mckinsey.com/industries/oil-and-gas/our-insights/the-oil-and-gas-organization-of-the-future>, accessed 27 December 2019.

<sup>87</sup> Ibid.

<sup>88</sup> Available at <https://www.bcg.com/capabilities/strategy/business-model-innovation.aspx>, accessed 27 December 2019.

<sup>89</sup> Section 21(3)(b) of the IPA.

<sup>90</sup> Ibid.

<sup>91</sup> Elahi et al 2013 at 23.

<sup>92</sup> Ibid.

The trend towards international innovation (innovation in a context which involves *inter alia* international information exchange and combination of know – how<sup>93</sup>) has been identified as having its roots in a number of factors.<sup>94</sup> Increased mobility of students and highly-skilled workers, the increased number of middle-income countries and the location of the R&D facilities of firms in various countries are factors cited as creating an international environment within which innovation is increasingly taking place.<sup>95</sup> The role of IPRs in innovation has been considered both from the perspective of spurring innovation and hindering the same by way of limiting competition.<sup>96</sup>

Innovations are driven by various factors. A firm may engage in innovative activities as part of its overall strategy, development of a new idea or as a response to developments in the market.<sup>97</sup> One study found that innovation among some firms in the oil and gas industry in Australia was one of the outcomes caused by regulatory compliance requirements in that country, in tandem with competitive capabilities of firms, R&D and collaborative activities.<sup>98</sup>

Whereas it would appear that innovation is a phenomenon that would generally be embraced by society, given that newer and more efficient products would find a ready market and thus lead to benefits for consumers and producers, it threatens the success and /or existence of some. The development of new technology may lead to loss of jobs and capital.<sup>99</sup> Another source of the resistance to innovation is that it may be difficult to determine the costs and risks of new technology in advance.<sup>100</sup>

#### **2.4.1 An overview of IPRs and innovation**

Through the disclosure requirement at the time of application, patents are tools for making knowledge available to the public. On the other hand, they may be an obstacle to invention by limiting the activities that can be undertaken by the public with regard to the patented item.

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<sup>93</sup> Martina Fromhold – Eisebith ‘Bridging scales in innovation policies: how to link regional, national and international innovation systems’ 1 *European Planning Studies* (2007) 221.

<sup>94</sup> World Intellectual Property Organisation ‘World intellectual property report 2011: the changing face of innovation’ (2011) 36 – 7. (Hereafter, WIPO IP Report 2011).

<sup>95</sup> Ibid.

<sup>96</sup> Kalanje at 1-2.

<sup>97</sup> Kalanje at 4.

<sup>98</sup> Jerad A Ford, John Steen and Martie – Louise Verreyne ‘How environmental regulations affect innovation in the Australian oil and gas industry: going beyond the Porter Hypothesis’ (2014) 84 *Journal of Cleaner Production* 212.

<sup>99</sup> Joel Mokyr and Eric Von Hippel ‘Aiding innovation’ 28, No. 1 *Issues in Science and Technology* (Fall 2011) 9.

<sup>100</sup> Ibid.

Limiting the information disclosed in a patent is also a well - known tactic employed by patent applicants as a way of retaining their competitive edge against competitors. As a result, in such instances, patents function as a tool that limits access to knowledge.<sup>101</sup> This is despite the general exceptions granted under patent laws, especially with regard to using the patented invention to conduct research.<sup>102</sup>

For instance, this could occur in circumstances where commercialisation of an invention requires the use of technology owned by a third party.<sup>103</sup> A refusal to license by the right holders in that situation or prohibitive royalties would bring to an end such an attempt to engage in market – targeted production as long as the IPR is held by the patentee in question.<sup>104</sup> An interesting point to note is that this refusal may have the effect of stalling innovation in a particular field if the invention is a significant one in the field.<sup>105</sup> For example, the patents granted for the invention of the light bulb, steam engine and airplane are said to have constrained research in their respective areas of human endeavour for years.<sup>106</sup>

Patent thickets are another stumbling block to innovation. A patent thicket has been defined as an overlapping set of patent rights which requires that those who intend to commercialise the patented technology obtain licences from a number of patentees.<sup>107</sup> The thicket is an outcome of research output which builds upon previously produced output.<sup>108</sup> Cross licences and patent pools have been proposed as tools to overcome patent thickets.<sup>109</sup>

Cross licensing involves a royalty – free licensing arrangement between two parties which require each other’s technology in order to develop their respective products.<sup>110</sup> Patent pools consist of such parties’ patents which are licensed to other parties who require the parties’

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<sup>101</sup> Joseph Stiglitz ‘Economic foundations of intellectual property rights’ 57 No. 6 *Duke Law Journal* (2008) 1710. (Hereafter Stiglitz 2008).

<sup>102</sup> WIPO IP Report 2011 at 78.

<sup>103</sup> *Ibid.*

<sup>104</sup> *Ibid.*

<sup>105</sup> International Expert Group on Biotechnology, Innovation and Intellectual Property, ‘Toward a new era of intellectual property: from confrontation to negotiation’ (2008) 16. (Hereafter International Expert Group on Biotechnology, Innovation and Intellectual Property 2008).

<sup>106</sup> *Ibid.*

<sup>107</sup> Carl Shapiro ‘Navigating the patent thicket’ in Adam B Jaffe, Josh Lerner and Scott Stern (eds) in *Innovation policy and the economy Vol. 1* (2001) 119. (Hereafter Shapiro 2001).

<sup>108</sup> Shapiro 2001 at 120.

<sup>109</sup> Shapiro 2001 at 124.

<sup>110</sup> Shapiro 2001 at 123.

respective patented technologies for product development.<sup>111</sup> In the absence of such methods, which ideally would enable a producer to proceed with production without the threat of litigation, the amount of time and costs incurred in obtaining licences from patentees who may not be easy to locate and negotiate with would likely stall such a project.<sup>112</sup> Additionally, high transaction costs may still feature in such arrangements as a result of joint fee-setting by the patentees and thus discourage production and therefore, competition in a market.<sup>113</sup>

Multinational corporations (MNCs) have been reported to use as few as 10% of their patents in their operations whilst paying annual renewal fees in millions of dollars for the remaining 90% of their unused patents.<sup>114</sup> This means that whereas the majority of the patents are not actively in use by the companies, other persons who may want to use patented material to develop further products cannot use the patented material unless authorisation is given by the MNCs.

It is notable that one IP management strategy by some MNCs entails examining the capacity of patented technology to be licensed after use by the companies or after a given period of time post patent - grant and using this information to determine whether annual renewal fees for the patent should be paid.<sup>115</sup> Where the registration of a patent is not maintained by allowing the lapse of such renewal fees, this provides an opportunity for exploitation of the patented product or process by other persons whilst saving the company the expense of the fees.<sup>116</sup>

The study of the methods undertaken by MNCs in the management of IP is particularly relevant to this thesis. This is because generally, natural – resource based industries, such as the oil and gas industry, typically feature large MNCs with significant R&D investments rather than small firms.<sup>117</sup>

The argument that generally, IP law in its current state has a tendency to favour those who are engaged in production, rather than the users of the products, is a point to consider in

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<sup>111</sup> Ibid.

<sup>112</sup> Ibid.

<sup>113</sup> Ibid.

<sup>114</sup> Oliver Alexy, Paola Criscuolo and Ammon Salter ‘Does IP strategy have to cripple open innovation?’ 2009 *MIT Sloan Management Review* 72.

<sup>115</sup> Ibid at 74.

<sup>116</sup> Ibid.

<sup>117</sup> Bruno dos Santos Silvestre and Paulo Roberto Tavares Dalcol ‘Geographical proximity and innovation: evidences from the Campos Basin oil and gas industrial agglomeration – Brazil’ 29 (2009) *Technovation* 549. (Hereafter Silvestre and Dalcol 2009).

assessing the influence of IPRs on innovation.<sup>118</sup> Where IPRs have been regarded as anticompetitive, their overall effect would be to hinder innovation. This is because the strict boundaries created by these rights may discourage testing of existing products or processes for fear of incurring legal liability. Additionally, it has been postulated that monopolies, once established, can easily be maintained.<sup>119</sup> As a remedial measure to such dominance by IPR owners, it has been suggested that where IP statutes do not address clearly anticompetitive practices, competition law should be applied as a corrective measure.<sup>120</sup>

Generally, however, the time limit on the duration of IPRs is accepted as one way in which cumulative innovation is encouraged by IP law.<sup>121</sup> This is because an opportunity is created for improvements to already existing products or processes protected by IPRs such as patents to be made for commercial gain once the term of such IPRs expires. However, there are those who hold that it may be difficult to differentiate between commercial and non-commercial experimentation.<sup>122</sup> This has arisen due to the enactment of statutes which encourage the commercialisation of research conducted in universities and research institutions.<sup>123</sup>

High transaction costs of patents may be a barrier to innovation when factored into production costs.<sup>124</sup> These costs include the expenses associated with registration of patents, registry fees and fees paid to professionals for patent prosecution. It becomes necessary to incur the costs in order to alleviate the risk of patent infringement and the risk of litigation related to such infringement.<sup>125</sup> Transaction costs also include the costs associated with obtaining a licence from a patent holder.<sup>126</sup>

The role of patents can also extend to control of a firm's production – related activities. Patents owned by patent – holders within a firm's industry define the boundaries that a firm should not cross as it engages in production. As a result, this arguably encourages specialisation

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<sup>118</sup> Herbert Hovenkamp 'Antitrust and innovation: where we are and where we should be going' 77, No. 3 (2011) *Antitrust Law Journal* 752.

<sup>119</sup> Stiglitz 2008 at 1705.

<sup>120</sup> *Ibid* at 1699.

<sup>121</sup> Peter S Menell 'Governance of intellectual resources and disintegration of intellectual property in the digital age' 26 No. 4 *Berkeley Technology Law Journal* (2011) 1545.

<sup>122</sup> Evans Misati and Kiyoshi Adachi 'The research and experimentation exceptions in patent law: jurisdictional variations and the WIPO development agenda' Policy Brief Number 7, March 2010 UNCTAD – ICTSD Project on IPRs and Sustainable Development 3. (Hereafter Misati and Adachi, 2010).

<sup>123</sup> *Ibid*.

<sup>124</sup> Stiglitz 2008 at 1706.

<sup>125</sup> *Ibid*.

<sup>126</sup> Shapiro 2001 at 142.

and therefore efficiency by a firm.<sup>127</sup> However, an opposing view, focused on the element of specialisation, highlights the flip side of the concentration of a firm's resources on its specialist product or activity. This view holds that broad IPRs held by one right(s) holder or IPRs held by a limited number of parties promote centralised decision – making structures within an industry and ultimately lead to limited improvement within the industry.<sup>128</sup> At the same time, the proponents of the argument against decentralisation point to the importance of centralised decision – making in industries such as the nuclear energy industry where the avoidance of errors is particularly important.<sup>129</sup>

Further, with regard to the boundary – defining purpose of IPRs, there is an argument that the grant of overly broad IPRs serves to blur the boundaries of the rights.<sup>130</sup> This is based on a comparison with land, which has defined geographical boundaries.<sup>131</sup> IPRs such as patents are granted based on varied interpretation of whether criteria for grant have been met.<sup>132</sup> Patents granted for incremental innovations may consolidate the market power of entities which already wield such power by virtue of patents granted to them.<sup>133</sup> These developments may generally have the effect of limiting innovation.<sup>134</sup>

It has been suggested that utility models may be more relevant than patents during the early stages of a country's economic development.<sup>135</sup> This is because at such a developmental stage, invention is more likely to be of incremental, non-patentable modifications of imported products.<sup>136</sup> As earlier indicated, the inventions which are prevalent in Kenyan industries have generally been found to consist of improvements to products and processes already in the market.<sup>137</sup> As a result, proving that such inventions represent inventive steps (non-obviousness) in their respective fields would likely present an insurmountable challenge. Thus, protection using patents for such inventions would not be possible.

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<sup>127</sup> WIPO IP Report 2017 at 108.

<sup>128</sup> Tim Wu 'Intellectual property, innovation and decentralized decisions' Vol. 92, No. 1 *Virginia Law Review* (March 2006) 125 – 126. The patent awarded to Thomas Edison for the light bulb is used to illustrate the point.

<sup>129</sup> *Ibid* at 127.

<sup>130</sup> Stiglitz 2008 at 1703.

<sup>131</sup> Stiglitz 2008 at 1703.

<sup>132</sup> Stiglitz 2008 at 1703.

<sup>133</sup> *Ibid*.

<sup>134</sup> Stiglitz 2008 at 1704.

<sup>135</sup> Maskus 2000 at 479.

<sup>136</sup> *Ibid*.

<sup>137</sup> *Ibid*.

Those engaged in the country's informal economy would likely benefit from protection by way of utility models rather than patents given that for individuals working in that segment of the economy, improvement-based innovations are more likely to be produced than 'radical' innovations.<sup>138</sup> Further, the high costs of patent protection would necessitate the use of utility models in the informal economy as an initial approach towards appropriation of innovation.<sup>139</sup>

Recently collected data indicates that there has been an increase in utility model applications in Kenya.<sup>140</sup> In 2018, 177 out of 178 applications for utility model certificates were made by Kenyan residents.<sup>141</sup> Of the 177 applications, 32 utility models were registered.<sup>142</sup> No information has been found in this study regarding the disparity in the number of applications for utility model certificates and the number of registered utility models in 2018. Poorly drafted applications contributed to non-registration of utility models between July 2011 and June 2012.<sup>143</sup>

With regard to patent applications, 85% of national applications made for patents in 2018 were by Kenyan residents.<sup>144</sup> These figures are promising from the perspective of estimating the prevalence of local innovative activity (in the absence of other data), even considering that as earlier stated, using such a yardstick for innovation has been argued to be inaccurate.<sup>145</sup> Other methods of IP protection have been used in informal economies. For example, secrecy and indigenous community sanctions such as exclusion of persons for copying are also mechanisms used for protection of innovations in informal economies.<sup>146</sup> Given that TK is communally originated and held, it is difficult to have it protected using IP systems which require that an individual or company is identified as the owner of IP.<sup>147</sup>

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<sup>138</sup> De Beer, Fu and Wunsch 2013 at 49.

<sup>139</sup> Ibid.

<sup>140</sup> KIPi KENYA IP STATISTICS 2000-2018. Available at <http://www.kipi.go.ke/index.php/component/content/167?task=view> , accessed 28 December 2019.

<sup>141</sup> Ibid.

<sup>142</sup> Ibid.

<sup>143</sup> Kenya Industrial Property Institute 'Kenya Industrial Property Annual Report 2011/2012' (2013) 8.

<sup>144</sup> Available at <http://www.kipi.go.ke/index.php/component/content/167?task=view> , accessed 28 December 2019.

<sup>145</sup> Jeremy de Beer, Chidi Oguamanam & Tobias Schonwetter 'Innovation, Intellectual Property and Development Narratives in Africa' in Jeremy de Beer et al (eds) *Innovation and Intellectual Property: Collaborative Dynamics in Africa* (2014) 6-7.

<sup>146</sup> De Beer, Fu and Wunsch 2013 at 38.

<sup>147</sup> World Intellectual Property Organization 'Intellectual property and genetic resources, traditional knowledge and traditional cultural expressions' (2015) 35. Available at [http://www.wipo.int/edocs/pubdocs/en/tk/933/wipo\\_pub\\_933.pdf](http://www.wipo.int/edocs/pubdocs/en/tk/933/wipo_pub_933.pdf), accessed on 2 August 2016.

The work culture in the informal sector has also influenced the general approach taken towards IP protection. The collaborative nature of working in that sector is not aligned with the notion of owning products of creativity such as inventions which is central to IP.<sup>148</sup> This concept of IP ownership has been associated with preventing access to relevant ideas within the industry.<sup>149</sup> Lack of awareness regarding IP protection has also served to limit the uptake of the opportunities for such protection offered by the law.<sup>150</sup> It is notable that some studies have cited the lack of exclusive rights offered by IP protection as a factor that may reduce incentives for investments in inputs such as machinery with the result that eventual output is relatively low and therefore limits the growth of enterprises in the informal sector.<sup>151</sup>

Interestingly, in the formal sector in high – income countries, factors such as entering the market before competitors and superior sales and customer – service efforts by firms have emerged as more preferred by firms to claim a hold on their innovations rather than by using IPRs.<sup>152</sup> Short product cycles of goods have been cited to justify an approach by those firms to use patent protection less and to rely primarily on trademark protection.<sup>153</sup>

High costs and the complexity of the patent system have been cited to justify a preference for protection of small firms' inventions as trade secrets.<sup>154</sup> Considering the process of patent drafting and the logistics and costs that are necessary for patent protection, it is easy to see why upcoming entrepreneurs would opt for non-disclosure agreements (NDAs) to achieve an almost similar objective if they are aware of the purpose that the agreements serve. Ideally, NDAs discourage disclosure of confidential information for fear of legal sanctions and also serve as a basis for instituting legal action for aggrieved parties.

Trade secret protection has been argued to have the additional benefit of encouraging rather than stalling innovation in a manner similar to patents.<sup>155</sup> The explanation given for this attribute is that independent discovery or reverse engineering by competitors is not barred by

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<sup>148</sup> Kawooya 2014 at 71.

<sup>149</sup> Ibid at 72.

<sup>150</sup> Ibid.

<sup>151</sup> De Beer, Fu and Wunsch 2013 at 39.

<sup>152</sup> De Beer, Fu and Wunsch 2013 at 34.

<sup>153</sup> Ibid.

<sup>154</sup> De Beer, Fu and Wunsch 2013 at 48.

<sup>155</sup> J Jonas Anderson 'Secret inventions' 26 (2011) *Berkeley Technology Law Journal* 920. (Hereafter Anderson 2011).

trade secret protection.<sup>156</sup> Further, given that patent protection requires disclosure, use of secrecy has the potential benefit of a longer period of exclusivity because as long as secrecy is maintained, the information regarding an invention is retained by the inventor and any other person to whom the inventor has chosen to disclose the information.<sup>157</sup>

This aspect however has the innovation – barring quality sometimes attributed to patents because a trade secret may remain secret for decades. Nevertheless, making a choice to protect an invention as a trade secret instead of using a patent has a number of disadvantages. One of these is the narrower exclusionary scope accorded by trade secret protection.<sup>158</sup> This exposes trade secrets to a greater risk of unauthorised appropriation, for example, in cases where reverse engineering produces a chemical that is the subject of trade secret protection.<sup>159</sup>

The use of both patent protection and trade secrets for appropriating certain products has been found to occur in cases where there is adequate disclosure to qualify for patent protection and simultaneous retention of information that is required to practice the invention by the patentee.<sup>160</sup> This would make it necessary for those who would like to access the patented product or process to negotiate a licence with the patentee in order to gain access to the vital information.<sup>161</sup> Some studies have suggested that simultaneous use of both methods of protection has been found in firms where an innovation has a high degree of novelty and requires significant financial investment.<sup>162</sup> This approach would have the likely effect of hindering innovation by others because the possibility of having the information used in the production of the invention eventually fall into the public domain is reduced.

The method of IP protection may be influenced by the industry in which a firm is operating.<sup>163</sup> For example, it is likely for reverse engineering to take place in the pharmaceutical industry after a drug has been released to the market, thus making it more prudent for a

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<sup>156</sup> Ibid.

<sup>157</sup> Ibid.

<sup>158</sup> –Anderson 2011 at 924.

<sup>159</sup> Ibid.

<sup>160</sup> Ibid at 944.

<sup>161</sup> Ibid.

<sup>162</sup> Dirk Crass et al ‘Protecting innovations through patents and trade secrets: determinants and performance impacts for firms with a single innovation’ Discussion Paper No. 16-061 Centre for European Economic Research 25.

<sup>163</sup> Anderson 2011 at 955.

pharmaceutical company to apply for a patent rather than rely on trade secret protection in order to exclude competitors.<sup>164</sup>

On the other hand, the process of manufacturing the drug by the same company, which may involve application of certain temperatures to constituent elements of the drug to produce a similar result, may be better protected as a trade secret in order to achieve the same goal of competitor exclusion.<sup>165</sup> Such dual protection for the product and process by the company would enable some cost – saving by trade secret rather than patent protection for one element related to the manufacture of the drug. It is however noteworthy that costs associated with maintaining secrecy can be quite high because the secret must be closely guarded.<sup>166</sup>

#### **2.4.2 Collaboration between Firms in the Oil and Gas Industry**

A broad definition of collaboration – working together to achieve mutually agreed goals,<sup>167</sup> applies in this section. Increased collaboration has been cited as a channel through which innovation may be achieved.<sup>168</sup> In Kenya’s upstream oil and gas sector, collaboration between firms has been identified in oil extraction and transportation. Tullow Oil, Africa Oil and Maersk Oil planned to undertake production and commercialisation of oil reserves in Kenya’s South Lockichar Basin in a joint venture arrangement expected to culminate in first oil production by 2021.<sup>169</sup> The three companies also entered into a joint development agreement with the government of Kenya for development of an oil export pipeline in 2017.<sup>170</sup>

In the oil and gas sector in the UK, collaboration between firms has been necessitated by factors such as increase in knowledge or learning and cost reduction,<sup>171</sup> with cost reduction

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<sup>164</sup> Ibid.

<sup>165</sup> Ibid.

<sup>166</sup> Ibid at 958.

<sup>167</sup> Deloitte and Oil & Gas UK, ‘UKCS upstream supply chain collaboration survey 2018: Collaboration at a crossroads – which way next?’ (2018) 08. (Hereafter Deloitte and Oil & Gas UK 2018).

<sup>168</sup> International Expert Group on Biotechnology, Innovation and Intellectual Property 2008 at 39.

<sup>169</sup> Strathmore Extractives Industry Centre and Extractives Baraza ‘Strengthening private sector engagement in the oil and gas value chain in Uganda and Kenya’ *Issue Paper* 12 (2019) 12.

<sup>170</sup> The Extractives Policy Working Group ‘Developing a sustainable in-country value addition strategy: Real-time policy options for Kenya’s petroleum sector’ *Kenya Extractives Policy Dialogues Discussion Paper* Number 2 (2018) 2.

<sup>171</sup> Nick Clark and Netti Farkas Mills, ‘A sea of possibilities: Transforming supply chain collaboration across the UK continental shelf,’ Deloitte Insights (2017) 7. Available at <https://www2.deloitte.com/insights/us/en/industry/oil-and-gas/uk-continental-shelf-supply-chain-collaboration.html>, accessed on 19 May 2019.

identified as the primary motivator.<sup>172</sup> Collaboration has been projected to occur in that country's oil and gas sector in areas that include physical decommissioning and technology.<sup>173</sup> Lower production costs are also the target of work by firms in ventures that include development of data analysis tools for use in offshore drilling.<sup>174</sup> Collaborative arrangements are guided by mechanisms such as contracts with a several-year time span to enable completion of project lifecycles.<sup>175</sup>

Firms may acquire technology for their operations in different ways. One method is to use imported technology without adaptations.<sup>176</sup> Another is to carry out minor adaptations to imported technology using external technical assistance.<sup>177</sup> An alternative way involves the development of technology using a firm's internal resources.<sup>178</sup>

Creation and use of IP has been singled out as a critical aspect of collaboration – based relationships.<sup>179</sup> Some studies have shown that firms working in the same industry and in proximity with each other may benefit from collaborative efforts among them which bring about innovations to enhance their production.<sup>180</sup> This was, for instance, observed among suppliers of wellhead equipment which is used for oil and gas exploration and production in the Campos Basin province in Brazil.<sup>181</sup> The firms were clustered in the Campos Basin and this enabled them to use their respective tacit knowledge to jointly develop technological advancements related to their field.<sup>182</sup> The productivity of such collaboration is however dependent on a number of factors, among them the technological capabilities and inter-firm relationships of the participating firms.<sup>183</sup>

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<sup>172</sup>Deloitte and Oil & Gas UK 2018 at 09.

<sup>173</sup> Ibid at 20.

<sup>174</sup> Anshu Mittal, Andrew Slaughter and Vivek Bansal, 'From bytes to barrels: The digital transformation in upstream oil and gas,' Deloitte Insights (2017) 10. Available at <https://www2.deloitte.com/insights/us/en/industry/oil-and-gas/digital-transformation-upstream-oil-and-gas.html>, accessed on 19 May 2019.

<sup>175</sup> Ibid at 24.

<sup>176</sup> Silvestre and Dalcol 2009 at 552.

<sup>177</sup> Ibid.

<sup>178</sup> Ibid.

<sup>179</sup> Stuart K Mehlman et al 'Better practices for managing intellectual assets in collaborations' 53. No. 1 *Research Technology Management* (January – February 2010) 56. (Hereinafter Mehlman et al 2010).

<sup>180</sup> Silvestre and Dalcol 2009 at 558.

<sup>181</sup> Silvestre and Dalcol 2009 at 558.

<sup>182</sup> Ibid.

<sup>183</sup> Silvestre and Dalcol 2009 at 559.

Sustainability is becoming increasingly important for firms in many industries. In order to remain relevant in terms of creating value for their owners, businesses, including those in the oil and gas industry, are motivated to continually address present and future challenges to their existence. Given that the natural resources that the industry relies upon are finite, there has been a move to consider diverse aspects of oil exploration and production.<sup>184</sup> Elements such as increasing output whilst maintaining economic efficiency, implementing climate change mitigation strategies and environmental pollution management make it necessary for firms in the industry to invest more financially than was previously the case.<sup>185</sup> The increased demand for financial resources in this context may encourage collaboration among the firms.<sup>186</sup>

Collaborations between oil and gas companies have been reported in the US where international oil companies (IOCs) and national oil companies (NOCs) have partnered with independent oil and gas companies to enable them to learn technologies and processes used to explore, appraise, delineate and develop shale gas operations in North America.<sup>187</sup> The intention behind such learning is to eventually export the technologies and processes to other sites in locations such as Europe and Asia where the IOCs also have operations.<sup>188</sup> Partnerships among IOCs have also emerged in projects which are large and technically challenging to enable sharing of complementary strengths, financial and technical risks.<sup>189</sup>

### 2.4.3 Collaboration and Innovation

Typically, collaborative ventures between organisations will involve exchange of knowledge through having meetings between teams from the organisations and exchange of workers from the organisations.<sup>190</sup> Whereas the focus of this research is the IP component where collaborative effort is concerned, it is important to note that knowledge that may be exchanged in the course of such work is likely to be of a diverse nature.<sup>191</sup> Some of that knowledge that may come into play

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<sup>184</sup> Rodrigo Garcia, Donald Lessard and Aditya Singh, 'Strategic partnering in oil and gas: a capabilities perspective' 3 (2014) *Energy Strategy Reviews* 22.

<sup>185</sup> *Ibid.*

<sup>186</sup> *Ibid.*

<sup>187</sup> *Ibid* at 27.

<sup>188</sup> *Ibid.*

<sup>189</sup> *Ibid.*

<sup>190</sup> Organisation for Economic Co-operation and Development, 'Collaborative mechanisms for intellectual property management in the life sciences' (2011) 33.

<sup>191</sup> *Ibid.*

in such circumstances includes knowledge relating to institutional structures, processes and networks.<sup>192</sup>

A key component of a firm's IP strategy is to decide whether or not to engage in collaborative activities with other firms.<sup>193</sup> This is particularly important when issues arise regarding how IP created during such collaborative effort will be dealt with.<sup>194</sup> Identifying the strategic intent of a firm and that of its partner(s) in such a working arrangement is a crucial determinant of a project's outcome.<sup>195</sup>

A number of benefits have been identified as drivers of partnerships entered into by organisations. Among these are learning from others' experience, reduction of costs by dividing tasks and sharing risk.<sup>196</sup> Indeed, rising costs of R & D and the increased complexity of production areas that firms have specialised in has led firms to develop strategic alliances with competitors.<sup>197</sup>

In seeking partnerships with other enterprises, IPRs can serve to strengthen the bargaining position of a firm.<sup>198</sup> This is because the possession of an IPR may convince a potential partner to take a risk by investing in a venture that already has a valuable asset which is likely to generate revenue and enjoy competitiveness in the market.<sup>199</sup>

Increased co-operation in various economic sectors can be seen in partnerships which have come into existence over time. For instance, increased R&D outsourcing, an increased number of patents issued to co-inventors and co-authored scientific publications all indicate this trend.<sup>200</sup> In the information and communication technology (ICT) industry in Africa, many innovations are developed from proprietary hardware and software.<sup>201</sup> Open source and proprietary business models are sometimes adopted within one firm to develop products which incorporate elements of internally developed creations and collaboratively developed goods.<sup>202</sup>

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<sup>192</sup> Ibid.

<sup>193</sup> Mehlman et al 2010 at 56.

<sup>194</sup> Ibid.

<sup>195</sup> Ibid.

<sup>196</sup> WIPO 2011 at 12.

<sup>197</sup> Ibid at 13.

<sup>198</sup> Ibid.

<sup>199</sup> Ibid.

<sup>200</sup> WIPO 2011 at 44.

<sup>201</sup> Elahi et al 2013 at 87.

<sup>202</sup> Ibid.

Closed innovation entails the generation, development and commercialisation of a company's idea by itself.<sup>203</sup> For most of the twentieth century, this approach to innovation was used by a large number of leading companies.<sup>204</sup> Products developed using the approach indicate its success at that time. The electric light bulb and nylon fibre are examples of the output that resulted from the application of the closed innovation method.<sup>205</sup> The eventual decline of the method's application has been attributed to increased mobility of workers and the increase in the amount of private venture capital which became available.<sup>206</sup> These two factors resulted in difficulty to keep proprietary information within organisations and availability of financial resources to set up new enterprises which enabled commercialisation of such information.<sup>207</sup>

Open innovation has been identified as a complementary trend to collaboration.<sup>208</sup> It involves the inclusion of the ideas of persons outside an organisation, such as competitors, suppliers, universities and research institutes in the organisation's activities. The resultant cross-fertilisation of ideas has the benefit of including perspectives that may not have been considered within an enterprise. The outcome is likely to be new products and processes for the organisation.<sup>209</sup> Interestingly, some studies have shown that some firms which have adapted open innovation have the largest number of patent applications.<sup>210</sup> It is however unclear whether those patent applications are a direct result of such collaboration. In the petroleum industry, it has been noted that open innovation may have an increasingly larger role to play in the development of technology by firms due to interest that they have demonstrated in that mode of innovation.<sup>211</sup>

Contracts play a significant role in open innovation. This is especially the case in firms which have formalised such collaboration, where the contract contains the terms of engagement

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<sup>203</sup> Henry W Chesbrough, 'The era of open innovation' 2003 *MIT Sloan Management Review* 36.

<sup>204</sup> *Ibid.*

<sup>205</sup> *Ibid.*

<sup>206</sup> *Ibid.*

<sup>207</sup> *Ibid.*

<sup>208</sup> WIPO 2011 at 47.

<sup>209</sup> *Ibid.*

<sup>210</sup> WIPO 2011 at 49.

<sup>211</sup> Deloitte 'Tracking innovation in oil and gas patents: the role and influence of the U.S. Department of Energy' (2015) 11. Available at <https://www2.deloitte.com/us/en/pages/energy-and-resources/articles/tracking-innovation-in-oil-and-gas-patents.html>, accessed on 10 December 2018.

between the firms or in circumstances where the licensing of IP is the manner in which the collaboration takes place.<sup>212</sup>

The processes related to the sharing of information between firms are important. This is because at the point of divulging valuable know how, what has been deemed as a necessary measure by a firm – partnering with another person or entity, can be risky. Enterprises are typically founded based on aspirations of their founders to succeed in carrying on profit-making operations. Therefore, it is normally the case that investments in the form of elements such as time, skill and money have been expended towards achieving success in the form of profit. The profit motive may not be realised if proprietary information which gives a firm its competitive advantage is lost to its competitors for no compensation. This is the risk that enterprises face in collaborative ventures where IP belonging to a firm may be released to another firm. It has been argued that the boundary demarcation that is enabled by IP protection is likely to encourage firms engaging in open innovation to make their protected IP available for the collaboration in question.<sup>213</sup>

Under section 31 of the IPA, where an applicant for a patent has obtained the essential elements of an invention which is the subject of the application from the invention of another person, he is under an obligation to assign the patent application or patent to that inventor unless the inventor has authorised the making of the patent application by that person. It is therefore the position under Kenya's patent law that in circumstances where the significant elements of an invention in a collaborative arrangement are derived from a person, that person is entitled to ownership of the patent.

However, given that the said Act does not define 'essential elements' this creates uncertainty regarding the term. There does not appear to be a reported court case in Kenya which has tested the application of this provision. A project in the country's medical research field was the subject of a dispute about patent applicants. It was reported that the terms of collaboration on a potential HIV vaccine between researchers at the University of Nairobi and a British research team would be revised after a dispute about a patent application for the vaccine.<sup>214</sup> The dispute occurred after the Kenyan researchers stated that their names had not been included in the

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<sup>212</sup> WIPO 2011 at 48.

<sup>213</sup> Gary B Pisano and David J Teece 'How to capture value from innovation: shaping intellectual property and industry architecture' (2007) 50 *California Management Review* 290.

<sup>214</sup> Wachira Kigotho 'Kenyan protest at being left off AIDS patent' (2000) 408 *Nature* 6. (Kigotho 2000).

application.<sup>215</sup> A statement was later issued by both parties indicating that the patent was filed in good faith to prevent unauthorised use of the vaccine by third parties.<sup>216</sup>

The difficulty noted above with regard to identifying an inventor has been identified in the UK case *Yeda Research and Development Company Limited v Rhone – Poulenc International Holdings Inc. and others*<sup>217</sup> in which Lord Hoffman stated:

The inventor is defined in section 7(3) as “the actual deviser of the invention”. The word “actual” denotes a contrast with a deemed or pretended deviser of the invention; it means, as Laddie J said in *University of Southampton's Applications* [2005] RPC 220, 234, the natural person who “came up with the inventive concept.” It is not enough that someone contributed to the claims, because they may include non-patentable integers derived from prior art: see *Henry Brothers (Magherafelt) Ltd v Ministry of Defence* [1997] RPC 693, 706; [1999] RPC 442. As Laddie J said in the *University of Southampton* case, the “contribution must be to the formulation of the inventive concept.” Deciding upon inventorship will therefore involve assessing the evidence adduced by the parties as to the nature of the inventive concept and who contributed to it. In some cases this may be quite complex because the inventive concept is a relationship of discontinuity between the claimed invention and the prior art. Inventors themselves will often not know exactly where it lies.<sup>218</sup>

Section 29(2) (a) of South Africa’s Patents Act Number 57 of 1978 provides that joint applicants to a patent who have a dispute regarding the ownership of a patent may apply to the commissioner of patents to decide the matter. In *Galison Manufacturing (Proprietary) Limited v Setpoint Industrial Technology Limited and Another*<sup>219</sup> the plaintiff did not succeed in establishing a claim to *inter alia*, be identified as a joint proprietor of a patent for an invention used for the transportation of ore in the mining industry. The court of the commissioner of patents, in dismissing the claim, referred to inconsistencies in the plaintiff’s testimony regarding whether the invention was the result of collaboration between the parties to the suit. The court’s observation that there was no precedent may indicate that at the time, lawsuits regarding co-inventor disputes either did not proceed to the hearing stage or that disputes of that nature were not common at the time.

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<sup>215</sup> Kigotho 2000 at 6.

<sup>216</sup> Ibid.

<sup>217</sup> (2007) UKHL 43.

<sup>218</sup> Ibid at 9.

<sup>219</sup> [2009] ZACCP 1.

*Onyx Pharmaceuticals Inc. v Bayer Corporation*<sup>220</sup> is also illustrative of one of the pitfalls of collaboration between firms. In the case, the plaintiff alleged that the parties to the suit had entered into a collaborative agreement under which they agreed to share the proceeds from the sale of a drug which they undertook to develop. The defendant allegedly used a product of the R&D between the parties and filed for a patent without the knowledge of the plaintiff. The plaintiff sued upon becoming aware of this latter development. Eventually, the matter was settled out of court with an agreement entered into between the parties for *inter alia*, payment of royalties relating to the drug developed by the defendant.<sup>221</sup>

Open innovation has been said to have three phases.<sup>222</sup> The exploration phase includes an assessment of a firm's business and IP management strategies and ultimately, linking these two.<sup>223</sup> The joint development phase includes activities which define the activities of the partnership and alignment of the respective firms' approaches to dealing with IP.<sup>224</sup> The third phase, the commercial phase, includes the development of a business model by the firms.<sup>225</sup> Such a model may entail licensing of IP jointly owned by the enterprises.<sup>226</sup> This approach to collaborative ventures, with its focus on the IP management angle, addresses a focal point of innovation in the context of firm partnerships. This is especially important where the industry within which such enterprises operate rewards constant improvements by firms. Sectors of an economy which depend on continued technological improvements to increase efficiency may therefore frequently encounter elements of the three phases above. An example of such a sector today is the ICT sector.

The development of interactive platforms on the internet has contributed to the advancement of open innovation. Crowdsourcing, which enables customer-driven innovation by, for example, obtaining feedback from customers, is a product of this technological development.<sup>227</sup> Considering the diversity and large number of customers who can be reached

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<sup>220</sup> 09-2145, U.S. District Court, Northern District of California.

<sup>221</sup> Andrew Dunn, Bayer settles with Onyx over Regorafenib cancer treatment, available at <http://www.bloomberg.com/news/articles/2011-10-12/bayer-settles-with-onyx-pharmaceuticals-over-regorafenib-cancer>, accessed on 22 August 2016.

<sup>222</sup> Mehlman et al 2010 at 56.

<sup>223</sup> Ibid.

<sup>224</sup> Mehlman et al 2010 at 59.

<sup>225</sup> Ibid at 61.

<sup>226</sup> Ibid at 62.

<sup>227</sup> WIPO 2011 at 8.

using the internet, there is a wealth of information regarding customer preferences and opinions regarding products or services which can be accessed through such platforms. Customer feedback is however, just one way in which crowdsourcing has played a role in the innovation sector. Crowdsourcing through Peer – to – Patent initiatives, which involve the use of social networking software to assist patent offices in their examination work, has been useful in identifying prior art in areas such as software and information security.<sup>228</sup>

One determining factor of openness in a firm has been found to be the type of innovation engaged in by the firm.<sup>229</sup> Where a firm is engaged in radical rather than incremental innovation, a tendency to rely more on external sources for technology stems from a necessity to benefit from a greater amount of knowledge required by such a project by the firm.<sup>230</sup>

Notably, one way in which openness has been classified is on the basis of the extent to which participation is open to those outside an organisation. For instance, crowd-sourcing is termed as totally open collaboration because it allows participation by all those who can access the forum on which participation takes place.<sup>231</sup> Less open innovation networks are composed of persons who have been selected to participate in the project(s) in question by an organisation based on their capacity to provide the required input.<sup>232</sup>

As noted earlier, co-operation between firms has its challenges. Firms may choose to forego the benefits of potential mutually beneficial partnerships due to such fears as free riding and other types of similar behaviour by their partners.<sup>233</sup>

With regard to the interaction between open innovation and IPRs, it has been observed that in some instances, IPRs may deter rather than encourage innovation.<sup>234</sup> The basis for this view is the difference in the motivation for innovation which exists between producers engaged in innovation and users of innovations.<sup>235</sup> Users are more likely to engage in innovation so that they

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<sup>228</sup> Ibid at 101.

<sup>229</sup> Valentina Lazzarotti and Raffaella Manzini ‘Different modes of open innovation: a theoretical framework and an empirical study’ 13 (2009) *International Journal of Innovation Management* 629. (Hereafter Lazzarotti and Manzini 2009).

<sup>230</sup> Ibid.

<sup>231</sup> Lazzarotti and Manzini 2009 at 618.

<sup>232</sup> Lazzarotti and Manzini 2009 at 619.

<sup>233</sup> WIPO 2011 at 132.

<sup>234</sup> WIPO 2011 at 10-12.

<sup>235</sup> Ibid.

can use the product rather than sell it.<sup>236</sup> Generally, users are willing to share details of their innovations with others without compensation.<sup>237</sup> The overall effect of such sharing is a large flow of the products of such innovation.<sup>238</sup>

It is also interesting to note that collaboration between firms may lead to questions regarding whether anticompetitive practices may thrive in such arrangements.<sup>239</sup> Practices such as price fixing may come about between collaborators in an industry as a result of products that arise from their joint ventures and a co-operative spirit fostered by competitors working together.<sup>240</sup> However, over time, competition law has appreciated that innovation may arise from collaboration and thus reduced its hostility towards the phenomenon.<sup>241</sup>

As seen in chapter one of the thesis, secrecy has been used to seek a competitive advantage in respective markets by metalworkers in Kenya<sup>242</sup> and auto parts fabricators in Uganda.<sup>243</sup> Active knowledge exchange between the firms was also identified among the firms in Kenya<sup>244</sup>, and Uganda.<sup>245</sup> The firms in Uganda also participated in exchange of knowledge with the formal sector.<sup>246</sup> Open innovation can be facilitated by such movement of information.

It has been suggested that an integrated approach between open and closed innovation models would perhaps provide optimal benefits to a firm.<sup>247</sup> This would consist of elements derived from the two models.<sup>248</sup> Where a choice would have to be made between the two, the more favourable model between two extremes would be determined by the objectives and management methods adopted by an organisation.<sup>249</sup>

It has been projected that the establishment of partnerships between large enterprises and smaller firms in the oil and gas industry in the US will be a common feature as the extraction of

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<sup>236</sup> Ibid.

<sup>237</sup> Ibid.

<sup>238</sup> Ibid.

<sup>239</sup> Ibid.

<sup>240</sup> Ibid.

<sup>241</sup> WIPO 2011 at 13.

<sup>242</sup> Bull et al 2014 at 32.

<sup>243</sup> Kawooya 2014 at 71.

<sup>244</sup> Bull et al 2014 at 32.

<sup>245</sup> Kawooya 2014 at 71.

<sup>246</sup> Ibid.

<sup>247</sup> Lazzarotti and Manzini 2009 at 632.

<sup>248</sup> Lazzarotti and Manzini 2009 at 632.

<sup>249</sup> Ibid.

shale gas is undertaken.<sup>250</sup> Joint ventures are the typical mode of partnership expected when these projects begin, as a way to enable firms to meet the costs associated with such projects.<sup>251</sup> Additionally, it is expected that firms from other shale-rich countries such as China will be expected to establish similar partnerships with USA-based enterprises in order to acquire technical expertise which they can then apply in their countries.<sup>252</sup>

It has also been reported that collaboration has enabled the commercialisation of new technology in the petroleum industry by bringing together the input of MNCs in the industry.<sup>253</sup> For example, the work of Chevron Corporation (hereafter Chevron), Total S.A. (hereafter Total) and Schlumberger Limited (hereafter Schlumberger) resulted in technology that could locate new petroleum reserves.<sup>254</sup> Chevron contributed its expertise in reservoir management; Total provided engineering and Schlumberger participated in software development in order to develop the technology.<sup>255</sup>

Collaboration among firms in the oil and gas industry therefore has the potential to enable progress in firms' operations. However, given that disputes related to holding IP may occur, it is important for firms to apply measures that will effectively deal with IP that is generated from collaborative work. Questions about firms' holding of IP in the industry in collaboration ventures may arise in circumstances in which it is unclear which firm's inputs have generated the IP or in what proportion respective firms can claim IPRs in IP produced. Written agreements that guide such work should be entered into before work begins to reduce the possibility of a lack of clarity regarding parties' arrangements in such collaborations if a dispute occurs.

With regard to non-technological innovation expenditure, this has largely been found to be mostly on machinery and equipment, rather than in R & D in middle and low-income countries.<sup>256</sup> In contrast, most international R&D investment occurs in high income economies.<sup>257</sup>

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<sup>250</sup> PWC 'Maximising value of shale joint ventures' (2011) 2. Available at <https://www.pwc.com/gx/.../oil-gas-energy/.../maximizing-value-shale-joint-ventures.p...>, accessed on 19 July 2019. (Hereafter, PWC 2011).

<sup>251</sup> PWC 2011.

<sup>252</sup> Ibid.

<sup>253</sup> Available at <https://www.bcg.com/publications/2013/innovation-strategy-sparking-intellectual-property-engine-energy-companies.aspx>, accessed on 6 December 2018.

<sup>254</sup> Ibid.

<sup>255</sup> Ibid.

<sup>256</sup> WIPO 2011 at 42.

<sup>257</sup> –WIPO 2011 at 38.

## 2.5 IP, FDI, Public Interest and Economic Growth in Kenya

Vision 2030 aims to achieve economic growth of ten per cent in Kenya over a 25 year period.<sup>258</sup>

It looks to elements such as R&D, increased investment in economic sectors and increased earnings from the informal sector to support the growth.<sup>259</sup> Essentially, the development plan is intended to expand industrial development in order to realise economic growth.<sup>260</sup> Ultimately, the economic progress envisioned by Vision 2030 is expected to result in socio-economic development which is intended to improve the quality of life of citizens.<sup>261</sup> The government's Big Four Agenda's initiatives - industrialisation, manufacturing and agro-processing; affordable housing; food and nutrition security; and universal health coverage are aligned with Vision 2030 and are intended to improve citizens' quality of life by *inter alia*, supporting economic growth.<sup>262</sup>

Industrial development is an important component in the realisation of economic growth.<sup>263</sup> It has been posited that the ability to enhance a country's technological capacity during early stages of a country's development depends on provision of education and specialised training, which enables absorption of new technologies by the workforce.<sup>264</sup> Learning by doing, through studying imported machinery, is also essential during that stage.<sup>265</sup>

In the next stage of development, creation of new knowledge by the workforce, combined with its absorption of technological knowledge from outside the country becomes important in order for technological improvements to occur.<sup>266</sup> Local workers also depend on licensed technology at this developmental stage.<sup>267</sup> Building of technological capacity at later stages of

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<sup>258</sup> Vision 2030 at 2.

<sup>259</sup> –Vision 2030 at 8 -10.

<sup>260</sup> –Vision 2030 at 9.

<sup>261</sup> –Vision 2030 at 1.

<sup>262</sup> Government of the Republic of Kenya 'Third Medium Term Plan 2018 – 2022' (2018) iv. Available at <http://planning.go.ke/reports/>, accessed 28 December 2019.

<sup>263</sup> See for example African Union, Economic Commission for Africa, African Development Bank and United Nations Development Programme 'Africa sustainable development report: tracking progress on agenda 2063 and the sustainable development goals'(2017) 2. Available at <https://www.uneca.org/publications/2017-africa-sustainable-development-report>, accessed on 13 December 2018.

<sup>264</sup> United Nations Industrial Development Organisation 'Industrial development report 2016' (2015) 92. Available at <https://www.unido.org>, accessed on 13 December 2018. (UNIDO 2016).

<sup>265</sup> –UNIDO 2016 at 93.

<sup>266</sup> Ibid.

<sup>267</sup> Ibid.

development is characterised by collaborations between firms and international mergers and acquisitions.<sup>268</sup>

Enabling factors for industrial development include investment. As noted in chapter one of the thesis, evaluation of an investment environment by existing and potential investors may be influenced by the regulatory environment. The study of Kenya's IP laws by this thesis in the context of investment in the oil and gas industry is therefore relevant to consider the possibility that the laws would enable protection of investors' inputs in the form of IP assets. Investment may be by local or foreign investors.

The focus on FDI in this section of the thesis is due to the involvement of MNCs established outside Kenya in the exploration and extraction of crude oil in the country. These two processes, as noted in chapter one of the thesis, are capital intensive and therefore entail significant risks for investors. Additionally, the current absence of Kenyan firms in the two processes on a scale equivalent to MNCs in the petroleum industry means that FDI is the likely channel through which any additional investment in the processes would currently occur.

FDI has been noted to contribute to funding continued long-term economic growth.<sup>269</sup> Economic growth would be expected to arise from expected results from FDI such as local employment and technology transfer to local enterprises.<sup>270</sup> It has however been noted that the generation of local employment by FDI in the extractive industry is low, compared to manufacturing industries and that in order for FDI to contribute to economic growth, factors such as a country's education levels are relevant.<sup>271</sup>

It is noteworthy that the presence of oil and natural resources in African oil – exporting countries has been identified as a key factor that attracts FDI to the countries.<sup>272</sup> Protection of IP has been cited as one of the elements that have been improved in an effort to increase FDI in African countries.<sup>273</sup> Areas addressed in investment treaties entered into by African countries

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<sup>268</sup> Ibid.

<sup>269</sup> UNCTAD 2002 at 5.

<sup>270</sup> Elizabeth Asiedu 'Foreign direct investment, resources and institutions' (2013) 20 and 22. Working Paper, International Growth Centre, available at <https://www.theigc.org/wp-content/uploads/2014/.../Asiedu-2013-Working-Paper.pdf>, accessed on 14 January 2019. (Hereafter Asiedu 2013).

<sup>271</sup> Ibid.

<sup>272</sup> Anupam Basu and Krishna Srinivasan 'Foreign direct investment in Africa – some case studies' IMF Working Paper (2002) 9. Available at <https://www.imf.org/>, accessed on 12 January 2019. (Hereafter Basu and Srinivasan 2002).

<sup>273</sup> Ibid at 15.

have included dispute settlement, which is regarded as one of the determinants of a country's investment environment.<sup>274</sup>

Utilitarianism, as a theoretical justification of IPRs, advances that maximum benefit would be derived by society through a system that provides for a reward mechanism designed to provide incentives for creators.<sup>275</sup> It promotes the limited grant of rights – in duration and scope, to inventors and authors for promotion of society's progress.<sup>276</sup> Article 7 of the TRIPS agreement has been noted to have utilitarian objectives.<sup>277</sup> The dominant concern of utilitarianism has been noted to be economic gain from protection by patents or copyright.<sup>278</sup> The theory has been criticised for lacking proven ways in which benefits and costs associated with achieving a balance between private rights and social welfare can be measured.<sup>279</sup>

Kenya's IP laws generally reflect a utilitarian approach through provisions that protect IPRs on the one hand, and those that give limitations to the rights. The theory forms the basis upon which answers to the central thesis question - how Kenya can apply intellectual property law in the country's oil and gas sector in order to foster innovation and support economic growth will be derived. This is because as seen in section 2.4 of the chapter, productive interaction between IPRs and innovation is considered to involve elements such as research and collaboration.

Research may be carried out using inventions that are the subject of protection using IPRs. Thus, the limitation in Kenya's IP law, specifically the IPA, which allows research to be carried out using inventions protected by patents,<sup>280</sup> utility models and industrial designs<sup>281</sup> is applicable in enabling work that could lead to improvements in implements that are used in the country's petroleum sector. In enabling research whilst securing the protection of rights for the IPR holder, the IPA's utilitarian provisions provide a basis upon which innovation and ultimately, economic growth can be achieved.

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<sup>274</sup> Ibid at 17.

<sup>275</sup> Jeanne C Fromer 'Expressive incentives in intellectual property, (2012) 98 *Virginia Law Review* 1746. (Hereafter, Fromer 2012).

<sup>276</sup> Ibid at 1747 and 1752.

<sup>277</sup> J Janewa OseiTutu, 'Humanising intellectual property: moving beyond the natural rights property focus,' (2017) 20 *Vanderbilt Journal of Entertainment and Technology Law* 218. (Hereafter OseiTutu 2017).

<sup>278</sup> Ibid at 236.

<sup>279</sup> Neil Wilkof, 'Theories of intellectual property; is it worth the effort?' (2014) 9 *Journal of Intellectual Property Law and Practice* 257.

<sup>280</sup> Section 58(1).

<sup>281</sup> Section 105.

Collaboration among firms in the sector may require licences in instances where the subject matter is protected IP and the work done in the course of collaborative activity may produce output that can be protected using IPRs. Provisions in Kenya's IP laws would guide matters such as the form of licences<sup>282</sup> and their registration.<sup>283</sup> Therefore, regulation of IP – related matters in oil and gas industry collaborations in Kenya would depend on the rights and duties of parties to the collaborations as provided under laws such as the IPA.

The argument that market power and competition can work concurrently to positively influence innovation was made by Schumpeter.<sup>284</sup> It has been noted that this view applied in markets in the early twentieth century in the USA, where market conditions included the merger of firms to create larger firms which competed among themselves and pioneered technological advancements during that time.<sup>285</sup> It was also Schumpeter's view that innovation in an economy is also supported by the use of returns from technology introduced in the economy by innovating firms.<sup>286</sup> It has however been argued that making similar conclusions regarding innovation in markets at the present time would require empirical evidence.<sup>287</sup>

The following review of literature on the relationship between IPRs, FDI, economic growth and public interest provides a basis for analysis of these issues in the thesis, conclusions made in section 2.7 of this chapter and recommendations made by section 6.4 of the thesis.

Ncube proposes that an equitable IP model that is informed by three factors should be used to evaluate drafting of IP policy and legislation.<sup>288</sup> These factors are public interest, the economic environment in which IPRs are protected and enforced and the use of human rights considerations to balance the interests of stakeholders.<sup>289</sup> The proposal is based on instrumentalism, public interest and balancing constitutional rights of creators and users of IP.<sup>290</sup>

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<sup>282</sup> Section 67 of the IPA.

<sup>283</sup> Section 68.

<sup>284</sup> Tom Nicholas 'Why Schumpeter was right: innovation, market power and creative destruction in 1920s America' (2003) 63 *The Journal of Economic History* 1050. (Hereafter, Nicholas 2003).

<sup>285</sup> Nicholas 2003 at 1025.

<sup>286</sup> –Nicholas 2003 at 1050.

<sup>287</sup> Ibid.

<sup>288</sup> Ncube 2013 at 382.

<sup>289</sup> Ncube 2013 at 374.

<sup>290</sup> Ibid.

Gathii states that for middle – income countries, IP protection is an incentive for technological innovation.<sup>291</sup> For least developed countries, he argues that strengthening IP protection, on its own, does not positively influence investment.<sup>292</sup> He posits that in order for economic growth to occur, IP protection, as one of the elements considered as contributing to that growth would also require a skilled workforce in order for transfer of technology to occur.<sup>293</sup> He also argues that optimal IP protection, to be achieved through means such as controlling the grant of patents with claims that are too broad, is more likely to occur in circumstances where patent offices are staffed with technically skilled personnel.<sup>294</sup> Further, he observes that enforcement of patents may have the consequence of applying resources in litigation rather in innovation – targeted pursuits.<sup>295</sup> As will be seen later in this section of the chapter, Kenya’s judiciary has sought to deal with the possibility of parties incurring litigation – related costs and delays by parties in court cases by encouraging alternative dispute resolution (ADR).<sup>296</sup> Barnard and Bromfield note IP- related concerns regarding investments in low income countries’ MNCs by high income countries’ MNCs with higher technological and economic capacity.<sup>297</sup> They observe that although learning and improvement in the lower income country MNCs may be increased by such arrangements, there is a possibility that their contribution in such arrangements may be appropriated by those MNCs.<sup>298</sup>

Dhar and Joseph posit that FDI is the most significant method of technology transfer.<sup>299</sup> They note that export of goods, licensing of technology and joint ventures are other technology transfer methods.<sup>300</sup> They also argue that IPR protection is particularly important in FDI which involves knowledge assets because of its potential for protection against misappropriation of the assets.<sup>301</sup> However, they point out that a strong IPR regime does not, by itself, provide an

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<sup>291</sup> Gathii 2016 at 526.

<sup>292</sup> Gathii 2016 at 505.

<sup>293</sup> Gathii 2016 at 524.

<sup>294</sup> Ibid.

<sup>295</sup> Gathii 2016 at 530.

<sup>296</sup> Gazette Notice Number 5179, Kenya Gazette Volume CXVI Number 89 dated 28th July 2014.

<sup>297</sup> Barnard and Bromfield 2009 at 86.

<sup>298</sup> Ibid at 86.

<sup>299</sup> Biswajit Dhar and Reji Joseph ‘Foreign direct investment, technology transfer and intellectual property rights: the north - south and the south - south dimension’ UNCTAD Background Paper Number 6 (2012) 6. Available at <https://unctad.org>, accessed on 16 December 2018. (Hereafter Dhar and Joseph 2012).

<sup>300</sup> Ibid.

<sup>301</sup> Dhar and Joseph at 8.

adequate incentive for technology transfer.<sup>302</sup> They cite increased competition in markets as a potential benefit of FDI.<sup>303</sup>

Dhar and Joseph give the example of technology development based on FDI and collaboration in the Republic of Korea growing through stages.<sup>304</sup> The first of these involved sub-contracting of local firms by MNCs to produce goods using an MNC's specifications and selling them under an MNC's brand name.<sup>305</sup> Thereafter, local firms conducted a significant quantity of production design tasks using general design templates provided by the MNCs, which demonstrates incremental innovation.<sup>306</sup>

Shavell and van Ypersele propose an optional reward system that would be an alternative to the grant of IPRs.<sup>307</sup> They posit that the optional reward system would better enable improvements in existing innovations, which would be in the public domain, unlike innovations protected by IPRs, for which improvements require licences from IPR holders.<sup>308</sup> They further argue that consumer welfare is negatively affected because of large differences between price and post –innovation production cost for innovations in industries such as pharmaceuticals and computer software.<sup>309</sup>

Roin argues that a prize system and the grant of IPRs as mechanisms for giving incentives for innovation can co-exist.<sup>310</sup> His argument regarding the proposed replacement of the IPR system with a prize system is that the intention of that replacement, which is the reduction of the difference between price and marginal cost for the benefit of consumers by reducing the prices they pay for innovations, would still be likely to face challenging factors such as high fixed production costs.<sup>311</sup> He posits that IPRs do not provide a right to monopoly profits by IPR

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<sup>302</sup> Dhar and Joseph at 12.

<sup>303</sup> Dhar and Joseph at 9.

<sup>304</sup> Ibid.

<sup>305</sup> Ibid.

<sup>306</sup> Ibid at 9 – 10.

<sup>307</sup> Steven Shavell and Tangay van Ypersele, 'Rewards versus intellectual property rights' (1998) Paper 246 Harvard Law School John M Olin Center for Law, Economics and Business Discussion Paper Series, 1. Available at [http://lsr.nellco.org/harvard\\_olin/246](http://lsr.nellco.org/harvard_olin/246), accessed on 13 December 2018. (Hereafter Shavell and van Ypersele 1998).

<sup>308</sup> Ibid at 23- 4.

<sup>309</sup> Ibid at 27.

<sup>310</sup> Benjamin N Roin 'Intellectual property versus prizes: reframing the debate' (2014) 81 *The University of Chicago Law Review* 1011. (Hereafter Roin 2014).

<sup>311</sup> Ibid at 1014.

holders, rather that they provide an opportunity for the profits to be made, a position which governments can change through their intervention in markets.<sup>312</sup>

Optional reward systems for invention, in forms such as direct financing and prize financing, have also been studied by Baker, Jayadev and Stiglitz.<sup>313</sup> They have noted that although such reward systems may offer benefits which could counter some of the demerits of the patent system, they may be hampered by bureaucracy and move slowly in comparison to the technology needs of the time in question.<sup>314</sup>

It has been noted that national legal regimes pertaining to investment may include IP law and competition law.<sup>315</sup> These laws therefore contribute to a country's investment environment. Reference to a country's legal environment as one that would support establishment and growth of enterprises has accordingly featured when countries promote themselves as suitable investment locations.<sup>316</sup> In some cases, the information available to potential investors in such promotional activities by countries includes details of the countries' laws, including IP law, which could prove relevant to the investors' business activities in those countries.<sup>317</sup> These may contain guides for investors on legal provisions that apply to elements such as registration of IPRs.<sup>318</sup> Further, in relation to the link between IP and investment, the Intellectual Property Policy of the Republic of South Africa states that it is intended to promote investment in South Africa.<sup>319</sup>

It is aligned with the National Industrial Policy Framework and the Industrial Policy Action Plan, key elements of the country's National Development Plan, which is aimed at the

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<sup>312</sup> Ibid.

<sup>313</sup> Supra Baker, Jayadev and Stiglitz 2017 at 10.

<sup>314</sup> Ibid at 13.

<sup>315</sup> United Nations Conference on Trade and Development 'World Investment Report 2018' (2018) 105 - 6. Available at [https://unctad.org/en/PublicationsLibrary/wir2018\\_en.pdf](https://unctad.org/en/PublicationsLibrary/wir2018_en.pdf), accessed on 13 January 2019. (Hereafter 'UNCTAD World Investment Report 2018').

<sup>316</sup> See, for example, <http://invest.go.ke/why-invest-in-kenya/>, accessed on 14 January 2019. See also The Department of Trade and Industry and Deloitte South Africa, 'South Africa: Investors' handbook 2014/15.' Available at <https://www.thedti.gov.za/publications>, accessed on 14 January 2019. (Hereafter South Africa Investors' Handbook 2014/15).

<sup>317</sup> South Africa Investors' Handbook 2014/15 at 116.

<sup>318</sup> Ibid.

<sup>319</sup> Department of Trade and Industry, Republic of South Africa, Intellectual Property Policy of the Republic of South Africa Phase I 2018' 33. Available at <https://www.gov.za/documents/intellectual-property-policy-south-africa-%E2%80%93-phase-i-2018-13-aug-2018-0000>, accessed on 14 January 2019. (Hereafter South Africa IP Policy 2018).

country's economic development.<sup>320</sup> The policy describes IP as a vital policy tool to promote economic growth.<sup>321</sup> It however notes that it has not been established that a link exists between stronger IP protection and economic development.<sup>322</sup>

Given that as shown above, IP and investment have been linked, it is relevant for this thesis to look at Kenya's IP laws as they relate to its oil and gas industry from an investor's viewpoint. The risk element in oil exploration, which was alluded to in chapter one of the thesis, is another element that points this study in the direction of analysing IP laws in Kenya as they relate to the industry. In considering whether the IP law framework in Kenya would contribute to mitigation of the risk that investors' IP assets may be appropriated by non-owners, the chapter deals with one angle of the research question. This is the angle that queries how having IP law in Kenya as a regulatory tool in the oil and gas sector interacts with the national policy goals related to the sector, from an investor's view. It also investigates the role that IP can play in achieving the national policy goals related to the sector.

It has been noted that uncertainty of the outcome of oil exploration, specifically, whether the search would lead to discovery of commercially viable reserves, is a contributing factor to the high risk associated with the process.<sup>323</sup> The risk level in such ventures is increased by the expense associated with them due to capital and advanced technology requirements.<sup>324</sup> Therefore, introducing a measure of certainty through tools such as laws in these circumstances may have the effect of improving the profile of an investment location.<sup>325</sup> South Africa's IP Policy 2018 cites creation of legal certainty as one of the ways in which it aims to enhance the country's investment profile.<sup>326</sup>

It notes that the introduction of substantive patent examination as part of the country's patent application process is intended to assess patent applications for pre-requisites for patent grant, which should increase the possibility of awarding patents on firmer grounds.<sup>327</sup> This is

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<sup>320</sup> Ibid.

<sup>321</sup> Ibid at 3.

<sup>322</sup> Ibid at 9.

<sup>323</sup> Asiedu 2013 at 1.

<sup>324</sup> Asiedu 2013 at 2.

<sup>325</sup> South Africa IP Policy 2018 at 33.

<sup>326</sup> Ibid at 34.

<sup>327</sup> Ibid.

projected to reduce instances of challenged patent grant which can cause costly and lengthy court proceedings.<sup>328</sup>

The policy notes that measures such as these, which are related to IP law, are one segment of an investment arena that comprises other laws in the country, such as tax laws.<sup>329</sup> With regard to legal certainty expected to be promoted by the policy, it notes that introducing substantive search and examination of patent applications would also support public interest by promotion of innovation through the grant of patents after these processes.<sup>330</sup> This seems to co-relate increased innovation with the grant of patents. However, as noted in section 2.4.1 of this chapter, an upward trend in innovation may not be linked to patent protection due to factors such as expenses associated with patent protection.<sup>331</sup>

The policy also cites opposition proceedings related to the grant of patents as contributing to certainty regarding patents' validity through testing the criteria for grant in the proceedings.<sup>332</sup> Opposition proceedings may involve submission of data by third parties to enable determination of patent applications, opposition by a third party to the grant of a patent prior to its grant or an appeal or review of a patent by a third party after patent grant.<sup>333</sup> Therefore, the criteria for patent grant in those instances are tested after the patent has been granted.<sup>334</sup>

These tests for meeting thresholds required for patent protection are intended to be beneficial to public interest by making it necessary for patent applications to undergo examination by interested parties, a measure intended to prevent the grant of the exclusive rights inherent to patents to inventions that do not satisfy the requirements for grant. This is likely to favour public interest because it prevents the removal of access to an invention from the public domain, albeit for a limited time.

South Africa's IP Policy has a noteworthy approach regarding the introduction of substantial search and examination of patents in the country.<sup>335</sup> It entails industry-specific search and examination initially rather than immediately subjecting patent applications from all

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<sup>328</sup> Ibid.

<sup>329</sup> Ibid.

<sup>330</sup> Ibid at 17.

<sup>331</sup> See, for example, Misati and Adachi 2010 at 3.

<sup>332</sup> South Africa IP Policy 2018 at 19.

<sup>333</sup> Ibid.

<sup>334</sup> Ibid.

<sup>335</sup> South Africa IP Policy 2018 at 18.

industries to the procedures.<sup>336</sup> Reasons cited for this have been noted to include public interest, government capacity and development concerns.<sup>337</sup> These factors reflect conditions that may hamper implementation of the procedure in all industries in other countries, particularly those with a similar economic profile with South Africa. It is relevant for this section of the chapter to assess South Africa's IP Policy (noted earlier as *inter alia* intended to enhance investment in that country) for comparison because chapter one of the thesis indicates that provision of a basis for investment as a role that IP law in Kenya is intended to play.

In Kenya, examples of investment by technology firms in the information and technology sector in 2013 were in the form of establishing research laboratories and technology incubation hubs by USA – based firms such as IBM and Microsoft.<sup>338</sup> It has been estimated that by 2024, Kenya will continue to develop as a regional hub in various sectors of the economy, such as energy and manufacturing.<sup>339</sup> In the manufacturing sector, intra-African investment has been identified in such industries as agri-processing, textiles and electronic equipment.<sup>340</sup>

Some studies on firms in high capital cost industries have concluded that FDI by way of setting up a company's production facilities in another country is more likely to take place in countries which have weak IP protection in order to prevent loss of the firm's proprietary information.<sup>341</sup> This FDI method would, ideally, enable greater control by the firm over its IP by closer supervision of the firm's daily activities.

On the other hand, licensing in jurisdictions where there is relatively strong IP protection seems to be a favoured method of production by enterprises in those industries.<sup>342</sup> As earlier mentioned, IP protection as a factor determining the mode of FDI is considered together with other factors in order to make FDI – related decisions.

The speed with which dispute resolution processes are completed is another element that influences investment decisions.<sup>343</sup> The findings of a study carried out in 2015 regarding judicial

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<sup>336</sup> Ibid..

<sup>337</sup> Ibid.

<sup>338</sup> United Nations Conference on Trade and Development 'World Investment Report 2014' (2014) 38. Available at [http://unctad.org/en/PublicationsLibrary/wir2014\\_en.pdf](http://unctad.org/en/PublicationsLibrary/wir2014_en.pdf) Accessed 14 June 2015. (Hereafter UNCTAD 2014).

<sup>339</sup> Ibid at 39.

<sup>340</sup> Ibid at 40.

<sup>341</sup> Michael W Nicholson 'The impact of industry characteristics and IPR policy on foreign direct investment' 13 (2007) *Review of World Economics* 45.

<sup>342</sup> Ibid.

<sup>343</sup> World Bank, *Doing Business 2016: Measuring Regulatory Quality and Efficiency*, Economy Profile Kenya, 6.

processes in Kenya's courts revealed that there was publication of decisions rendered in commercial disputes at the appellate courts and the Supreme Court in newspapers, official gazettes, websites and other media that were accessible to the public.<sup>344</sup> The availability of this information would make those intending to pursue legal action aware of the possible outcome(s) of such action given that the doctrine of precedent applies in Kenya's courts.

However, the same study identified a lack of legal provisions that stipulate a maximum number of adjournments that can be granted in a matter that is in court or legal provisions that limit the granting of adjournments only in unforeseen and exceptional circumstances.<sup>345</sup> This presents a potential drawback to litigants who would like to estimate how long a matter will be heard in court and thus may hinder decision – making for parties or potential parties to a suit.

Policy changes by government institutions to speed up the process of granting IPRs may lead to an increase in the number of applicants for such rights. For example, in the UK, the UK Intellectual Property Office introduced a service called the Green Channel in 2009 to enable patent applicants to apply for accelerated processing of patent applications where inventions have an environmental benefit at no additional cost.<sup>346</sup>

Where a benefit of this nature is evident, the applicant need not prove the same.<sup>347</sup> Generally, when entrepreneurs who are eager to start commercial production of a product or process that they have created are made aware of the lengthy timeframes (and costs) required for registration of patents, they are likely to question the rationale for embarking on registration. A measure such as Green Channel therefore has the potential to encourage patent registration among business people.

Changes in the law also have the potential to enable faster hearing of cases and encourage alternative dispute resolution. This may in turn result in the growth of economic benefits realised by patent holders and diffusion of technology by mechanisms such as the licensing of IP. For example, the Constitution of Kenya, 2010, provides for the expeditious hearing of matters in

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<sup>344</sup> Ibid at 86.

<sup>345</sup> Ibid.

<sup>346</sup> United Kingdom Intellectual Property Office 'Patents: accelerated processing' Available at <https://www.gov.uk/guidance/patents-accelerated-processing>. Accessed on 19 July 2016.

<sup>347</sup> Ibid.

court by providing that justice shall not be delayed<sup>348</sup> and also providing for the administration of justice without undue regard to procedural technicalities.<sup>349</sup>

The provision regarding procedural technicalities has been applied by the courts<sup>350</sup> which have distinguished between rules of procedure that the courts may overlook to enable court proceedings to continue and those to which the parties must adhere before the case can be heard and determined.<sup>351</sup> The Constitution's provision for ADR<sup>352</sup> is also intended to encourage faster delivery of justice by avoiding accumulation of cases awaiting determination by the courts. The Practice Directions Relating to Case Management in the Commercial and Admiralty Division of the High Court in Kenya have also provided for ADR with a view to reducing costs and delays associated with court cases.<sup>353</sup>

The overall impact of speedier hearing of disputes may affect the attractiveness of patent protection as a means of protecting the IP in inventions. One of the ways in which the effectiveness of protection by the law would be assessed is through the enforcement of legal provisions, a factor tested partially by the efficiency of litigation processes.

From the above constitutional provisions and developments in Kenya's legal system, it is evident that efficiency in dispute resolution has been prioritised. As earlier noted, one of the parameters that firms consider in assessing the suitability of an investment destination is its legal system because that system has an impact on the ease of establishing and continuing a firm's operations and therefore may ultimately determine the success or failure of the enterprise.

Possible benefits from FDI have been found to include the possibility of knowledge transfers through elements such as mobility of skilled workers and increased competition through the establishment of MNCs' operations.<sup>354</sup> It is however possible that FDI could be detrimental to local firms if those firms are driven out of the market when unable to compete with MNCs.<sup>355</sup> It is noteworthy that the realisation of FDI – related knowledge transfer benefits is dependent on

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<sup>348</sup> Article 159(2) (b).

<sup>349</sup> Article 159 (2) (d).

<sup>350</sup> See for example *Kenya Commercial Bank Limited v Kenya Planters Co-operative Union* (2010) eKLR and *Ali Abdi Sheikh v Edward Wainaina Nderitu and Others* (2012) eKLR.

<sup>351</sup> *Ibid.*

<sup>352</sup> Article 159(2) (c).

<sup>353</sup> Gazette Notice Number 5179, Kenya Gazette Volume CXVI Number 89 dated 28<sup>th</sup> July 2014.

<sup>354</sup> UNIDO 2016 at 99.

<sup>355</sup> *Ibid.*

the capacity of the local workforce to absorb any knowledge that is available for transfer from MNCs.<sup>356</sup>

## 2.6 Public Interest

This section of the chapter considers public interest in relation to IPRs in Kenya's oil and gas industry. Vision 2030, as noted in section 2.5 of the chapter, has its ultimate goal as the improvement of the quality of life of citizens, stemming from socio-economic development.<sup>357</sup> This echoes two aspects that public interest in the context of IP has been argued to consist of – access to products which produce social welfare gains and optimal provision of products by granting exclusive rights to the creators of the products.<sup>358</sup>

It has been argued that it is difficult to define public interest.<sup>359</sup> Public interest has also been said to be associated with aspects that are facilitated by exceptions and limitations, including research and education.<sup>360</sup>

As indicated in chapter one of the thesis, this study defines public interest as the economic and social welfare of people. This definition is derived from the intention of Vision 2030 which is cited above.<sup>361</sup>

TRIPS makes one direct reference to public interest that is related to law-making by member states.<sup>362</sup> In article 8, the agreement gives member states the option of promoting the public interest in areas that are important to their socio-economic and technological development in law-making, provided that the promotion of the public interest in legislation accords with the provisions of the agreement.<sup>363</sup> This lays a foundation for the examination of IPR-related public interest in Kenya's IP laws in chapters three, four and five of the thesis. The conclusions reached

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<sup>356</sup> Ibid.

<sup>357</sup> Vision 2030 at 1.

<sup>358</sup> Ruth L. Okediji 'The international copyright system: limitations, exceptions and public interest considerations for developing countries' (2006) UNCTAD and ICTSD Project on IPRs and Sustainable Development Issue Paper Number 15. (Hereafter Okediji 2006).

<sup>359</sup> See, for example, Ilanah Fhima 'The public interest in European trade mark law' (2017) 4 *Intellectual Property Quarterly* 1. Available at <https://ssrn.com/>, accessed on 18 December 2018.

<sup>360</sup> Vuyisile Hobololo 'Strategic patenting of pharmaceutical inventions and the public's right to access medicines: the South African context,' 16 (2015) *The African Journal of Information and Communication* 78.

<sup>361</sup> Vision 2030 at 1.

<sup>362</sup> Articles 8.

<sup>363</sup> Article 8.1.

about public interest – related provisions in the laws studied will serve as a point from which recommendations made in chapter six of the thesis will be drawn.

Anderson and Wager take the view that the provisions for protection of economic and moral rights in works that are the product of creative endeavour by international human rights instruments such as the Universal Declaration of Human Rights are a reflection of the foundation of modern IP systems in seeking to safeguard the rights of individual creators of works and advantages to the society at the same time.<sup>364</sup> They argue that public interest is served in the long term by virtue of the protected IP eventually falling into the public domain.<sup>365</sup> They also cite seeking an optimal balance between the human rights of creators of work that can be protected by IP and public good in relation to the protectable or protected work as a challenge that arises in making IP laws and propose that provision for particular aspects relevant to IP in the laws is one way in which the balance could be achieved.<sup>366</sup>

The aspects that they identify are: defining subject matter that can be protected under the law, the rights available, limitations applicable and protection term.<sup>367</sup> Their argument, which is illustrated using copyright protection, is that the four aspects can be provided for in law in a manner that promotes the protection of a right holder and public good, concurrently.<sup>368</sup> The two authors point out that the maintenance of the optimal balance between the identified competing interests presents challenges that are wrought by dynamic technological and economic environments.<sup>369</sup>

Anderson and Wager's analysis on the role of competition policies in relation to human rights, development and IPRs also takes into account the effect that the policies have on public interest.<sup>370</sup>

Okediji notes the importance of limitation of IPR holders' rights in addressing the need for access to works protected by copyright, both to authors, who require access in order to engage in creative ventures and users of the works who may be potential authors or may require

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<sup>364</sup> Robert D Anderson and Hannu Wager 'Human rights, development and the WTO: the cases of intellectual property and competition policy' (2006) 9(3) *Journal of International Economic Law* 723. (Hereafter Anderson and Wager 2006).

<sup>365</sup> *Ibid* at 724.

<sup>366</sup> *Ibid* at 725.

<sup>367</sup> *Ibid*.

<sup>368</sup> *Ibid*.

<sup>369</sup> *Ibid* at 726.

<sup>370</sup> *Ibid* at 732.

access for purposes such as education.<sup>371</sup> She cites the importance of access to knowledge goods by developing and least-developed countries as a significant public interest concern, given the impact of copyright limitations and exceptions on accessibility of the goods.<sup>372</sup>

She also notes the importance of accessibility to works by developed countries for purposes such as research.<sup>373</sup> Two of the types of limitations that she refers to, under copyright law – limitations through protection criteria and limitations on duration,<sup>374</sup> are available under Kenya's Copyright Act 2001. She indicates that the use of competition law and policy enables control of the abuse of market power by IPR holders and further, argues that the distinction between use of IPRs for use or abuse of rights is defined by jurisdictions depending on the domestic market conditions and the doctrinal approach adopted by each jurisdiction.<sup>375</sup>

Competition law and policy are also noted as relevant to the protection of benefits that should accrue to society even as private rights that are available to IPR holders are enjoyed.<sup>376</sup> In Kenya's oil and gas industry it will be important to facilitate the availability of learning materials as a measure aimed at increasing the number of those trained in areas that are relevant to the industry. Access to learning materials has been stated to be an aspect of access to knowledge.<sup>377</sup> The access to knowledge campaign is intended to facilitate the use of IP law and policy to pursue protection of IPRs that is likely to support the objectives of both producers and users of IP.<sup>378</sup> For example, students undertaking education programmes that are applicable to the sector should benefit from limitations to IPRs such as copyright, which can enhance availability of learning materials and conduct of research. A well-trained workforce in the sector has the potential to contribute to economic growth through job creation and increased productivity and thus promote public interest.

On the other hand, commercial entities such as firms engaged in the extraction and sale of oil and gas are more likely to seek benefits conferred by exclusive rights conferred by IPRs

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<sup>371</sup> Okediji 2006 at x-xi.

<sup>372</sup> Ibid at 2.

<sup>373</sup> Ibid.

<sup>374</sup> Ibid at 11.

<sup>375</sup> Ibid at 16.

<sup>376</sup> Ibid.

<sup>377</sup> Andrew Rens, Achal Prabhala and Dick Kawooya 'Intellectual property, education and access to knowledge in Southern Africa' (2006) ICTSD UNCTAD TRALAC 6. Available at [unctad.org › PublicationsLibrary › ictsd-tralac2006d1\\_en](http://unctad.org/PublicationsLibrary/ictsd-tralac2006d1_en), accessed 26 January 2020.

<sup>378</sup> Chris Armstrong et al 'Introduction' in C. Armstrong et al (eds) *Access to Knowledge in Africa: The role of copyright* (2010) 4.

rather than promote access to the rights. For example, a firm that holds copyright in software may seek to increase chances of recouping the investment in developing the software by licensing the software rather than making it available to other firms at no cost. It is however possible that the firm could use the research exception in Kenya's Copyright Act, 2001<sup>379</sup> to inform its commercial dealings.

South Africa's IP Policy 2018 notes that fair distribution of goods and services that incorporate IP underlies the public interest approach that it pursues.<sup>380</sup> It uses the example of the health sector to illustrate an industry in which access related to IP that is legally protected through IPRs is relevant.<sup>381</sup> The focus on health-related products by the policy uses a priority area for illustration of the importance of equitable access but also mentions the goal of achieving development objectives through such access to underline the significance of that approach to the country's overall agenda.<sup>382</sup>

## 2.7 Conclusion

The aim of this chapter was the provision of a foundation upon which the role of IP laws in Kenya's oil and gas industry can be identified. This has been pursued through the study of:

1. IP protection in Kenya;
2. IP as a factor considered to influence investment;
3. The primary policy goal of Vision 2030, economic growth;
4. A summary of IP legislation in Kenya that is relevant to the oil and gas industry;
5. Innovation as a concept relevant to IP and the oil and gas industry;
6. Reforms in Kenya's legal system that are relevant to improving the handling of disputes and
7. Public interest related to IP law.

In studying the above aspects, the chapter has provided a theoretical framework which will serve as a basis of determining the role that IP laws in Kenya will play or are likely to play in its oil and gas industry.

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<sup>379</sup> Section 26(1)(a).

<sup>380</sup> South Africa IP Policy 2018 at 10.

<sup>381</sup> Ibid.

<sup>382</sup> Ibid.

The chapter has outlined the manner in which IP that is relevant to the oil and gas industry is currently protected and used in Kenya. It has also studied the possibility that IP laws relevant to the industry, which were highlighted in the chapter, could influence investment decisions. It has noted that investment in the oil and gas sector is required in order to realise the industrial growth goal of Vision 2030 and, through a literature review, examined the possibility that IP laws in Kenya could have an impact on investment in the industry. The chapter's study of the investment environment has been noted as crucial because of expected economic growth that is expected to stem from industrial growth.

The chapter's study of Utilitarianism as a theory propounded to justify the grant of IPRs has revealed the Utilitarian approach in Kenya's IP laws. In doing so, it has highlighted provisions in laws relevant to the country's oil and gas sector and determined that the provisions would likely contribute to innovation and economic growth through the balance of rights and duties available to IPR holders and users. It has used the contexts of collaboration and research to underline the areas in which the legal provisions would be applied. Thus, it has illustrated the manner in which the use of the laws would play a part in advancing innovation and economic growth in the sector and in so doing, provided an answer to the main question of the thesis.

The thesis' sub-questions regarding the current use of IP in Kenya and how that use can be improved were dealt with by section 2.4 of this chapter. The current use of IP in Kenya was noted to include widespread use of trade marks in the downstream segment of Kenya's oil and gas sector. Further, the chapter noted the registration of transactions such as assignments in the KIPI Journal, which indicates that IP assets have been the subject of commercial dealings. The potential for use of IP assets as security for financing was explored by the chapter in light of the enactment of the MPSR Act. It emerged that the actualisation of the potential for use of IP in that context will become clearer with time, given that the Act has been in force for less than two years at the time of writing.

The chapter has shown that a country's laws are an important part of its investment landscape. It has cited Kenya's and South Africa's illustrations of this point and concluded that IP law has a role to play in shaping capital injection from local and foreign sources. Although the chapter has noted that a link may exist between FDI and IP laws, it has also noted that this has

not been proved.<sup>383</sup> Given that there exists the possibility that investment and IPRs may be related, IP laws in Kenya may influence input by investors into the country's economic sectors, including the oil and gas industry and thus, positively influence the growth of the sectors and by extension, Kenya's economy.

In studying the legal environment in Kenya, the chapter has also noted the reforms made in court procedures in Kenya with a view to more efficient delivery of justice by courts in the country. The expected outcome of such measures is a better dispute resolution environment which should enable parties to have a wider variety of dispute resolution options and faster service delivery by the country's courts. This is expected to improve the country's investment profile.

In its study of innovation and innovation trends, the chapter studied the role of collaboration between firms in the oil and gas sector. It noted that collaboration is set to grow in the near future in the US, both between local firms there and with firms from other countries such as China. With the cost – saving and expertise – sharing benefits projected to emerge from such co-operation, it is likely that this approach will be replicated in other countries. Whether this method of innovation will be relevant to the oil and gas sector in Kenya will depend on, among other factors, the legal framework under which the innovation will occur. Currently, the country's laws, which have been derived from the TRIPs agreement are largely similar to those in other TRIPs – compliant jurisdictions and this should positively influence the decisions made by enterprises in the sector to engage in collaborative ventures.

The chapter's study of public interest, aimed at providing a complete picture of the impact of IP laws in the oil and gas industry, determined that competition law and policy are important in protecting the public's rights in that context.

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<sup>383</sup> See, for example, Gathii 2016.

## CHAPTER THREE: TRADITIONAL KNOWLEDGE AND THE UPSTREAM OIL AND GAS SECTOR IN KENYA

### 3.1 Introduction

This chapter's goal is to look at Kenya's legal provisions regarding traditional knowledge (TK), with a focus on benefit-sharing. The chapter seeks to determine whether TK may have any role to play in the tracing, extraction and production of oil and gas in Kenya. As an initial point, the chapter will study the environmental impact caused by oil and gas production in order to locate the likely role of TK in the conservation of the environment. The chapter will then analyse the relationship between TK and IPRs. This will establish a basis for inclusion of TK as a subject of study where IP is concerned. The chapter will also examine management of any TK that is related to oil and gas production with a view to determining optimal use and sharing of benefits associated with such TK. References made to provisions of Kenya's PTK Act in this chapter will focus on TK rather than cultural expressions as TK is the subject of study herein.

The chapter addresses the thesis sub-questions regarding how IP law in Kenya as a regulatory tool in the oil and gas sector interacts with the national policy goals related to the sector and how, if at all, the application of IP law in Kenya to the oil and gas sector is likely to advance the country's economic growth agenda.

The use of TK in modern life is varied. Either purely on its own<sup>1</sup> or combined with scientific knowledge,<sup>2</sup> it remains relevant in various fields. TK includes traditional medicinal and ecological knowledge.<sup>3</sup>

Traditional ecological knowledge has been said to comprise specific environmental knowledge, knowledge of ecosystem relationships and a code of ethics governing human – environmental relationships.<sup>4</sup> Specific environmental knowledge includes knowledge related to climate, wildlife and plants.<sup>5</sup> It has been advanced that this knowledge is useful for activities

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<sup>1</sup> For example, information accumulated by communities over time about crop planting methods.

<sup>2</sup> As seen in the combination of active ingredients identified in TK over time with other substances in medicinal preparations.

<sup>3</sup> Elahi et al 2013at 117.

<sup>4</sup> Marc G Stevenson, 'Indigenous knowledge in environmental assessment,' 49 *Arctic* 3 (September 1996) 281. (Hereafter Stevenson 1996).

<sup>5</sup> Ibid.

such as environmental impact assessment (EIA).<sup>6</sup> Knowledge of ecosystem relationships relates to the relationships among the ecosystem's components and the operation of the ecosystem.<sup>7</sup>

An ecosystem has been defined as a dynamic complex of plant, animal and microorganism communities and their non – living environment interacting as a functional unit.<sup>8</sup> Each of the organisms in an ecosystem performs a function in the ecosystem and has a role to play in the health and productivity of the ecosystem.

Rules and conventions governing appropriate relationships between people in the community and between community members and nature have been categorised as constituting the code of ethics component of traditional ecological knowledge.<sup>9</sup>

In the extractives industry, studies have shown that often, short – term needs of mining companies have taken precedence over long-term needs of the communities that live in the locations where mines are located.<sup>10</sup> In this context, it has been suggested that traditional ecological knowledge may prove useful in sustaining the environment in which mining takes place.<sup>11</sup> This would enable the communities concerned to continue living in areas that would support the lifestyle that they enjoyed prior to the extractive activity on the land. This is relevant to the oil and gas industry in Kenya because resource extraction will take place in the Turkana region of Kenya that is occupied by communities. As noted in chapter one of the thesis, Turkana people, who live there, have been found to have traditional ecological knowledge that is used for forest management.<sup>12</sup> This knowledge may therefore be applicable to processes related to oil and gas mining, such as extraction and environmental management.

Therefore, ideally, access to resources such as uncontaminated water sources in those areas after the closure of mines would be possible. It has also been noted that the most important resource that would support the continued survival of indigenous communities is land.<sup>13</sup> The

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<sup>6</sup> Ibid.

<sup>7</sup> Ibid.

<sup>8</sup> Available at <http://web.unep.org/ecosystems/who-we-are/about-ecosystems>, accessed on 17 March 2017.

<sup>9</sup> Ibid.

<sup>10</sup> H D Smith, 'Using traditional ecological knowledge to develop closure criteria in tropical Australia', Proceedings of the third international seminar on mine closure, 14 – 17 October 2008, Johannesburg, South Africa, 47.

<sup>11</sup> Ibid.

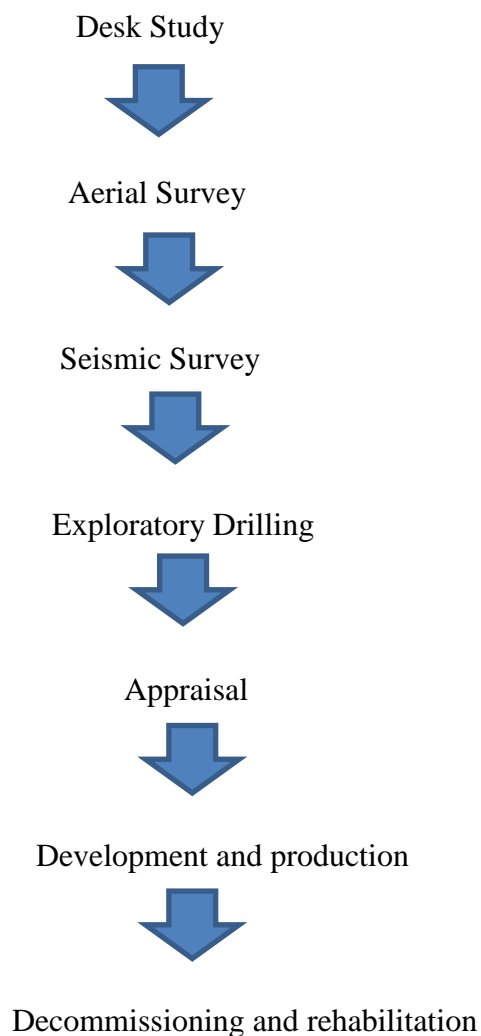
<sup>12</sup> Stave 2007 1485.

<sup>13</sup> Darrell Posey, 'Intellectual property rights; and just compensation for indigenous knowledge,' (1990) 6 *Anthropology Today*14.

communities may also acquire benefits from mining activities taking place on land that they occupy as provided in Kenya's legislation. These provisions will feature in this chapter.

### 3.2 The Environmental Impact of Oil and Gas Production

Generally, the following processes are undertaken in oil and gas exploration and production.<sup>14</sup>



Source: United Nations Environment Programme, 'Environmental management in oil and gas exploration and production' (1997) 5.

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<sup>14</sup> United Nations Environment Programme, 'Environmental management in oil and gas exploration and production' (1997) 4. (UNEP 1997).

The impact of the above activities on the environment depends on the operations carried out by entities engaged in the exploration and production processes.<sup>15</sup> Changes in the environment which are caused by the extraction of oil and gas may affect animals and plants through variations in natural resources such as water, air, soil quality and noise.<sup>16</sup> Such modifications may affect habitats, food supplies and migration routes.<sup>17</sup> Additionally, the risk of occurrence of fires, spills of oil and dangerous chemicals is elevated.<sup>18</sup> These disadvantages that may accrue can be lessened or eliminated if appropriate practices are applied.<sup>19</sup> On the other hand, improved infrastructure, water supply and health services are some of the advantages that may be realised by people living in areas where oil and gas mining takes place.

The environmental impact of oil and gas extraction in Kenya has been projected to occur in various areas.<sup>20</sup> Natural water and forest resources may be negatively affected and effects of mining may be experienced in relation to activities such as crop farming and fishing.<sup>21</sup> Section 58(2) of Kenya's EMCA provides that prior to any activities related to the financing, commencement or execution of a project related to the extraction of petroleum in Kenya, one must present a report of an EIA study to the National Environment Management Authority (NEMA) for approval of the project.

The Act defines an EIA as a systematic examination conducted to determine whether or not a programme, activity or project will have any adverse impacts on the environment.<sup>22</sup> The Act also recognises the importance of preserving biological diversity under section 50. The section provides for NEMA to prescribe measures necessary for the conservation of biological diversity. Further, the Act gives NEMA the mandate to protect indigenous property rights of local communities in respect of biological diversity.<sup>23</sup> The wide ranging powers that are accorded to NEMA under the Act with respect to the management of Kenya's environment provide tools

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<sup>15</sup> Ibid at 16.

<sup>16</sup> Ibid at 15.

<sup>17</sup> Ibid.

<sup>18</sup> Ibid.

<sup>18</sup> Ibid at 12.

<sup>19</sup> UNEP 1997 at 14.

<sup>20</sup> Ministry of Energy and Petroleum, 'Strategic environmental impact and social assessment of the petroleum sector in Kenya,' (2016) 78. (Hereafter Environmental and Social Assessment of the Petroleum Sector in Kenya, 2016).

<sup>21</sup> Environmental and Social Assessment of the Petroleum Sector in Kenya, 2016 at 78-9.

<sup>22</sup> Section 2.

<sup>23</sup> Section 50(f).

with which the authority can undertake activities that would preserve Kenya's environment before and after the extraction of oil and gas begins. Additionally, the property rights of local communities, under which TK falls, also qualify for protection by NEMA in the context of conserving biological diversity. The Convention on Biological Diversity<sup>24</sup> (CBD) defines biological diversity as the variability among living organisms from all sources including *inter alia* terrestrial, marine and other aquatic ecosystems and the ecological complexes of which they are part.<sup>25</sup> The variability referred to by this definition refers to genetic, population/species and community/ecosystem variability.<sup>26</sup>

Biological diversity (biodiversity) is important for food security, alleviation of environmental and weather hazards and alleviation of health risks to human and animal populations.<sup>27</sup> Thus, it is dependent on having an environment that can support the growth and survival of life. As earlier mentioned, oil and gas extraction and production is associated with risks to the environment. Some reported incidents that involved the production of petroleum products have caused oil spills and damaged land.<sup>28</sup> These have an impact on the environment and therefore pose a risk to biodiversity.

The EMCA recognises the potential for TK to contribute to the conservation of biological resources by providing for the integration of TK and mainstream scientific knowledge in that regard.<sup>29</sup>

### 3.3 IPRs and TK

IPRs are relevant to TK because information which has previously not been protected using the mechanisms provided by IP law may become the subject of IPR protection. This may lead to individual ownership rights over knowledge that has been held by communities for generations. Exercising the exclusive rights that are offered by IP law as a result of such ownership may clash with some of the fundamental principles upon which the law is based. For example, the appropriation of knowledge that has been held and improved over time by one who encounters

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<sup>24</sup> 1760 UNTS 79.

<sup>25</sup> Article 2.

<sup>26</sup> Secretariat of the Convention on Biological Diversity 'Linking biodiversity conservation and poverty alleviation: a state of knowledge review' CBD Technical Series No. 55 (2010) 13.

<sup>27</sup> *Ibid* at 23.

<sup>28</sup> UNEP 1997 at 2.

<sup>29</sup> Section 51.

the knowledge, should, ideally, stand in the way of the grant of patents, which, under Kenya's IPA, require novelty, an inventive step and industrial applicability criteria to be fulfilled by inventions before they are granted.

As noted in this chapter's introduction, TK may fall under various categories.<sup>30</sup> A study conducted among Turkana pastoralists and cultivators in the Turkwel Riverine forest of Northern Kenya revealed that the traditional ecological knowledge among the interviewees included knowledge about aspects such as management of trees in the forest and primary threats to the forest's survival.<sup>31</sup> Among the 11 plant species studied, over 100 uses were identified, among them sources of food, firewood and medicine.<sup>32</sup> Respondents were also familiar with environmental conditions necessary to sustain the forest.<sup>33</sup> The study concluded that the Turkana had detailed knowledge of plants in the forest, their use and management and that the knowledge had the potential for use in environmental impact and biodiversity assessments.<sup>34</sup>

The knowledge held by the community may therefore be relevant to Kenya's oil and gas industry for management of the environment that is related to extraction of resources from that geographical region. It would also be important for those engaged in extraction of resources from that region to obtain information about any of the communities' practices that are related to environmental management prior to beginning work on the land. This may be useful in preserving the community's cultural practices. For example, in the Miombo region of southern Africa, it was found that cutting fruit trees around a particular water spring is not permitted by the customs of a community residing there.<sup>35</sup>

Commercialisation of products that have been used by indigenous communities for generations has been the subject of considerable interest and controversy. The patent granted for a molecule derived from the hoodia plant is a case in point.<sup>36</sup> The San people had shared the TK about the appetite – suppressing qualities of the hoodia plant and the knowledge was later used to

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<sup>30</sup> Stevenson 1996 at 281.

<sup>31</sup> Jorn Stave et al 'Traditional ecological knowledge of a riverine forest in Turkana, Kenya: Implications for research and management' (2007) 16 *Biodiversity Conservation* 1475. (Hereafter Stave 2007).

<sup>32</sup> Ibid at 1476.

<sup>33</sup> Ibid.

<sup>34</sup> Ibid at 1485.

<sup>35</sup> Marcelin Tonye Mahop *Intellectual property, community rights and human rights: The biological and genetic resources of developing countries* (2010) 10.

<sup>36</sup> World Intellectual Property Organization, 'Leveraging economic growth through benefit sharing.' Available at <http://www.wipo.int/ipadvantage/en/details.jsp?id=2594>, accessed on 5 March 2017. (Hereafter WIPO 2010).

conduct R&D by the South African Council for Scientific and Industrial Research (CSIR).<sup>37</sup> The research conducted resulted in the identification of a molecule, referred to as P57, which could be used in the production of an appetite suppressant and anti-obesity drug.<sup>38</sup> Eventually, CSIR entered into a benefit sharing agreement with the San people which provided *inter alia* for the receipt of royalties by the community from products manufactured using P57 and sharing of knowledge by the community with CSIR.<sup>39</sup> CSIR licensed the P57 patent to Phytopharm, a pharmaceutical company, for commercialisation of products derived from hoodia.<sup>40</sup> It later returned all development and commercialisation rights to CSIR.<sup>41</sup>

The neem tree provides another example of a patent granted based on TK. Products from the tree, which is indigenous to India and mentioned in Indian texts more than 2,000 years old, have been used in various preparations, including medicines, cosmetics and fungicides.<sup>42</sup> Its use as a fungicide has the advantage that it has fewer damaging side effects to plants, unlike other pesticides.<sup>43</sup> The European Patent Office (EPO) granted a patent for a stable extract from the neem seed, used for controlling fungi on plants to an American company.<sup>44</sup> The EPO later revoked the patent on the basis that the claims were not novel in view of public prior use which had taken place in India.<sup>45</sup>

Legal protection mechanisms for TK have been termed as defensive or positive.<sup>46</sup> Defensive protection is aimed at stopping others from obtaining IPRs over TK.<sup>47</sup> This type of protection includes TK databases.<sup>48</sup> Positive protection of TK enables granting of rights to TK

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<sup>37</sup> WIPO 2010.

<sup>38</sup> Ibid.

<sup>39</sup> Ibid.

<sup>40</sup> Ibid.

<sup>41</sup> Available at <https://mg.co.za/article/2014-10-17-new-study-offsets-toxic-findings>, accessed on 31 January 2019.

<sup>42</sup> Philip Schuler 'Biopiracy and Commercialization of Ethnobotanical Knowledge' in J Michael Finger and Philip Schuler (eds) *Poor Peoples' Knowledge* (2004) 161. (Hereafter Schuler 2004).

<sup>43</sup> Ibid.

<sup>44</sup> Ibid.

<sup>45</sup> Ibid at 162. Also see 'India wins landmark patent battle,' Available at <http://news.bbc.co.uk/2/hi/science/nature/4333627.stm>, accessed on 2 March 2017.

<sup>46</sup> Marisella Ouma, 'The policy context for a commons- based approach to traditional knowledge in Kenya' in Jeremy de Beer et al (eds) *Innovation and Intellectual Property: Collaborative Dynamics in Africa* (2014) 138. (Hereafter Ouma 2014).

<sup>47</sup> World Intellectual Property Organisation, Traditional knowledge and intellectual property – Background Brief. Available at [http://www.wipo.int/pressroom/en/briefs/tk\\_ip.html](http://www.wipo.int/pressroom/en/briefs/tk_ip.html) ., accessed on 15 March 2017. (Hereafter WIPO TK Background Brief).

<sup>48</sup> Ibid.

holders to effect the promotion of TK, control its uses and benefit from its commercial exploitation.<sup>49</sup> IP laws enable positive protection of TK.<sup>50</sup>

Sometimes, the commodification of TK is opposed on religious or cultural grounds.<sup>51</sup> *Sui generis* methods of protecting TK (including TK databases) should ideally incorporate compliance with a community's norms and values by users of the TK who are not members of the community.<sup>52</sup> Customary law is the basis for many activities that take place within indigenous communities.<sup>53</sup> It is important for non-members of the communities to respect practices in those settings that are based on a community's traditions and in so doing, appreciate the value of the TK that has been held by the communities for long periods of time. Possibly, deference to such practices would create a better work environment for any collaboration between the communities and non-members where the subject matter of the work is TK – related. This is likely to enhance productivity.

It has been noted that some of the value that accrues to TK is derived from the fact that the accumulation and preservation of the knowledge over generations means that commodification of the knowledge by enterprises does not require rigorous R&D as would be the case when investigating the characteristics and functions of materials that have not been used by communities for centuries.<sup>54</sup>

The thinking that TK has remained static over generations has been challenged on the basis that the needs of a community and contemporary problems faced by the community call for innovation by members of the community in order for the TK to satisfy those needs and provide solutions to problems.<sup>55</sup> Thus, TK is contemporary.<sup>56</sup>

The World Intellectual Property Organisation (WIPO) has an intergovernmental committee on IP and genetic resources, TK and folklore which is undertaking work that is aimed at reaching an agreement on an international legal instrument related to IP and protection of genetic

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<sup>49</sup> Ibid.

<sup>50</sup> Ibid.

<sup>51</sup> Madhavi Sunder 'The invention of traditional knowledge' 70 *Law and Contemporary Problems* 2 (2007) 112.

<sup>52</sup> Elahi et al 2013 at 119.

<sup>53</sup> Ibid at 118.

<sup>54</sup> Caroline Ifeka and Sylvanus Abua, 'Nigeria: Conservation, 'traditional' knowledge & the commons,' 32 *Review of African Political Economy*, (June – September 2005) 439. (Hereafter Ifeka and Abua 2005).

<sup>55</sup> Elahi et al 2013 at 110.

<sup>56</sup> Stevenson 1996 at 281.

resources, TK and traditional cultural expressions.<sup>57</sup> IPRs provide one channel through which challenges regarding protection and use of TK can be addressed.<sup>58</sup> It has been posited that, from an international IP law standpoint, the inclusion of clauses in an international treaty such as TRIPs to provide for defences against IPR infringement would potentially protect the users of TK that forms the basis of appropriated inventions and creations against infringement actions.<sup>59</sup> The exclusivity in activities related to commercialisation of the product, which are offered by IPRs, may however limit the possibility of creating future inventions by shrinking the foundation upon which innovation can occur.<sup>60</sup> With regard to any amendments to TRIPs, these may present difficulties<sup>61</sup> which may be caused by competing interests among member states, a factor that already emerged at the time of concluding the agreement.

Another suggestion made on the basis of a change to TRIPs pertains to genetic resources obtained without prior informed consent.<sup>62</sup> It has been posited that the absence of prior informed consent should serve as a basis for patent revocation.<sup>63</sup> However, laws of countries such as Kenya and South Africa require that prior informed be obtained before the resources are extracted. If the same genetic resources are available in areas that are not occupied by the indigenous community making the claim, it may be difficult to prove misappropriation of the resource.<sup>64</sup>

The application of IPR – based principles to TK in order to obtain IPRs for the same may also present some difficulties. The requirement that an applicant for IPRs should be a person, whether a legal or natural person, may not be compatible with the manner in which most TK is held, by a community rather than an individual, which does not have a legal personality.<sup>65</sup>

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<sup>57</sup> Available at [http://www.wipo.int/export/sites/www/tk/en/igc/pdf/igc\\_mandate\\_1617.pdf](http://www.wipo.int/export/sites/www/tk/en/igc/pdf/igc_mandate_1617.pdf), accessed on 4 March 2017.

<sup>58</sup> Siddhartha Prakash, 'Nurturing traditional knowledge systems for development,' World Bank IK Notes, Number 61, October 2003, 4.

<sup>59</sup> William Fisher, 'Two thoughts about traditional knowledge,' 70 *Law and Contemporary Problems* 2 (2007) 132 - 133. (Hereafter Fisher 2007).

<sup>60</sup> John Reid, 'Biopiracy: the struggle for traditional knowledge rights,' 34 *American Indian Law Review* 1 (2009-2010) 78.

<sup>61</sup> Fisher 2007 at 133.

<sup>62</sup> Coenraad J Visser Making Intellectual Property Laws Work for Traditional Knowledge in J Michael Finger and Philip Schuler (eds) '*Poor Peoples' Knowledge*' (2004) 215.

<sup>63</sup> Ibid.

<sup>64</sup> Ibid. However, prior informed consent is required by countries such as Kenya and South Africa.

<sup>65</sup> Dutfield 2001 at 253.

However, one suggested solution to this is an award of a patent to an entity that represents a community.<sup>66</sup>

An argument made against the protection of TK using IPRs is the appropriation of material that has been in the public domain.<sup>67</sup> This view seems to ascribe a quality of ‘publicly available’ to all TK, which is not valid because of the various types of TK and the resultant difference in the means of holding them.<sup>68</sup> An important point to consider when looking at IPRs in relation to TK is that not all TK is collectively held.<sup>69</sup> Some of it is held by individuals in a community.<sup>70</sup>

This section of the chapter will look at two IPRs - geographical indications of origin (GIs) and patents and consider how Kenya’s IP law for the two IPRs interacts with protection of TK. Selection of GIs and patents is intended to provide two modes of holding IPRs – collective and individual, under Kenya’s IP law.

GI protection systems are predicated on collective ownership of the rights applicable to the unique name identifiers that apply to agricultural commodities that are grown in particular regions of the world.<sup>71</sup> As such, they may be suitable for protection of TK, which is sometimes held by groups of people rather than individuals.<sup>72</sup> The subject matter of protection by GIs is products which derive the characteristics which make them unique from a particular geographical region. Kenya’s Trade Marks Act provides for protection of certification trade marks and collective trade marks under sections 40 and 40A respectively. GIs can be protected under the two sections of the Act. The statute contemplates registration of several persons as proprietors of certification trade marks<sup>73</sup> and collective trade marks.<sup>74</sup>

The National Policy on Traditional Knowledge, Genetic Resources and Traditional Cultural Expressions, 2009 (NPTK) states that protection of TK, where authorised by communities, could

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<sup>66</sup> United Nations Conference on Trade and Development ‘The Convention on Biological Diversity and the Nagoya Protocol: intellectual property implications’ (2014) 99. (Hereafter UNCTAD 2014).

<sup>67</sup> World Intellectual Property Organisation ‘Traditional knowledge and intellectual property – background brief’. Available at [http://www.wipo.int/pressroom/en/briefs/tk\\_ip.html](http://www.wipo.int/pressroom/en/briefs/tk_ip.html)., accessed on 1 March 2017. (Hereafter, WIPO Background Brief).

<sup>68</sup> Ouma 2014 at 133.

<sup>69</sup> Ouma 2014 at 133.

<sup>70</sup> Ibid.

<sup>71</sup> Ibid.

<sup>72</sup> Ibid. Section 40A (5) of Kenya’s Trade Marks Act, Chapter 506 of the Laws of Kenya provides for GIs to be protected by collective trade marks.

<sup>73</sup> Section 40(1) of the Trade Marks Act.

<sup>74</sup> Section 40A(1) of the Trade Marks Act.

be conducted through certification, trade marks or GIs after development of enabling mechanisms by the government.<sup>75</sup> This has been made possible by the above provisions of the Trade Marks Act. The intention to preserve and develop TK<sup>76</sup> can be facilitated by statutes such as the PTK Act and the Trade Marks Act. This can be done through provisions that promote the documentation of TK where possible<sup>77</sup> and authorised use of TK.<sup>78</sup>

In the context of the oil and gas industry in Kenya, the above legal provisions provide guidance for communities that may engage in TK-related transactions that are relevant to the industry and protection of their TK. Investors can also be guided about authorised use of TK by the provisions.

Novelty, a criterion upon which patent grant is based in Kenya, requires that the subject matter of patent protection should not be anticipated by prior art.<sup>79</sup> Prior art is defined by the IPA as everything made available to the public anywhere in the world by means of written disclosure (including drawings and other illustrations), or by oral disclosure, use, exhibition or other non – written means.<sup>80</sup>

TK would likely fall under the definition of prior art, under Kenya's law, whether or not it has been reduced into writing, and potentially create a barrier to the grant of patents derived from the TK. The potential 'gate-keeping' quality of prior art in this regard is, however, subject to other factors. One observation made regarding the examination of patent applications by patent offices in some high income countries is that oral prior art is likely to be ignored in the course of conducting the examination.<sup>81</sup> Cost is another factor. Even where a patent has been issued despite the presence of ignored oral prior art, the costs associated with instituting and carrying on proceedings for the revocation of a patent are prohibitive.<sup>82</sup> Additionally, written evidence may have to be produced in order to prove a prior art claim.<sup>83</sup>

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<sup>75</sup> Republic of Kenya 'The National Policy on Traditional Knowledge, Genetic Resources and Traditional Cultural Expressions, 2009' (2009) 16. (Hereafter, NPTK 2009).

<sup>76</sup> NPTK 2009 at 18.

<sup>77</sup> Sections 8(1) and 8(2) of the PTK Act.

<sup>78</sup> Sections 19(2) and 19(3) of the PTK Act.

<sup>79</sup> Section 23(1) of the Industrial Property Act, 2001.

<sup>80</sup> Section 23(2).

<sup>81</sup> Schuler 2004 at 176.

<sup>82</sup> Schuler 2004 at 213.

<sup>83</sup> Ibid at 214.

Further, with regard to patent grants that are related to TK, it may be difficult to prove inventive step<sup>84</sup>, another requirement for patentability under the IPA<sup>85</sup>. Under the Act, an invention involves an inventive step, if having regard to the prior art on the date of the patent application, it would not have been obvious to a person skilled in the art to which the invention pertains.<sup>86</sup> The difficulty in proving that TK is non-obvious may arise from a difficulty in proving that a common skilled worker in the relevant field would not have been able to come up with the invention for which patent protection is sought, a challenge that may also be faced by other patent applicants whose inventions are not TK – derived.<sup>87</sup>

It is also possible, under Kenya's patent law, to have a patent revoked after grant, if it can be established that the patent should not have been granted.<sup>88</sup> This provision, made under the IPA, may become effective for want of novelty in the invention.<sup>89</sup>

Attempts by indigenous communities in Kenya to register patents would likely be blocked by the expensive nature of the process and novelty and inventive step criteria, which, together with industrial applicability of the invention, also apply in other TRIPS member states.<sup>90</sup> It may also be difficult to prove that TK is novel, considering that generally; it consists of knowledge that has been passed on.<sup>91</sup> Under the IPA, meeting the requirement of industrial applicability would require that the invention can be made or used in any kind of industry,<sup>92</sup> an apparently achievable requirement, given that where the commercialisation of TK is sought; the eventual outcome of that process is intended for use in industries.

The role played by the award of a patent to bio prospectors who do not share benefits with the communities from which the raw materials of commercialised TK are derived has been questioned.<sup>93</sup> It has been argued that such a patent is one aspect of commercialisation and does not prevent use of the raw material by the community and thus, the disadvantage that arises from such bio - prospecting is the introduction of a competitor for export markets for the

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<sup>84</sup> Schuler 2004 at 138.

<sup>85</sup> Section 24.

<sup>86</sup> Ibid.

<sup>87</sup> Schuler 2004 at 138.

<sup>88</sup> Section 103 (1) of the IPA.

<sup>89</sup> Section 103(3) (h) (i).

<sup>90</sup> Per article 27 of TRIPS.

<sup>91</sup> WIPO TK Background Brief.

<sup>92</sup> Ibid at section 25.

<sup>93</sup> Schuler 2004 at 176.

commodities.<sup>94</sup> Another argument that challenges the role that patents play in the loss of benefits to communities in this context is that some producers of the commodities concerned do not obtain patents for the products but still engage in the production and sale of the commodities.<sup>95</sup>

Trade secret protection of TK using closed access databases has been advanced as a viable option.<sup>96</sup> Benefit-sharing agreements, such as the one between the San people and CSIR that was referred to earlier in this section of the chapter, may be used together with such databases.<sup>97</sup> A system of this nature would only work in favour of the community concerned as long as there is adherence to the terms of the contracts by the companies in question. Breach of the contracts by those entities would likely bring up the disadvantage of expenses related to pursuing legal action that are out of reach for the community.

The PTK Act was preceded by the NPTK. The policy noted a gap in harmonised legislation for protection of TK, genetic resources and traditional cultural expressions.<sup>98</sup> This gap was the basis of the policy's proposal to have legislation enacted to deal with the protection of the three elements.<sup>99</sup> It also stated that current IPRs were an inappropriate legal regime for the protection of TK, genetic resources and traditional cultural expressions.<sup>100</sup> It is noteworthy that the PTK Act acknowledges that IPRs such as copyright, trademarks and patents may be used to protect TK.<sup>101</sup>

The PTK Act provides for the establishment and maintenance of a register containing information on TK collected and documented by county governments in the course of registering TK.<sup>102</sup> This information is the subject matter contained in a TK digital repository (TKDR) which the Act provides should be established by the national government.<sup>103</sup> Considering that information of this nature is sometimes held by the community and not an individual in the community, a number of challenges are likely to be encountered in processes such as collection and documentation. These may include delays in submission of information that should qualify

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<sup>94</sup> Ibid.

<sup>95</sup> Ibid at 177.

<sup>96</sup> Deepa Varadarajan 'A trade secret approach to protecting traditional knowledge,' 36 *The Yale Journal of International Law* (2011) 406. (Hereafter Varadarajan 2011).

<sup>97</sup> Varadarajan 2011 at 406 refers to the use of such a mechanism in Ecuador.

<sup>98</sup> Republic of Kenya 'The National Policy on Traditional Knowledge, Genetic Resources and Traditional Cultural Expressions, 2009' (2009) 16.

<sup>99</sup> Ibid.

<sup>100</sup> Ibid at 6.

<sup>101</sup> Section 23(1) of the PTK Act.

<sup>102</sup> Section 8(1).

<sup>103</sup> Section 8(3).

for protection by a community due to lack of awareness about the potential or actual value of such information and erosion of community structures over time that may make it unclear who is responsible for availing the information for such preservation.

However, if the information is successfully submitted for inclusion in the TKDR, this could prove useful to the community. The provision for the TKDR appears to be the culmination of efforts which included the joint work of a number of public institutions in Kenya and local communities.<sup>104</sup> With time, some traditions related to the preservation and sharing of TK among members of some communities have faded away.<sup>105</sup> An example has been identified among the Miji Kenda community in Kenya.<sup>106</sup> In that community, a traditional educational evening, during which elders passed on knowledge, is no longer held.<sup>107</sup> Consequently, TK that may have been useful to the community may not be available for subsequent generations.<sup>108</sup>

To counter the possibility of a similar occurrence among the Maasai community, a project aimed at digitisation of Maasai culture in Kenya was undertaken to document and preserve the TK of the community.<sup>109</sup> Among both communities, TK includes information relating to agriculture, medicine and healing processes, art and preservation of food.<sup>110</sup> Traditional medicine and healing in the two communities is practised by designated people in the community.<sup>111</sup> Further, there are customs that guide and safeguard the preservation of the knowledge.<sup>112</sup>

The PTK Act provides for registration of TK that is shared by a community in Kenya and a community outside Kenya.<sup>113</sup> This provision may be relevant to any TK that may become relevant to tracing and extraction of oil and gas in Kenya, depending on the location of the resources. It is however unclear how disputes about TK would be handled in cases where TK is

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<sup>104</sup> National Economic and Social Council of Kenya 'Harnessing the locally derived value-added herbal products sub-sector for health and wealth' Policy Brief (April 2010) 1.

<sup>105</sup> Ouma 2014 at 143.

<sup>106</sup> Ibid.

<sup>107</sup> Ibid.

<sup>108</sup> Ibid.

<sup>109</sup> Ibid at 136-7.

<sup>110</sup> Ibid at 142.

<sup>111</sup> Ibid.

<sup>112</sup> Ibid.

<sup>113</sup> Section 7(4).

held by a community in Kenya and one that is outside Kenya.<sup>114</sup> It has been proposed that the PTK Act should include a provision regarding cross-border co-operation to provide clarity about handling such disputes.<sup>115</sup> Although the Swakopmund Protocol provides for administration of transboundary TK, it would not apply in cases where the countries concerned have not ratified the Protocol.<sup>116</sup>

India has a system for documentation of TK which was established in 2001.<sup>117</sup> It has been studied in Kenya in the course of plans to establish the TKDR.<sup>118</sup> The rationale for establishing the mechanism in India, where it is referred to as a traditional knowledge digital library (TKDL), was to enable the protection of TK from appropriation by way of patents where prior art searches in the TKDL could establish that the subject matter of potential patent protection was already in use, thus rendering those applications unsuccessful.<sup>119</sup> Challenges that were encountered prior to the establishment of the TKDL included language barriers.<sup>120</sup> Where the TK only existed in languages that could not be understood by patent examiners from other countries, patents for medicinal TK were granted to applicants in the USA and Europe owing to the information gap that was created by this barrier.<sup>121</sup>

After the establishment of the TKDL, some TK which has originated in India has been translated into languages that would enable patent examiners to gain access to information regarding the existence of prior art, which has proved important in maintaining the ownership of rights associated with exploitation of the knowledge.<sup>122</sup> The TKDL has an integrated global bio piracy watch system which enables monitoring of patent applications which are related to India's medicine – related TK.<sup>123</sup> This has improved the effectiveness of the digital library in controlling the appropriation of Indian TK outside India.<sup>124</sup>

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<sup>114</sup> Harriet Deacon 'Transboundary knowledge and regional cooperation in the protection of traditional knowledge in Kenya' (2017) 12 *Journal of Intellectual Property Law and Practice* 232. (Hereafter Deacon 2017). See also Manuel Ruiz Muller 'Protecting widely shared traditional knowledge' (2014) 8 *Biores* 2 for a discussion on legal and policy options for protection of transboundary TK.

<sup>115</sup> Deacon 2017 at 235.

<sup>116</sup> *Ibid.*

<sup>117</sup> Dr. V.K. Gupta 'Protecting India's traditional knowledge' No. 3 WIPO Magazine (June 2011) 5.

<sup>118</sup> Ouma 2014 at 145.

<sup>119</sup> *Ibid.*

<sup>120</sup> *Ibid.*

<sup>121</sup> *Ibid.*

<sup>122</sup> *Ibid* at 6.

<sup>123</sup> *Ibid* at 7.

<sup>124</sup> *Ibid.*

If TK is not documented, this increases the risk that it will be lost with time as a result of dying oral traditions.<sup>125</sup> Further, attribution of the same becomes difficult because there is no written record of the person or people in the community who came up with the TK in question. However, it appears that documentation may also have disadvantages. Information that is available to the public is easier to misappropriate, if, for instance, it is available on the Internet.<sup>126</sup> It has also been pointed out that focusing purely on documentation of TK may leave out concerns about the interpretation and use of the TK.<sup>127</sup> Consequently, TK may be used for purposes that are not consistent with the values of the community from which the TK has been sourced.<sup>128</sup> It has been suggested that in order for TK records to be useful for preservation and attribution, the record – keeping should be done within a legal framework that would enable access under controlled conditions, such as India’s TKDL.<sup>129</sup>

The availability of information regarding TK in that form may provide a basis upon which a new use of the knowledge may be developed, protected by IP law and commercialised without any reward or attribution accruing to the communities which served as the source of the knowledge.<sup>130</sup> This has led to reluctance by some communities to provide information for inclusion in the knowledge receptacles.<sup>131</sup> Further, expenses associated with creation of databases may hamper their establishment.<sup>132</sup>

Bio-prospecting agreements have been suggested as an alternative means to protect TK in order to counter some of the pitfalls of databases, such as the possible access to TK without any payments made to the communities involved.<sup>133</sup> The agreements allow the search and removal of specified resources from specified areas.<sup>134</sup> The payments in such agreements are generally an initial fee and royalties which are paid by the prospecting company to the community.<sup>135</sup> Since these agreements are only binding between the parties involved, this does not prevent the commercialisation of the TK that is the subject matter of such an agreement by other entities

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<sup>125</sup> Ouma 2014 at 143.

<sup>126</sup> Varadarajan 2011 at 409.

<sup>127</sup> Ouma 2014 at 142.

<sup>128</sup> Ibid.

<sup>129</sup> Ibid.

<sup>130</sup> UNCTAD 2014 at 119.

<sup>131</sup> Ouma 2014 at 142.

<sup>132</sup> Ibid.

<sup>133</sup> UNCTAD 2014 at 153.

<sup>134</sup> Ibid at 155 – 156.

<sup>135</sup> Varadarajan 2011 at 378.

other than the prospecting company.<sup>136</sup> The effectiveness of the agreements in reducing biopiracy (the unauthorised commercialisation of biological resources) is thus limited.

A material transfer agreement (MTA) has been defined as an agreement for the transfer of tangible research materials between two entities.<sup>137</sup> This may occur in instances where basic research has been undertaken by one entity which transfers the materials to another which will commercialise the research product.<sup>138</sup> This agreement could also be entered into between a community which has TK that is valuable and a company which can commercialise the TK. Usually, the contents of an MTA include:

- i. The R & D that the user will be able to undertake using the genetic resource in question.<sup>139</sup>
- ii. The extent to which replication, alteration or breeding of the genetic resource is permitted.<sup>140</sup>
- iii. How benefits received from commercialisation would be shared.<sup>141</sup>
- iv. Limitations on third party transfer of the genetic resource.<sup>142</sup>
- v. Prohibition or permission to commercialise the transferred resource and associated TK.<sup>143</sup>

Despite the physical movement of genetic resources under an MTA, there is no transfer of ownership of the resources.<sup>144</sup> MTAs are provided for under the EMCA Regulations as a prerequisite to the movement of genetic resources derived in Kenya out of Kenya. Where genetic resource – based TK may turn out to be useful in the context of environmental conservation in oil and gas production, this point may be relevant. It is noteworthy that the use of agreements such as MTAs and prospecting agreements for benefit-sharing may be problematic for indigenous communities which may lack knowledge of the law and skills required to negotiate and enter into the agreements.

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<sup>136</sup> Ibid.

<sup>137</sup> UNCTAD 2014 at 155.

<sup>138</sup> Ibid.

<sup>139</sup> Ibid at 154.

<sup>140</sup> Ibid.

<sup>141</sup> Ibid.

<sup>142</sup> Ibid.

<sup>143</sup> Ibid.

<sup>144</sup> Ibid at 156.

Public participation by communities is considered important in areas where mining of oil and gas has been undertaken by persons who are not members of the community.<sup>145</sup> Generally, benefit sharing systems among communities can be regarded as a way in which the community can engage in public participation of the positive outcomes that result from the economic activities that take place in geographical areas that they occupy. The involvement of the community in such an economic activity is likely to foster a sense of ownership in projects, a factor that may in turn contribute to the success of projects. However, divisions within a community which can be based on differences between clans and sub-communities may lead to non-attainment of benefits associated with such involvement.<sup>146</sup> A presumption that communities are homogenous and unified by common interests and values is erroneous.<sup>147</sup>

In circumstances where natural resources such as oil and gas are the subject matter of extractive activity, communities may have conflicts regarding property rights and the sharing of benefits that arise from the mining activities.<sup>148</sup> Nevertheless, it is crucial for companies to engage with communities in forums such as meetings, where information about the companies' proposed activities can be made available. Meetings of this nature have been reported in Baringo and Elgeyo Marakwet counties in Kenya.<sup>149</sup> Oil exploration has been undertaken in the two counties.<sup>150</sup>

### 3.4 Kenya's Legal Framework on TK

The PTK Act states that it was enacted to provide a framework for the protection and promotion of TK and traditional cultural expressions and to give effect to articles 11, 40 and 69(1)(c) of Kenya's Constitution, 2010. Previously, a National Policy on Traditional Knowledge, Genetic Resources and Traditional Cultural Expressions was issued in 2009. As earlier noted in the chapter, the policy provided for a national framework within which TK in Kenya could be

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<sup>145</sup> Chilenye Nwapi 'A legislative proposal for public participation in oil and gas decision – making in Nigeria' 54 *Journal of African Law* 4 (2010) 205.

<sup>146</sup> *Ibid.*

<sup>147</sup> *Ibid.*

<sup>148</sup> *Ibid* at 206.

<sup>149</sup> Wycliffe Kipsang, 'Oil exploration kicks off as locals fear losing land,' Available at <http://www.nation.co.ke/counties/Oil-exploration-kicks-off-as-locals-fear-losing-land/1107872-2453408-hxxulgz/index.html>. Accessed on 15 March 2017.

<sup>150</sup> *Ibid.*

recognized, preserved and protected.<sup>151</sup> It also became the basis of the PTK Act and promoted the use of TK sustainably to advance the attainment of the country's national development goals.<sup>152</sup> The documentation of the country's TK was also contemplated by the policy, which factored in a system of preservation of TK that would contribute to open innovation and collaborative creativity.<sup>153</sup> The guiding principles of the policy were respect, good faith, confidentiality, full disclosure, compensation, prior informed consent, access, sustainable development and international cooperation.<sup>154</sup>

With regard to TK, Article 11 of the Constitution provides that the state shall recognise the role of science and indigenous technologies in the development of the nation.<sup>155</sup> It also provides for the enactment of legislation to ensure that communities receive compensation or royalties for use of their cultures and cultural heritage.<sup>156</sup> The recognition and protection of the ownership of indigenous seeds and plant varieties, their genetic and diverse characteristics and their use by the communities of Kenya are also intended to be achieved by the enactment of legislation under the Constitution.<sup>157</sup>

Article 40 of the Constitution, previously referred to in chapter one of this thesis, provides for the support, promotion and protection of the IPRs of the people of Kenya by the state. Article 69 of the Constitution addresses the issue of the environment and natural resources. Under the article, the state has the mandate to ensure sustainable exploitation, utilisation, management and conservation of the environment and natural resources, and ensure the equitable sharing of the accruing benefits.<sup>158</sup> Protection and enhancement of IP in, and indigenous knowledge of biodiversity and the genetic resources of the communities by the state is also provided for under the article.<sup>159</sup> Article 69 also provides for the state's involvement in the protection of genetic resources and biodiversity.<sup>160</sup>

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<sup>155</sup> Article 11 (2) (b).

<sup>156</sup> Article 11(3) (a).

<sup>157</sup> Article 11(3) (b).

<sup>158</sup> Article 69(1) (a).

<sup>159</sup> Article 69 (1) (c).

<sup>160</sup> Article 69(1) (e).

The PTK Act has a number of provisions that address the issues of promoting and protecting IPRs in the context of TK, sustainable use and conservation of the environment and natural resources. Its definition of TK encompasses knowledge that can be applied in a number of industries, among them the oil and gas industry.<sup>161</sup>

In Canada, aboriginal peoples sought to have a greater role in decision – making processes related to their traditional lands based on their TK.<sup>162</sup> This eventually led to the use of the TK for making decisions regarding their land in the Northwest Territories of Canada.<sup>163</sup> Previously, creation of land management policies for those lands was purely science – based and did not take into account the way of life of the aboriginal communities that resided there.<sup>164</sup> It has also been noted that the aboriginal peoples raised concerns in environmental hearings about developments taking place on their land.<sup>165</sup>

The concerns were based on traditional ecological knowledge; past experience with industrial developments such as oil and gas and the potential effect of proposed developments and their potential effects on aboriginal lands and lifestyles.<sup>166</sup> Observations such as these, even though they are drawn from a different part of the world, may be applied to other geographical areas where mining activities are undertaken on land that has been occupied by communities for centuries.

The dependence of communities on such ancestral land means that any activity that may interfere with the way of life of the people concerned can potentially raise issues of a nature that is similar. In this context, occupants of land depend on the land for their basic needs. It is therefore likely that the PTK Act's provisions are relevant in informing the approach taken in environmental management in areas where mining of oil and gas will be undertaken in Kenya.

It has been observed that communities have an interest in the sustainability of the areas that they have occupied over time because their way of life, indeed, the survival of the

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<sup>161</sup> The Act defines TK as any knowledge originating from an individual, local or traditional community that is the result of intellectual activity and insight in a traditional context, including know-how, skills, innovations, practices and learning, embodied in the traditional lifestyle of a community; or contained in the codified knowledge systems passed on from one generation to another including agricultural, environmental or medical knowledge, knowledge associated with genetic resources or other components of biological diversity, and know – how of traditional architecture, construction technology, designs, marks and indications.

<sup>162</sup> Ellis 2005 at 67.

<sup>163</sup> Ibid.

<sup>164</sup> Ibid.

<sup>165</sup> Stevenson 1996 at 279.

<sup>166</sup> Ibid.

communities, is dependent upon the continued existence of the natural environment that is required to sustain it.<sup>167</sup> For example, the Soliga people, who live in Karnataka, India, have used fruit harvesting techniques which involve harvesting some of the available fruits in a harvesting season.<sup>168</sup> Some of the fruits are left on the ground and on the trees on which they grow, for regeneration of the plants and also as food for animals.<sup>169</sup> An almost similar approach is used in the harvesting of tubers, where only some of the tubers are harvested.<sup>170</sup> Children accompany older members of the community during harvesting seasons in order to acquire this knowledge.<sup>171</sup>

Sharing of benefits that have been derived from land on which mining occurs may be contentious. This can be seen in aspects such as payment for use of land. Compensation for landholders and people affected by the grant of a mining lease falls under obligations that are met by the lessee of the land who is engaging in mining.<sup>172</sup> Notably, advances in technology have reduced the labour needs for mining projects.<sup>173</sup> This has had an impact on the number of people hired from communities that inhabit areas near mining sites meaning that communities benefit less than they did before in this context, which has been cited as a possible reason for a community's rejection of a project.<sup>174</sup>

The type of compensation awarded to communities living in areas where there is mining activity is important because it determines whether the entities engaged in mining obtain a social licence from them.<sup>175</sup> The term 'social licence' has been used to refer to gaining acceptance from stakeholders by their express support of the project or reduced opposition to the project.<sup>176</sup> It is related to the views held by a community that bears the impact(s) of mining by a company and

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<sup>167</sup> C Madegowda 'Traditional knowledge and conservation' 44 *Economic & Political Weekly* (May 23 – 29 (2009) 69. (Hereafter Madegowda 2009).

<sup>168</sup> Madegowda 2009 at 69.

<sup>169</sup> *Ibid.*

<sup>170</sup> *Ibid.*

<sup>171</sup> *Ibid.*

<sup>172</sup> Wall, Elizabeth and Relon, Remi, 'Sharing mining benefits in developing countries,' *Extractive industries and development series*, number 21 (2011) 7.

<sup>173</sup> *Ibid* at 8.

<sup>174</sup> *Ibid.*

<sup>175</sup> *Ibid* at 7.

<sup>176</sup> John R Owen and Deanna Kemp, 'Social licence and mining: a critical perspective' 38 *Resources Policy* (2013) 30.

may affect the company's ability to obtain resources such as land and water which are required for mining activities.<sup>177</sup>

In the context of obtaining a social licence, it has been found that one-off cash payments by the enterprises to the people living in those areas are not enough.<sup>178</sup> Other grievances that have been identified in mining ventures include a lack of recognition of communities' land and resource rights by companies and poorly planned and implemented mining projects.<sup>179</sup> The monetary and non-monetary benefits that are derived by communities from extractive activities are important in supporting their lifestyles.<sup>180</sup> For instance, owing to modernisation of some activities such as farming, cash income is useful in enabling communities to acquire farming tools.<sup>181</sup> Jobs that are generated by mining activities provide a source of income for members of a community.<sup>182</sup>

Under the PTK Act, the identification of holders of TK is provided for under ss 29 to 31. This identification is necessary for allocation of benefits derived from the TK. Section 2 of the Act defines a holder of TK as a recognized individual or organisation within a community in whom the custody or protection of TK is entrusted according to the customary law and practices of that community.

Sharing of benefits after patenting of inventions based on TK by those who commercialise the inventions has been criticized on the basis that it does not accord the communities in which the TK originated the status of inventors, instead choosing to classify them as wardens of the knowledge.<sup>183</sup> Consequently, the monetary rewards that accrue to the patent holders by virtue of the exclusive rights conferred by the patents in commercially dealing with the inventions are ultimately higher than those awarded to the communities.<sup>184</sup>

Kenya is a member state of the CBD. It signed the convention in 1992 and ratified it in 1994.<sup>185</sup> The convention provides for member states to encourage the equitable sharing of benefits arising from the utilisation of TK that is relevant for the conservation and sustainable

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<sup>177</sup> Ibid at 31.

<sup>178</sup> Ibid.

<sup>179</sup> International Council of Mines and Minerals 'Good Practice Guide: Indigenous Peoples and Mining' (2015) 46.

<sup>180</sup> Stevenson 1996 at 279.

<sup>181</sup> Ibid.

<sup>182</sup> Ibid.

<sup>183</sup> UNCTAD 2014 at 69.

<sup>184</sup> Ibid.

<sup>185</sup> Available at <https://www.cbd.int/information/parties.shtml>, accessed on 13 July 2019.

use of biodiversity subject to the national legislation of the member states.<sup>186</sup> It also provides for the promotion of the wider application of TK with the approval and involvement of the holders of such knowledge, also subject to the national legislation of the states.<sup>187</sup> This indicates recognition of the importance of TK for purposes of the maintenance of biodiversity.

However, it has been observed that it is not clear whether there are legal requirements that member states should meet with regard to this provision in the CBD.<sup>188</sup> The language used in article 10 (c) of the CBD also does not place an obligation on member states to ‘protect and encourage customary use of biological resources in accordance with traditional cultural practices that are compatible with conservation or sustainable use requirements.’

The Nagoya Protocol on Access to Genetic Resources and the Equitable and Fair Sharing of Benefits Arising from their Utilisation to the Convention on Biological Diversity<sup>189</sup> recognises the oral, documentary and other forms in which TK is held and its relevance in the conservation and sustainable use of biodiversity in its preamble. The Protocol also places member states which require prior informed consent under an obligation to undertake necessary legislative, administrative or policy measures to provide for legal certainty, clarity and transparency of their access and benefit-sharing legislation or regulatory requirements.<sup>190</sup> Although the Protocol’s focus is on genetic resources, it enhances the point about the importance of TK in activities related to the protection of biodiversity and thus underlines the importance of TK in matters related to environmental conservation. In terms of the benefits arising from TK – derived genetic resources, those provided for by the Protocol include special fees to be paid to trust funds supporting conservation and sustainable use of biodiversity.<sup>191</sup> It is however optional for member states to provide for such a benefit.

Section 20 (2) of the PTK Act provides for an authorised user agreement to be entered into between an IPR holder and an authorised user of a work that is derived from TK. The terms ‘authorised user’ and ‘right holder’ are not defined in the Act. Section 20(3)(a) of the Act refers to a requirement for the agreement to provide for equitable monetary or non-monetary

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<sup>186</sup> Article 8(j).

<sup>187</sup> *Ibid.*

<sup>188</sup> Dutfield 2001 at 261.

<sup>189</sup> UNEP/CBD/COP/DEC/X/1 of 29 October 2010.

<sup>190</sup> Article 5.

<sup>191</sup> Annex to the Protocol.

compensation to right holders which can be interpreted to mean that in the context provided, the right holder is the community from which the TK is derived. Section 20 (1) provides for IP that relates to a derivative work from TK to vest in the creator of the work as provided by the relevant IP law. Other features that, according to the Act, an authorised user agreement should contain include:

1. A provision about whether the TK that is the subject matter of the agreement will be exclusive or non-exclusive.<sup>192</sup>
2. The duration of the use of the TK, disclosure requirements in relation to the use<sup>193</sup>.,
3. Possible sharing by the communities where the TK originated of IPRs related to the use of the TK.<sup>194</sup>
4. Assignment of rights where appropriate.<sup>195</sup>

The PTK Act places a restriction on the transfer of TK – based IPRs.<sup>196</sup> The transfer of IPRs based on TK requires approval by the Cabinet Secretary responsible for matters related to IPRs.<sup>197</sup>

The right to equitable monetary or non – monetary benefits is also provided for under the Environmental Management and Coordination (Conservation of Biological Diversity and Resources, Access to Genetic Resources and Benefit Sharing) Regulations, 2006 (EMCA Regulations) which are under the EMCA. Under regulation 20(1)(3) of the EMCA Regulations, provisions are made for monetary benefits which include access fees, payment of royalties, research funding, joint ventures and joint ownership of relevant IPRs. Non-monetary benefits, provided for under regulation 20(1)(4) of the Regulations, include sharing of R & D results, participation in product development, access to scientific information relevant to conservation and sustainable use of biodiversity and strengthening capacities for technology transfer to Kenya.

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<sup>192</sup> Section 34.

<sup>193</sup> Section 34.

<sup>194</sup> Section 34.

<sup>195</sup> Section 34.

<sup>196</sup> Section 25(3) (d).

<sup>197</sup>Section 25(3)d)..

### 3.5 Optimal Management of TK

Studies have shown that in some areas, the willingness with which some communities have embraced a lifestyle that does not mirror that of previous generations depends upon how far the areas that they inhabit are located from modern amenities such as roads.<sup>198</sup> The erosion of TK by virtue of the abandonment of the way of life previously adopted by those communities is one outcome of the modernisation of those areas.<sup>199</sup> One approach that has been proposed to counter the effects of such erosion is the enclosure of areas such as forests where the communities live, by the state, for the protection of those areas.<sup>200</sup> The effectiveness of this approach is, however, questionable, as a result of the increasing pressure of market forces which are in favour of privatising communally held resources such as land.<sup>201</sup>

Despite some erosion of TK over time, it retains some importance even in modern times. Although its accuracy has been contested, partly due to the changing lifestyles of indigenous communities,<sup>202</sup> consequent reduced interaction with the TK and doubts regarding its adaptability due to perceived rigidity, some studies show that in some cases, advantages can still be derived from that knowledge in activities such as catching wildlife for human consumption.<sup>203</sup> The preservation of the knowledge has been achieved through means such as family diaries, although verbal transmission of the information still occurs.<sup>204</sup> Age – old practices such as preventing access to areas where the wildlife is hunted enable breeding and rearing, activities which sustain the existence of the wildlife for many seasons.<sup>205</sup>

Collaborative activity between local public institutions, indigenous communities and enterprises has been suggested as an approach that may spur commercialisation of products derived from TK whilst maintaining local ownership of IP related to the ventures.<sup>206</sup> This is rooted in the recognition that an understanding of the context within which TK has been applied by communities over time is important.<sup>207</sup> In some cases, where the TK derived has been applied

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<sup>198</sup> Ifeka and Abua 2005 at 441.

<sup>199</sup> Ibid.

<sup>200</sup> Ibid.

<sup>201</sup> Ibid.

<sup>202</sup> Ibid.

<sup>203</sup> Ibid.

<sup>204</sup> Ibid.

<sup>205</sup> Ibid.

<sup>206</sup> Stevenson 1996 at 284.

<sup>207</sup> Ibid at 282.

without regard to the culture of communities concerned, this has placed communities from which the TK has been derived in a subordinate position to modern research and management systems in disciplines such as wildlife management.<sup>208</sup> Consequently, communities have in some cases been hesitant to share their TK.<sup>209</sup>

A collaborative approach to the management of TK is also provided for by 51 of the EMCA. The section provides for NEMA, in consultation with relevant lead agencies, to prescribe measures that are adequate to the conservation of biological resources *in situ* by issuing guidelines for integrating TK for the conservation of biological diversity with mainstream scientific knowledge.

As seen above, engagement between indigenous communities and agencies in the context of management of TK is intended to enhance trust and greater co-operation from communities in sharing their TK.<sup>210</sup> Kenya could draw lessons regarding such collaboration from a proposed system of optimal engagement with aboriginal people in Canada in the context of the application of their TK to EIA which has four steps.<sup>211</sup> They are:

1. The documentation of the concerns of the community, reasons for such concerns and the social, environmental and economic impacts of a project that is at the proposal stage.<sup>212</sup>
2. Allaying the above concerns bearing in mind the community's fears and the federal regulations.<sup>213</sup>
3. Planning programs that will fully include the community in subsequent monitoring of valued ecosystem components and management of effects on the components over a long term period.<sup>214</sup>

The above approach is expected to provide the community with important roles in all stages of EIA.<sup>215</sup> One of the expected outcomes is an increased capacity to differentiate natural changes in the environment from project – related consequences once the TK from the community, which

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<sup>208</sup> Ibid at 281.

<sup>209</sup> Ibid.

<sup>210</sup> Ibid at 281.

<sup>211</sup> Ibid.

<sup>212</sup> Ibid.

<sup>213</sup> Ibid.

<sup>214</sup> Ibid.

<sup>215</sup> Ibid.

has been gathered over time while living in the geographical region in question is applied. This would be useful in forming a more accurate picture of the environmental effects of an activity such as mining on the land. TK is reported to have played a role in studying the effect of mining on the Bathurst caribou population in a region of northern Canada.<sup>216</sup>

### 3.6 Conclusion

This chapter has identified the possibility that TK may be useful in Kenya's upstream oil and gas industry by contributing to environmental management.<sup>217</sup> This can be attributed to the knowledge demonstrated by the Turkana community in managing forest resources, which could prove useful for EIA before and after resource extraction.<sup>218</sup> The PTK Act's provisions regarding the manner in which such knowledge should be protected for the benefit of the community are therefore relevant in the context of economic growth. This is because benefits that the community receives from the use of that knowledge, if properly managed, could have a positive impact on the community's access to resources derived from the benefits. These could take the form of monetary or non-monetary benefits. In that context, the use of provisions in the PTK Act may be useful as a legal basis upon which access to such benefits could occur.

Although the challenges associated with the protection of TK, including the untested effectiveness of the TKDR may hamper the realisation of TK-related benefits, the PTK provides an initial step towards this. Therefore, the Act has the potential to enable the realisation of economic growth among indigenous communities, including those living in areas where oil and gas mining has taken place and will take place. This demonstrates an intersection between the statute and the country's national policy agenda relating to economic growth.

Sustainability is a theme that runs through the subject of TK in mining. A cycle can be identified, starting from the application of the knowledge and the mechanism(s) that would enable its use in modern extractive work in the oil and gas industry to its maintenance through documentation, which in the best case scenario would serve both the community and modern industrial endeavour.

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<sup>216</sup> Ibid at 285.

<sup>217</sup> Stave 2007 at 1475.

<sup>218</sup> Ibid.

The possibility of maintaining biodiversity also applies to sustainability of communities and the environment. The role that TK may play in supporting sustainability in these contexts means that its management has a place in the formulation of strategies related to the extraction of oil and gas in Kenya.

## **CHAPTER FOUR: APPLICATION OF IP LAW RELEVANT TO THE OIL AND GAS INDUSTRY BY COURTS IN KENYA, SOUTH AFRICA AND THE UK**

### **4.1 Introduction**

This chapter looks at the enforcement of IP law by courts in Kenya, South Africa and the UK in civil cases that have issues for determination that are relevant to IP protection in the oil and gas industry whilst also analysing the public interest angle in IP protection as it relates to the oil and gas industry. This approach is informed by the attempt to answer the key research question of the thesis regarding the manner in which IP law can be used in the regulation of Kenya's oil and gas sector. The sub-questions regarding IP law as a regulatory tool in oil and gas sector and application of IP law in the sector to advance Kenya's economic growth agenda are also dealt with by the chapter.

The chapter begins by identifying actual and potential IP protection in the petroleum industry using the processes that are undertaken in the industry's production cycle. The IPRs featured in the chapter are patents, trademarks, copyright, industrial designs and trade secrets. Chapter two introduced Kenya's IP law framework and aspects of patent and trade secrets law in the context of innovation. Chapter three focused on TK as it relates to oil and gas production and Kenya's legal provisions under the PTK Act and the EMCA. This chapter studies the featured IPRs in the context of their use by firms in the oil and gas industry, criteria for their protection in the three countries, rights available to those granted IPR protection and judicial interpretation of legal principles relating to the IPRs in civil cases.

The chapter's analysis is limited to application of IP law principles through the pursuit of legal remedies in civil proceedings. Civil proceedings are provided for in the statutes of the three countries where there has been infringement of the IPRs featured in the chapter. In some cases, the statutes also provide for criminal proceedings which may be instituted by the state where there has been unauthorised use of their IPRs.<sup>1</sup> This chapter looks at civil proceedings where infringement of IPRs is the subject matter of the litigation for two reasons. The first of these is the remedies that are available when civil proceedings are instituted by an IPR holder who

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<sup>1</sup> For example, in Kenya's Industrial Property Act, 2001 with regard to infringement of patents and industrial designs, the country's Trade Marks Act and its Copyright Act, 2001. In South Africa, criminal proceedings are provided for in the country's Copyright Act 98 of 1978. The proceedings are also provided for under the UK's Copyright, Patents and Designs Act 1988 and Trade Marks Act 1994.

alleges infringement and whose case prevails against that of the defendant. The three jurisdictions studied in the chapter have remedies that include damages, account for profits, injunction, delivery up and destruction of infringing articles. Although criminal proceedings would provide punishment in the form of fines and / or imprisonment where a complainant's case leads to a conviction, the compensatory aspect of civil remedies such as damages is important.<sup>2</sup> This is an advantage that may influence an aggrieved IPR holder to institute civil proceedings.

The second reason that would make civil litigation more attractive in such matters, where both options are available, is the possibility of exercising more control, at least in the initial stages prior to instituting proceedings, by the plaintiff. In civil matters, it is more likely that a plaintiff will have a greater say in the manner in which a matter is handled in aspects such as the strategy to use in dealing with a defendant in the course of seeking remedies than if the matter is handled by a prosecutor, who will not be working under the direction of the complainant. Thus, given the two advantages, an IPR holder may be persuaded to consider civil rather than criminal litigation.

The chapter features studies of statutory provisions of Kenyan, South African and UK statutes that are related to the criteria for grant of the IPRs mentioned above and infringement – related provisions. Thereafter, it considers case law in each of the said jurisdictions. The cases featured in the chapter were selected based on the relevance of issues determined in the cases to the oil and gas industry. Some of the cases studied involved parties in the extractives sector. Although some of the cases studied do not involve parties in the oil and gas industry, the issues that are referred to by the courts in each case are relevant to IPR-related disputes notwithstanding the industry or industries in which the parties operate.

To reach a conclusion about the application of IP laws in the oil and gas industry, the chapter draws upon points raised in the cases featured in the chapter. The choice of these points is used as a parameter to gauge application of the protection. This is guided by the use of the cases as a forum in which statutory provisions and past court decisions are interpreted and applied by

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<sup>2</sup> World Intellectual Property Organisation 'WIPO Intellectual Property Handbook: Policy, Law and Use' (2004) 218. Available at <http://www.wipo.int/about-ip/en/iprm/>, accessed 13 January 2018.

courts. The importance of litigation as a means of protecting IP has been recognised by companies.<sup>3</sup>

With regard to public interest, which was briefly discussed in chapter one of the thesis, the chapter looks at statutory provisions and case law to consider the limitations on the private interests in the enforcement of IP law. This is important in order to ascertain the boundaries placed by the law in the exercise of IPRs in the context of various industries, including the oil and gas industry. It gives a more complete picture of the IP law landscape.

#### **4.2 The International Oil and Gas Industry**

The risks that apply during oil and gas exploration, development and production have been noted as geological – the possibility of finding the reserves of the resources and the size of those reserves; financial and political risks.<sup>4</sup> Notably, improved technology has reduced the chances of failure that may occur during exploration but oil and gas production remains a high – risk venture.<sup>5</sup> Among the resources required for undertakings of this nature is specialised equipment.<sup>6</sup> Chapter three of this thesis summarised the oil and gas exploration and production process in order to link the activities undertaken in the process with their possible environmental impact and thus, the role that TK may have to play in that context. In this section of chapter four, the study revisits the process to find out which products and processes are the subject of actual or potential IP protection. In doing so, the section draws attention to the ‘tools’ that make oil and gas mining a reality. It also shows the context in which firms in the industry would use IP to retain or gain a competitive advantage. The modern oil exploration process is recorded as having been first used in 1912.<sup>7</sup> The desk study portion of the exploration process is conducted by reviewing geological maps and aerial photographs of land formations likely to contain oil reserves.<sup>8</sup> A seismic survey is thereafter undertaken to locate the oil.<sup>9</sup> Drilling of wells is then

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<sup>3</sup> M Rashid Khan, ‘What is an intellectual property strategy for oil and gas industry?’ LII No. 1 *Journal of the Licensing Executives Society* (March 2017) 46.

<sup>4</sup> Silvana Tordo, David Johnston and Daniel Johnston ‘Petroleum exploration and production rights: allocation strategies and design issues’ World Bank Working Paper No. 179 (2010)1.

<sup>5</sup> *Ibid* at 3.

<sup>6</sup> *Ibid* at 5.

<sup>7</sup> Oil Industry International Exploration and Production Forum and United Nations Environment Programme ‘Environmental management in oil and gas exploration and production’ (1997) 4.

<sup>8</sup> *Ibid*.

<sup>9</sup> *Ibid*.

used to confirm the presence and size of the reserves.<sup>10</sup> If commercial quantities of petroleum are found, the appraisal stage will follow.<sup>11</sup> At this stage, the size and nature of the reserves are examined in order to determine the number of appraisal wells required and whether additional seismic surveying is necessary.<sup>12</sup> Production wells are then drilled.<sup>13</sup> Decommissioning of production facilities occurs at the end of commercial production and may include elimination of structures used for production, reinstating the production site(s) to conditions suitable for the environment and continued observation of the site after it has been closed.<sup>14</sup>

After extraction, it is necessary to process raw natural gas.<sup>15</sup> This serves to meet the requirements of companies engaged in gas distribution.<sup>16</sup> One of the processes involves liquefaction, the conversion of the gas into a liquid state.<sup>17</sup> Liquefied natural gas has a lower volume than natural gas in its gaseous form.<sup>18</sup> Therefore conversion into a liquid state makes it easier to store and transport the gas.<sup>19</sup> Liquefaction processes are protected using patents.<sup>20</sup>

Global oil and gas prices have fallen since 2014.<sup>21</sup> There has also been oversupply of gas in the global gas market.<sup>22</sup> Global gas prices had increased between 2011 and 2014 due to increased demand for gas.<sup>23</sup> This led to increased profit margins for companies that were involved in supplying the commodity.<sup>24</sup> It has been projected that gas prices will fall further due to shale gas production in the USA.<sup>25</sup> It is also expected that the demand for gas is likely to grow as a result of less emissions of carbon dioxide, a quality that renders gas a more ‘climate – friendly’ source of energy than coal or oil.<sup>26</sup>

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<sup>10</sup> Ibid.

<sup>11</sup> Ibid at 7.

<sup>12</sup> Ibid.

<sup>13</sup> Ibid.

<sup>14</sup> Ibid at 10.

<sup>15</sup> Havard Devold ‘Oil and gas production handbook: an introduction to oil and gas production, transport, refining and petrochemical industry’ (2013) 62.

<sup>16</sup> Ibid.

<sup>17</sup> Ibid at 70.

<sup>18</sup> Ibid.

<sup>19</sup> Ibid.

<sup>20</sup> Ibid at 71.

<sup>21</sup> PWC ‘Navigating the transformation of the gas market: adapting to survive in a period of change’ (2016) 5. (Hereafter PWC 2016).

<sup>22</sup> Ibid at 4.

<sup>23</sup> Ibid at 6.

<sup>24</sup> PWC 2016 at 5.

<sup>25</sup> Ibid.

<sup>26</sup> Ibid at 8.

Although the trend in most markets has been an increase in gas prices due to increased demand for the fuel, lower prices will be expected in this instance.<sup>27</sup> Low oil prices and an increased number of gas suppliers globally are two factors that are expected to push gas prices downwards.<sup>28</sup> This indicates that competitiveness among entities with operations in the hydrocarbons industry is expected to increase. Generally, the assets held by entities are useful for the establishment of a competitive advantage over their competitors. Lowering of production costs and increase in production and sales generally become more important to firms competing in such a market environment. Assets that are held by firms, among them those protected by IP, may prove useful in attaining goals of this nature. As noted in section 2.2 of the third chapter of the thesis, patents, industrial designs, copyright, trade marks and trade secrets are the types of IP likely to be used in oil and gas extraction and production. Sections 4.3 to 4.6 of this chapter will feature case law that highlights elements that have been considered by courts in dealing with infringement of these types of IP.

As is the case with other industries, technological advancement is considered to be crucial in the global hydrocarbon sector. The growth in Australia's gas industry has been attributed to a number of factors, among them the application of technology.<sup>29</sup> Environmental conservation concerns associated with the industry in that market have also been addressed by air cooling technology which enables less water usage.<sup>30</sup> Another beneficiary of technology – based growth is the North American gas market, where growth has been linked to advances in drilling technology.<sup>31</sup>

The processes of exploration, drilling, production, processing and distribution of petroleum have been influenced positively by improvements in technology that include 3-D and 4-D seismology.<sup>32</sup> Nanotechnology and biotechnology are among the fields that have been studied by energy companies to provide future advancements in the industry.<sup>33</sup> Nanotechnology

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<sup>27</sup> Ibid.

<sup>28</sup> Ibid.

<sup>29</sup> Australian Petroleum Production and Exploration Association 'Australian upstream oil and gas industry: state of the industry 2012' (2012) 2.

<sup>30</sup> Ibid at 4.

<sup>31</sup> Ibid.

<sup>32</sup> PWC 'Gateway to growth: innovation in the oil and gas industry.' Available at <https://www.pwc.com/gx/en/industries/energy-utilities-mining/oil-gas-energy/publications/gateway-to-growth-innovation-in-the-oil-and-gas-industry.html>, accessed on 2 August 2017.

<sup>33</sup> Ibid.

can be applied in oil and gas exploration and production processes to improve efficiency.<sup>34</sup> Patent applications have been reported in nanotechnology that is related to hydraulic fracturing for extraction of shale gas.<sup>35</sup>

It has been noted that although the value of innovation in the industry is appreciated, in some cases, companies are reluctant to take risks that are attendant to the development and first use of technology.<sup>36</sup> In those circumstances, one preferred approach is to acquire licences from those who develop the technology.<sup>37</sup>

Digital technology has proved useful in the location of petroleum resources and improving operational efficiency at various stages of the oil and gas supply chain.<sup>38</sup> The technology also has the potential to be useful in prolonging the life of machinery used in the industry.<sup>39</sup> It has been argued that the current state of technology – the availability of elements such as cloud storage and advanced capacity to analyse data, has provided fertile ground for digital – based improvements to be applied to the petroleum industry.<sup>40</sup> The Internet of Things is expected to improve the output of petroleum wells globally whilst enhancing their safety.<sup>41</sup>

Aside from commercial entities, patent ownership in the oil and gas sector is exercised by government departments.<sup>42</sup> Patents have been obtained in areas ranging from the development of organic compounds to gas separation processes.<sup>43</sup> The approach taken in the development of patentable technology by companies also appears to be changing.<sup>44</sup> Whereas in-house

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<sup>34</sup> Available at <https://www.bdo.co.uk/en-gb/insights/industries/natural-resources-and-energy/reaping-the-benefits-of-nanotechnology-in-the-oil-and-gas-industry>, accessed 13 January 2020.

<sup>35</sup> Available at <https://www2.deloitte.com/us/en/pages/energy-and-resources/articles/tracking-innovation-in-oil-and-gas-patents.html>, accessed 13 January 2020.

<sup>36</sup> Abbe E L Brown 'Lessons from technology and intellectual property in the oil and gas industry in Scotland: A scholarly journey and an empirical review' (2014) 11 *ScriptEd* 23-25. (Hereafter Brown 2014).

<sup>37</sup> *Ibid* at 25.

<sup>38</sup> Harsh Choudry et al 'The next frontier for digital technologies in oil and gas.' Available at <http://www.mckinsey.com/industries/oil-and-gas/our-insights/the-next-frontier-for-digital-technologies-in-oil-and-gas>, accessed on 26 July 2017.

<sup>39</sup> United Kingdom Oil and Gas Authority 'Technology delivery programme' (2017) 15.

<sup>40</sup> Ernst & Young LLP 'Why it's time to invest in digital oil' (2016) 3.

<sup>41</sup> PWC 'The future of industries: bringing down the walls' (2016) 11.

<sup>42</sup> Deloitte 'Tracking innovation in oil and gas patents: The role and influence of the US Department of Energy' (2015) 1.

<sup>43</sup> *Ibid* at 8.

<sup>44</sup> *Ibid* at 11.

development of technology has been adopted by oil and gas companies in the past, the companies have been reported to have shown an interest in open innovation.<sup>45</sup>

Collaboration among interested parties in the hydrocarbon sector to produce technology – based solutions has occurred when necessary.<sup>46</sup> For example, after the Deepwater Horizon oil spill, it became necessary to develop a method of capping a well under the sea urgently.<sup>47</sup> This was developed as a result of the work of a group that consisted of representatives from the UK government, industry, academia, relevant industry bodies and trade unions.<sup>48</sup>

It has been reported that an increase in oil and gas - related patent infringement suits in the US from late 2014 accompanied a global fall in oil prices.<sup>49</sup> The litigation became an alternative way in which firms in the oil and gas industry tried to retain or gain market share from their assets, including patents that they owned, in the challenging business environment.<sup>50</sup> Another reason cited for the lawsuits is the importance attached by enterprises to establishing ownership of patents where the need to sell assets or enterprises may arise due to poor financial performance by the enterprises.<sup>51</sup>

Environmental conservation in the context of energy production has been a focus area for development organisations.<sup>52</sup> In this regard, technology transfer has featured as a mechanism that will be used for the dispersion of advancements in the production of clean energy.<sup>53</sup> Where technology used for this purpose is the subject of IP protection, it will be necessary to determine the manner in which it will be made available where it is required whilst safeguarding the rights of IP owners.

Thus, the role played by technology, currently and in future will be increasingly important to firms, given prevailing market conditions – unpredictable oil prices and the increasing attractiveness of clean energy. IP can therefore play a role in enhancing the advantage

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<sup>45</sup> Ibid.

<sup>46</sup> Supra Brown 2014 28-9.

<sup>47</sup> Ibid.

<sup>48</sup> Ibid.

<sup>49</sup> ‘Patent infringement cases increase in oil and gas business.’ Available at <https://bol.bna.com/patent-infringement-cases-increase-in-oil-and-gas-business/>, accessed on 9 July 2017.

<sup>50</sup> Ibid.

<sup>51</sup> Ibid.

<sup>52</sup> World Bank Group ‘Toward a sustainable energy future for all: directions for the World Bank Group’s energy sector’ (2013) 18.

<sup>53</sup> Ibid.

of enterprises in the sector and thus, is an important component of a firm's planning and execution strategy.

Sections 4.3, 4.4 and 4.5 of the chapter will study court cases in Kenya, South Africa and the UK to identify issues that have emerged in cases that have infringement of IPRs that are relevant to the oil and gas sector as their subject matter. Selected issues that the cases adjudicated upon that are relevant to IP in Kenya's oil and gas sector will thereafter be analysed by section 4.6 of this chapter.

### **4.3 Kenya**

This section of the chapter will look at court cases in Kenya which have infringement of patents, copyright and industrial designs as their subject matter. It will also consider court cases in Kenya that have dealt with passing off and breach of confidential information. The cases are relevant to the oil and gas industry in Kenya because they dealt with issues that are likely to feature in cases relating to IPRs in the industry. Therefore, they show the issues that courts may consider and decisions that are likely to be made by courts in adjudicating cases that deal with IPRs in the industry.

#### **4.3.1 Patents**

This section describes issues that have been determined by court cases in Kenya regarding the jurisdiction of courts in matters pertaining to patent infringement and validity of a patent respectively. In the oil and gas industry, these issues would guide parties engaged in disputes about the appropriate judicial forum in which to institute proceedings and the likelihood of succeeding in an application for an injunction in a patent infringement claim.

The IPA provides for the patentability criteria of novelty, inventive step and industrial applicability.<sup>54</sup> It provides for the right to exclude others from dealing with a patented product or process by means such as offering the same for sale.<sup>55</sup>

The Act provides for various powers of the industrial property tribunal with regard to patents. For example, the tribunal may revoke patents on various grounds, including a failure by the invention to meet the criteria for grant of a patent,<sup>56</sup> infringement,<sup>57</sup> and failure to disclose the

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<sup>54</sup> Section 22.

<sup>55</sup> Section 54.

<sup>56</sup> Section 103(3) (c), (d) and (i).

best method of performing the invention known to a patentee at the time of applying for a patent.<sup>58</sup> A patentee may appeal the tribunal's revocation of a patent at the high court.<sup>59</sup>

In *Apex Creative Limited and another v Kartasi Industries Limited*,<sup>60</sup> the applicant sought an injunction based on alleged infringement by the respondent of an advertising concept which was the subject matter of its patent application. One of the issues for determination by the court was whether the high court or the industrial property tribunal should hear the matter. The court ruled that although the high court has unlimited original jurisdiction to hear criminal and civil matters,<sup>61</sup> the industrial property tribunal has technical expertise in handling matters related to industrial property disputes and is the most suitable forum for the hearing of such disputes. Consequently, the court determined that any further proceedings in the case should be before the tribunal. However, given that the applicant had applied for an injunction, the court at the same time determined that the application for an injunction would not succeed. The basis for the ruling on this point was that the patent had not yet been registered and therefore the applicant could not claim the right of a patent holder to stop the use of the concept by the respondent. Additionally, the court found that the applicant had not satisfied the requirements for the grant of an injunction.<sup>62</sup>

A dearth of local case law on the subject matter of patent infringement was cited by the Court of Appeal in *Sanitam Services (EA) Limited v Rentokil (K) Limited and Another*.<sup>63</sup> In the case, the court stated:

The appeal before us focuses on a branch of law which has scanty litigation and therefore minimal jurisprudential corpus in this country...<sup>64</sup>

The court also stated:

'...The lack of authoritative case law on the issues raised also means that they will be considered and decided on first principles.'<sup>65</sup>

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<sup>57</sup> Section 103(3) (b).

<sup>58</sup> Section 103(3) (g).

<sup>59</sup> Section 103(11).

<sup>60</sup> (2011) eKLR.

<sup>61</sup> As provided by article 165(3) of the Constitution of Kenya, 2010.

<sup>62</sup> As established in *Giella v Cassman Brown* (1973) EA 358.

<sup>63</sup> (2006) eKLR, Civil Appeal 228 of 2004.

<sup>64</sup> *Ibid.*

<sup>65</sup> *Ibid.*

The above case was determined on the basis of the Industrial Property Act, Chapter 509 of the Laws of Kenya, which was repealed by the IPA. In *Sanitam Services Limited v Bins (Nairobi) Services Limited*<sup>66</sup>, the plaintiff applied for an interlocutory injunction pending the determination of a suit in which it had sued the defendant for infringement of its patent. The defendant contended that the patent on which the plaintiff's action was based had ceased to exist. The plaintiff submitted that the patent, which had been registered by the African Regional Intellectual Property Organisation, had been removed from the register of patents but had been reinstated there after it paid maintenance fees. The defendant also argued that the patent should not have been registered as it had been anticipated by prior art. On this point, the court determined that the defendant should have instituted proceedings for the revocation of the patent under section 103 of the IPA. It also concluded that the plaintiff had established that it had a valid patent which had been infringed by the defendant by offering the invention for sale or hire without the plaintiff's authorisation and granted the interlocutory injunction.

The cases above examined the jurisdiction of the high court in dealing with patent infringement cases and registration of a patent as a requirement for a claim in patent infringement respectively. The respective courts underlined the importance of having the industrial property tribunal exercise its original jurisdiction to deal with the cases and registration of a patent as a preliminary point for plaintiffs who would like to pursue civil remedies.

#### **4.3.2 Trade Marks**

This section describes issues that have been determined by court cases in Kenya regarding the effect of non-registration of a trade mark in matters pertaining to passing off and factors that Kenya's courts have considered when determining if passing off has occurred. These issues would guide parties to disputes about the likelihood of succeeding in an action for passing off.

The Trade Marks Act, Chapter 506 provides for distinctiveness of a mark as the criterion for registration of the same.<sup>67</sup> The rights available to a trade mark owner include the right to use the mark and assign the same.<sup>68</sup> It is noteworthy that apart from civil remedies that are available

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<sup>66</sup> (2008) eKLR.

<sup>67</sup> Section 12.

<sup>68</sup> Section 27.

in cases of infringement, criminal remedies are also available under the Trade Marks Act<sup>69</sup> and the Anti-Counterfeit Act Number 13 of 2008.<sup>70</sup>

The subject matter of the following cases is passing off. Passing off occurs when one tries to sell or sells goods by taking advantage of goodwill that has been established in a trade mark by another.<sup>71</sup> Whereas remedies for infringement are provided for under statutory law as stated above, common law remedies apply for passing off and further, one who alleges passing off would have to prove that there is a likelihood of confusion between goods in a particular geographical area where a reputation about the goods exists.<sup>72</sup>

In *National Industrial Credit (NIC) Bank Limited v Nairobi Investment Company (NIC) Microfinance Limited*<sup>73</sup> the plaintiff sued the defendant for passing off. The plaintiff's claim was that the use by the defendant of a name so similar to that of the plaintiff had confused the plaintiff's clients. The defendant's argument was that the plaintiff had not registered the trade mark 'NIC'. The plaintiff submitted that it had received an inquiry regarding whether it was associated with the defendant based on the similarity of the parties' names. The court noted that the plaintiff had provided certificates of registration of trade marks as evidence, which proved that it was the owner of the trade marks. The court also found that the defendant's use of the plaintiff's registered trade mark occurred after the registration of the trade mark. Further, the court stated that the plaintiff had proved that it had goodwill in the trade mark, having carried on business for over 51 years and being well known in Kenya. The court concluded that the defendant had passed off its services as those of the plaintiff.

*Pastificio Lucio Garofalo S.P.A v Debenham & Fear Limited*,<sup>74</sup> involved a claim by the plaintiff that the defendant had passed off its products as the plaintiff's and also engaged in trade mark infringement. The plaintiff argued that the use of the get up and packaging of the defendant's products caused confusion among consumers who were unable to distinguish between the parties' products. The court stated that its assessment of the plaintiff's evidence established that the plaintiff was the registered owner of the contested trade mark, which

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<sup>69</sup> Section 58D.

<sup>70</sup> Section 35(1).

<sup>71</sup> David I Bainbridge *Intellectual Property* 8 ed (2010) 115.

<sup>72</sup> Wim Alberts 'A tale of two remedies in competition and intellectual property law' 14 (2006) *Juta's Business Law* 45. (Hereafter Alberts 2006).

<sup>73</sup> (2012) eKLR.

<sup>74</sup> (2013) eKLR.

included the get up of its products. It found that the defendant had infringed the trade mark. The court further determined that the plaintiff had established goodwill in the trade mark.<sup>75</sup> It also stated that the packaging of the parties' products was strikingly similar and likely to cause confusion among customers. It concluded that passing off and infringement had been established by the plaintiff.

From the above cases, the issues that emerged are the importance of proof of goodwill and likelihood of confusion to establish passing off. This is significant to the oil and gas industry because in order to increase the possibility of succeeding in cases where passing off is claimed, claimants should focus primarily on proving the two elements. Trade marks are important in the industry because of confidence placed by customers on good quality of fuel products. A number of trade marks in the industry have been in use for more than a decade in Kenya and are well known to customers. Therefore, a number of entities in the industry would have a basis for making a claim of passing off based on goodwill.

### 4.3.3 Copyright

This section describes issues that have been determined by court cases in Kenya regarding *locus standi* in matters pertaining to copyright infringement and incidental use of works protected by copyright in Kenya. Parties to disputes would benefit from guidance from the first case in this section about when to institute proceedings for copyright infringement in circumstances where the existence of an entity is unclear. The second case in the section dealt with the likelihood of succeeding in an application for an injunction in a copyright infringement claim where incidental use of work protected by copyright has occurred.

The Copyright Act, 2001 provides for originality and reduction to material form as the criteria for protection of literary, musical or artistic work.<sup>76</sup> Under the Act, the rights conferred by copyright include the rights to reproduce and sell the protected work.<sup>77</sup>

In *Mount Kenya Sundries Limited v Macmillan Kenya (Publishers) Limited*<sup>78</sup> the appellant contested a high court judgment in favour of the respondent with regard to infringement of copyright in maps. It argued that the respondent, an entity not in existence at the

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<sup>75</sup> On this point, the court referred to *inter alia*, *CDL Hotels International Limited v Pontiac Marina Pty Limited* (2001)1 LRC 243 and *Triple Five Corporation v Walt Disney Productions* (1994) ABCA 120.

<sup>76</sup> Section 22(3).

<sup>77</sup> Section 26(1).

<sup>78</sup> (2016) eKLR.

time when the action was brought before the high court, had no *locus standi* for instituting the action. Additionally, it claimed that both parties had obtained the maps which were the subject matter of the action from the same source and therefore similarities between the maps were inevitable. The respondent's argument was that the appellant had copied the map by tracing the respondent's map. Further, the respondent argued that assignment of the copyright could take place after the institution of an action.

The court determined that the respondent was the equitable owner of the map as its parent company had made the map specifically for it. Additionally, the court agreed with the high court's finding that the respondent was entitled, in equity, to commence proceedings pending assignment of the copyright. The appellant admitted that by the time it started making maps, the respondent's maps were on the market. The court dismissed the appeal.

The importance of the case to the oil and gas industry is based on the use of IP as an asset that an entity may use in a transaction. As seen in the facts of the case, uncertainty may arise regarding ownership of copyright and this could lead to claims of infringement. Therefore, it would be useful for entities in the oil and gas industry to apply for registration of copyright in their works to prove ownership since this option is available under Kenya's copyright law.

In *Nairobi Map Service Limited v Celtel Kenya Limited (Zain Kenya) and two others*<sup>79</sup> the plaintiff sued the defendants for copyright infringement of its map. The first defendant claimed that there had only been incidental use of the map in its advertisement. The second defendant stated that the map used in the advertisement was not copied from the plaintiff's map and that the maps were not the subject matter of the advertisement but only appeared there incidentally. The incidental use of the map was also claimed by the third defendant.

The court noted that the plaintiff was indicated on the map as the author and copyright owner of the same, a claim that had not been rebutted by the defendants. It concluded that the plaintiff was the copyright owner. It also found that the third defendant's use of the map in the advertisement was incidental and did not amount to infringement of the copyright. The court also noted that there was no evidence that the use of the map in the advertisement had interfered with the sale of the map by the plaintiff or that the defendants had sold the map. Consequently, there was no loss suffered by the plaintiff. Thus, the appeal was dismissed. This is significant to the oil

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<sup>79</sup> (2016) eKLR.

and gas industry because it would guide copyright owners in the industry in avoiding pursuit of legal action for incidental use of work protected by copyright. Incidental use, as a non-infringing exception to unauthorised use of copyright-protected works, and copyright ownership as a basis for a claim of infringement featured in the above cases. In the second case examined in this section, the court also referred to a lack of evidence that the plaintiff had incurred losses by reason of the defendant's use.

#### **4.3.4 Industrial Designs**

This section describes issues that have been determined by court cases in Kenya regarding the jurisdiction of courts in matters pertaining to industrial design infringement and criteria for registration of an industrial design. These issues are relevant because they would guide potential parties to disputes about grounds used by courts to determine if infringement of an industrial design has occurred and to decide if registration of an industrial design is valid.

The IPA provides for registration of an industrial design on the basis of its novelty.<sup>80</sup> An industrial design owner has rights that include the right to reproduce the industrial design in the manufacture of a product and to sell a product that bears the design.<sup>81</sup>

In *Acme Containers Limited v Blowplast Limited*<sup>82</sup> the applicant claimed that the respondent had infringed its industrial design and applied to the industrial property tribunal for an injunction to prohibit the infringement. The respondent's industrial design had also been registered and no objection was filed prior to its registration. The tribunal determined that the designs appeared to be dissimilar from an examination of their pictorial representation at the time when their respective applications were presented to the Kenya Industrial Property Institute for registration. Thus, it found that the applicant's design had not been infringed by the respondent.

In *Malplast Industries Limited v Safepak Limited*<sup>83</sup> the appellant appealed the decision of the Managing Director of the Kenya Industrial Property Institute not to register its industrial design on grounds that the design lacked requisite creativity as provided under section 86(2) of the IPA to qualify for registration. The respondent opposed the appeal and contended that the decision not to register the appellant's design was justified as the design was substantially similar

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<sup>80</sup> Section 86(1).

<sup>81</sup> Section 92(1) (a) and (b).

<sup>82</sup> (2016) eKLR.

<sup>83</sup> (2016) eKLR.

to its design. The Tribunal determined that the appellant's design was substantially similar and indistinguishable from the prior art.

The test of similarity between the designs in the above two cases was applied by the industrial property tribunal. This is a point that is noteworthy to owners of industrial designs in the oil and gas industry for decision-making that is related to instituting legal proceedings for industrial design infringement and to evaluate if a design fulfils the novelty requirement for registration as an industrial design in Kenya when seeking registration of the design.

#### **4.3.5 Trade Secrets**

This section describes issues that have been determined by court cases in Kenya regarding the grounds for grant of an injunction for disclosure of confidential information and grounds used by courts to determine if documents are confidential. These court decisions can guide potential parties to disputes about the likelihood of succeeding in an application for an injunction to prevent disclosure of confidential information. Cases in which trade secrets are the subject matter of the dispute are adjudicated using case law and in some cases, reference is made to the Contracts in Restraint of Trade Act, Chapter 24.

*Credit Reference Bureau Holdings Limited v Steven Kunyih*<sup>84</sup> featured an application for an injunction to bar the defendant from disclosing confidential information including trade secrets, pricing and unique competitive business strategies obtained whilst he had been employed by the plaintiff, to his subsequent employer. The defendant contended that the clause in the employment contract which restrained him from obtaining employment in an organisation which was in competition with the plaintiff contravened article 41(1) of the Constitution of Kenya 2010 which provides that every person has a right to fair labour practices.

He further argued that the nature of his employment with the plaintiff did not entail access to any confidential information which would be detrimental to the plaintiff's business if disclosed. The court made a number of observations. It stated that in order for such restraint to be enforceable, it must seek to restrain the use of only that which is an employer's secret and not knowledge and skill which can be acquired by learning, experience or development in technology. Further, it stated that the plaintiff had not shown the nature of the secrets acquired by

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<sup>84</sup> (2017) eKLR.

the defendant and the manner in which these could be used in his current employment to the plaintiff's detriment. It therefore did not grant an injunction.

In *Leland I. Salano v Intercontinental Hotel*<sup>85</sup> the Industrial Court addressed the issue of confidential documents in an employment relationship. It stated that these are documents considered by the employer to contain information which is not generally known, or readily accessible to persons other than the employer. It further stated that their nature as confidential would arise if their unauthorised disclosure could damage the essential interests of the employer's business. The court further considered that limited access to the documents by unauthorised persons would indicate their confidential nature, as would information on the documents that identifies them as confidential. It was also the court's view that an implied contractual obligation to keep information obtained from an employer arises from an employment contract. It is noteworthy that the court stated that it had not found precedents from Kenyan courts specifically addressing confidentiality in employment relationships and it therefore made reference to decisions from other jurisdictions to address this point.<sup>86</sup>

One point which emerged from the first case in this section is that enforceable restraints of trade are those related to an employer's confidential information. Skill or knowledge acquired from other sources is not included in such restraints of trade. The second case in the section identified the qualities of confidential documents. Firms in the oil and gas sector may use the findings in the two cases to guide decision-making related to institution of legal proceedings for breach of confidential information. This is because pursuing relief in that context would be more likely to succeed, as seen in the two cases, when information meets the threshold of confidential quality.

#### **4.4 South Africa**

This section of the chapter will look at court cases in South Africa which have infringement of patents, copyright and industrial designs as their subject matter. It will also consider court cases adjudicated in South Africa's courts with passing off and breach of confidential information as their subject matter. The cases are relevant to the oil and gas sector because they dealt with

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<sup>85</sup> (2013) eKLR.

<sup>86</sup> The court referred to *Faccenda Chicken Limited v Fowler* (1987) 1 Ch. 17, *Medivac International Management Pte Limited v Moore* (1988) 1 MLJ and *Quinlan v Curtiss – Wright Corporation* 204 NJ 239 (2010).

issues that are likely to feature in cases relating to IPRs in the sector. Therefore, they indicate matters that courts will consider and decisions that are likely to be made by courts in deciding cases that deal with IPRs in the industry.

#### 4.4.1 Patents

This section describes issues that have been determined by court cases in South Africa regarding grounds for revocation of a patent infringement, jurisdiction of the high court in patent licensing agreements and validity of a patent. These court decisions can guide parties involved in disputes with similar issues for determination about the appropriate judicial forum in which to institute proceedings and the likelihood of succeeding in an application for revocation of a patent. In South Africa's Patents Act 57 of 1978 the requirements for patentability are novelty, inventive step and applicability in trade, industry or agriculture.<sup>87</sup> A patentee is awarded the exclusive rights to make, use, exercise, dispose of or import the invention.<sup>88</sup> The Act provides for revocation of a patent based on *inter alia*, the insufficient description, ascertainment, illustration or exemplification of the invention and how it is performed to enable it to be carried out by a person skilled in the art of the invention.<sup>89</sup> It also provides that in proceedings for infringement of a patent, a defendant may counterclaim for the revocation of a patent or rely on any ground upon which a patent may be revoked as a defence.<sup>90</sup>

In *Mantella Trading 310 (Pty) Limited v Kusile Mining (Pty) Limited*<sup>91</sup> the subject matter of the case was the infringement of a patent for an underground passage barrier, a method of erecting such barriers in an underground passage and a kit for erecting the barrier in an underground passage. The respondent's counterclaim for the patent's revocation was based on its allegation that the matters disclosed in the patent's specification were not a fair basis for the invention's claims and that the specification lacked clarity regarding the term 'rigid material.' It was also the respondent's claim that the patent lacked an inventive step and should therefore be revoked. The Supreme Court of Appeal noted that the respondent had conceded that the patent fulfilled the novelty criterion.

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<sup>87</sup> Section 25.

<sup>88</sup> Section 45 (1).

<sup>89</sup> Section 61(e).

<sup>90</sup> Section 65(4).

<sup>91</sup> [191/2014] [2015] ZASCA 10 [12 March 2015].

Regarding obviousness, the court concluded that the appellant had employed creative ingenuity in combining techniques that were known by using corrugated iron sheets as barriers in underground passageways. Thus, the non-obviousness claim failed. Subsequently, the court issued an interdict against the respondent from infringing the patent and dismissed the respondent's claim for revocation of the patent.

In *Orica Mining Services SA (Pty) Limited v Elbroc Mining Products Limited*<sup>92</sup> the Supreme Court of Appeal considered the appellant's claim for an interdict against alleged patent infringement by the respondent and the respondent's claim for revocation of the patent on the basis of obviousness. A patent for a drill rig was the subject matter of the dispute. The basis for the appellant's infringement claim was the sale of roof bolter rigs which performed a similar function as that of the drill rig by the respondent. The respondent argued that the location of its rig's drill carriage was different from that of the appellant and therefore its rig did not infringe the appellant's patent.

The court noted the admission made by the respondent with regard to having taken all the essential features, except one, of the appellant's patent.<sup>93</sup> It also noted the lack of proof that the different element in the respondent's rig materially affected the working of the appellant's rig. The court found in favour of the appellant and issued an interdict against the respondent for sale and offering for sale of its drill rig in South Africa.

*Precismeca Limited v Melco Mining Supplies (Pty) Limited*<sup>94</sup> involved a determination by the Supreme Court of Appeal regarding the jurisdiction of the high court, specifically whether the jurisdiction was ousted by s 18 (1) of the Patents Act. The provision states that no tribunal other than the Commissioner of Patents shall have jurisdiction in the first instance to hear and decide proceedings except criminal proceedings relating to any matter under the Act.

The appellant had, under an exclusive licensing agreement, given the respondent rights to manufacture items in exchange for royalty payments. The appellant later instituted an action against the respondent to have information regarding the number of items made under the agreement and for royalty payments by the respondent. The agreement provided that the grant of

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<sup>92</sup> [233/2016] [2017] ZASCA 48 [31 March 2017].

<sup>93</sup> On this point, the court indicated a similarity with *Catnic Components Limited and another v Hill and Smith Limited* (1982) RPC 183.

<sup>94</sup> [2002] ZASCA 119.

exclusive rights under the agreement was in respect of the manufacture, use and sale of the product whose trade mark and patent were to be applied for by the appellant.

The agreement also provided that the appellant was under an obligation to apply for the registration of the patent and trade mark in respect of the product and that upon the grant of the trade mark and patent, the appellant would license the patent and enter into a user agreement in respect of the trade mark. Further, the agreement stated that until the licence was granted and the user agreement registered, the licensing agreement would operate as a licence in respect of the patent applied for. Ultimately, the parties did not enter into the user agreement and the patent licences were not granted.

The respondent argued that at the time of instituting the suit by the appellant, the patents referred to in the schedule to the licence agreement had expired. One of them expired after the conclusion of the licence agreement and two of them prior to its conclusion. Thus, the respondent argued, the litigation should have been referred to the Commissioner for Patents as provided under s 28(1) of the Patents Act as the dispute concerned the right to deal with an invention by making, using, exercising or disposing of an invention. The appellant stated that its claims were made under the common law and not the Patents Act.

The court found that the agreement that the parties entered into was a common law licensing agreement and was not a patent licensing agreement based on the non-inclusion of the list of patents by attaching them to the agreement. It also based this conclusion on the possibility of the agreement enduring for an indefinite period, unlike the patents which had a fixed term. It termed the agreement a technology licensing agreement for the manufacture of the products defined using patents previously in existence. Consequently, it found that the high court had jurisdiction to enforce the rights which arose at common law under the agreement— payment of royalties and accounting.

*Roman Roller CC and another v Speedmark Holdings Proprietary Limited*<sup>95</sup> involved a patent for conveyor rollers applied in mining and other industrial activities. The validity of the patent was challenged by the appellant based on obviousness and lack of clarity.

The Supreme Court of Appeal agreed with the finding of the Commissioner of Patents with regard to non-obviousness of the invention. It cited the statement of the commissioner

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<sup>95</sup> [1995] ZASCA 78; 1996 (1) SA 405 (SCA).

which noted the commercial success of the invention despite the simplicity of the idea behind it. The commissioner's statement also referred to the invention's ability to reverse the challenges encountered while using conveyor rollers. The court dismissed the claim of obviousness made by the appellant.

With regard to the appellant's claim that the patent should be revoked for want of clarity, the court noted that the use of flexible language in a patent's claim may be justified to avoid circumvention by a party who may substantially make what is claimed in the patent but introduce variations to make the imitation outside the patent's limits.<sup>96</sup> The court's conclusion was that the appellant had not established that the patent claim was lacking in clarity.

*Water Renovation (Pty) Limited v Gold Fields of SA Limited*<sup>97</sup> featured a challenge to the appellant's patent claim for a method to separate solids and liquids which could be applied in the purification of mine water. The respondent wanted to use elements of the invention but the parties did not enter into an agreement regarding its use. The respondent thereafter applied for revocation of the patent. Its application was based on allegations that claims were not fairly based on the matter indicated in the provisional specification, that there were false representations in the prescribed declaration, lack of novelty and no entitlement to apply for the patent by the patentee.

As part of its response to the respondent's application, the appellant applied for an amendment of the patent. The parties agreed that the application for the patent's revocation would be stayed pending a determination of the application for the amendment. The application for amendment was dismissed by the commissioner of patents. The Supreme Court of Appeal examined the question of co-inventorship, the subject of one of the proposed amendments to the patent by the appellant. It noted that an admission of co-inventorship by a patentee may be admissible evidence, even if the admission had appeared in a specification of the patent prior to amendment. The court dismissed the application for amendment of the patent. It did not render a decision on the patent's validity.

*Rotaque (Proprietary) Limited v General Mining and Finance Company Limited and another*<sup>98</sup> involved an appeal from opposition proceedings instituted in respect of the grant of

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<sup>96</sup> On this point, the court referred to *Helios Limited v Letraset Limited* (1970) BP 495 (T).

<sup>97</sup> [1993] ZASCA 169.

<sup>98</sup> [21A/85] [1986] ZASCA 103 [25 September 1986]; 1986 BP 534 AD.

two patents for hoppers used in gold mines. The first ground of opposition, lack of novelty, failed on account of a lack of proof that novelty had been defeated by experimental use of modified hoppers. The Supreme Court of Appeal also found that the opponents' claim of material misrepresentation against the appellant had not been proved. The opponents had alleged that at the time of making the application for the patent, the appellant had been aware that its claims in the application's specification had been anticipated by a drawing and hoppers made to resemble the drawing. It was also the court's conclusion that the third ground of opposition, obviousness, had not been proved by the opponents. Thus, the court upheld the appeal.

In *Merial and Others v Cipla Vet (Pty) Limited*<sup>99</sup> the Court of the Commissioner of Patents considered whether infringement of a patent for an anti-parasitic composition for the treatment and protection of pets by the defendant had occurred. The plaintiff's contention was that the defendant had infringed various claims of the patent. As part of its defence, the defendant contended that the patent should be revoked on grounds of insufficiency of the description of the way in which the invention should be performed in order to enable a person skilled in the art of the invention to perform the invention.<sup>100</sup> The court analysed the requirement of insufficiency as involving a question of fact about the availability (in the view of the person skilled in the art) of proper instructions in the patent's specification to allow the invention to be put to use.<sup>101</sup> Moreover, it considered that a finding of insufficiency would only hold if the person skilled in the art could perform the invention with ease and using simple and routine experiments that do not call for extended research or enquiry.<sup>102</sup> Expert evidence is admissible to determine whether the performance of the invention by a person skilled in the art would be possible in those conditions.<sup>103</sup> The court found that the defendant had not proved insufficiency of the invention's description. On the basis of inadequate evidence to show that infringement had occurred, the court also found that the defendant had not infringed the patent.

The importance of the function of patents for provision of information regarding the performance of an invention was highlighted in *Merck Sharpe Dohme Group v Cipla Agrimed*

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<sup>99</sup> Case No. 96/8057 [2014] ZACCP 3 [24 July 2014].

<sup>100</sup> Ibid at 33.

<sup>101</sup> Ibid at 34. The court quoted the statement made in *Cipla Medpro (Pty) Ltd v Aventis Pharma SA* 2013 (4) SA 579 (SCA) para 23 regarding insufficiency of a patent's description.

<sup>102</sup> Ibid. Here, the court quoted the statement made in *De Beers Industrial Diamond Division (Pty) Ltd v Ishizuka* 1980 (2) SA 191 (T) 198-199 regarding the factors used to determine insufficiency of a patent's description.

<sup>103</sup> Ibid at 34.

*(Pty) Limited*.<sup>104</sup> The case also underlined the standard that is necessary for a court to find that a patent should be revoked for want of novelty. In testing whether an invention was anticipated by prior art, the court stated that whether a skilled person would be enabled to create an invention by the claims of a patent determines if anticipation by prior art has taken place.<sup>105</sup> Thus, according to the court, where coming up with an invention would entail a substantial amount of ingenuity on the part of the skilled person and widespread testing to attain the invention, it should be concluded that the novelty threshold has been reached. It was on this basis that the court dismissed the application for revocation of a patent that was made in the appeal.

A number of issues were raised and addressed by the cases in the above section: that creative ingenuity using known techniques could defeat a claim of obviousness, the importance of a factor materially affecting the functioning of a patented item to prove novelty and inventive step, the jurisdiction of the high court in determining matters related to enforcement of licensing agreements, the effectiveness of a patented item in carrying out tasks and its commercial success as markers of its non-obviousness, grounds for establishing insufficiency of a patent's description and how to test an invention's novelty.

These points are noteworthy for firms in the oil and gas sector because they are relevant to protection of inventions using patents. Firms may benefit from the points that emerged in the cases through knowledge about criteria thresholds to be attained for patent protection. This is useful for decision-making regarding patent or invention management. The points are especially pertinent in Kenya's context, given the noted scarcity of cases that have patents as their subject matter in Kenya's case law. Kenya's courts may therefore be guided by decisions made by South Africa's courts when dealing with patent - related cases.

#### **4.4.2 Trade Marks**

This section describes issues that have been determined by court cases in South Africa regarding grounds for granting an interdict for trade mark infringement and passing off. The court decisions in the section can guide parties to similar disputes about the likelihood of succeeding in an application for an interdict for such claims.

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<sup>104</sup> ([20282/2014] [2015] ZASCA 175[27 November 2015].

<sup>105</sup> The court relied on *Synthon BV v SmithKline Beecham plc* (2005) UKHL 59; (2006) 1 All ER 685, *Hill v Evans* (1862) 31LJ (NS) 457, *General Tire and Rubber Company Limited v Firestone Tyre & Rubber Company Limited* (1972) RPC 457 and *Eli Lilly and Company Limited v Apotex (Pty) Limited* (2013) FCA 214.

The Trade Marks Act 194 of 1993 provides that a trade mark is registrable if it is capable of distinguishing the goods or services of a person in respect of which it is registered from goods or services of another person.<sup>106</sup> A trade mark owner has the right to use the mark and to assign the same.<sup>107</sup> Criminal remedies are available for trade mark infringement are provided for under the Counterfeit Goods Act Number 37 of 1997.<sup>108</sup> As indicated in section 4.3.2 of this chapter, remedies may be sought for passing off or trade mark infringement depending on the circumstances in which unauthorised use of a trade mark occurs.

*Impala Platinum Holdings Limited v Impala Warehousing and Logistics Africa (Proprietary) Limited and others*<sup>109</sup> involved an application for interdictory and ancillary relief against the first respondent for alleged infringement and passing off of the applicant's trade marks. The first respondent made a counter-application for the expungement or restriction of the trade marks in order to re-define the boundaries of the marks. The high court noted the importance of the classification of trade marks in the testing of likeness between marks.<sup>110</sup>

The court noted the difference between the trading activities undertaken by the parties – the applicant's extraction, processing and sale of minerals and the respondent's service provision in transport, logistics and storage of refined metals and bulk concentrates. In dismissing the application for the reliefs sought by the applicant, it agreed with the respondent that its products were so dissimilar to those offered by the applicant that the applicant did not prove passing off and infringement by the respondent. Further, the court directed the second respondent in the counter-application to make six amendments to the register of trade marks.

In *Protective Mining and Industrial Equipment Systems (Pty) Limited (formerly Hampo Systems) v Audiolens (Cape) (Pty) Limited*<sup>111</sup> the Supreme Court of Appeal heard a claim by the appellant regarding the alleged unauthorised importation or sale of cameras and other equipment which had previously only been distributed by the appellant in South Africa and other countries under a distributorship agreement between the equipment manufacturer and the appellant. The respondent received a demand letter from the appellant's attorneys which stated that the

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<sup>106</sup> Section 9(1).

<sup>107</sup> Section 39.

<sup>108</sup> Section 19(1).

<sup>109</sup> [2014] ZAGP JHC 410.

<sup>110</sup> On this point, the court referred to *Foschini Limited Group (Pty) Limited v Coetzee* (A1/11) (2013) NGHC (18 January 2013).

<sup>111</sup> 282/85 [1987] ZASCA 33; [1987] 2 All SA 173 [A] [30 March 1987].

unauthorised sale of the items amounted to an infringement of the manufacturer's trade mark. It sought the respondent's assurance that the respondent would not import or sell the items in South Africa. The respondent declined to give the assurance and stated that it had obtained the items that it sold legally and would continue to re-sell them.

The court concluded that there was bona fide use of the mark by the respondent by noting that the use of a mark as a trade mark when reselling goods constitutes continued use by the mark's proprietor.<sup>112</sup> In dismissing the applicant's claim of infringement, it emphasised that its finding of bona fide use depended upon the items in question being sold in exactly similar condition to that in which they were when the mark was placed upon them and the mark having been placed upon them by the proprietor of the mark.

In *Societe des Produits Nestle SA v International Foodstuffs*<sup>113</sup>, the appellants sought to have an interdict issued against the respondents for trade mark infringement and passing off. The court considered that the Trade Marks Act provides for likelihood of deception or confusion arising out of the use of a registered mark on a good similar or almost similar to that on which a defendant has used the registered mark as a test for infringement.

Additionally, the court highlighted the creation of an impression that there is a substantial connection between the defendant's goods and the entity that is the origin of the goods upon which the registered trade mark appears as an indicator of infringement.<sup>114</sup> It was on this basis that the court held that the respondents were liable for trade mark infringement and issued an interdict against them. The respondents relied upon tacit waiver and estoppel as defences against the action for infringement. The court's position was that there was no conduct by the appellants that showed an unequivocal waiver of rights held in their trademarks.

In *Etraction (Pty) Limited v Tyrecor (Pty) Limited*<sup>115</sup> the appellant's case to have an interdict issued against the respondent for trade mark infringement was dismissed. In making that decision, the court referred to a number authorities, among them s 36(1) of the Trade Marks Act which allows continuous and *bona fide* use of a trade mark identical with or nearly

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<sup>112</sup> On this point, it referred to *Wistyn Enterprises (Pty) Limited v Levi Strauss & Co. and another* (1986) (4) SA 796 (T).

<sup>113</sup> (100/14) ([2014] ZASCA187 (27 November 2014).

<sup>114</sup> *Ibid* at 17 [2014 – ZASCA, Nov 2014]. The court referred to *Verimark (Pty) Ltd v Bayerische Motoren Werke Aktiengesellschaft* 2007 (6) SA 263 (SCA) para 5.

<sup>115</sup> [20185/2014] [2015] ZASCA 78 [28 May 2015].

resembling a registered trade mark in circumstances where the mark has been used before the use of the registered trade mark or prior to the registration of the registered trade mark.

Further, the court examined the aspect of good faith on the part of the appellant in pursuing registration of a mark that had been in use by the respondent and found that an ulterior motive could be inferred. It was on that basis that the court granted the respondent's counter-application for expungement of a word from the appellant's registered trade mark because of its reference to tyres, which the respondent was already engaged in selling.

The points raised by the cases in this section include: similarity in marks as a basis for a finding of liability for trade mark infringement and passing off, the effect of using misrepresentation to acquire goodwill that a defendant is not entitled to, the elements of bona fide use of a trade mark and the importance of good faith in pursuing registration of a trade mark.

#### **4.4.3 Copyright**

This section describes issues that have been determined by court cases in South Africa regarding grounds for copyright infringement and grant of an Anon Piller order. The court decisions in the section can guide parties to similar disputes about the likelihood of succeeding in a claim for copyright infringement and an application for the order.

The Copyright Act 98 of 1978 provides for originality and reduction into material form as the criteria for protection of *inter alia* literary and artistic works using copyright.<sup>116</sup> The rights to reproduce and publish literary and artistic works are among the rights available to a copyright owner under the Act.<sup>117</sup>

In *Media 24 Books (Pty) Limited v Oxford University Press SA (Pty) Limited*<sup>118</sup> the appellant sued the respondent for copyright infringement of a literary work. The court considered the quantity of copied work necessary to establish that infringement of copyright had occurred and stated that if a substantial part of the work in question had been reproduced, this would suffice to make a finding that infringement had occurred. In circumstances where copying of a

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<sup>116</sup> Section 2(1) and (2).

<sup>117</sup> Sections 6 and 7.

<sup>118</sup> [886/2015] [2016] ZASCA 119 [16 September 2016].

work protected by copyright is not blatant, the text of the literary work may be taken to cover general content including arrangement of ideas and characters.<sup>119</sup>

The court additionally noted that in order to make a finding that copyright had been infringed, the court's focus had to not only be on the evidence which demonstrated copying but rather, all the evidence before the court in that case.<sup>120</sup> The court, in dismissing the appeal, noted that the appellant's decision not to have oral evidence presented in the appeal made it difficult for the court to conclude that copyright infringement had taken place, in the absence of cross-examination of the author(s) of the allegedly infringing work.

In *Non – Detonating Solutions (Pty) Limited v Durie*<sup>121</sup>, an Anton Piller order granted to the appellant on the basis of its copyright infringement claim against the respondents was challenged on the basis that it was too broad and that the appellant had no cause of action as the assignment of copyright that had been granted to it had expired. It was also partly on the basis of the expired assignment that the appellant's cause of action for unlawful competition based on a breach of confidential information was challenged. A *prima facie* cause of action and a requirement that an applicant for an Anton Piller order must establish that the respondent has in its possession evidence that is crucial to establish a cause of action were stated by the court to be necessary for a grant of the order. The court upheld the appeal on the basis of the relevance of the evidence sought by the appellant to its case. In its judgement, the court stated that the documents contained in the Anton Piller order were specified in the order and that it was clear that it was necessary to search the respondents' premises for the same.

The points that emerged from the above cases are the importance of cross – examination of an author of an allegedly infringing work to determine copyright infringement and the grounds for the grant of an Anton Piller order. In the oil and gas sector, firms may find the information about evidence required to prove a copyright infringement claim important for their case management. If they only present documentary evidence of copying as evidence in proceedings, a court may not decide in their favour, based on the *Media 24 Books (Pty) Limited* case cited above. The above *Non-Detonating Solutions (Pty) Limited* case illustrates the conditions that

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<sup>119</sup> Ibid at 11. For this point, the court referred to *Baigent & another v The Random House Group Limited* (2007) EWCA Civ 247.

<sup>120</sup> Ibid at 26. On this point, the court referred to *IPC Media Limited v Highbury – Leisure Publishing Limited* (2004) EWHC 2985 (Ch); (2005) F.S.R. 20 at para 11.

<sup>121</sup> [20440/2014] [2015] ZASCA 154 [2 October 2015].

must be fulfilled by a party that applies for an Anton Piller order. This information may also be useful for firms in the petroleum sector in determining whether to apply for the order, based on their circumstances.

#### 4.4.4 Designs

This section describes issues that have been determined by court cases in South Africa regarding grounds for industrial design infringement. The court decisions can guide parties to similar disputes about the likelihood of succeeding in such a claim.

The Designs Act 195 of 1993 provides for aesthetic and functional designs.<sup>122</sup> The criteria for registration of an aesthetic design are novelty and originality.<sup>123</sup> Novelty and not being commonplace in the art in question are the criteria for registration of a functional design.<sup>124</sup> Among the rights that are available to the registered proprietor of a design are the rights to exclude others from making or importing the design of any article embodying the design or a design not substantially different from the registered design.<sup>125</sup>

In *Bayerische Motoren Werke Atkiengesellschaft v Grandmark International*,<sup>126</sup> the appellant sought a declaration that its designs had been infringed, a remedy relevant to proceedings that it had instituted for payment of royalties. It also made a claim for trade mark infringement.

The Supreme Court of Appeal agreed with the High Court's position regarding whose perception of an aesthetic design a court would use in determining the appeal of the features of the design. The High Court had determined that a customer's view of the design would be the view used by the court.<sup>127</sup> On that basis, the Supreme Court of Appeal stated that the customer's perception of an aesthetic design is important in determining whether the criteria for protection of the design, as provided for under the South African Designs Act had been met.

The Supreme Court of Appeal found that the subject matter of protection by appellant was functional designs which did not qualify for registration as aesthetic designs. The court also

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<sup>122</sup> Section 1(1).

<sup>123</sup> Section 14(1) (a).

<sup>124</sup> Section 14(1) (b).

<sup>125</sup> Section 20(1).

<sup>126</sup> [722/12] [2013] ZASCA 114 [18 September 2013].

<sup>127</sup> On this point, the court referred to *Swisstool Manufacturing Company v Omega Africa Plastics* 1975(4) SA 379.

found that the claim for trade mark infringement had no merit as the marks that were the basis of the claim by the appellant had not been used as trade marks. It therefore dismissed the appeal.

In *Clipsal Australia (Pty) Limited v Trust Electrical Wholesalers*,<sup>128</sup> the appellants made a claim for the infringement of a design for electrical accessory plates. The respondents denied that they had infringed the design and contended that the design was neither new nor original. With regard to novelty, the Supreme Court of Appeal stated that an ordinary trade variant does not fulfil the criterion of novelty.<sup>129</sup> However, upon examining the respondents' claim that the design in question was not new, it found that the claim lacked merit by drawing a distinction between a previously registered design and the design under examination for novelty. The court found that the differences between the appellant's design and the respondents' design were insubstantial and that the respondents had infringed the design.

The points that emerged from the above cases are the importance of a customer's view of a design to determine the appeal of a design's features and the threshold for determining novelty of a design. This information could assist oil and gas firms engaged in cases where the subject matter is industrial design in their case management strategy because it may guide decisions regarding evidence to present at court proceedings in order to increase chances of success in infringement claims.

#### **4.4.5 Trade Secrets**

*Blastrite (Pty) Limited v Mineral Sands Resources (Pty) Limited and others*<sup>130</sup> involved the interpretation of a clause of a confidentiality agreement entered into between the applicant and the first respondent. According to the applicant, the clause forbade the discussion of elements of potential garnet deposits, including ideas, processes, packaging and operational arrangements by the first respondent with third parties.

The likely deposits were located at a mineral sand mine in which the first respondent had registered mining rights. The applicant sought an interdict to prevent dealings between the first respondent and any other person(s) other than itself with regard to garnet extracted from the sand mine, with the exception of the movement of heavy minerals by the ninth respondent from the

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<sup>128</sup> (2007) SCA 24 (RSA).

<sup>129</sup> The court illustrated this point using *Schultz v Butt* 1986 (3) SA 667 (A).

<sup>130</sup> (21897/15) ZAWCHC 166 (9 October 2015).

mine. Additionally, the applicant sought the prevention of the renewal of a garnet off-take agreement between the first and third respondents.

The first respondent argued that the clause of the confidentiality agreement in question did not confer exclusivity as claimed by the applicant and that the confidentiality agreement had been superseded by a memorandum of understanding entered into between the parties. The seventh, eighth and ninth respondents contended that the confidentiality agreement only barred the disclosure of confidential information and not business transactions in garnet with third parties. The high court noted that the applicant had not asserted the exclusive rights that it claimed arose from the confidentiality agreement that it entered into with the first respondent. It concluded that the confidential information that the agreement sought to protect was that of the first respondent.

Further, the court observed that no evidence was adduced by the applicant to support its allegation that it had invested considerable resources in the discussion and consideration of matters related to the potential garnet and other resource that was likely to be present in the mine. It was also the court's finding that the applicant had not demonstrated that information disclosed by the applicant to the first correspondent to advance the discussions between the parties regarding the potential garnet was confidential. Consequently, the court dismissed the application for an interdict.

In *Automotive Tooling Industries (Pty) Limited v Wilkens*,<sup>131</sup> the Supreme Court of Appeal considered, *inter alia*, the enforceability of confidentiality clauses in agreements entered into between the appellant and the first and second respondents. The appellant's argument was that the first and second respondents had acquired confidential know-how during their employment with the appellant and would use that know-how to do the fourth appellant's work. The court noted the inherent difficulty in locating the demarcation between an employer's trade secrets or confidential information and an employee's skills, experience and knowledge.

It also noted the difficulty in determining whether the process by which a machine is built or the skill and discretion of its operator is majorly responsible for the machine's success. The respondents argued that the know-how was commonly available to all technicians and artisans. The court determined that the appellant had not indicated which part of the process or method

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<sup>131</sup> (2006) SCA 128 (RSA).

that was the subject matter of the dispute between the parties was unique or justified why the same was worthy of protection. The court also stated that it appeared that all employees, clients and sub-contractors had access to the appellant's methods and processes, which in the court's view, would not have been possible if the same were confidential. Consequently, it dismissed the appeal.

*Strike Productions (Pty) Limited v Bon View Trading 131 (Pty) Limited and Others*<sup>132</sup> featured an application for a final interdict to restrain the first respondent from employing the third respondent. The basis of the application was that the third respondent was using its confidential information for the benefit of the first respondent, its competitor. The respondents argued that the applicant had not proved that it had trade secrets or confidential information that deserved protection under the law. The court noted that for a party to protect its trade secrets and confidential information, it must show that the same is unique and not in the public domain.<sup>133</sup> Further, the court stated the party must show that the information for which protection is sought deserves such protection. The court found that the appellant had not proved these points regarding its claims. It dismissed the application.

In the above cases, the criteria used to determine confidential quality were stated by the courts. For entities in the oil and gas industry, this information is useful in guiding decisions about whether to pursue claims of breach of confidentiality through court proceedings.

#### **4.5 UK**

This section of the chapter will look at court cases in the UK which have infringement of patents, copyright and industrial designs as their subject matter. It will also consider court cases decided in the UK's courts that have dealt with passing off and breach of confidential information. The cases are relevant to the oil and gas industry because they dealt with issues that are likely to feature in cases relating to IPRs in the industry and decisions that are likely to be made by courts in such cases.

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<sup>132</sup> (10/21704) (2011) ZAGP JHC 1.

<sup>133</sup> On this point, the court referred to *Hirt Carter (Pty) Limited v Mansfield and Another* 2008(3) SA 512(D).

#### 4.5.1 Patents

This section describes issues that have been determined by court cases in the UK regarding grounds for determining if patent infringement has occurred and revocation of a patent based on a claim of obviousness. In the oil and gas industry, these cases can guide parties to similar disputes about the likelihood of succeeding in an action for patent infringement and an application for revocation of a patent.

The UK Patents Act 1977 (Chapter 87) provides for novelty, inventive step and industrial applicability as patentability criteria.<sup>134</sup> The Act provides for exclusive rights for a patent's proprietor, which include the right to make and import the patented product.<sup>135</sup> The Copyright, Designs and Patents Act 1988 (CDPA) provides for patent agents under sections 274 to 281 of Part V and for patents county courts in sections 287 to 292 of Part VI.

In *Lubrizol Corporation and ANR v Esso Petroleum Company Limited and others*<sup>136</sup> the appellant sued for patent infringement and the respondent alleged invalidity of the patent and counterclaimed for the right's revocation. The disputed patent was for an engine lubricating oil additive. The Supreme Court of Appeal found that the patent had been infringed as the alleged infringing products fell within the first claim of the patent. With regard to the respondent's claim of invalidity on the basis of the ambiguity of the first claim, the court concluded that the claim was not ambiguous. It also concluded that the first claim was obvious and therefore invalid. Further, it determined that there had been prior use of the invention by the respondent which rendered the patent invalid. Consequently, the appeal was dismissed.

In *Halliburton Energy Services Inc. v Smith International (North Sea) Limited and Others*<sup>137</sup>, the Court of Appeal of England and Wales considered an appeal regarding the patentability of a rotary cone drill bit used for drilling rock surfaces. On the basis of insufficiency of a specification in the drill bit's patent application, the court did not grant permission to appeal. The court cited s72(1) (c) of the Patents Act 1977 which provides for insufficient disclosure by a patent specification as a ground for revocation of a patent.

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<sup>134</sup> Section 1.

<sup>135</sup> Section 60 (1) (a).

<sup>136</sup> (1998) RPC.

<sup>137</sup> (2006) EWCA Civ 1715.

In *Schlumberger Holdings Limited v Electromagnetic Geoservices AS*<sup>138</sup> the court examined obviousness in a patent for a method called marine controlled source electromagnetic surveying to locate oil and gas deposits. It considered the role of secondary evidence in determining obviousness and stated that such evidence is relevant in finding out why an invention had not been developed before if it was obvious. It concluded that if, in hindsight, a useful development had seemingly been obvious and what appeared to be an obvious straightforward technical step from the prior art had not been taken; it was likely that there had been an invention.

The court also stated that commercial success, considered separately from all other possible causes of that success such as advertising, would also suggest inventiveness. It also considered the reactions of skilled people in the use of the invented process and determined that it was clear that the use of the process was not obvious.<sup>139</sup> Further, the court examined novelty of the invention and found that the invention had not been anticipated by prior art. Consequently, it found the patent for the process to be valid.

The points noted in the cases include: prior use of an invention as a ground for a patent's invalidity, insufficiency of a patent specification as a ground for a patent's invalidity and tests for inventive step. The criteria for patent protection tested in the cases are a guide for applicants, including those in the oil and gas industry, to determine whether they have fulfilled the criteria for protection. The information may be useful for planning and executing business strategy related to protection of inventions. It may also be useful for case management strategy where a firm is a party to court proceedings with similar subject matter. The information is also relevant for Kenya's courts as the decisions in the cases are useful reference points in cases with patents as their subject matter, including those pertaining to the oil and gas industry in Kenya.

#### **4.5.2 Trade Marks**

This section describes issues that have been determined by court cases in the UK regarding grounds for finding that trade mark infringement has occurred. The decisions can guide potential parties to similar disputes about the possibility of succeeding in trade mark infringement claims.

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<sup>138</sup> (2010) EWCA Civ 819.

<sup>139</sup> The court additionally referred to the approach in *Windsurfing International Inc v Tabur Marine (Great Britain) Limited* (1985)RPC 59 and *Pozzoli Spa v BDMO SA and Another* (2007)EWCA Civ 588 to determine non-obviousness.

The UK Trade Marks Act 1994 (Chapter 26) provides for distinctiveness as a criterion for the registration of a trade mark.<sup>140</sup> The proprietor of a registered trade mark has a number of exclusive rights, among them the right to use the mark by affixing it to goods or their packaging and offering goods for sale under the sign.<sup>141</sup>

In *Total Limited v YouView TV Limited*<sup>142</sup> the claimant sued for infringement of its trade mark. The defendant counterclaimed for a declaration of invalidity of the trade mark and rectification of the UK trade marks register. The high court made reference to a number of points raised by the UK intellectual property office (IPO) in opposition proceedings instituted by the claimants against the registration of the defendant's trade mark. Among these were the conceptual and oral similarities between the parties' marks, a point that the court agreed with. It was also noted by the court that despite the outcome of the hearing of the opposition proceedings, in which the IPO found in favour of the claimant, and the defendant's appeal to that outcome, which was dismissed, the defendant proceeded to market its services with the mark. Further, the court noted that the defendant's commercial activities were similar to those offered by the claimant using its registered mark. It was also the court's position that the commercial activities of the parties made them competitors in a particular market and industry and with the use of both marks there was a high likelihood that the public would be confused about the source of the goods and services offered to them. Consequently, the court held that the claimant's trade mark had been infringed.

In *Cartier International Limited and Another v British Telecommunications Plc and Others*<sup>143</sup> the claimants applied to the high court for an injunction that would require the defendants, who are internet service providers (ISPs) to block access to websites which were used to infringe trade marks belonging to the claimants by using the sites to market counterfeit goods. The court referred to its earlier judgment in *Cartier International AG v British Sky Broadcasting Limited*.<sup>144</sup> It mentioned that before that case, applications for orders to block websites had only arisen in copyright cases, based on s97A of the CDPA.

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<sup>140</sup> Section 3(1) (b).

<sup>141</sup> Section 10(4) (a) and (b).

<sup>142</sup> (2014) EWHC 1963 (Ch).

<sup>143</sup> (2016) EWHC 339 (Ch).

<sup>144</sup> (2014) EWHC 3354 (Ch).

Among the issues addressed by the court were the alternatives to an injunction against the defendants that were provided by the defendants in the earlier case involving the parties. One such alternative was to have an injunction issued against those who operated the websites on which the counterfeit goods were marketed. In the earlier case the court stated that issuing an injunction against those website operators would not be possible where those operators were outside the UK.

The court hearing the latter application for the injunction pointed out the difficulty associated with controlling the emergence of websites selling the counterfeit products even after injunctions had been issued against other websites. The court also referred to the potential challenge that would apply in having a declaration of infringement issued by the court in the earlier case and served upon the search engine, Google, to remove the infringing websites from search results. The court found that the claimants' application complied with the criteria of granting a website-blocking order as given in the earlier case.

The points raised by the courts in the cases above are: likelihood of confusion as a basis for invalidity of a trade mark and the limitations of remedies such as injunctions in circumstances where the creation of websites would be difficult to control.

### **4.5.3 Copyright**

This section describes issues that have been determined by court cases in the UK regarding grounds for finding that copyright infringement has occurred. The court decisions can guide parties to similar disputes about the likelihood of succeeding in copyright infringement claims. The UK CDPA provides for originality and reduction into material form as criteria for copyright registration.<sup>145</sup> The rights granted to a copyright owner include the right to sell or possess the protected work in the course of a business.<sup>146</sup>

In *IPC Media Limited v Highbury Leisure Publishing Limited*<sup>147</sup> the claimant alleged that the defendant had infringed the copyright in artistic works in certain issues of a magazine that it published. The court indicated that the first step in a copyright action is for a claimant to identify the work in which they claim ownership of copyright. This point was important in the case as the claim made in the case related to infringement of a number of issues of the claimant's magazine.

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<sup>145</sup> Sections 1(1) (a) and 3 (2).

<sup>146</sup> Section 23 (a) and (b).

<sup>147</sup> (2004) EWHC 2985 (Ch).

The court also referred to the necessity of meeting the originality requirement in order for the work to qualify for copyright protection.

It would then, according to the court, be important for the claimant to prove that at least a substantial part of the work has been copied by the defendant. The court stated that as a general rule, there would be a greater prospect of a court inferring that copying had taken place if there are a large number of similarities between the alleged infringing work and the protected work. However, it noted that similarities do not necessarily indicate copying.

The court determined that the similarities between the claimant's and defendant's magazine covers were standard or common features in the magazine publishing trade and that there was nothing to suggest that the features had been copied from the claimant. It therefore held that a credible case of copying had not been made out by the similarities between the two magazines and that the action for infringement failed.

In *Baigent v Random House Group Limited*<sup>148</sup> the authors of a book claimed that a book published by the respondent had infringed copyright in their work. The basis of the claim was the alleged copying of the theme in the appellants' work. The court of appeal agreed with the high court in finding that although parts of the book published by the respondent were based on the material in the appellants' book, those parts consisted of generalised propositions which did not qualify for copyright protection as they were not the product of the application of skill and labour by the appellants in creating their work. The court also concluded that if any parts of the central theme in the appellants' book had been copied in the book published by the respondent, they were not a substantial part of the respondent's publication. Consequently, it dismissed the appeal.

In the cases above, the courts considered the threshold required to conclude that copying had occurred. This is a reference point for firms in the oil and gas industry in circumstances where legal action is considered for instances of infringement of copyright. Where the threshold to prove unauthorised copying of protected material has not been reached, firms may re-consider instituting court proceedings.

#### **4.5.4 Designs**

This section describes issues that have been determined by court cases in the UK regarding grounds for courts deciding that infringement of a design has occurred. Parties to similar disputes

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<sup>148</sup> (2006) EWHC 719 (Ch).

can be guided about the likelihood of success in design infringement cases by the court decisions.

The Registered Designs Act 1949 provides for novelty as the criterion for the registration of a design.<sup>149</sup> A design right includes the exclusive right to sell or have in one's possession for commercial purposes, an article which bears the design in question.<sup>150</sup>

In *Landor & Hawa International Designs Limited v Azure Designs Limited*<sup>151</sup> an appeal arose out of a decision by the Patents County Court that the appellant had infringed the respondent's UK unregistered design rights (UKUDR) in a suitcase design. In determining the issue of whether the respondent had UKUDR protection in respect of the suitcase's design, the court agreed with the interpretation of s213 (3)(a) of the CDPA 1988 by the Patents County Court. The section provides that a design right does not subsist in a method or principle of construction. In that court's opinion, the section does not preclude a design from being protected only because it serves a functional purpose. Consequently, the court upheld the finding of the Patents County Court that the respondent was entitled to the UKUDR in respect of the design.

*Whitby Specialist Vehicles Limited v Yorkshire Specialist Vehicles and Others*<sup>152</sup> involved claims for infringement of a UKUDR, a UK registered design and a UK registered trade mark. The first defendant denied the infringement claims and, together with the second and third defendants, counterclaimed for revocation of the registered design. The defendants' argument was based on the claimant's registered design lacking individual character. The claimant's rebuttal was that the claimant's design produced a different overall impression on the informed user than the closest prior design. The court agreed with the claimant and found that the design possessed an individual character and was therefore valid.

It also found that the defendants' design produced the same overall impression as the claimants' registered design. In referring to the criterion of originality for a design right to subsist, the court stated that 'original' referred to the copyright sense of originating from the author and not having been copied. With regard to the claim for trade mark infringement the court referred to evidence of a photograph of a mould bearing the claimants' name in reverse, which had been posted by the defendants on Facebook. It concluded, on a balance of

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<sup>149</sup> Section 1(2).

<sup>150</sup> Section 227(1) (b) and (c) of the CDPA 1988.

<sup>151</sup> (2006) EWCA Civ 1285.

<sup>152</sup> (2014) EWHC 4242 (Pat).

probabilities, that two of the defendants had used the mould for their designs and had therefore infringed the trade mark.

The above cases raised the following points: functionality of a design is not, without other factors, a bar to its protection and the individual character of a design as a criterion for its registration. Oil and gas firms may find the points raised in the cases useful for decision – making related to applying for design protection.

#### **4.5.5 Trade secrets**

This section describes issues that have been determined by court cases in the UK, Kenya and South Africa regarding grounds for finding that misuse of trade secrets has occurred. Parties to similar disputes can be guided about the likelihood of success in breach of confidence cases by the court decisions in this section. Common law is the basis of court decisions in cases which have trade secrets as the subject matter of the dispute.

In *Vestergaard Frandsen A/S and Others v Bestnet Europe Limited and Others*<sup>153</sup> the appellants appealed against a Court of Appeal decision that a former employee was not liable for misuse of trade secrets. The Supreme Court dismissed the appeal on the basis that the appellant's former employee did not acquire the confidential information in question before or during her employment. Another ground for the appeal's dismissal was that the employee in question was unaware that the appellant's trade secrets had been used to develop the respondent's product until the suit was instituted.

In *Kerry Ingredients (UK) Limited v Bakkavor Group Limited and Others*<sup>154</sup> the appellant sought injunctive and other relief based on a claim against the defendants for misuse of its confidential information. The court noted that knowledge of confidential information by some members of the public may not necessarily be fatal to a claim for breach of confidence.<sup>155</sup> It added that a breach of confidence claim would still stand even if the confidential information

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<sup>153</sup> (2013) EWCA CIV 780.

<sup>154</sup> (2016) EWHC 2448 (Ch).

<sup>155</sup> On this point, the court referred to *Stephens v Avery* (1988) Ch 449 and *Mills v News Group Newspapers Limited* (2001) EMLR 41.

could be attained by reverse engineering.<sup>156</sup> The court however indicated that the reverse engineering would need to involve a significant amount of work.

It also noted the submissions by the claimant and defendants regarding the intended use of the information provided by the claimant to the defendants. On this point, the claimant stated that the information had been provided to the defendants for safety and regulatory purposes. The defendants stated that the information was provided to them for compliance reasons and not to be used by them to develop their own process. The court found that the defendants had breached the obligation of confidence and granted an injunction lasting until 30 June 2017. It stated that it was reasonable to infer that the defendants had gained a head start of a year due to their misuse of the confidential information.

In the above cases, the following points emerged: the importance of determining when confidential information had been acquired by an employee as a basis for a claim for its misuse by the employee and the grant of a time-limited injunction by a court depending on the time when misuse of confidential information is determined to have occurred. It has been noted that claims of confidentiality falling within the category of business information tend to be more closely scrutinised by courts in England than those which relate to manufacturing and product technology.<sup>157</sup> This is because a defendant is more likely to argue that business information is in the public domain or has become part of an employee's skill, knowledge and experience and therefore cannot be protected. In *Ixora Trading Inc. v Jones*,<sup>158</sup> a claim that information concerning costs and profits was confidential was dismissed by the court.

In a similar way to Kenyan cases regarding trade secrets, many reported UK cases have involved decisions made at an interlocutory stage where a plaintiff applies for an interlocutory injunction to restrain the use and/or disclosure of the plaintiff's confidential information.<sup>159</sup>

South Africa's Promotion of Access to Information Act Number 2 of 2000 lists commercial information, including trade secrets as information that should not be revealed. Further, the

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<sup>156</sup> Here, the court drew a contrast between the statements of Lord Greene MR in *Saltman Engineering Co Ltd v Campbell Engineering Co Ltd* (1948) 65 RPC 215 and Havers J in *Ackroyds (London) Limited v Islington Plastics Limited* (1962) RPC 97, which support this point of view with that of Jacob J in *Cray Valley Limited v Deltech Europe Limited* (2003) EWHC 728 (Ch) which raised the ease of reverse engineering as a point against the confidentiality of information.

<sup>157</sup> Simon Mehigan and Mary Yeadon 'Trade Secrets in the United Kingdom' in Melvin F Jager (ed) *Trade Secrets Throughout the World* Volume 3 (2012) 360. (Mehigan and Yeadon 2012).

<sup>158</sup> [1990] FSR 251.

South African Companies Act Number 71 of 2008, under section 212(7) gives the option of applying to court for an order to protect confidentiality of information in situations where information is required by the Companies and Intellectual Property Commission, the Companies Tribunal, the Takeover Regulation Panel or the Financial Reporting Standards Council.

The above provisions are a pointer to the law's appreciation of the place of commercially important secrets to the success of those engaged in commercial ventures. In *Waste –Tech (Pty) Ltd v Wade Refuse (Pty) Ltd*,<sup>160</sup> the court concluded that information or knowledge, of whatever value and however confidential, is not recognised as property under South African law. Nevertheless, it has, in addition to the aforementioned statutory provisions been stated in the country's case law that trade secrets enjoy protection under South African law on condition that they are confidential. The protection of trade secrets under the country's laws is however qualified by statutory provisions such as section 212(2) of the country's Companies Act.

#### **4.6 An Analysis of Kenya's, South Africa's and UK IP Law that is Relevant to the Oil and Gas Industry in Relation to Public Interest and IPR Protection**

This section of the chapter considers statutory provisions from Kenya's, South Africa's and UK IP statutes and case law to highlight the approach taken by the respective laws in dealing with benefits that can accrue to society in the context of IP protection. The benefits mentioned in this section of the chapter may have the effect of enabling people working in the oil and gas industry to gain access to knowledge in the field. This could occur through availability of information that is facilitated by disclosure in patents or the limitation in patent holders' rights that allows scientific research. The knowledge can be applied to future inventions in the industry.

##### **4.6.1 Patents**

As earlier seen in this chapter, Kenya's IPA provides for revocation of a patent based on failure to disclose the best method of performing the invention known to the patent owner at the time of presenting the patent's specification for registration of the patent at the KIPI.<sup>161</sup> Regulation 16 of the Industrial Property Regulations, 2002 (Legal Notice Number 50 of 2002) provides that the specification means the description, claims, drawings and abstract which are contained in an application for a patent. Section 34(5) of the Act provides for requirements for disclosure. The

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<sup>161</sup> Section 103 (3) (g).

Act requires that at least one mode of carrying out the invention should be disclosed in such full, clear, concise and exact terms as to enable any person having ordinary skills to make use of and to evaluate the invention.<sup>162</sup>

Further, the description should include any drawing and relevant deposits which are essential to undertake the invention.<sup>163</sup> Section 53(2) of the Act sets out the obligations of an applicant for a patent. They include the disclosure of an invention in a clear and complete manner.<sup>164</sup> The provision specifies that the applicant should indicate at least one mode for carrying out the invention in accordance with the requirements in the Act.<sup>165</sup> Additionally, the provision makes a failure to comply with the Act's requirements in that context subject to sanctions under the Act.<sup>166</sup>

Ideally, the inclusion of information in a patent application should enable those who would like to obtain the information for purposes of knowledge or further work that is related to an invention to gain access to the same. It is intended that access to that data should increase the knowledge available to society. The knowledge can thereafter potentially be applied in various ways, including the development of more inventions.

The usefulness of disclosure as a tool for advancing the state of the art in industries where patent protection is prevalent has however been questioned.<sup>167</sup> Reasons for this include the scanty detail given in some patents and the view among researchers that patents are unreliable as they are out-dated and not peer – reviewed.<sup>168</sup> It has been suggested that the ability of patents to attain the purpose of advancing knowledge in specialised fields for the eventual benefit of society, reforming the manner in which patents are drafted, for example, by using terms that are less broad, would be helpful.<sup>169</sup> Further, the introduction of a requirement that applicants for patents must prove that an invention works, by way of providing a working model of an invention where necessary, has been proposed to increase the value of patents to public

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<sup>162</sup> Section 34 (5) of the IPA.

<sup>163</sup> Ibid.

<sup>164</sup> Section 53 (2) (a).

<sup>165</sup> Ibid.

<sup>166</sup> Ibid.

<sup>167</sup> Lisa Larrimore Ouellette 'Do patents disclose useful information?' 25, No. 2 *Harvard Journal of Law & Technology* (2012) 517. See also Heidi L Williams 'Do patents affect research investments?' NBER Working Paper Series, Working Paper 23088 (2017)5 and 28.

<sup>168</sup> Ibid at 571-2.

<sup>169</sup> Sean B Seymore 'The teaching function of patents' (2010) *Notre Dame Law Review* 641.

interest.<sup>170</sup> It has however been observed that introducing this requirement may have the potential to stifle inventive activity that may be motivated by the possibility of acquiring patent protection.<sup>171</sup>

In *Halliburton Energy Services Inc. v Smith International (North Sea) Limited and Others*<sup>172</sup> the court pointed out that *quid pro quo* in the context of patent protection accorded to patentees' functions by way of disclosure in the patent by the patentees in exchange for the monopoly granted by the protection. It stated that the teaching function of such disclosure to the public should enable performance of that invention by those interested in doing so. The court however highlighted the need to have a reasonable disclosure requirement in order to balance the rights of the patentee and the public. In the court's view, a high standard of disclosure should not be imposed only on account of the complexity of the subject matter of the patent. As seen earlier in this chapter, revocation of patents is also applicable in South Africa's patent law where the information included in the patent application would not enable performance of the invention by one who is skilled in the art.<sup>173</sup>

The limitation of patentees' rights under the IPA is also seen in the provisions made for compulsory licences in the Act. Section 72(1) of the Act provides for the grant of compulsory licences on grounds that the market for the patented invention is not being supplied on reasonable grounds in Kenya. With regard to the issuance of a compulsory licence on grounds that the market demand for a patented article is not being met on reasonable terms, the South African Patents Act provides for this in section 56(2)(c).

This position is also seen in the UK Patents Act which provides for the issuance of a compulsory licence for a patented product where the demand for the product is not being met on reasonable terms in the United Kingdom.<sup>174</sup> It is noteworthy that the respective laws regarding issuance of compulsory licences are intended to temporarily remedy a shortage of the patented item in a market. This can be seen by the limited duration of the licences as provided in the respective statutes.<sup>175</sup>

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<sup>170</sup> Ibid at 642-4.

<sup>171</sup> Ibid at 658.

<sup>172</sup> (2006) EWCA Civ 1715.

<sup>173</sup> Section 61(e) of the Patents Act.

<sup>174</sup> Section 48A (1) (a).

<sup>175</sup> Section 75(2) (a) of the IPA, section 56(4) (c) of South Africa's Patents Act and section 48(6) (e) of the UK Patents Act.

The IPA also provides that patent holders' rights will apply only to acts done for industrial or commercial purposes and not for research.<sup>176</sup> This is intended to promote public interest by enabling use of patented inventions in research to increase knowledge available to society.

A similarity identified among the cases studied in sections 4.3 to 4.5 relates to non-obviousness as a requirement for patent grant. For example, in *Roman Roller CC and another v Speedmark Holdings Proprietary Limited*<sup>177</sup>, South Africa's Supreme Court of Appeal cited commercial success of the invention and the invention's ability to overcome difficulties in using conveyor rollers as indicators of its non-obviousness. In *Schlumberger Holdings Limited v Electromagnetic Geoservices AS*<sup>178</sup> the Court of Appeal also cited, *inter alia*, commercial success of the invention and an apparently obvious technical step from prior art previously not taken as proof of non-obviousness. Where patent grant is challenged on account of obviousness, the two cases provide reference points for Kenya's courts.

Difficulties that may arise in determining how IPRs are held in circumstances where there is joint invention was noted in section 2.4.3 of the thesis. *Water Renovation (Pty) Limited v Gold Fields of SA Limited*,<sup>179</sup> which involved a dispute about patent rights of co-inventors underlined this point. Collaborating entities in Kenya's oil and gas sector should, as mentioned in section 2.4.3, set out the allocation of rights, including IPRs, in written agreements before beginning collaborative work arrangements.

#### **4.6.2 Trade Marks**

Limitations exist in the respective jurisdictions' laws where there is registration of a trade mark which subsequently remains unused by the trade mark owner. Section 29(1)(a) of the Kenya Trade Marks Act (Chapter 506 of the Laws of Kenya) provides for the removal of a registered mark from the trade marks register for this reason. This position is reflected in s27(1)(a) of the South African Trade Marks Act and s 46(1)(a) of the UK Trade Marks Act.

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<sup>176</sup> Section 58(1).

<sup>177</sup> [1995] ZASCA 78; 1996 (1) SA 405 (SCA).

<sup>178</sup> (2010) EWCA Civ 819.

<sup>179</sup> [1993] ZASCA 169.

However, where non-use of the mark is justified, this may prevent the removal of the mark from the register.<sup>180</sup> This means that the mark, although unused, would not be in the public domain.

Remedies available for passing off and infringement of trade marks in the three jurisdictions, for example injunctions, work for the benefit of trade mark holders and users. Trade mark holders can avoid monetary and reputational losses that may occur when goods bearing marks that they are authorised by the law to hold are used. Trade mark users can be protected from buying goods whose origin has been misrepresented.

#### **4.6.3 Copyright**

Anton Piller orders are used to preserve evidence for court proceedings by applicants. They are provided for under section 37 of Kenya's Copyright Act 2001. In *Non-Detonating Solutions (Pty) Limited v Durie*,<sup>181</sup> the court considered the consequences of the grant of these orders in the context of the right to privacy. It stated that, based on the principle of proportionality, only evidence that is considered important to the applicant's case should be the subject matter of the search. There is therefore a limitation on the right to search premises and obtain evidence in those circumstances even where one is an IP owner.

#### **4.6.4 Industrial Designs**

The South African Designs Act provides for the grant of compulsory licences for industrial designs.<sup>182</sup> One of the grounds for such grant is the unavailability of articles embodying the designs on a commercial scale for a reason that is not satisfactory in the opinion of a court hearing a matter involving the same.<sup>183</sup>

The CDPA provides for the grant of compulsory licences in respect of designs on grounds of non-use of the design in the UK.<sup>184</sup> The IPA does not provide for compulsory licences for industrial designs. Compulsory licences may prevent abuse of the exclusive rights provided for industrial designs by providing alternative sources of the designs. This means that public interest

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<sup>180</sup> Section 29(3) of the Kenya Trade Marks Act, section 27(4) of South Africa's Trade Marks Act and section 46(1)(a) of the UK Trade Marks Act.

<sup>181</sup> [2015] ZASCA 154 [2 October 2015].

<sup>182</sup> Section 21(1) and 21(2).

<sup>183</sup> Section 21(2) (a).

<sup>184</sup> Section 10 (1).

may be promoted through increased availability of designs that might otherwise have been in short supply.

#### 4.6.5 Trade Secrets

Breach of confidence cases are dealt with by courts in the three jurisdictions using the law of contract where a contract has been entered into between the parties involved in a dispute. Provisions of restraint of trade statutes may also feature in the determination of the disputes during court proceedings. This is because contracts such as contracts of employment may contain restraint of trade clauses that may be based on the access to an employer's confidential information by an employee.

In *Credit Reference Bureau Holdings Limited v Steven Kuniya*<sup>185</sup> the court referred to section 2 of the Restraint of Trade Act which gives the High Court the power to declare a restraint of trade clause in a contract void where the clause is not reasonable in the interests of the party against whom it operates or in the public interest.

In *Automotive Tooling Industries (Pty) Limited v Wilkens*<sup>186</sup> the court noted the unenforceable nature of a restraint of trade that is considered to be unreasonable and thus contrary to public policy where, rather than protect the legally recognisable interest of the employer, it is intended to exclude or eliminate competition.<sup>187</sup> In *Vestergaard Frandsen A/S and Others v Bestnet Europe Limited*<sup>188</sup> the court referred to the reasonableness test in determining the enforceability of a confidentiality clause where a party was not aware of trade secrets in the context of a transaction or of their misuse.

Determining if information that is claimed to be a trade secret is confidential is the basis upon which court decisions in *Credit Reference Bureau Holdings Limited v Steven Kuniya*<sup>189</sup> and *Strike Productions (Pty) Limited v Bon View Trading 131 (Pty) Limited and Others*<sup>190</sup> were made by courts in Kenya and South Africa respectively. Parties that seek to institute court proceedings to disputes related to disclosure of information that is claimed to be

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<sup>185</sup> (2017) eKLR.

<sup>186</sup> (2006) SCA 128 (RSA).

<sup>187</sup> On this point, the court referred to John Saner 'Agreements in Restraint of Trade in South African Law' (2005) p 7-4, 7-5.

<sup>188</sup> (2013) EWCA CIV 780.

<sup>189</sup> (2017) eKLR.

<sup>190</sup> (10/21704) (2011) ZAGP JHC 1.

confidential should therefore consider if the information in question has not been disclosed to increase the likelihood of succeeding in a claim related to disclosure of such information.

#### **4.7 Alternative Dispute Resolution in Oil and Gas Industry Matters**

As noted in chapter two of this thesis, the use of alternative dispute resolution (ADR) to settle disputes is being promoted in Kenya. The Constitution of Kenya, 2010 provides for the promotion of ADR.<sup>191</sup> The Arbitration Act (Number 4 of 1995) applies to domestic and international arbitration.<sup>192</sup> The Act provides a basis for arbitration of disputes involving parties in the oil and gas sector. An example of a dispute involving parties in the industry in Kenya that was referred to arbitration was between National Oil Corporation of Kenya and Prisko Petroleum Network Limited.<sup>193</sup> The dispute involved an agreement to supply an oil product.<sup>194</sup> This study has not found information about arbitration of an IP - related dispute in the sector in Kenya.

This segment of the chapter highlights the use of ADR in the energy and technology sectors, albeit from an international forum to shed light on its application.

The WIPO is involved in ADR in the energy sector.<sup>195</sup> ADR mechanisms used have included mediation and arbitration.<sup>196</sup> Disputes adjudicated have included one in which there was a dispute regarding contractual obligations under a licence agreement for patented technology used to locate offshore reserves of oil and gas.<sup>197</sup> Mediation was used to handle the dispute.<sup>198</sup>

An international survey by WIPO on ADR in technology transactions was published in 2013.<sup>199</sup> It revealed that patent disputes in transactions of that nature were more prevalent than copyright or know-how – related disputes.<sup>200</sup> Further, the survey indicated that most claimants in those disputes sought a declaration that a patent was invalid.<sup>201</sup> Among the survey's respondents,

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<sup>191</sup> Article 159(2)(c).

<sup>192</sup> Section 2.

<sup>193</sup> Available at <http://kenyalaw.org/caselaw/cases/view/99586>, accessed 4 January 2020.

<sup>194</sup> *Ibid.*

<sup>195</sup> Available at <http://www.wipo.int/amc/en/center/specific-sectors/energy/>, accessed on 9 July 2017.

<sup>196</sup> *Ibid.*

<sup>197</sup> *Ibid.*

<sup>198</sup> *Ibid.*

<sup>199</sup> Available at <http://www.wipo.int/amc/en/center/survey/results.html>, accessed on 24 July 2017.

<sup>200</sup> *Ibid.*

<sup>201</sup> *Ibid.*

fewer claimants sought a declaration of patent infringement.<sup>202</sup> The primary factors for seeking ADR were found to be higher costs and greater time – consuming nature of litigation.<sup>203</sup>

International commercial disputes between companies in the energy sector have arisen from various agreements, including joint venture agreements and confidentiality agreements.<sup>204</sup> It has been noted that in drafting dispute resolution clauses in agreements, parties to ADR may need to provide for confidentiality of trade secrets to be maintained should it become necessary for the details of the ADR process to be reported.<sup>205</sup> This may occur in circumstances such as court proceedings or as part of regulatory reporting requirements.<sup>206</sup> Arbitration has been reported to be the most widely accepted and applied method of handling disputes in the international energy sector.<sup>207</sup> An example of a dispute handled by WIPO involved three companies and an inventor working in development of technology in the gas sector.<sup>208</sup>

#### **4.8 Conclusion**

Courts in Kenya, South Africa and the UK have applied their respective IP laws in the determination of issues that have arisen in civil cases that involve issues for determination which are relevant to the oil and gas sector.

There is protection of IP that is relevant to the oil and gas industry in Kenya, South Africa and the UK. This can be seen from the IP statutory provisions in the three jurisdictions which provide for protection of IP by registration, rights which accrue from registration and infringement. Similarities in the IP laws of the three countries can be seen in aspects such as statutory provisions (for example, the criteria for IP protection) and the reference to English common law in court decisions. Generally, where public interest is considered in IP statutory provisions, there are also provisions in the respective jurisdictions' statutes that allow for exceptions to limitations on the rights of IP owners. The effect of this is that the approach taken by the law is largely to protect the rights of IP owners, with some limitations to those rights only

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<sup>202</sup> Ibid.

<sup>203</sup> Ibid.

<sup>204</sup> Timothy Martin 'Dispute resolution in the international energy sector: an overview' 4 (2011) *Journal of World Energy Law and Business* 335. (Hereafter Martin 2011).

<sup>205</sup> Martin 2011 at 350.

<sup>206</sup> Martin 2011 at 350.

<sup>207</sup> Martin 2011 at 339.

<sup>208</sup> Available at <https://www.wipo.int/amc/en/center/specific-sectors/energy/>, accessed 3 January 2020.

applying where the right holder has not remedied or justified activity that *prima facie*, is against public interest.

The IP laws in the three countries have dealt with or are in the process of dealing with elements related to modern technology. This can be seen in facets such as the intermediary liability of internet - related intermediaries that is related to IP infringement, in case law or statute law.

IP law has been used to regulate the use of IPRs in various industries in Kenya, South Africa and the UK. The chapter has demonstrated, through case law, that IP law provisions and principles have been applied in industries dealing with diverse subject matter, such as advertising, banking, mining and the oil and gas industry. IP law, as a component of the regulatory environment in the three jurisdictions with regard to the protection of IPRs can be applied in a similar manner to Kenya's oil and gas industry. Although this study has not found an example of the application of IP law in the determination of cases involving the downstream oil and gas sector in Kenya, the applicability of IPRs to elements of the sector, as noted in the introduction to the chapter, provides a basis upon which case law and IP – related statutory provisions in Kenya would apply. Such application would serve to protect the IP of IPR holders and users in the industry, where this is justified by the law.

The protection of the IP would, however, of necessity, be required to co-exist with the public interest, as noted in the chapter through requirements such as disclosure which exist as pre-conditions for patent protection. Thus, where protection is sought for IP in the oil and gas industry in Kenya, it would be useful to take into account the conditions that should be fulfilled for optimal protection of IP. Stated differently, the accessibility of IP law as a tool for IP protection in Kenya's oil and gas sector is dependent upon meeting certain obligations provided for under the law in order to protect public interest. This means that in terms of protecting private rights and public interest, the use of statutory provisions which are noted in the chapter points to likelihood that this intended objective of applying IP law in Kenya's oil and gas sector can be achieved.

## CHAPTER FIVE: COMPETITION LAW AND IPRs IN ASPECTS RELEVANT TO KENYA'S OIL AND GAS INDUSTRY

### 5.1 Introduction

The exclusive rights granted by IPRs provide a testing ground for competition law in Kenya. This is because on one hand, the exercise of the rights by a person who holds them provides a basis upon which it is possible for the right holder to determine whether to grant access to the use of the rights and to also define the conditions under which access is granted. On the other hand, s 3 of Kenya's Competition Act states that the Act's object is the promotion and protection of effective competition in markets as tools for the enhancement of the welfare of the people of Kenya. The section also cites the Act's object as prevention of unfair and misleading market conduct in the country to achieve the welfare – related objective.

Having considered the interaction between IPRs and innovation in chapter two of this thesis and specific IPRs relevant to the oil and gas industry in the third and fourth chapters of the thesis, this chapter considers how the protection of the IPRs in the oil and gas industry is likely to interact with competition law in Kenya. As part of the regulatory environment in Kenya, the competition law, as indicated in the paragraph above, is intended to achieve certain goals. These goals should align with the protection of IPRs because the country's laws also provide for these rights. The promotion of a competitive environment in Kenya is pursued with the attainment of economic growth sought by Vision 2030 as one of its intended outcomes.<sup>1</sup>

The definition of the term 'competition' in s 4 of the Competition Act refers to a process where two or more persons supply or attempt to supply a market in Kenya with similar goods or services or substitutable goods or services. The section also states that the term may also refer to a process of acquiring or attempting to acquire goods or services or substitutable goods or services in a market in the country by two or more persons.

In determining the role of IPRs in Kenya's oil and gas industry, the country's competition law is a relevant basis for study of the working of IPRs in that context. The interplay between the two areas of law in the extractives industry will be studied by looking at the application of competition law principles, in general, where IPRs have been involved or are likely to be involved in Kenya, South Africa and the UK. The approach taken by the chapter will be a study

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<sup>1</sup> World Bank 'Unlocking growth potential in Kenya: dismantling regulatory obstacles to competition' (2015) iii (Hereafter World Bank 2015).

of the manner in which IPRs may be linked or have been linked to limiting competition in markets and the determination of cases involving competition and IPRs in the three countries. From that approach, the following will emerge: the outcome or likely outcome of the application of competition law principles to cases involving IPRs and the co-existence of the seemingly conflicting ideas underlying competition and IPRs.

The question posed in the first chapter of this thesis about how competition law can be applied in Kenya's oil and gas industry to balance competing interests and create an enabling environment for innovation in Kenya will be answered by this chapter.

## 5.2 Background

Article 40 of the TRIPS agreement provides for control of anti-competitive practices in contractual licences by member states of the agreement (hereafter members). It details these practices as including exclusive grant back conditions, conditions preventing challenges to validity and coercive package licensing.<sup>2</sup> The article indicates the agreement of members regarding the potential negative consequences of such practices on trade and the transfer of technology.<sup>3</sup>

As a measure to control such practices, the article provides that members may include provisions in their respective laws detailing licensing practices or conditions that amount to an abuse of IPRs with adverse effects on relevant markets.<sup>4</sup> Further, as a measure to counter the activities of IPR owners conducting activities that constitute an abuse of IPRs in members other than those in which they are nationals, the article provides for cooperation between members with a view to achieving compliance of the IPR owners with the laws of the member in which IPR abuse has occurred.<sup>5</sup>

Thus, art 40 appreciates the place of control on the exercise of IPRs in order to achieve competitive markets. It has been noted that the article was proposed by developing countries during TRIPS agreement negotiations.<sup>6</sup>

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<sup>2</sup> Article 40.2.

<sup>3</sup> Article 40.1.

<sup>4</sup> Article 40.2.

<sup>5</sup> Article 40.3.

<sup>6</sup> Hiroko Yamane 'Competition analyses of licensing agreements: considerations for developing countries under TRIPS' Discussion Paper ICTSD Innovation, Technology and Intellectual Property (2014) 2. (Hereafter Yamane 2014.

Under art 31, the TRIPS agreement provides for laws of members to accommodate the use of patent-protected material without authorisation. The article provides for a pre-requisite to apply prior to the unauthorised use through a requirement for efforts to have been made to get authorisation from the right holder for a reasonable period of time, except in circumstances where a national emergency or other matter of extreme urgency has necessitated such use.<sup>7</sup> In making this option available to members, the agreement provides leeway for -them to limit the exclusive rights granted by patents, albeit in limited circumstances. It may therefore be possible to have members' laws allow competition in markets to be facilitated by such a limitation. In the third section of this chapter, compulsory licensing, a feature of Kenya's IPA enabled by this TRIPS provision, will be analysed in more detail.

The availability of competing products in a market generally has the effect of controlling the extent to which a producer can price a commodity, and therefore, that producer's market power.<sup>8</sup> Market power has been defined as the ability to influence aspects such as price, variety, quality and innovation to divert from competitive levels.<sup>9</sup> Where the commodity is technology, it is possible that where there is a substitute technology on the market, a producer of technology which serves a similar purpose may be compelled to price the commodity at a price that is within a reasonable range of the prices in the technology's market.<sup>10</sup> However, generally, IPRs do not necessarily give market power to their holders.<sup>11</sup>

It would therefore be necessary to ascertain whether any exercise of market power by a firm which is an IPR owner in a technology market is linked to the rights conferred by the IP. These rights, which include exclusive control of commercial dealings with the technology, would likely be more widely exercised in technology markets where there is greater demand for technology owing to developments in those markets, for example, the growth of a particular industry. Thus, in a technology market such as Kenya, in the context of the oil and gas industry, a study of the exercise of those rights is pertinent. It has been noted in the fourth chapter of this

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<sup>7</sup> Article 31(b).

<sup>8</sup> Yamane 2014 at 6.

<sup>9</sup> Organisation for Economic Co-operation and Development 'Policy Roundtables: Competition, Patents and Innovation II' (2009) 90. (Hereafter OECD 2009).

<sup>10</sup> Yamane 2014 at 2.

<sup>11</sup> Carlos Correa 'Intellectual property and competition law: exploration of some issues of relevance to developing countries' ICTSD IPRs and Sustainable Development Programme Issue Paper Number 21 (2007) ix. (Hereafter Correa 2007).

thesis that technological developments in the oil and gas industry are currently taking place or imminent.

As noted in chapter two of the thesis, one way in which IPRs can be used by their holders is by licensing. It has been noted that the exercise of rights in this manner would lead to the creation of horizontal and vertical relationships (between competitors and between buyers and sellers, respectively) among entities operating in an industry.<sup>12</sup> Although vertical relationships have been found to be more common than horizontal ones in the IPR licensing context, entry into relationships between buyers and sellers, which prevent competition from new entrants into a market may be anti-competitive.<sup>13</sup>

Horizontal relationships on the other hand have the potential of creating an environment in which practices such as price-fixing and sharing of markets may occur.<sup>14</sup> Those who argue that licensing mostly promotes competition in markets advance that products of innovation are made available to the market using this method which also introduces efficiency in production where the licensor may not be as efficient as the licensee.<sup>15</sup>

They also point out that improvements to technology and reduced duplication of R&D are likely outcomes of licensing.<sup>16</sup> However, it may be the case that the terms of a licence may provide that improvements to the protected technology will be owned by the licensor or that the majority of benefits accruing from the improvement will be awarded to the licensor.<sup>17</sup> It has been suggested that this may discourage innovation by the licensee.<sup>18</sup>

Patent pools, which are formed by licensing a number of patents through one licence, may increase licensing revenues for the patent holders in question through lowering transaction costs for complementary patents that would otherwise have been incurred by individual patent holders.<sup>19</sup> Lower transaction costs may also be achieved through reduced infringement

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<sup>12</sup>Yamane 2014 at 6.

<sup>13</sup>Ibid.

<sup>14</sup>Yamane 2014 at 7.

<sup>15</sup>OECD 2009 at 154.

<sup>16</sup>Ibid.

<sup>17</sup>United Nations Conference on Trade and Development 'Competition policy and the exercise of intellectual property rights' report by the UNCTAD secretariat from the ninth session of the Intergovernmental group of experts on competition law and policy, Geneva, 15 – 18 July 2008, 9. (Hereafter UNCTAD 2008).

<sup>18</sup>Ibid.

<sup>19</sup>Ioannis Lianos and Rochelle C. Dreyfuss 'New challenges in the intersection of intellectual property rights with competition law – a view from Europe and the United States' CLES Working Paper Series (April 2013) 88. (Hereafter Lianos and Dreyfuss 2013).

litigation.<sup>20</sup> The pools may however result in cartel conduct among the concerned patent holders.<sup>21</sup>

As competition in markets has been identified as an innovation driver in some cases due to competition among firms to have their product be the first to enter a market among a number of alternatives,<sup>22</sup> there is a firm basis for encouraging and preserving market – based competition.<sup>23</sup> It has been noted that incremental imitative innovation may be affected negatively by a monopoly in a market.<sup>24</sup> There is however, an opposing point of view to the effect that monopolies incentivise innovation by availing higher profits which can be allocated to R & D with a resultant increase in innovation.<sup>25</sup> Other studies have compared the innovation outcomes in competitive and monopolistic markets and found that competitive markets produce more innovation.<sup>26</sup>

It has been appreciated that factors which influence research on innovation and market structure include the demand in markets and opportunities for innovation that are presented by technological conditions.<sup>27</sup> Further, it has been contended that the grant of IPRs in circumstances where the rights are undeserved, by virtue of not meeting criteria for grant, is anti-competitive because of the limitations that it introduces with regard to dealing with the subject matter of IP protection.<sup>28</sup> This is because the requirement that one who would like to deal with the protected material commercially would have to secure the permission of the right holder means that there are limited resources that members of the public have that are available for use if they would like to engage in competing ventures.

As noted in the second chapter of the thesis, patent thickets, a likely outcome of patent protection, also present a challenge to competition in markets.<sup>29</sup> Further, with regard to patents, it has been argued that although competition law provides a means through which the abuse of

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<sup>20</sup> Ibid.

<sup>21</sup> Ibid.

<sup>22</sup> Yamane 2014 at 7.

<sup>23</sup> See Beatrice Dumont and Peter Holmes ‘The scope of intellectual property rights and their interface with competition law and policy : Divergent paths to the same goal?’ 11 (2002) *Economics of Innovation and New Technology*152. (Hereafter Dumont and Holmes 2002).

<sup>24</sup> Dumont and Holmes 2002 at 152.

<sup>25</sup> OECD 2009 at 152.

<sup>26</sup> Ibid at 153.

<sup>27</sup> Ibid.

<sup>28</sup> Yamane 2014 at 13.

<sup>29</sup> Ibid at 14.

IPRs may be checked, the use of competition law in this manner should be limited to alleviate the possibility that uncertainty in the rights held by IPR holders may be introduced by application of the law.<sup>30</sup>

The importance of joint ventures in the oil and gas industry has been noted.<sup>31</sup> The benefits of firms working together in this manner include reduction in costs by enterprises involved and the pooling of strengths of the respective businesses.<sup>32</sup> On this basis, collaboration, adopted by some oil and gas companies to harness their respective competitive advantages as seen in chapter two, should be tested from a competition law standpoint. This is because of the likelihood that the benefits reaped by parties in working arrangements of this nature may limit competitiveness in a particular product or geographical market.

For example, if an invention arises from a joint venture between leading companies in the oil and gas sector, it may be protected using a trade secret rather than a patent. This may make it possible for the companies to maintain exclusive rights in commercial dealings related to the invention for over 20 years. Any competitive advantage drawn from the invention by the entities may thus be maintained for a prolonged period of time and may lead to dominance in the market by the entities. It is possible that such dominance in a market could be abused to the detriment of competition in the market.

Regulation of firms' activities, for example mergers, by competition tribunals has been necessitated by the objective of maintaining competitive markets.<sup>33</sup> Public interest has featured as a factor considered in merger approval.<sup>34</sup> It has been argued that the type of IPR and the industry in which it applies has an effect on the possibility of anticompetitive practices occurring.<sup>35</sup> For example, in the car industry or semiconductor industry, it is more likely that there will be a number of patents applicable to various parts of the finished product, with different patent owners.<sup>36</sup> This means that patent cross – licences are more likely to feature in

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<sup>30</sup> OECD 2009 at 133.

<sup>31</sup> The decision of the South Africa Competition Tribunal in the merger application by Sasol Limited, Engen Limited and Petronas International Corporation Limited as the primary acquiring firms and Sasol Oil (Pty) Limited and Engen Limited as the primary target firms, Case Number 101/LM/Dec 04 7.

<sup>32</sup> Ibid at 8.

<sup>33</sup> Ibid at 77.

<sup>34</sup> Ibid at 61.

<sup>35</sup> Yamane 2014 at 22.

<sup>36</sup> Ibid.

those industries than in say, the pharmaceutical industry where patents are more likely to apply to whole products that are sold in the market, rather than to components of the products.<sup>37</sup>

### 5.3 Consumer Welfare

It has been argued that the threat to consumer welfare posed by IPRs may be through limited output of a product protected by IP due to the exclusive right to produce the product for sale.<sup>38</sup> Further, IPRs may hinder cumulative innovation – successive innovation(s) built upon an earlier innovation, a factor which may also limit product choice for consumers.<sup>39</sup> However, it may be the case that limited output of the product may be caused by factors other than IP protection.

With regard to the argument that limited output may be linked to IPRs related to the product, it may be the case that if monopoly profits are generated by the product, these may be applied in better product quality which would be beneficial to consumers.<sup>40</sup> IPRs may however work against the consumer's benefit because of their ability to reduce consumer choice owing to fewer competitors in a market. It is possible for competition law to create conditions that enable innovation in a market which could benefit the consumer and the economy.<sup>41</sup>

The rule of reason approach is used to determine whether a practice that has the potential to have anticompetitive effects may affect market output.<sup>42</sup> The *per se* rule is used when there is enough experience in antitrust to conclude that a practice is anticompetitive without offering social benefits that would counter the disadvantages caused by the practice.<sup>43</sup>

Mechanisms that have been used by dominant firms in the US and European Union, including counterclaims based on competition law in patent infringement suits, have been noted to have the potential to negatively affect consumer welfare.<sup>44</sup>

The importance of competition law and policy has been linked to their role in curtailing practices which include abuse of dominance.<sup>45</sup> Those practices negatively affect peoples'

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<sup>37</sup> Yamane 2014 at 24.

<sup>38</sup> Ibid at 38.

<sup>39</sup> Ibid.

<sup>40</sup> Lianos and Dreyfuss 2013 at 88.

<sup>41</sup> Ibid.

<sup>42</sup> Herbert Hovenkamp, Mark Janis and Mark A. Lemley 'Anticompetitive settlement of intellectual property disputes' UC Berkeley School of Law Public Law and Legal Theory Research Paper Number 113 (2003) 11.

<sup>43</sup> Ibid.

<sup>44</sup> Lianos and Dreyfuss 2013 at 81.

<sup>45</sup> Anderson and Wager 2006 at 730.

welfare, both as producers and consumers.<sup>46</sup> Ultimately, economic welfare of consumers is reduced due to their limited spending power.<sup>47</sup> There are also barriers to market entry which are created by the practices and may discourage entrepreneurship.<sup>48</sup>

It has been posited that IPRs may promote market competition over time if properly structured and applied, through provision of incentives.<sup>49</sup> However, it has been noted that IPRs may threaten competitive market conditions through patent pools, licensing of technology and IPR acquisition through mergers.<sup>50</sup>

#### **5.4 Competition Law in Kenya**

Prior to the enactment of the Competition Act 2010, the Restrictive Trade Practices, Monopolies and Price Control Act (Number 14 of 1988), Chapter 504 of the laws of Kenya, governed competition law in the country.

The Competition Act 2010 cites the promotion of innovation as one of the intended outcomes of a competitive environment in Kenya.<sup>51</sup> Other results expected from having a competitive environment in the country's markets include the creation of a favourable environment for local and foreign investment, protection of consumers and increasing efficiency in the production, distribution and supply of products.<sup>52</sup>

The Act's object of promoting innovation echoes the IPA's objective of promoting innovative activities, captured in the IPA's preamble. As seen in chapter two of the thesis, the IPA's provisions that are intended to promote research,<sup>53</sup> have the potential to promote innovation. The two statutes' provisions therefore provide a law-based footing upon which innovation and economic growth could occur.

The threshold for dominance in a market in Kenya is set by the Act. The production, supply, distribution or other control of goods in Kenya or a substantial part of Kenya amounting to a minimum of 50 per cent of the total goods of any description would render one engaged in

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<sup>46</sup> Ibid.

<sup>47</sup> Ibid at 732.

<sup>48</sup> Ibid at 733.

<sup>49</sup> Ibid at 743.

<sup>50</sup> Ibid at 744.

<sup>51</sup> In section 3(b).

<sup>52</sup> Section 3(e), 3(d) and 3(a).

<sup>53</sup> For example, section 58(1).

any those activities a dominant person in a market in Kenya or a substantial part of Kenya.<sup>54</sup> The Act also provides that for the service industry, the definition of a dominant person in that context refers to that person's provision or other control of a service rendered by the person in a minimum of one-half of the services rendered in Kenya or a substantial part of the country.<sup>55</sup>

Section 21 of the Competition Act provides for restrictive trade practices. It prohibits practices intended to distort, prevent or lessen competition in trade in goods or services (hereafter together referred to as 'products') in Kenya or a part of Kenya. Practices carried out by parties as a concerted practice or under an agreement or decision are contemplated by the provision. They include activities which amount to the use of an IPR in a way that exceeds the limits of fair, reasonable and non-discriminatory use.<sup>56</sup> The Act's definition of a concerted practice is co-operative or coordinated conduct between firms that may be achieved through direct or indirect contact and replaces their independent action but does not amount to an agreement. This may occur through concerted refusals to licence IPRs.<sup>57</sup> Section 2.4.1 of chapter two of the thesis discussed IPR – related transactions such as licensing that are relevant to the oil and gas sector. The prohibition of concerted practices by the Competition Act provides a basis upon which IPR-related concerted refusals to deal can be prosecuted. However, it is questionable whether this could occur, given its potential to negatively influence the investment environment for IPR holders in the sector.

Given that the Act does not specify which conduct would fall outside the prescribed boundaries as stated by the three criteria for IPR use , it may be difficult for IPR holders to determine whether they have complied with this provision of the Act as part of their legal risk management. This is disadvantageous to them because non-compliance with the provision amounts to an offence.<sup>58</sup>

However, the exemption of an IPR holder from the requirement of the provision may be sought under s 25 of the Act. Public policy is one ground upon which exemption may be granted

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<sup>54</sup> Section 4(3) (a).

<sup>55</sup> Section 4(3) (b).

<sup>56</sup> Section 21 (3) (h).

<sup>57</sup> See, for example, Christina Bohannon and Herbert Hovenkamp 'Concerted refusals to licence intellectual property rights' Harvard Business Review Online 1 (2011) 22 which discusses refusals to licence in *Princo Corporation v. International Trade Commission* 616 F.3d 1318, 1330 (Fed. Cir. 2010).

<sup>58</sup> Section 21(9).

by the Competition Authority (CA), which is established under the Act.<sup>59</sup> The ground would however only serve the IPR holder if exceptional and compelling reasons are provided in the application for exemption.<sup>60</sup> Section 28 of the Act provides specifically for the grant of an exemption with regard to a prohibited practice related to IPRs. The grounds upon which the CA may allow the exemption include improving production of goods<sup>61</sup> and promoting technical or economic progress in any industry.<sup>62</sup>

The Act provides for a number of measures that the CA may undertake upon making a finding that an entity has engaged in trade practices that are prohibited under s 21 of the Act. These include restraining the entity from engaging in the prohibited conduct, directing that any action be taken by the undertaking to remedy or reverse the effects of the prohibited practices or imposition of a financial penalty of a maximum amount of 10 per cent of the preceding year's gross annual turnover in Kenya.<sup>63</sup>

The grant of interim relief by the CA in the form of a written order to an entity to stop engaging in prohibited trade practices whilst investigations by the CA are ongoing is also possible.<sup>64</sup> An agreement of settlement may also be entered into between the CA and the undertaking or undertakings involved in an investigation.

Mergers must be approved by the CA.<sup>65</sup> An unapproved merger shall have no legal effect.<sup>66</sup> A number of factors are considered by the CA when determining whether to approve a merger.<sup>67</sup> They include:

1. The possibility that the proposed merger will reduce competition or limit trade;<sup>68</sup>
2. The likelihood that any undertaking may acquire a dominant position in the market or
3. That the merger may strengthen an undertaking's dominant position in the market<sup>69</sup> and

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<sup>59</sup> Section 26(2).

<sup>60</sup> Ibid.

<sup>61</sup> Section 26(3) (b).

<sup>62</sup> Section 26(3) (c).

<sup>63</sup> Section 36.

<sup>64</sup> Section 37.

<sup>65</sup> Section 42(2).

<sup>66</sup> Section 42(3).

<sup>67</sup> Section 46(2).

<sup>68</sup> Section 46(2) (a).

4. Any advantages that may be obtained from the proposed merger that relate to R&D, technical efficiency, increased production, efficient distribution of goods or provision of services and access to markets.<sup>70</sup>

Unwarranted concentration of economic power is also provided for under the Competition Act. Under s 50(1), the Act empowers the CA to review the production and distribution structure for goods and services in Kenya where such concentration exists and where negative effects on the economy surpass efficiency benefits of integration in production and distribution. Section 50(4) provides for a number of tests that would point to this concentration of economic power being against the public interest. They are in the form of effects that would be experienced as a result of the power. These include: unreasonable increase in the cost of production, supply or distribution of products and unreasonable increase in the price of goods or profits obtained from production, supply and distribution of products.

Also included are: lessening, distortion, prevention or limiting of competition in the production, supply or distribution of products, deterioration in the quality of products or insufficient production, supply or distribution of products. The Act provides that the CA may make an order for the disposal of the part of the interest in production, supply or distribution of products by the person deemed by the CA to hold the unwarranted concentration of economic power in any sector.<sup>71</sup> A restriction on the use of confidential information obtained in the course of conduct of duties by officers of the CA applies under s 85 of the Act.

Anti-competitive practices under the IPA provide grounds for grant of compulsory licences by the Industrial Property Tribunal.<sup>72</sup> The IPA does not define the term ‘anti-competitive.’ However, it makes reference to a failure to supply a market for an invention on reasonable terms in Kenya as a ground for the issuance of a compulsory licence.<sup>73</sup> The Competition Act prohibits agreements between undertakings, decisions by undertakings or associations of undertakings, or concerted practices by undertakings which amount to the use of an IPR in a manner that is unfair, unreasonable or discriminatory.<sup>74</sup> Thus, there is a link between

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<sup>69</sup> Section 46(2) (b).

<sup>70</sup> Section 46 (2) (h).

<sup>71</sup> Section 52(1).

<sup>72</sup> Section 75(2) (a).

<sup>73</sup> Section 72(1).

<sup>74</sup> Section 21(3) (h).

the provisions in the IPA and the Competition Act because both statutes provide for IPRs as a possible channel for activities that may have a negative impact on competition in a market.

This study has not found information about any compulsory licences having been issued in Kenya. It has been reported that there have been applications made for the licences but these have not proceeded beyond preliminary enquiries, a situation which has been attributed partly to unspecified uncertainties regarding application procedures for the licences.<sup>75</sup> There have been voluntary licences that have been issued by pharmaceutical companies for the manufacture of cheaper medicines in Kenya.<sup>76</sup> Two voluntary licences for the manufacture of medicines were issued to a local pharmaceutical company in 2004 after it worked with the government to obtain the licences.<sup>77</sup>

This study has also not found information regarding cases handled by the CA or the Competition Tribunal involving anti-competitive practices related to IPRs. The application of provisions relating to IPRs in the Competition Act would be examined using such cases. The CA has handled merger applications and cases involving restrictive trade practices.<sup>78</sup> Of the reported decisions by the CA,<sup>79</sup> one involved the retention of a brand name for at least three years after the completion of the merger.<sup>80</sup>

Section 75 of the IPA provides for the Industrial Property Tribunal to grant compulsory licences. Compulsory licenses, one of the limitations to the exercise of exclusive rights granted to IPR holders under the Act, can be issued after conditions stipulated in s 74 of the Act have been met. The conditions that the applicant for the licence is required to meet are to prove to the tribunal that although the applicant has applied for a licence from a patent owner, the owner has not given a licence on reasonable commercial terms and within a reasonable time<sup>81</sup> and to offer guarantees that are satisfactory to the tribunal to work the invention that is the subject of the

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<sup>75</sup> L M Opati 'Intellectual property rights in health – impact on access to drugs' in Moni Wekesa and Ben Sihanya (eds) *Intellectual Property Rights in Kenya* (2009) 28. See also Paul Omondi Ogendi *Access to essential medicines and the utilisation of compulsory licensing and parallel importation in Kenya and South Africa* (LLM thesis, University of Nairobi, 2013) 10.

<sup>76</sup> Ibid at 29.

<sup>77</sup> Ibid.

<sup>78</sup> World Bank 2015 at xvi.

<sup>79</sup> See for example, Competition Authority of Kenya's determinations on 29<sup>th</sup> August 2017 based on the Competition Act available at [www.cak.go.ke/images/new/CAK\\_DECISIONS\\_29\\_AUG\\_2017](http://www.cak.go.ke/images/new/CAK_DECISIONS_29_AUG_2017) accessed on 1 May 2018.

<sup>80</sup> Ibid.

<sup>81</sup> Section 74(1) (a).

request in order to rectify the shortage which led to the request or to meet the requirements which led to the request.<sup>82</sup>

In a national emergency or in circumstances of extreme urgency, the first condition for the grant of the licence would be waived and it is required that the owner of the patent be notified of such grant as soon as reasonably possible.<sup>83</sup> This position reflects the position in art 31(b) of the TRIPS agreement. The terms ‘reasonable commercial terms’ and ‘within a reasonable time’ may depend on the circumstances of each case, given their flexibility in interpretation. It is provided in the Act that it is possible for a patent owner to justify the owner’s failure to supply a patented invention to a market in Kenya or not to supply the invention on reasonable terms and thus, prevent the issuance of a compulsory licence by the tribunal.<sup>84</sup>

The terms of a licence under s 74(1) of the IPA are determined by the tribunal depending on any consensus reached between the patent owner and the licensee.<sup>85</sup> The tribunal must include a number of terms in the agreement including a time limit and a limit on the purpose for which the licence is issued.<sup>86</sup> If the invention concerned incorporates semi-conductor technology, the licence shall only be for a public non-commercial use or to rectify a practice found to be anti-competitive after a judicial or administrative process.<sup>87</sup>

Further, the licence should be used mainly to supply the domestic market,<sup>88</sup> should bear a limit in dealing for the licensee, by requiring that the licensee seeks consent from the patent owner prior to granting other licences,<sup>89</sup> should not be an exclusive licence<sup>90</sup> and should provide for equitable remuneration to the patent owner, with due attention to all circumstances of the case.<sup>91</sup>

Transfer of a compulsory licence can only be done with the consent of the tribunal.<sup>92</sup> These conditions indicate that the patent owner’s interests are vital even in cases where there is limitation of the owner’s rights in the circumstances given. The licensee must comply with the

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<sup>82</sup> Section 74(1) (b).

<sup>83</sup> Section 74 (2).

<sup>84</sup> Section 72 (2).

<sup>85</sup> Section 75 (1).

<sup>86</sup> Section 75 (2) (a).

<sup>87</sup> Section 75(2) (a).

<sup>88</sup> Section 75 (2) (b).

<sup>89</sup> Section 75 (2) (c).

<sup>90</sup> Section 75 (2) (d).

<sup>91</sup> Section 75 (2) (e).

<sup>92</sup> Section 76.

terms of the licence and work the invention in question sufficiently within two years of the grant of the licence to avoid cancellation of the licence.<sup>93</sup> A compulsory licence can also be cancelled if the circumstances that led to its grant no longer exist and are unlikely to recur, so long as the valid interests of the licensee are sufficiently protected.<sup>94</sup>

Change of terms of a compulsory licence may be undertaken by the tribunal following the application of the patent owner or the licensee if there are new facts which support variation of the terms, particularly where there has been grant of contractual licences by the patent owner on more favourable terms.<sup>95</sup>

Section 73 of the IPA provides that the interdependence of patents is a ground for issuance of a compulsory licence, in circumstances where the working of a patented invention would lead to infringement of an already existing patent and where the invention is a significant technical advance in relation to the invention in the already existing patent. The section has a number of terms which require interpretation, for example the threshold that should be met to qualify as a technical advance represented by the newer invention.

The right to be a cross-licensee, upon meeting the requirements contained in s 73(1) in order to enable use of the newer invention, is provided for in s 73(2). The intention of the provision appears to be to enable the use of a patent to facilitate production and therefore, albeit indirectly, competition using the newer patent. The aspect of cross-licensing may however involve anti-competitive behaviour such as collusion in aspects such as price determination or creating barriers to entry in a market.<sup>96</sup>

It has been noted that finding an optimal balance between IPRs and competition law in a market can be difficult because actual conditions in an innovation and product market will appear after grant of a patent has occurred.<sup>97</sup> One suggestion given to deal with the difficulty is the creation of a fair market environment taking into account elements such as product life cycle whilst protecting IPRs.<sup>98</sup>

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<sup>93</sup> Section 77(1) (a) and 77(2) respectively.

<sup>94</sup> Section 77(1) (b).

<sup>95</sup> Section 77(3).

<sup>96</sup> UNCTAD 2008 at 8.

<sup>97</sup> Dumont and Holmes 2002 at 161.

<sup>98</sup> Ibid.

Another argument made to demonstrate the difficulty in having alignment between IP law and competition policy is based on application of similar legal principles to work that qualifies for IP protection regardless of input by an IPR holder.<sup>99</sup> This position holds that uniform rights given to IPR holders irrespective of costs incurred in realising innovations for which IPRs are granted means that some innovations may be over-rewarded under IP laws.<sup>100</sup> This may lead to attainment of market power by the IPR holder.<sup>101</sup>

Section 80 (1) provides for public interest as a basis for exploitation of a patented invention by a non-owner of the patent. Such use, as provided for under the section, would involve manufacture, sale or supply of the invention without giving notice to the patent owner<sup>102</sup> subject to the condition that an applicant for an order to use the patented invention in the manner provided under the section would be required to have made an unsuccessful attempt to get a contractual licence from the patent owner.<sup>103</sup> Parties such as a government ministry or department may undertake such utilisation as long as sufficient compensation is paid to the patent owner.<sup>104</sup> The public interest elements that are noted in the section include the development of any other vital sector of the economy. It is likely that competition would fall within aspects that would be considered as contributing to progress in a segment of the country's economy. Therefore, the variation of exclusive rights granted by patents in favour of public interest would fall under the use of IP law in the country to influence market competition. The order given in the section may be varied<sup>105</sup> or revoked<sup>106</sup> upon the request of the patent's owner and after all interested parties have been heard by the minister in charge of matters related to the KIPI.

Although s 80 can limit the rights that can be exercised by a patent owner, there are also limits that are placed upon any person using those rights after authorisation under the section.

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<sup>99</sup> Mattias Ganslandt 'Intellectual property rights and competition policy' IFN Working Paper Number 726 of 2008 (2008) 15. (Hereafter, Ganslandt 2008).

<sup>100</sup> Ganslandt 2008 at 15.

<sup>101</sup> Ganslandt 2008 at 15.

<sup>102</sup> Section 80(1) (A).

<sup>103</sup> Section 80(2).

<sup>104</sup> Section 80(1) (b).

<sup>105</sup> Section 80(6).

<sup>106</sup> Section 80(7).

These include the limitation on transferring rights granted under this section<sup>107</sup> and the restriction of the use of the rights primarily for the supply of the market in Kenya.<sup>108</sup>

Section 69 of the IPA prohibits the inclusion of some terms in licence contracts. A number of the terms included in the section would be likely to include an anticompetitive effect. They include terms that would require that the licensee:

1. Obtains materials from the licensor or sources indicated by the licensor, unless it is not otherwise practically possible to make the products conform to particular quality standards;<sup>109</sup>
2. Is stopped from using materials that have not been sourced from the licensor or sources approved or recommended by the licensor;<sup>110</sup>
3. Only sells products that the licensor has produced only or mainly to persons indicated by the licensor;<sup>111</sup>
4. To make a designated number of products using the licensed technology,<sup>112</sup> to stop or limit production intended for export;<sup>113</sup>
5. Allows the licensor to work in a managerial capacity permanent as a pre-condition to obtain the licensor's technology;<sup>114</sup> and
6. To apply different conditions to similar transactions with other parties engaged in trade.<sup>115</sup>

Through these provisions, s 69 of the IPA clarifies the boundaries set out by s 21 of the Competition Act.

The control of terms that should be included in a licence contract in s 69 gives some freedom to licensees of patented inventions in commercial engagements, which is likely to lead to enhanced competition if the provisions are applied. Since licences function as a tool through which technology transfer is facilitated, it is noteworthy that these provisions in the IPA generally align with article 7 of TRIPS which provides that IPR protection and enforcement

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<sup>107</sup> Section 80(8).

<sup>108</sup> Section 80(9).

<sup>109</sup> Section 69(iii).

<sup>110</sup> Section 69(iv).

<sup>111</sup> Section 69(v).

<sup>112</sup> Section 69(viii).

<sup>113</sup> Section 69(ix).

<sup>114</sup> Section 69(xxviii).

<sup>115</sup> Section 69(xxxii).

should enable the transfer and dissemination of technology for the mutual benefit of technology producers and users and in a manner that enables social and economic welfare.

### **5.5 Competition Law in South Africa**

Section 4 of South Africa's Competition Act prohibits restrictive horizontal practices. These practices involve parties in a horizontal relationship – defined by the Act as a relationship between competitors.<sup>116</sup> The section provides for practices of this nature that take the form of agreements, concerted practices or decisions by firms' associations. The provision states that in order to be considered as a prohibited practice, the practice by parties in a horizontal relationship has to have the effect of substantially preventing or lessening competition in a market or involve fixing of a price, dividing markets or collusive tendering.<sup>117</sup>

Section 5 of the Act prohibits restrictive trade practices between firms in a vertical relationship – defined by the Act as the relationship between a firm, its suppliers, customers or both.<sup>118</sup> Dominance of a firm in a market is also provided for by the Act.<sup>119</sup> A dominant firm is defined as one with at least 45 per cent of the market, one with at least 35 per cent of the market and market power and one with less than 35 per cent of the market but with market power.

The statute defines market power as the power of a firm to control prices or to exclude competition or to behave to an appreciable extent independently of its competitors, customers or suppliers. Section 8 of the Act prohibits abuse of dominance using various means, including charging an excessive price to the detriment of competitors,<sup>120</sup> refusal of access to an essential facility to a competitor (as noted in chapter one of the thesis) when it is economically feasible to do so and engaging in an exclusionary act.<sup>121</sup>

The Competition Commission may grant an exemption to a firm engaging in a restrictive trade practice or abuse of dominance where an agreement that results in such practice or abuse contributes to maintaining or promoting exports, promoting the competitive ability of small businesses or businesses controlled or owned by historically disadvantaged persons, the economic stability of an industry or changing the productive capacity that is required to halt the

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<sup>116</sup> Section 1 (1) (xiii).

<sup>117</sup> Section 4(1) (a) and section 4(1) (b).

<sup>118</sup> 1(1) (xxxiii) (c) (ii).

<sup>119</sup> Section 7.

<sup>120</sup> Section 8(a).

<sup>121</sup> Section 8(b).

economic decline of an industry.<sup>122</sup> The Commission may also grant an exemption based on use of IPRs if an application is made by a firm.<sup>123</sup> This may occur in circumstances where an agreement or practice or category of agreements or practices that involves the exercise of IPRs is the subject matter of a practice or agreement.<sup>124</sup>

The cases below illustrate the application of some sections of the Competition Act which prohibit various practices in IPR-related matters. It has been noted that the remedies sought under South Africa's competition law in IPR – related matters may be attributable to factors such as the non-existence of opposition proceedings for patent grant and grant of patents without substantive examination.<sup>125</sup> The absence of these procedures means that opportunities to challenge patents granted are reduced.<sup>126</sup>

Another reason that may encourage litigants to approach competition law enforcement bodies in matters related to IPRs is the reported success of these bodies in enforcing the law.<sup>127</sup> Further, access to a compulsory licence under the Patents Act on grounds of excessive pricing may require that considerable costs are incurred in proving that an excessive price has been charged for the patented item, a requirement that would not apply if an aggrieved party pursues remedies under competition law.<sup>128</sup>

*Nqobion Arts Business Enterprise v The Business Place Joburg and another*<sup>129</sup> featured an application for interim relief based on the applicant's claim that the respondents were using a trade mark that it claimed ownership of, to abuse their dominant market positions. During the proceedings, it was noted that the Competition Commission had, subsequent to the application being filed, determined that it would not refer the matter to the Competition Tribunal owing to its view that the matter involved the infringement of IPRs and delictual claims, which were outside the jurisdiction of the Tribunal.

The Tribunal decided to hear the application in order to determine the chances of success of the applicant's case. The Tribunal found that since the service offered by the respondents was

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<sup>122</sup> Section 10(3) (b).

<sup>123</sup> Section 10(4).

<sup>124</sup> *Ibid.*

<sup>125</sup> UNCTAD 2008 at 8.

<sup>126</sup> *Ibid.*

<sup>127</sup> UNCTAD 2008 at 14.

<sup>128</sup> *Ibid* at 15.

<sup>129</sup> [2006] ZACT 24.

offered to consumers for free, no detriment had been suffered by consumers as a result of the respondents' activities in that regard. It concluded that the applicant had not proved that there existed a prohibited practice by the respondents in the matter and stated that the matter concerned an IP rather than a competition issue. Consequently, it dismissed the application.

In *DW Integrators CC v SAS Institute (Pty) Limited*<sup>130</sup> the claimant made an application to the Competition Tribunal for the respondent to be compelled by the tribunal to issue a licence to its software to the claimant. The claimant stated that it was unable to offer its services effectively without the licence, as a result of an exclusionary practice by a dominant firm, the respondent. It also based its claim on its interpretation that the software was an essential facility and the respondent was therefore in violation of s 8(b) of the Competition Act, which prohibited denial of access to an essential facility by a dominant firm.

The Tribunal stated that there were three grounds upon which the interim relief claimed by the claimant could be granted: the tribunal had to be satisfied that a restrictive practice existed, the claimant would suffer irreparable harm in the absence of an order by the tribunal or that the purposes of the Act would be frustrated and that the balance of convenience favoured the granting of the order.

The tribunal pointed out that facts particular to each case have considerable influence on antitrust adjudication. The tribunal noted that caution was necessary in dealing with matters in which both antitrust and IP are involved.<sup>131</sup> On the claim of abuse of the respondent's dominance by the claimant, the tribunal noted that it had to first establish whether there was dominance by the respondent. It then noted that because of the nature of the proceedings as interim proceedings, it did not have the benefit of information from the Competition Commission's investigations and could therefore only rely on the parties' submissions on that point.

A limitation that arose from this point was that the parties' submissions had not established the relevant market. Thus, according to the tribunal, the claimant had not proved that the respondent had a market share that exceeded 45 per cent in the information delivery software market, a threshold necessary under the Competition Act to establish dominance. The tribunal

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<sup>130</sup> [2000] ZACT 16.

<sup>131</sup> On this point, the tribunal referred to *Atari Games Corporation v Nintendo of America Inc.* (897 F.2d 1572(Fed. Cir. 1990)). In the case, the court referred to the necessity of exercise of caution by a court where a matter involved both patent rights and antitrust to avoid disturbing the complementary balance attained by Congress with regard to public policies relevant to patent and antitrust laws.

also concluded that the claimant had not proved that the relevant market was the national market for the software instead of an international one and that the respondent was dominant in the global market. The tribunal found that the claimant had not established the existence of a restrictive practice and dismissed the claim.

In 2003, the Competition Commission entered into agreements with GlaxoSmithKline and Boehringer Ingelheim under which the firms agreed to provide patent licences of anti-retroviral drugs to generic manufacturers.<sup>132</sup> The agreements were entered into by the parties after the Commission conducted an investigation and concluded that the firms had abused their dominance and contravened sections 8(a), 8(b) and 8(c) of the Competition Act which prohibit excessive pricing, denial of access to an essential facility when it is economically feasible to do so and engaging in exclusionary acts.<sup>133</sup>

In 2017, it was reported that the Competition Commission had referred a matter pertaining to plant breeders' rights for a potato variety for prosecution on grounds that there was denial of access to the variety despite the expiry of the plant breeders' right.<sup>134</sup>

A notification to the Commission by a party to an intermediate or large merger is required under the Act.<sup>135</sup> An intermediate merger is defined by the Act as a merger or proposed merger between the lower and higher thresholds of combined annual turnover or assets or combinations of turnover and assets in general or specific to industries established by the Minister of Trade and Industry in consultation with the Competition Commission.<sup>136</sup>

A large merger is defined by the Act as a merger or proposed merger with a value at or above the higher threshold of combined annual turnover or assets or combinations of turnover and assets in general or in relation to specific industries established by the Minister of Trade and Industry in consultation with the Competition Commission.<sup>137</sup> A party to a small or intermediate merger which has been approved by the Competition Commission subject to conditions or

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<sup>132</sup> South Africa Competition Commission 'GSK and BI issue anti-retroviral licences' Competition News Edition 15 March 2004 1.

<sup>133</sup> Ibid.

<sup>134</sup> Available at [www.compcom.co.za/wp-content/uploads/2017/01/Potato-Media-Statement-1.pdf](http://www.compcom.co.za/wp-content/uploads/2017/01/Potato-Media-Statement-1.pdf), accessed on 1 February 2019.

<sup>135</sup> Section 13A (1).

<sup>136</sup> Section 11(5) (a) and section 11(1) (a).

<sup>137</sup> Section 11(5) (b) and section 11(1) (a).

prohibited by the Commission may request the Competition Tribunal to consider the conditions or the prohibited merger.<sup>138</sup>

The Competition Tribunal may also consider a large merger upon referral by the Commission.<sup>139</sup> The factor initially taken into account by the Commission or Tribunal in considering the merger is whether a merger will have a negative effect on competition by substantially preventing or lessening it.<sup>140</sup> The Act considers the effect of a merger on public interest.<sup>141</sup> Although the term ‘public interest’ is not defined by the Act, there are some pointers to what is contemplated by the Act to be in the public interest in s 12(A)(3).

The elements that the section refers to in order for a determination to be made by the Commission or Tribunal regarding a merger are the effect of the merger on a particular industrial sector or region, employment, potential for small businesses owned or controlled by historically disadvantaged persons to become competitive and the capacity of national industries to compete in international markets. These elements are made up of factors that would influence national economic growth.

The Competition Act places restrictions on the handling of firms’ proprietary information. Confidential information is defined by the Act as information with a particular commercial value and which is trade, business or industrial information owned by a firm and which is generally unavailable to or unknown by others.<sup>142</sup> For example, where a person would like to access information that is claimed to be confidential, the person may apply to the Competition Tribunal for a determination as to whether this is accurate, and thereafter the Tribunal would make an appropriate order concerning the information.<sup>143</sup>

The Patents Act and the Designs Act also have provisions that, if applied, would be likely to have the effect of maintaining competitive market conditions. The Patents Act has provisions related to the control of refusal to supply<sup>144</sup> and excessive pricing.<sup>145</sup> The Act terms these

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<sup>138</sup> Section 16(a) (1).

<sup>139</sup> Section 16(2).

<sup>140</sup> Section 12A (1).

<sup>141</sup> Section 12(A) (3).

<sup>142</sup> Section 1(1) (v).

<sup>143</sup> Section 45(1).

<sup>144</sup> Section 56(2) (a), (c) and (d).

<sup>145</sup> Section 56(2) (e).

practices as abuse of patent rights.<sup>146</sup> Under the Act, a compulsory licence may be granted where a patentee has refused to grant a licence on reasonable terms.<sup>147</sup> Excessive prices, in relation to the patented items and the price in the country from which they are imported, are another basis upon which the grant of a compulsory licence may occur.<sup>148</sup> It is however possible for an application for the licence to be denied, based on an assessment by the commissioner of patents that the grant is not warranted.<sup>149</sup> If the circumstances that led to the grant of the licence cease to exist and in the commissioner's opinion are unlikely to recur, the licence may be terminated.<sup>150</sup>

The Designs Act also provides for compulsory licences under s 21. The section requires that an interested person who would like to apply for a compulsory licence should show that the rights in a registered design are being abused. Abuse of rights which the Act gives as grounds for the application for a compulsory licence include:

1. Non-satisfactory reasons for failure to avail items embodying the registered design to the public in the Republic of South Africa on a commercial scale or to a sufficient extent after registration of the design,<sup>151</sup>
2. Failure to meet the demand for the articles to an adequate extent and on reasonable terms,<sup>152</sup>
3. Restricting a trade or industry or the establishment of any trade or industry in the Republic by the refusal of the design's registered proprietor to provide a licence for the design or to provide the licence on reasonable terms,<sup>153</sup>
4. Charging an excessive price for the article incorporating the registered design by the design's proprietor, licensee or agent in comparison to the price charged in countries where the articles are manufactured by or under licence from the registered manufacturer where importation is the means by which the

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<sup>146</sup> Section 56 (2).

<sup>147</sup> Section 56(2) (d).

<sup>148</sup> Section 56(2)(e).

<sup>149</sup> Section 56(4) (b).

<sup>150</sup> Section 56(4) (c).

<sup>151</sup> Section 21(2) (a).

<sup>152</sup> Section 21(2) (c).

<sup>153</sup> Section 21(2) (d).

demand for the articles bearing the registered design is being met in South Africa.<sup>154</sup>

Another basis for the grant of a compulsory licence under s 21 is in circumstances in which importation of items embodying the design has resulted in the inadequate supply of the items in South Africa.<sup>155</sup>

Some limitations apply with regard to the grant of compulsory licences for registered designs under the Designs Act. For example, the court hearing the application for the licence may grant the licence under conditions that it considers suitable<sup>156</sup> and a court may amend or revoke a licence.<sup>157</sup>

It has been noted that compulsory licences have not been issued in South Africa despite the statutory provisions in the Patents Act, owing to factors such as a requirement for a judicial process prior to grant.<sup>158</sup> This study has not found information regarding issuance of a compulsory licence under the Designs Act.

South Africa's IP Policy 2018 notes that the link between competition law and IPRs has not undergone much study in South Africa's jurisprudence.<sup>159</sup> It proposes enforcement of competition law in a way that preserves competition in markets whilst appreciating that social and economic welfare can be advanced by having IPRs which could function as incentives to make technological advancements available to society.<sup>160</sup>

## 5.6 Competition Law in the UK

The link between competition law and IP protection laws in the UK can be seen through the provisions made in statutes such as the Patents Act for issuance of compulsory licences in situations where the effect of a practice carried out by a patent holder may lead to anticompetitive effects in a market.<sup>161</sup>

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<sup>154</sup> Section 21 (2) (e).

<sup>155</sup> Section 21(2) (b).

<sup>156</sup> Section 21(4) (a).

<sup>157</sup> Section 21(9).

<sup>158</sup> Itumeleng Lesofe 'Finding the right balance between the enforcement of competition law and the protection of intellectual property rights' (2017) 3 *South African Mercantile Law Journal* 458-459.

<sup>159</sup> *Supra* South Africa IP Policy 2018 at 30.

<sup>160</sup> *Ibid.*

<sup>161</sup> For example, section 48B of the Patents Act.

The Competition Act 1998 Chapter 41 prohibits agreements, decisions by associations of undertakings or concerted practices which may affect trade within the UK and are intended or have the effect of preventing, restricting or distorting competition in the UK.<sup>162</sup> This is unless they are exempt under the statute.<sup>163</sup> The specific agreements, practices and restrictions apply in particular to activities which include fixing of buying or selling prices, limiting or controlling production, markets, technical development or investment and making conclusion of contracts subject to acceptance of additional requirements which are not connected to their subject matter.<sup>164</sup>

Any of the agreements or decisions prohibited by the statute are void.<sup>165</sup> Abuse of dominance by an undertaking or undertakings is prohibited by the Act in circumstances where it may have the effect of affecting trade in the UK.<sup>166</sup> It may be concluded that conduct amounts to such abuse where it has results which include forcing unfair trading conditions or unfair buying or selling prices, reducing markets, production or technical development to the disadvantage of customers and imposing additional requirements which are unrelated to the subject matter of the contracts before contracts can be concluded.<sup>167</sup> The disclosure of information relating to matters provided for in Part I (these include prohibited practices such as abuse of dominance by undertakings) of the Act is restricted.<sup>168</sup>

Consent to the disclosure of information may however be obtained from the person who is the source of information or to whom the information relates, if that person is not the source of information or from the person conducting the business related to the information.<sup>169</sup> The restriction on disclosure does not apply in circumstances such as criminal proceedings in the UK or facilitation of the functions of the Competition Commission.<sup>170</sup> A fine of a maximum of 10 per cent of the turnover of an undertaking may apply as a penalty for infringing a prohibition under Part I of the Act.<sup>171</sup>

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<sup>162</sup> Section 2(1).

<sup>163</sup> Ibid.

<sup>164</sup> Section 2(2) (a), section 2(2) (b) and section 2(2) (e).

<sup>165</sup> Section 2(4).

<sup>166</sup> Section 18(1).

<sup>167</sup> Section 18(2).

<sup>168</sup> Section 55(1).

<sup>169</sup> Section 55(2).

<sup>170</sup> Section 55(3).

<sup>171</sup> Section 36(1).

Section 60 of the Act has a requirement for consistency of UK competition law with European Union (EU) law. Following the UK's vote to leave the EU (Brexit) on 29 March 2019, there will be a transition period during which the rules likely to apply in the post-Brexit era will be finalised.<sup>172</sup>

The Enterprise Act 2002 Chapter 40 is another UK Act that has provisions related to competition law. In relation to potential mergers, it provides for factors that the Competition and Markets Authority (CMA), which replaced the Office of Fair Trading (OFT) and the Competition Commission, would consider in determining whether it should approve certain mergers. These potential mergers are referred to as relevant merger situations by the Act.<sup>173</sup>

The relevant merger situations are described by the statute as existing where two or more enterprises have ceased to be distinct enterprises four months prior to the reference by the CMA to its chair as required before approval of certain mergers and the value of the turnover in the UK of the target of a takeover exceeds 70 million pounds sterling.<sup>174</sup> The factors to be considered in those circumstances include relevant customer benefits which are detailed as greater variety, lower prices or higher quality of goods or services in any market the UK<sup>175</sup> or more innovation related to those goods or services.<sup>176</sup>

If the market concerned is not of sufficient importance to validate the making of a reference by the CMA prior to a merger, or if the relevant customer benefits to be derived from the merger are greater than the substantial lessening of competition and any negative effects of the lessening of competition, the CMA may decide not to make a reference.<sup>177</sup> From these provisions, it emerges that the possible effect of a merger to customers in the context of competition features prominently in merger approval in the UK.

Prior to making a reference under section 22 of the Enterprise Act 2002, the CMA may make an enforcement order under a number of sections in the Act, among them s 72. This section provides for enforcement orders related to the prevention of pre-emptive actions by undertakings

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<sup>172</sup>Alex Hunt and Brian Wheeler 'Brexit: all you need to know about the UK leaving the EU' available at <https://www.bbc.com/news/uk-politics-32810887>, accessed on 3 February 2019.

<sup>173</sup> Section 23.

<sup>174</sup> Section 23(1).

<sup>175</sup> Section 30(a) (1).

<sup>176</sup> Section 30(a) (2).

<sup>177</sup> Section 22(2).

which have pending approvals for their mergers.<sup>178</sup> The pre-emptive actions concerned include imposition of obligations on any person concerned regarding safeguarding of any assets or conducting certain activities.<sup>179</sup> A restriction is, however, placed upon the CMA under s 86 of the Act regarding the enforcement orders that it can make in the circumstances contemplated by s 72 and other sections in the Act which provide for enforcement orders.

This restriction is related to IPRs. Under s86, the effect of an enforcement order should not involve the cancellation or modification of licences granted under a patent registered under the Patents Act 1977 or any European patent (UK) as defined in the Patents Act 1977 by the proprietor of the patent.<sup>180</sup> Further, the enforcement order should not apply to a design registered under the Registered Designs Act 1949 (Chapter 88) by the proprietor of the design.<sup>181</sup> Such an enforcement order should also not require that licences under the patents or registered designs referred to in the section should be available as of right.<sup>182</sup> The intended outcome of s86 appears to be to protect the rights of IP right holders, specifically patent and registered design owners, from having to relinquish their control over the terms that licences that they have entered into contain or the choice of the parties that they would like to contract with in the context of licences.

Further, with regard to enforcement orders, Schedule 8 of the Act has provisions that relate to division of a business or division of body corporates which are interconnected.<sup>183</sup> Where such division is ordered, the enforcement order may contain provisions related to the transfer or creation of property or rights,<sup>184</sup> number of persons to whom property or rights are to be transferred or vested,<sup>185</sup> the time within which property or rights are to be transferred or vested<sup>186</sup> or the adjustment of contracts.<sup>187</sup>

Under s 188 of the Act, it is an offence for an individual to engage in cartel conduct. This is unless an agreement or agreements entered into for that purpose is made in order to

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<sup>178</sup> Section 72(2).

<sup>179</sup> Section 72(2) (b).

<sup>180</sup> Section 86(2) (a) (i).

<sup>181</sup> Section 86(2) (a) (ii).

<sup>182</sup> Section 86(2) (b).

<sup>183</sup> Paragraph 13(1).

<sup>184</sup> Paragraph 13(3) (a).

<sup>185</sup> Paragraph 13(3) (b).

<sup>186</sup> Paragraph 13(3) (c).

<sup>187</sup> Paragraph 13(3) (d).

comply with a legal requirement.<sup>188</sup> The section refers to the conduct as entailing entry by the individual into agreements with another person or other persons to make or implement or to cause to be made or implemented, arrangements of various kinds.

These include price fixing for supply of a product or service by an undertaking in the UK,<sup>189</sup> limit or prevent supply by an undertaking in the UK of a product or service,<sup>190</sup> limit or prevent production of a product or service in the UK by an undertaking,<sup>191</sup> division between undertakings of supply of a product or service in the UK to a customer or customers,<sup>192</sup> division between undertakings of customers in the UK for the supply of a product or service<sup>193</sup> or bid-rigging arrangements.<sup>194</sup>

Section 48A of the Patents Act provides for the issuance of compulsory licences where the patent's proprietor is a WTO proprietor (defined in the Act as a national of or domiciled in a WTO member country or one who possesses a real and effective industrial or commercial establishment in such a member country) on a number of grounds. The grounds, provided for under s 48B of the Act include: failure to meet the demand for the patented product on reasonable terms in the UK by the proprietor,<sup>195</sup> a refusal to grant a licence by the proprietor of the patent which has the effect of preventing or stopping the use of a patented invention important which bears a technical progression of substantial economic importance<sup>196</sup> or results in unfairly challenging the setting up or development of industrial or commercial activities in the UK.<sup>197</sup>

A pre-condition for grant of the licence is that the applicant for the licence should have sought a licence from the patent's proprietor on reasonable terms and conditions and failed to obtain the licence within a reasonable time.<sup>198</sup> The Act provides that the proprietor of the patent should receive adequate remuneration depending on the circumstances of the case.<sup>199</sup>

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<sup>188</sup> Section 47(3) of the Enterprise and Regulatory Reform Act 2013.

<sup>189</sup> Section 188(2) (a).

<sup>190</sup> Section 188(2) (b).

<sup>191</sup> Section 188(2) (c).

<sup>192</sup> Section 188(2) (d).

<sup>193</sup> Section 188(2) (e).

<sup>194</sup> Section 188(2) (f).

<sup>195</sup> Section 48A (1) (a).

<sup>196</sup> Section 48A (1) (b) (i).

<sup>197</sup> Section 48A (1) (b) (ii).

<sup>198</sup> Section 48A (2) (a) and (b).

<sup>199</sup> Section 48A (6) (d).

Under the Act, the CMA can make an application aimed at correcting anti-competitive conduct that is based on a patent licence.<sup>200</sup> Such conduct may include a refusal by a patent's proprietor to grant licences on reasonable terms.<sup>201</sup> It is also provided under the Act that the intervention of an appropriate minister in circumstances in which licences have conditions which work against the public interest is another way in which anti-competitive arrangements can be controlled.<sup>202</sup> These conditions may include restrictions on the right of a patent's proprietor to grant other licences.<sup>203</sup>

The proprietor however has a right to apply to the comptroller of patents to cancel an order made to mitigate anti-competitive provisions which have culminated in the issuance of a compulsory licence<sup>204</sup> or to appeal against an order made by the comptroller to cancel or modify anti-competitive provisions in licences.<sup>205</sup> Thus, the approach taken by the statute appears to be to seek a balanced approach to protection of private rights and public interest in the context of competition where patents are concerned. A study of the application of the provisions would give a more complete picture on whether this approach has been adopted by courts or other bodies which have adjudicating powers in competition matters.

Under the CDPA, compulsory licences may be granted in circumstances where a design is not applied in any industrial process in the UK.<sup>206</sup> It is possible for an appeal to be made against an order that relates to industrial designs that is made by the comptroller-general of patents designs and trade marks.<sup>207</sup> If a proprietor of a registered design refuses to grant licences in respect of the design on reasonable terms, this may be interpreted as working against the public interest<sup>208</sup> and may lead to the cancellation or modification of the terms of the licence which have that effect.<sup>209</sup>

A number of EU cases have dealt with the link between IPRs and prohibited practices. In the UK, mergers featuring IPR – related matters have been reported.

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<sup>200</sup> Section 50 A (1) (b).

<sup>201</sup> Section 50A (1) (c) (ii).

<sup>202</sup> Section 51(d).

<sup>203</sup> Section 51(3) (a).

<sup>204</sup> Section 52(2) (a).

<sup>205</sup> Section 52(4) (a).

<sup>206</sup> Section 10(1).

<sup>207</sup> Section 10(4).

<sup>208</sup> Section 11A (3) (a).

<sup>209</sup> Section 11A (3).

In *Radio Telefis Eireann and Independent Television Publications Limited v Commission of the European Communities*<sup>210</sup> Radio Telefis Eireann and Independent Television Publications Limited (hereafter 'RTE') published weekly television guides which were protected by copyright. Magill TV Guide Limited ('Magill') wanted to publish a comprehensive weekly television guide but had injunctions issued against the publication by RTE and the British Broadcasting Corporation (BBC). Magill lodged a complaint against the injunctions, claiming abuse of dominance by RTE and the BBC.

The Court of First Instance (CFI) issued a compulsory licence on the basis that: the information was required for the new product which Magill sought to introduce into the market and for which there was consumer demand, RTE and BBC sought to monopolise the separate market for the television guides and lacked objective justification for their refusal. On appeal, RTE and BBC sought to have a decision in favour of Magill overturned on the basis that the CFI had misinterpreted article 86 of the Treaty Establishing the European Community (EC Treaty) with regard to abuse of dominance and should not have granted a compulsory licence to Magill. Among the points raised by the appellants was the contention that owning copyright did not automatically confer economic power and therefore dominance upon the appellants.

The European Court of Justice (ECJ) found that the appellants were dominant on the basis of copyright ownership in their publications and in a position to prevent effective competition on the market in television magazines. It noted the exclusive right conferred on a copyright owner to grant a copyright licence and that refusal to grant a licence did not by itself amount to abuse of dominance. It also noted the position of the CFI with regard to the denial of a licence amounting to an abuse of dominance in exceptional circumstances. It concluded that the appellant's refusal to grant a licence amounted to abuse of a dominant position under article 86 owing to the refusal, without justification, leading to prevention of the production of a new product and dismissed the appeals.

*IMS GmbH & Co. OHG v NDC Health GmbH & Co. KG*<sup>211</sup> considered the use of a brick structure developed by IMS GmbH & Co. OHG (IMS) for the provision of German regional sales data on pharmaceutical products. A former manager of IMS started a company engaged in marketing regional data on pharmaceutical products in Germany modelled on brick structures

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<sup>210</sup> C-241/91 P and C-242/91 P.

<sup>211</sup> C - 418/01.

which very closely resembled those used by IMS. That company was acquired by NDC Health GmbH & Co. KG (NDC). IMS obtained orders prohibiting the use of the brick structures by the company established by the former manager and later, against NDC after it acquired the company.

The orders were granted on the basis that the brick structure may be protected by copyright law. NDC made a complaint to the Commission of the European Communities, citing violation of article 82 of the EC Treaty by IMS's refusal to licence the brick structure. The European Competition Commission ordered IMS to licence the brick structure to all undertakings on the market working with German regional sales data on the basis that refusal to grant access to that structure without an objective justification was likely to eliminate competition in the relevant market because it was not possible to compete in the relevant market without it.

The ECJ noted that the refusal to grant a licence to an IPR by a dominant undertaking did not amount to abuse of a dominant position although in exceptional circumstances, it may amount to such abuse.<sup>212</sup> The court ruled that the indispensability of the structure to the users in the market would have to be determined in order to make a finding on whether the refusal to grant access to the structure amounted to abuse of a dominant position. If the structure was indispensable to users in the market, abuse of a dominant position would be found if the undertaking which required the licence intended to develop new products not offered by the owner of the IPR and for which there was consumer demand. The refusal to grant the licence was not justified by objective considerations and if the refusal would result in reserving the relevant market for the owner of the IPR by eliminating all competition in that market.

It has been argued that the above cases, together with others decided in the EU, illustrate the use of the essential facilities doctrine to introduce compulsory licensing.<sup>213</sup>

The OFT assessed the potential acquisition by Delachaux S.A. of Pandrol Holdings Limited.<sup>214</sup> The firms were engaged in the supply of rail fastenings and rail fastening systems and would cease to become distinct entities if the merger proceeded. The principal pre-assembled

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<sup>212</sup> On this point, the ECJ referred to *Radio Telefis Eireann and Independent Television Publications Limited v Commission of the European Communities* C-241/91 P and C-242/91 P.

<sup>213</sup> Silky Mukherjee *Interface between competition law and intellectual property law: a study of United States, European Union and Indian law* (PhD Thesis, Gujarat National Law University, 2016) 88.

<sup>214</sup> Published on 22 September 2003.

fastening systems were protected by patents. It was estimated that if the merger proceeded, the parties would supply 45 to 55 per cent of the rail fastenings and systems in the European Economic Area and 70 to 80 per cent of the fastenings and systems in the UK.

The OFT considered that the supply of rail fastenings was through a bidding process and noted that in bidding markets market shares do not always function as a good indicator of market power. It also considered that evidence from the parties to the merger application and third parties showed that the entry of another firm into the rail fastenings market in the UK seemed imminent and that the new entrant appeared to have capacity to meet increased demand. It was also the OFT's view that further entry into the UK market from other firms was likely to occur and it concluded that the merger did not appear to lead to the substantial lessening of competition in the UK for goods and services. The OFT determined that the merger would not be referred to the Competition Commission under s 33(1) of the Competition Act.

The OFT also assessed the potential acquisition by Day International (UK) Holdings (hereafter Day) of Duco Holdings Limited (hereafter Duco).<sup>215</sup> Day, a company engaged in manufacturing of printing products including printing blankets, agreed to buy the issued share capital of Duco, a company engaged in the manufacture and supply of printing blankets. The OFT considered whether the merger of the firms would lead to the creation of a relevant merger situation. In this regard, it looked at the possibility of UK customers having enough choice of printing blankets available to them after the merger.

The OFT observed that customers had indicated that it would be simple to buy the products in question from other supplies as they were not dependent on a specific brand of the products. It concluded that barriers to entry and expansion in the product market were not high. It also heard the submission of a competitor in the market which stated that it had considerable IP for printing blankets.

The OFT considered that although the merged firm would be the largest supplier of the printing blankets in the UK, there were a minimum of four competing firms with market share of between 5 and 15 per cent with the possibility of other competitors outside the UK entering the UK market. It concluded that it was unlikely that the merged firm would wield sufficient market

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<sup>215</sup> Published on 4 October 2006.

power to individually increase prices or reduce quality and that in its view, the merger would not lead to reduction of competition within UK markets.

In 2016, it was reported that GlaxoSmithKline had been fined by the CMA for entering into agreements to delay the release of a generic version of a drug for which it previously owned a patent, prior to the patent's expiry.<sup>216</sup>

### **5.7 Commonly Identified Anti-competitive Behaviour in Statutory Provisions Related to IPRs in Kenya, South Africa and the UK**

From the previous section of the chapter, there are some similar provisions identified in the three jurisdictions' statutes, which are intended to deal with the exercise of an IPR holder's exclusive rights to the detriment of the market in which the holder has been awarded those rights. This section of the chapter looks at the practices identified in the jurisdictions as having the potential to lead to anti-competitive outcomes in markets.

The use of agreements that may lead to collusion between firms is prohibited in the three jurisdictions, where that activity may lead to pricing decisions that are dictated by the agreement or availability of products in quantities that are intended to achieve higher prices for the producing firms. IPR holders may reach agreements intended to achieve such objectives by virtue of the control that they generally have over production and pricing of the protected products. Mergers between firms require approval of the authorities charged with matters related to competition in the three jurisdictions. The possibility that a firm which already holds significant IP assets may acquire other assets of this nature in a merger means that the control exercised by the formation of an entity which combines the assets of two firms in a market may be considerable. Accordingly, approval of mergers is controlled in the three jurisdictions and must be obtained from relevant authorities before firms merge.

Dominance by firms is provided for in the three jurisdictions' statutes and is another avenue through which control by firms in a market can be exercised. Where an IPR holder uses the rights granted by virtue of the IP to charge prices for the protected products that limit access to the products in a manner considered as anti-competitive in a market or refuses to licence the IP in circumstances in which it would be considered important to have licences to the IP in a

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<sup>216</sup> Available at <https://www.reuters.com/article/us-gsk-britain-genericdrugs/uk-watchdog-fines-gsk-54-million-over-pay-for-delay-drug-deals-idUSKCN0VLOH8>, accessed on 1 February 2019.

market, these practices may qualify as an improper use of the rights. Authorities which govern competition in markets in the three jurisdictions may use measures intended to curtail the ability of firms to engage in such conduct.

Compulsory licences are available to control anti-competitive conduct in the three jurisdictions. They would only be issued in circumstances where the conditions necessary for their issuance have been met and the provisions that enable their issuance also provide for the payment of adequate remuneration to the right holders. Further, the right holders have the possibility of having the licences terminated if they correct their conduct to the satisfaction of the competition authorities. Licensees are also subject to monitoring if a compulsory licence is issued and it is possible for the licence to be withdrawn if the licensee does not comply with the terms of the award of the licence. Consequently, the IPR holder's bargaining position, even in these circumstances, is preserved.

It is worth noting that it has been argued the effectiveness of compulsory licences as a mechanism used to correct anti-competitive practices may be enhanced by measures such as permitting the exportation of products that are manufactured by a compulsory licensee.<sup>217</sup> The use of the licences has been cited as especially favourable to circumstances in which there are substitute technologies.<sup>218</sup>

Protection of the public interest as a basis for intervention by competition authorities in the three jurisdictions features prominently. Where IPRs are concerned, the provisions in favour of preservation of public interest are intended to provide for competitive markets and availability of the protected products in reasonable amounts and prices. Competitive markets for IPRs in Kenya's oil and gas sector have the potential to increase access to IPRs through transactions such as licensing. This may offer opportunities for more firms to work in the industry in Kenya and create employment which could positively impact economic growth. Innovation may also be promoted in competitive IPR markets when IPR licensees come up with ways to modify licensed technology or processes that they frequently work with to increase output or shorten production time. The competition authorities in the three jurisdictions are under an obligation to preserve confidential information of firms that they have dealt with in the course of discharging their

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<sup>217</sup> Correa 2007 at 21. This is provided for under article 31(k) of TRIPS.

<sup>218</sup> Ibid.

mandate. This functions as a way of attempting to preserve the competitive advantage that the firms have by reason of holding that information.

## 5.8 Conclusion

This chapter has shown the link between IPRs and competition law in the context of the laws of Kenya, South Africa and the UK. It has also shown the basis of the application of the laws as the creation of a competitive environment within which enterprises operate. Protection of public interest underlies this application.<sup>219</sup>

The chapter has assessed the application of competition laws in relation to IPRs in the countries noted above and found that the reported cases in that regard have featured in South Africa and the UK. These cases could serve as authorities in any future cases in Kenya with similar or almost similar issues for determination, given the dearth of reported cases dealing with IPRs and competition law in the country. It has emerged from the chapter that competition law can be applied to Kenya's oil and gas industry to meet one objective of applying IP law in Kenya - promotion of peoples' economic and social welfare. Kenya's Competition Act prohibits trade practices that are anti-competitive;<sup>220</sup> approval of mergers by the CA depends on factors that include the likelihood of reducing competition<sup>221</sup> and the IPA provides for compulsory licences to remedy anti-competitive practices.<sup>222</sup>

South Africa and the UK, as potential sources of case law for Kenya's courts in such matters, also have legal provisions that mirror Kenya's approach to anti-competitive practices that may be carried out using IPRs. South Africa's Competition Act prohibits restrictive trade practices,<sup>223</sup> abuse of dominance which may be executed through denial of access to an essential facility<sup>224</sup> and its Patents Act provides for compulsory licences as a measure to correct refusal to supply.<sup>225</sup> The UK's Patents Act also provides for compulsory licences to correct possible anti-

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<sup>219</sup> See, for example, Kenya's IPA.

<sup>220</sup> Section 21.

<sup>221</sup> Section 46(2) (a).

<sup>222</sup> Section 75(2) (2).

<sup>223</sup> Section 4 and section 5.

<sup>224</sup> Section 8.

<sup>225</sup> Section 56(2) (d).

competitive effects in a market.<sup>226</sup> Its Competition Act prohibits abuse of dominance<sup>227</sup> and agreements or practices that may affect competition in the market negatively.<sup>228</sup>

This chapter noted that the study had not found information about the application of compulsory licensing Kenya. It cited the legal provisions in the country's IPA and Competition Act that contain mechanisms such as compulsory licensing which are intended to restore market conditions that are favourable to the public interest. However, the efficacy of the mechanisms in the case of IPRs appears not to have been tested because there seem, according to the findings of this study, to be no reported use of the mechanisms by the country's judicial system.

Additionally, this study noted the safeguards that exist for IP holders in the use of compulsory licences, for example, through the possibility that their justification of the failure to supply a patented invention could prevent the issuance of the licences. These two factors cast doubt on the effectiveness of the practical application of the licences as a possible solution to the misuse of patents by patent holders in the context of the public interest. Additionally, the industry within which the compulsory licence is intended to apply may pose a challenge to the practicability of the grant of the licences.

This is because under the IPA, the public interest ground for the grant of the licences is specified to relate to national security, nutrition, health, environmental conservation or the development of a vital sector of the national economy. The import of this is that if a patented invention does not fall within the four specific categories in the provision, there is room for interpretation as to whether a patented invention is a contributor to the development of a vital sector of the national economy. It is therefore possible that a successful challenge could be advanced by a patent holder in the oil and gas industry who would like to retain the exclusivity conferred by a patent.

Further, a WIPO survey on legal grounds for the grant of compulsory licences identified national or public interest related to factors such as protection of the natural environment and national security, public health interests and non-exploitation of IPRs for a period of time indicated in the national law(s) as the grounds most provided for in the respondents' legal

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<sup>226</sup> Section 48B.

<sup>227</sup> Section 18(1).

<sup>228</sup> Section 2(1).

frameworks.<sup>229</sup> The same survey found that among respondents, the application of compulsory licensing has been limited, a point that echoes the findings made by this study.<sup>230</sup> One respondent to the survey noted that this position arose from a limited number of applicants for the licences; a situation that it stated could be attributed to the deterrent effect of the legal provisions for the licences on IPR holders.<sup>231</sup> Overall, the applicability of compulsory licences is questionable owing to the points noted.

In light of the above, it is therefore unlikely that compulsory licensing would work as a frequently used tool to correct any imbalance in the circumstances, even though Kenya's patent law provides for it. Thus, it is necessary to explore other workable possibilities that may improve accessibility to IP – protected assets in Kenya's oil and gas sector.

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## **CHAPTER SIX: SUMMARY OF FINDINGS, CONCLUSIONS AND RECOMMENDATIONS ON THE ROLE OF INTELLECTUAL PROPERTY LAW IN KENYA'S OIL AND GAS SECTOR**

### **6.1 Introduction**

This chapter will set out the arguments made in the previous chapters and make suggestions for how Kenya's IP laws that are relevant to the oil and gas industry can work as a tool to regulate the country's oil and gas sector. This is in response to the main research question of the thesis – 'How should Kenya apply intellectual property law in the country's oil and gas sector in order to foster innovation and support economic growth?' In order to provide a basis upon which the intended regulation can occur, it became necessary to establish the context within which the regulation would take place by setting out four roles (based on economic growth that is planned by Vision 2030) that IP laws can play in the sector. The four roles of IP laws in Kenya's oil and gas sector are described as follows in chapter one of this thesis:

1. Provision of a basis for investment.
2. Preservation of the TK of local communities.
3. Promotion of competition in Kenya's markets.
4. Provision of a sustainable IP legal framework for the oil and gas sector for economic growth in Kenya.

Chapters two to five of this work looked at the four roles above in an attempt to answer the main research question and its sub-questions. The next segment of this chapter will analyse the manner in which the respective chapters considered the respective question(s) and the conclusions made in the chapters.

Using the oil and gas industry as a basis upon which the four roles above are considered by this thesis is important because of the ongoing developments in the oil and gas sector in Kenya, particularly from the upstream segment of the sector. In June 2018, the first consignment of crude oil was transported from Turkana in Kenya to Mombasa, the country's coastal city, for

storage and export.<sup>1</sup> The infrastructure development component of the oil production and distribution has been noted as being imminent.<sup>2</sup> Steps made in that direction have been reported to include the involvement of entities in the development of oilfields and pipeline design.<sup>3</sup> These recent activities are an indicator of interest that has been generated by the country's upstream oil and gas sector among investors.

The developments described require the use of inputs that are intended to generate income. Some of these inputs may qualify for IP protection. Further, among local communities, there are expectations that the income generated from oil production and export will benefit them.<sup>4</sup> The basis of these expectations has been reported to be the location of the natural resources, which is local land.<sup>5</sup> Thus, competing interests centred on the acquisition of benefits from the two natural resources are evident.

The current nature of the activities described, especially in relation to inputs in the oil and gas sector, in the form of intangible assets and Kenya's laws that govern their protection, contributes to the subject matter of this thesis being one that has not been the focus of sustained academic study.

## **6.2 The Regulation of Kenya's Oil and Gas Sector using IP Law**

### **6.2.1A Brief Overview of Thesis Chapters in Relation to The Regulation of Kenya's Oil and Gas Sector using IP Law**

Using the perspective of each of the four roles related to IP law in Kenya, chapters two to five of this work have respectively taken elements of IP law in Kenya and considered the manner in which they would regulate the oil and gas industry in Kenya from those perspectives.

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<sup>1</sup> Neville Otuki 'Turkana in big dreams as oil export kicks off' available at <https://www.businessdailyafrica.com/news/Turkana-in-big-dreams-as-oil-export-kicks-off/539546-4605734-u6v24vz/index.html>, accessed on 21 July 2018. (Hereafter, Otuki 2018).

<sup>2</sup> George Wachira 'Why setting up oil infrastructure is key in achieving exports goal' available at <https://www.businessdailyafrica.com/analysis/ideas/oil-infrastructure-is-key-in-achieving-exports-goal/4259414-4668366-5h5sj0z/index.html>, accessed on 21 July 2018.

<sup>3</sup> Otuki 2018.

<sup>4</sup> Ibid.

<sup>5</sup> Ibid.

Chapter two of the thesis looked at Kenya's IP law framework that is applicable to the oil and gas sector in order to *inter alia*, establish the objective of having the laws in question. In so doing the chapter attempted to answer the main question by establishing how Kenya can use IP law to regulate the country's oil and gas sector. It also considered the sub-questions relating to the role that IP law can play in achieving the national policy goals related to the sector, the current use of IP in Kenya, the improvement on current use of IP in Kenya and the interaction of Kenya's national policy goals with its IP law in relation to the petroleum industry.

The focus of chapter three of the thesis – TK, also served to analyse the objective of using IP law in the oil and gas sector in Kenya in the context of the management of the physical environment in which extraction of the two resources has been undertaken and the knowledge held by indigenous communities living in the region in which the extraction is taking place.

Chapter four of the thesis considered the interpretation of IP law relevant to patents, trade marks, copyright, designs and trade secrets in Kenya, South Africa and the UK by courts in the three jurisdictions. This section of the study concentrated on the application of legal principles in the three jurisdictions in order to examine elements that have featured in judicial interpretation of respective provisions. Given that the three jurisdictions are member states of TRIPS, the study identified similarities in the respective statutory provisions that form the regulatory framework of IPRs. The chapter also identified differences between the provisions.

Chapter five of this work considered the relationship between IP law and competition law principles in the three jurisdictions. In the chapter, the study drew upon statutory provisions in IP laws in Kenya, South Africa and the UK to focus on the use of such provisions to protect IPRs in market environments which also support competition. Case law from the jurisdictions also featured in the chapter to illustrate the use of judicial interpretation of statutory provisions in competition law to control the exercise of IPRs.<sup>6</sup>

Thus, the chapter illustrated that IP laws play a role in regulating industries by way of delineating the boundaries which protect IPR holders and authorised users in those industries and thus, creating a basis upon which they may have a competitive advantage in the market. This may have the effect of creating competitive markets and producing benefits for producers and consumers in those markets. The chapter also demonstrated that competition law provisions may

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<sup>6</sup> For example, *Radio Telefis Eireann and Independent Television Publications Limited v Commission of the European Communities* (C-241/91 P and C-242/91 P).

have the effect of controlling the abuse or potential abuse of IPRs. In so doing, the chapter also addressed the sub-question of the application of IP and competition law in meeting the objectives of IP law in Kenya.

The regulatory framework that emerged from this study in chapters two to five of the thesis applies to the private rights exercised by IP owners and those authorised to use IP on the one hand and public interest on the other. Public interest featured in chapters two and five in the context of IP law and competition law respectively. The next section of this chapter considers the manner in which the respective chapters attempted to answer the main research question regarding the use of IP law by Kenya to regulate the country's oil and gas industry from the respective angles of private rights and public interest.

This approach is necessary to consider the context in which regulation by IP law would take place in Kenya by identifying the effect of the legal provisions on parties affected and likely to be affected by the law as it applies in the country's oil and gas sector. The next section also looks at the manner in which chapters two to five of this work attempted to answer the sub-questions identified in this work's first chapter.

### **6.3 The Co-existence of Public Interest and IPRs in the Regulation of Kenya's Oil and Gas Industry by Kenya's IP Laws**

Adopting an approach intended to address the interests of people in the categories of communities which possess TK and current and potential innovators in the oil and gas sector in Kenya on the one hand, and investors in the oil and gas sector on the other through Kenya's IP laws, is based on public interest and IPRs, respectively.<sup>7</sup> These factors are looked at by this thesis in the context of the oil and gas industry in Kenya to acquire a new perspective through which their examination occurs.

#### **6.3.1 Public Interest**

Public interest was introduced in chapter one. The chapter noted that high costs for IPR – protected factors of production may also have the effect of limiting accessibility to the IP, with a

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<sup>7</sup> See Ncube 2013 at 374 and 377.

similar effect on economic growth.<sup>8</sup> Under-protection of IPRs, it considered, may have the effect of removing incentives related to innovation.<sup>9</sup>

In the oil and gas industry in Kenya, in which investment has been taking place as noted in chapter one and this chapter, there are a number of factors that may provide incentives to investors other than the regulatory environment. Even where investors may look at the legal environment to guide investment decisions, there are various laws other than the country's IP law that may influence those decisions. Chapter one of the thesis studied IP law as a component of the legal environment in Kenya and thus, a relevant area of study in looking at Kenya's oil and gas industry. The types of IP that apply in the oil and gas industry, as noted in chapters three and four of the thesis, provide support for this argument.

With chapter one of the thesis having provided a backdrop against which IP provisions in Kenya, South Africa and the UK would be studied, chapters two to five considered IP laws in Kenya in the context of public interest – based provisions in the laws. The objective of identifying the public interest - based provisions of the laws was to identify the context within which regulation by IP laws in Kenya's oil and gas industry would occur, as an initial point in answering the main question of the thesis. This is because the mechanisms of using IP law to regulate Kenya's oil and gas industry has to be based on identifying the areas for which regulation is required in that industry and the prevailing conditions in which regulation will work. Examining the public interest in this regard thus serves to identify one of the conditions that will determine the effectiveness of the use of IP laws for that purpose in the industry in Kenya.

Chapter four of the thesis looked at public interest from the perspective of the provisions of IP statutes in Kenya, South Africa and the UK. Kenya's IPA, Trade marks Act and Copyright Act, 2001 were noted to have public interest provisions. The specific provisions are highlighted below and compared with South Africa's and the UK's statutory provisions that govern patents, trade marks and copyright in order to note the manner in which the chapter addressed the key research question and the sub-questions regarding the applicability of IP law to the country's oil and gas sector and whether the application of IP law in Kenya's oil and gas sector is likely to

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<sup>8</sup> Jeremy de Beer, Chidi Oguamanam & Tobias Schonwetter 'Innovation, Intellectual Property and Development Narratives in Africa' in Jeremy de Beer et al (eds) *Innovation and Intellectual Property: Collaborative Dynamics in Africa* (2014) 6-7.

<sup>9</sup> Ibid.

produce the intended objective of IP law application in the country. Additionally, the chapter considered the judicial interpretation of statutory provisions related to private interests. This will be considered in the next section of this chapter which looks at the chapters' handling of the element of private interests in IP in relation to the thesis' research questions.

In chapter four it was noted that the IPA's provisions on public interest include the possibility of revocation of a patent for non-disclosure of the best method of producing the invention known to the applicant for the patent at the time of making the patent application.<sup>10</sup> The intention of this requirement is to avail information to the public regarding that aspect of the invention. It is possible that the availability of the information may provide a basis for further invention, a possibility that may enhance public benefit by way of increased availability of various important creations that improve human activities. As noted in chapter four, this position has been challenged by those who hold the view that there is limited dissemination of knowledge by patents because of the broad terms that are used in drafting some of them.<sup>11</sup>

The possibility of revocation of a patent for non-disclosure under South Africa's patent law is provided for in the country's Patent's Act.<sup>12</sup> The element of disclosure *vis a vis* the public interest has also been examined in the UK's case law.<sup>13</sup> The position regarding disclosure in one of the cases examined is related to the application of the disclosure function as it relates to patents – to what extent a high standard of disclosure should be applicable in order to achieve the teaching function of patents whilst protecting the patentee's right to a competitive advantage that would be derived from the patent.<sup>14</sup>

In relation to the requirement of disclosure noted in Kenya's and South Africa's respective patent-governing statutes and UK case law, the intention of making insufficient disclosure a ground for revocation of a patent is grounded in securing societal interests as a whole from the angle of one of the intended objects of patent protection - the diffusion of knowledge related to patents' subject matter. Thus, the chapter, by noting this objective, concluded that the IP law would regulate the oil and gas sector, by requiring that patentees or

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<sup>10</sup> S 103 (g).

<sup>11</sup> Sean B Seymore 'The teaching function of patents' (2010) *Notre Dame Law Review* 641.

<sup>12</sup> Section 61 (e).

<sup>13</sup> See, for example, *Halliburton Energy Services Inc. v Smith International (North Sea) Limited and Others* (2006) EWCA Civ 1715.

<sup>14</sup> *Ibid.*

potential patentees adhere to patent-related disclosure obligations under the law. Additionally, in relation to the sub-question about the application of IP law to the oil and gas sector to advance Kenya's economic growth agenda, the chapter considered that disclosure requirement served to seek a balance between private rights and public interest, as they respectively relate to IPRs.<sup>15</sup> This approach is likely to promote both current individual interests related to IP holders and future innovation with the possible effect that continuous innovation may be achieved in the economy.

For the oil and gas industry, disclosure in patent applications is particularly relevant given the technological advances that have been projected to apply to the industry and which are likely to be dealing in content and knowledge that is not in the public domain and will therefore be important to disseminate.<sup>16</sup> Although questions have arisen, as noted in the chapter, regarding the extent to which disclosure would be considered to have met the required standard, the determination of this point is likely to continue to depend on the standards of disclosure established under patent law using case law. Accordingly, it would then likely be the case that expanded reference points for the purpose of such determination would become available with time due to the development of IP law by Kenya's courts.

In relation to trade marks, copyright and confidential information, chapter four highlighted non-use of trade marks and restraint of trade in relation to the thesis' key question and the sub-questions relating to the applicability of IP law in Kenya's oil and gas sector.

Under Kenya's Trade Marks Act the chapter identified the consequence of unjustified non-use of a trade mark as possible removal of the mark from the trade marks register.<sup>17</sup> The public interest angle in this provision can be seen in the limitation of the likelihood of removal of distinctive product identifiers from the public domain by persons who do not use them to identify products that they have produced. This means that those identifiers remain available to persons who have them registered and use them. It was also noted that this position was similar under South Africa's and the UK's trade mark laws.<sup>18</sup> It also emerged that the respective countries' trade marks' statutes may make an exception to this position where the non-use can be

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<sup>15</sup> *Halliburton Energy Services Inc. v Smith International (North Sea) Limited and Others* (2006) EWCA Civ 1715.

<sup>16</sup> Advancements anticipated in the sector were noted in chapter four of the thesis to involve diverse technology – related phenomena including biotechnology, 3-D and 4-D seismology and the Internet of Things.

<sup>17</sup> Section 29 of the Act.

<sup>18</sup> Section 27(1) (a) of South Africa's Trade Marks Act and s 46(1) (a) of the UK's Trade Marks Act.

justified.<sup>19</sup> The relevance of the chapter's finding in this regard, in relation to the main question, is the use of IP law to govern the manner in which exclusive rights granted under IP are used. The provision under the Act serves as a barrier to the possibility that an IPR holder may have obtained protection under trade mark law for rights that are unjustifiably not in use by the holder, an indicator of the regulatory effect of the law.

In dealing with confidential information, the element of public interest has also emerged in Kenya's case law.<sup>20</sup> One of the cases that dealt with this issue had its focus as a restraint of trade clause in an employment contract.<sup>21</sup> According to the decision in the case, operation of such a clause would therefore be tested using the aspect of its alignment with the possibility that a former employee at a firm would be able to obtain employment at a competing firm after being subject to a restraint of trade clause, where it has not been shown that the employee had access to information that could be divulged to a competing firm, to the detriment of a former employer. In South Africa, courts have referred to public interest and the reasonableness test to determine the enforceability of restraint of trade and confidentiality clauses in agreements.<sup>22</sup>

The decisions in those cases are also an indicator of the use of IP law to govern the boundaries in employment – related situations in which the use of confidential information is likely to be an element. Especially considering the point highlighted earlier in this section in relation to the possibility that emerging technology may be useful in the upstream oil and gas industry, these principles are likely to have relevance in the industry due to the demand for qualified and experienced workers in the sector. Such demand is likely to lead to the movement of highly sought after workers in the industry from one employer to another. It is therefore useful to take into account the question of transfer or transferability of skills and knowledge that such workers may have acquired from working in entities in the same industry.

Thus, in relation to the chapter's main question and the sub-questions related to the likelihood that the application of IP law to Kenya's oil and gas industry producing the intended objective of protecting private rights whilst also governing public interest related to the IPRs, the

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<sup>19</sup> Section 29(3) of the Kenya Trade Marks Act, section 27(4) of the South African Trade Marks Act and s 46(1)(a) of the United Kingdom Trade Marks Act.

<sup>20</sup> See, for example, *Credit Reference Bureau Holdings Limited v Steven Kunyihya* (2017) eKLR.

<sup>21</sup> *Ibid.*

<sup>22</sup> *Automotive Tooling Industries (Pty) Limited v Wilkens* (2006) SCA 128 (RSA). *Vestergaard Frandsen A/S and Others v Bestnet Europe Limited* (2013) EWCA CIV 780.

IPRs above served as an indicator that, having taken into account the public interest angle as noted above, it is possible that the application of IP law principles concerned with protection of IPRs that are relevant to the industry is likely to advance the balance between the competing interests as contemplated by IP law in general. The IPA's provision for compulsory licences was noted by chapter four as a tool provided for by the statute in favour of public interest.<sup>23</sup> Reasonable grounds for provision of the market of the patented item in Kenya features in the provision as a determining factor for the grant of a compulsory licence.<sup>24</sup>

Industrial design laws in South Africa and the UK provide for compulsory licences on grounds of unavailability of the designs on a commercial scale for reasons that are unsatisfactory to a court hearing the matter and non-use respectively.<sup>25</sup> This means that practices such as hoarding items to drive up prices for items bearing the design and exclusive rights in a design that are unutilised by the right holder are unlikely to work in favour of the right holder and instead, this is likely to lead to market-driven pricing and availability of designs in the public domain, consequences which favour the general public.

Compulsory licences therefore emerged in the chapter as a statutory device in IP law that could be applied in the oil and gas sector in order to pursue the balance pursued by IP law in relation to the co-existence of IPRs and the public interest. The chapter's noting of the conditions that should apply prior to the grant of compulsory licences showed that the restriction of the private rights inherent to IPRs required justification and it should still be the case, under those legal principles, that the private rights are not hindered in a manner that may result in unchecked disadvantages to IPR holders.

Chapter five of the thesis focused on the interaction between competition law and IPRs. The chapter sought to answer the main research question from the angle of a competitive market environment, considering that it may be the case that the application of IP law principles may lead to the accumulation of market power by IPR holders that may translate into practices such as abuse of a dominant position in a market. In that context, public interest featured in the chapter as a basis upon which exceptions may be made to the availability of exclusive rights under IP law. Generally, competitive markets support public interest. This is because they are

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<sup>23</sup> Section 72 (1).

<sup>24</sup> Ibid.

<sup>25</sup> Sections 21 (1) and 21 (2) of the South African Designs Act and s 10(1) of the CDPA respectively.

likely to provide conditions such as fairer pricing of commodities and a greater variety of products from which consumers can choose. The answer to the main research question was sought by the chapter in a number of ways. The first of these was the competition law statutory provisions in Kenya, South Africa and the UK. This approach served to compare the IP law framework in the three jurisdictions with the respective competition law statutory provisions and case law as a means through which the limitations to IP law provisions – specifically those relating to the protection of IPRs, were provided by competition law. In this way, the chapter considered that abuse of IPRs may lead to anti-competitive practices that competition law is intended to prevent or remove from markets. This emerged in the chapter as highlighted below.

Kenya's Competition Act provides for use of a patented invention by a non-owner as a method by which public interest may be advanced.<sup>26</sup> The condition for such use of an invention is that an attempt to get a contractual licence to produce the invention from the patent owner must have failed.<sup>27</sup> Another condition that would apply in such use would be the payment of compensation to the patent owner.<sup>28</sup> Additionally, the use of an invention in this manner may be revoked<sup>29</sup> or varied.<sup>30</sup> These pre-conditions for grant of the rights of an invention serve to offer some protection to the patent holder even in circumstances where the invention may serve the public.

The position under Kenya's competition law is that the abuse of IPRs as part of collusive practices by firms is prohibited.<sup>31</sup> An IPR holder may, however, obtain an exemption from engaging in IPR – related concerted practices on grounds of improving goods' production or improving technical or economic progress in an industry.<sup>32</sup> Provisions in the IPA which relate to issuance of compulsory licences on grounds of anti-competitive practices<sup>33</sup> complement the prohibited practices relating to IPRs in the Competition Act.<sup>34</sup> A number of restrictions apply

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<sup>26</sup> Section 80(1).

<sup>27</sup> Section 80(2).

<sup>28</sup> Section 80 (6).

<sup>29</sup> Section 80 (7).

<sup>30</sup> Section 80(1) (b).

<sup>31</sup> Section 23(1) (h) of the Competition Act.

<sup>32</sup> Sections 28, 26(3) (b) and 26(3) (c) respectively.

<sup>33</sup> Section 75 (2) (a).

<sup>34</sup> For example, section 23(1) (h) of the Competition Act.

where compulsory licences are issued, including the non-transferrable nature of the licences<sup>35</sup> and the use of the rights to primarily supply the market in Kenya.<sup>36</sup>

The next section of this summary of the points raised in chapter five looks at the control of terms of licences relating to IPRs in the statutes of Kenya, South Africa and the UK. In the chapter, this served to underline the point that abuse of IPRs may lead to anti-competitive practices that competition law is intended to prevent or remove from markets. IP law provisions in the three countries give requirements that apply to compulsory licences for the purpose of ultimately, protecting IPRs, albeit limited by use of the licences. The chapter noted that the effect of this approach by the statutes is to confer some benefits on IPR holders even in circumstances where rights are limited through licences.

The IPA has provisions that are intended to exclude some terms from patent licences. These include terms that limit the sources of materials used to make the patented item by the licensee to the licensor or sources provided by the licensor.<sup>37</sup> One of the exceptions to this provision would apply where it is not practically possible to maintain the quality standards of the product without such otherwise anticompetitive restrictions.<sup>38</sup> The chapter also noted the compliance of the provisions of the IPA in that regard with article 7 of TRIPS, which looks at the promotion of social and economic welfare through the transfer and dissemination of technology for the mutual benefit of producers and users of IPRs.

South Africa's Patents Act also has restrictions on activities that may have an anticompetitive effect. Activities such as refusal to supply and excessive pricing fall under this category in the Act.<sup>39</sup> Compulsory licences are a tool available under the Act to deal with a patentee's refusal to grant a licence on reasonable terms.<sup>40</sup> It is therefore the case that South Africa's patent law provides a mechanism outside the competition law framework that can be used to deal with anticompetitive conduct. This reflects the position under Kenya's patent law. Chapter five of the thesis however noted that the protection of a patentee's rights is still secured by the Act, despite the possibility of grant of compulsory licences. It was also noted that

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<sup>35</sup> Section 80(8).

<sup>36</sup> Section 80 (9).

<sup>37</sup> Section 69.

<sup>38</sup> Section 69 (iii).

<sup>39</sup> Section 56(2) (a), (c), (d) and (e).

<sup>40</sup> Section 56(2) (d).

cancellation of a compulsory licence may occur where there has been a change in the circumstances that led to the issuance of the licence and which in the opinion of the commissioner of patents, are unlikely to recur.<sup>41</sup>

Abuse of IPRs pertaining to designs is a ground on which compulsory licences may be granted under South Africa's Designs Act.<sup>42</sup> An amendment or revocation of the licences may, however, be ordered by a court.<sup>43</sup>

Chapter five of the thesis also covered the issuance of compulsory licences under the UK Patents Act and the CDPA. The grounds upon which the licences would be issued were noted to be similar to those in Kenya and South Africa in some instances.<sup>44</sup> The CDPA provides for the possible interpretation of a refusal to grant a licence in respect of a design on reasonable terms as being against public interest and therefore, a ground for cancellation or modification of the terms of such a licence.<sup>45</sup>

South Africa's Competition Act also includes public interest as a factor that determines whether a merger will be approved by the Competition Commission or the Competition Tribunal.<sup>46</sup> The effect of a merger on a number of elements – for example a particular industrial sector or region or the capacity of national industries to compete in international markets, is considered in making a determination pertaining to the influence that the merger is likely to have on public interest. In that context, it is possible that IPR assets held by firms that are pursuing a merger may have the effect of working against public interest when considered against those factors. This may be the case when the potential effect that control of the IPRs by the entity that is formed after the merger will have on the market is considered.

It is notable that protection of confidential information obtained by the competition authorities in Kenya, South Africa and the UK, in the course of their work is provided for in the statutes that govern competition law in the three countries.

The CMA, which regulates merger approvals in the UK, may make enforcement orders related to pre-emptive actions that may be undertaken by entities that have pending approvals of

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<sup>41</sup> Section 56(4) (b).

<sup>42</sup> Section 21(2) (a), (c), (d) and (e).

<sup>43</sup> Section 21(9).

<sup>44</sup> For example, the Patents Act provides for grounds for grant of the licences as including failure to meet the demand for the patented product on reasonable terms or refusal of grant of a licence for the patented product.

<sup>45</sup> Section 11(A) 3.

<sup>46</sup> Section 12A (1).

their mergers.<sup>47</sup> Restrictions on the issuance of the orders apply in relation to the cancellation or modification of licences under patents issued under the 1977 Patents Act or any European patent (UK) as defined under the 1977 Patents Act.<sup>48</sup> The orders also cannot apply to designs registered under the Registered Designs Act 1949.<sup>49</sup> These restrictions also protect IPR holders by limiting the ability of the regulatory body to affect the arrangements entered into by parties in relation to the IPRs mentioned.

Therefore, the chapter answered the sub-question relating to the interaction of IP and competition law principles by providing examples and considering the interaction in the context of the oil and gas industry. The chapter noted the importance of having the interaction between legal principles relevant to the two areas of the law in order to pursue a balanced benefit system for IPRs holders in relation to the IPRs, in the context of society's needs.

### **6.3.2 Use of IPRs in Relation to the Oil and Gas Sector**

The identification of the types of IP relevant to the oil and gas sector in chapter four of the thesis and the regulatory framework in Kenya in relation to the IP formed a basis for this study to answer the main question and sub-questions relating to the application of IP law to Kenya's oil and gas industry. Chapters two to five of the thesis examined the types of IP that are relevant to the oil and gas sector, their protection under the legal regimes in Kenya, South Africa and the UK and the manner in which IPRs applicable to the industry interact with competition law principles in the three countries.

The focus of chapter two with regard to IPRs in the oil and gas industry was Kenya's legal environment in relation to IP. The chapter considered the legal framework in that regard as a basis upon which further examination of legal provisions in the statutes would occur in subsequent chapters.

Chapter three examined the protection of TK, in relation to Kenya's oil and gas industry. TK may be protected by some IPRs in the context of the study because of the physical environment in which extraction of oil and gas has occurred in Kenya. The Turkana area of Kenya has been occupied by communities for generations and the traditional ecological

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<sup>47</sup> Section 72(2) of the Competition Act.

<sup>48</sup> Section 86(2) (a) (i).

<sup>49</sup> Section 86(2) (a) (ii).

knowledge referred to in section 3.3 of chapter three may be relevant to extraction of oil and gas in the area for environmental management.

The chapter noted the factors that made protecting TK with IPRs that would present challenges to the more established forms of protection of IP such as patents. It emerged that novelty, as a criterion for the protection of patents, may present challenges due to the position that most TK falls within prior art because of its disclosure. The requirement that an inventive step should be evident in the invention presented for the award of a patent was noted as one that may be difficult to fulfil by TK. It was also noted that the manner in which TK is held by communities presents a challenge to the holding of IP using the existing legal context for IPRs such as patents which is not tailored for communal holding of IP. These factors led to a study of a mechanism through which TK could be protected by IPRs.

The method identified by the chapter, the TKDR, which is provided for under Kenya's PTK Act, was found to have its origin based on India's TKDL, a TK documentation system.<sup>50</sup> The system has been used in prior art searches, as part of the examination process undertaken before patents are granted.<sup>51</sup> The information available in the TKDL is a system for protection of TK because it contains information that would enable barring of patent protection for inventions that use TK.<sup>52</sup> This outcome, if achieved by the TKDR, would be likely to play a role in meeting the objectives of Kenya's constitutional provisions that are related to TK.<sup>53</sup>

Chapter three of the thesis also considered the application of TK in EIA in the oil and gas industry in Norway<sup>54</sup> and Canada.<sup>55</sup> Thus, it emerged that the application of the PTK Act may be relevant to Kenya's oil and gas industry in order to protect any TK that is used in the country in that regard. The chapter also looked at the provisions related to TK in Kenya's EMCA and found that they are applicable for management of TK in the oil and gas industry. The application and the applicability of the two statutes' provisions with regard to TK in the industry may be more evident with time, given that the extractive component of the work in the industry is a current

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<sup>50</sup> Dr. V.K. Gupta 'Protecting India's traditional knowledge' No. 3 WIPO Magazine (June 2011) 5.

<sup>51</sup> Ibid.

<sup>52</sup> Ibid.

<sup>53</sup> Articles 11, 50 and 69(1) (c) of the Constitution of Kenya, 2010.

<sup>54</sup> Eynar Eporsson and Alma Elizabeth Thuestad 'Incorporating traditional knowledge in environmental impact assessment – how can it be done?' 6 *Arctic Review on Law and Politics* 2 (2015) 133.

<sup>55</sup> Douglas J Nakashima 'Application of native knowledge in EIA: Inuit, eiders and Hudson Bay oil' A report prepared for the Canadian Environmental Assessment Research Council (September 1990) 3.

development. Thus, in relation to the regulatory role of IP law in Kenya as it pertains to the oil and gas industry, the chapter identified the PTK Act and the EMCA as statutes with provisions that would enable the protection of any TK that is applicable in the oil and gas sector in Kenya. Kenya's Vision 2030, the country's long-term national planning strategy, states that intended reforms in the country's energy sector include the presence of a strong regulatory framework.<sup>56</sup>

The main research question was therefore dealt with by the analysis in chapter four of the thesis which looked at provisions of the EMCA and the PTK Act and their possible effect on the manner in which TK used in the oil and gas sector would be handled in order to provide benefits to the local communities in the resources' extraction areas. In relation to the sub-question which relates to the possibility of the application of IP law in Kenya's oil and gas sector advancing the country's economic growth agenda, it emerged from the chapter that the protection of TK and compensation of local communities which generate TK by those who use the TK is likely to have the effect of producing benefits for those local communities. It is possible that those benefits, which may include monetary and non-monetary benefits, may result in the betterment of communities' way of life if they are well managed.

Chapter four considered recent and projected developments in the oil and gas sector and their possible effects on production of the resources. In doing so, the chapter considered the position of entities that are involved in production of the two extractives. It noted the importance of assets available to those firms in that context and looked at how assets of an IP nature would be protected in that regard. It emerged that patents, trade marks, trade secrets, copyright and industrial designs could protect the assets relevant in the industry.

The chapter considered the legal provisions applicable to the IP in Kenya, South Africa and the UK respectively. It also considered case law from the three jurisdictions relating to the protection of the IP. Given that common law is applicable in the three countries, some similarities were observed in the points considered by courts regarding protection of IP. In a number of cases, the right to the exercise of IPRs by an IP owner was upheld by the courts in instances where infringement was found to have occurred.<sup>57</sup> In other cases, courts pointed out

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<sup>56</sup> Vision 2030 at 8.

<sup>57</sup> For example, *Total Limited v YouView TV Limited* 2014)EWHC 1963 (Ch) and *Societe des Produits Nestle SA v International Foodstuffs*(100/14) [2014] ZASCA187(27 November 2014) with regard to trade marks and *Roman Roller CC and another v Speedmark Holdings Proprietary Limited* [1995] ZASCA 78; 1996 (1) SA 405 (SCA) with regard to patents.

that where infringement had been claimed, the claimant had to establish that the material claimed to have infringed the IP owner's work had substantially been derived from the claimant's work.<sup>58</sup>

Chapter four therefore indicated some of the points that may work in favour of IP owners and challenges that IP owners are likely to face in asserting rights to their IP from a litigation context. It also highlighted issues that are likely to be considered by the courts in making determinations when faced with IP-related facts that are presented by parties in the course of making their arguments.

These points are relevant to the examination of the use of IP law as a regulatory tool in the manner described by the main research question of the use of application of Kenya's IP law in the country's oil and gas sector in order to foster innovation and support economic growth. In seeking an answer to the question, the chapter highlighted instances, shown by case law, in which aspects of laws relevant to IPRs have been applied in relation to IP protection in extractives and other industries, including the oil and gas industry. Thus, the chapter demonstrated that statutory provisions in Kenya can be used by courts as a regulatory tool to pursue the achievement of the national policy goals related to providing protection for IP that qualifies for protection.

The chapter also considered how courts looked at the overall effect that the protection of IP is likely to have on an industry as was demonstrated by cases that considered restraint of trade related to confidential information. For example, some cases showed that the protection of private rights related to trade secrets depended on the subject matter meeting the criteria required to qualify as confidential information.<sup>59</sup> This is important in order to pursue the aforementioned balance of private rights and public interest related to IP as it is likely that a balance of this nature would enable the achievement of national policy goals from the perspective of spurring creativity and innovation whilst limiting the potential that IPRs have, to act as a barrier to entry in markets. As seen in section 2.4.1 of chapter two, patent thickets may hamper access to patent licences but this may be remedied by the creation of patent pools.<sup>60</sup>

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<sup>58</sup>For example, *IPC Media Limited v Highbury Leisure Publishing Limited* (2004) EWHC 2985 (Ch) and *Baigent v Random House Group Limited* (2006) EWHC 719 (Ch).

<sup>59</sup> For example, *Credit Reference Bureau Holdings Limited v Steven Kunyihya* (2017) eKLR and *Leland I. Salano v Intercontinental Hotel* (2013) eKLR.

<sup>60</sup> Shapiro 2001 at 119.

As noted before in this summary, chapter five considered the position of IP protection *vis a vis* competition law principles in Kenya, South Africa and the UK. Although competition law provisions may pose challenges to the protection of IPRs, it emerged from the chapter that there are safeguards for IP owners that may be provided as exceptions to legal provisions that are in favour of maintaining competitive market conditions. For example, the provision made for adequate remuneration of IP owners which is available in provisions that allow issuance of compulsory licences and the possibility of cancellation or modification of compulsory licences by competition authorities where circumstances such as changes in market conditions are in favour of such action.

The exceptions which were demonstrated in the chapter sought to address the key research question of the thesis and the sub-questions regarding the interaction of the application of IP laws with the national policy goals related to the oil and gas sector and the likelihood of IP law application in the sector advancing the country's economic growth agenda. The chapter showed the manner in which the policy goal of enhancing investment in the country's oil and gas sector would be pursued, through the protection of IPRs, even where the rights are protected in a market environment where competition is encouraged.

Although, as noted earlier, there are various aspects which would be considered as drivers of investment in an economy, the protection of IPRs is likely to play a role in this regard, especially in encouraging entities which have IP that they consider valuable to their competitive advantage to apply the IP in their operations within the country. The application of IP law is therefore likely to contribute to the advancement of Kenya's economic growth agenda.

#### **6.4 Towards the Achievement of the Intended Objective of IP Laws' Application in the Oil and Gas Sector in Kenya: Recommendations**

In order to achieve the four roles that Kenya's IP laws are intended to achieve in the country's oil and gas sector, as described in the introduction to this chapter, the public interest and IP ownership aspects in the laws should be applied with the intended objective of achieving a fair outcome for the respective interested parties. This study has sought answers to the central research question and sub-questions in order to address the achievement of this objective. The findings in the chapters, which were summarised in the first section of this chapter, revealed, *inter alia*, that challenges have been encountered or may be encountered in applying IP laws in

Kenya's oil and gas industry to achieve the above objective. The next sections in this chapter outline those challenges and propose solutions to them.

Chapter two gave an introduction to IPRs relevant to the oil and gas industry and innovation and found that there may be a link between IP, innovation and economic growth, although it is contended that other factors other than the award of IPRs may provide motivation for innovation.<sup>61</sup> The chapter also found that arguably, economic growth, as a possible outcome of innovation, may therefore not be linked to ownership or control of IPRs. In answer to the sub-question on the possible role of IP in economic growth and innovation, the chapter found that there are factors that are specific to different IPRs that may work against any role that IPR grant may have in encouraging innovation and therefore, economic growth.

#### **6.4.1 Aiming for a Balance between Private Rights and Public Interest in Judicial Interpretation of Laws**

The interpretation of statutory provisions in relation to IPRs is an important component of the overall legal environment in relation to IPRs in the oil and gas industry in Kenya. The use of case law that has its focus as the pursuit of a balance between private rights and public interest may also play a part in improving the possibility of moving closer to the achievement of this balance as it relates to Kenya's oil and gas industry.

Chapters four and five of the thesis, in undertaking a study of case law in Kenya, South Africa and the UK, identified instances in which the judicial interpretation of statutory provisions and use of case law by courts in the three jurisdictions considered the overall effect of courts' decisions on the legal environment. This approach by judicial authorities in Kenya may have the effect of obtaining the benefits intended by IP law in relation to the eventual overall advantages that can be achieved by society in relation to IPRs in the country's oil and gas industry.

The recommendation regarding judicial interpretation of legal provisions in relation to private rights and public interest is likely to be important in the interpretation of provisions of the PTK Act and the EMCA. The two statutes, which featured in chapter three of this study, should, in theory, provide a legal environment in which the possibility of unauthorised appropriation of TK is minimised. Since the enactment of the PTK Act in 2016, there appear not to have been court decisions that are based on interpretation of the Act's provisions. This means that the

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<sup>61</sup> See, for example, Gathii 2016.

practicability of the Act's provisions for its intended purpose may not have been tested, a factor that may introduce uncertainty in its effectiveness as a regulatory tool. The apparent absence of case law based on TK with reference to the provisions of the EMCA also suggests that there may be a gap in testing the provisions of the statute in relation to TK in Kenya. Therefore, safeguarding TK in relation to Kenya's oil and gas sector from the basis of the country's law may face the challenge of a lack of local judicial authorities to guide the implementation of the PTK and EMCA although reference to case law from other common law jurisdictions may be used for that purpose.

#### **6.4.2 Promoting the Use of Utility Models in Kenya's Oil and Gas Industry**

Under Kenya's IPA, an invention qualifies for the award of a utility model certificate if it is new and industrially applicable. In Kenya, the term of protection for a utility model is ten years.<sup>62</sup> The recommendation in this section is based on the two, rather than three criteria for patent protection for inventions and the possibility of converting patent applications to utility model applications and vice versa. Further, the point noted in chapter two of this thesis regarding incremental, rather than radical innovations being prevalent in Kenya's industries makes an examination of the possibility of promoting the use of utility models in Kenya's oil and gas industry relevant. The promotion of use of utility models rather than patents may be successful because of the above factors, in addition to generally lower costs of registration for utility model registration.

Training entrepreneurs in the oil and gas industry to create awareness about the registration of the IPR may provide them with more options to protect inventions. In chapter two of the thesis, it emerged that wrongly drawn applications for the IPR may be responsible for the low uptake in registration, a point that may be addressed through training. Successful applications for utility model certificates would be likely to work in favour of the grantees of the IPR through protection of inventions whilst providing a shorter duration for protection than patents, a point likely to work in favour of public interest.

In the upstream segment of Kenya's oil and gas industry, opportunities may exist for activities related to modifying existing products or processes to local conditions in a manner that qualifies for utility model protection. It may therefore be useful for local workers in the industry

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<sup>62</sup> Section 82(3) of the IPA.

to pursue inventive activity in the industry with that goal. Given the industry's stage of growth in the country, this may however prove more risky for entrepreneurs due to uncertainties inherent in newer industries. Another factor that may limit applications for utility models in the industry is the accessibility to products or processes in the industry that could qualify for local modification. Limitations to accessibility may be caused by elements such as limited information on available products or processes in use for extractive processes in the industry and limited skills or experience required to engage in the inventive activity in question.

Thus, the practicability of utility models seems to be untested in that regard in the country's hydrocarbons sector. It has been argued that the possibility of hampering innovation with utility models exists, as would likely be the case with other IPRs such as patents, by reason of limiting access to knowledge that has previously been in the public domain and thus available to others to use for invention.

The enactment of Kenya's MPSR Act indicates progress made in the country's legal provisions for transactions involving IP assets. The statute provides for the creation of security rights – property rights in movable assets intended to secure payment or other performance of an obligation. Movable assets are defined in the Act to mean any tangible or intangible asset. The promotion of utility model protection by government policies should go hand in hand with the provision of information and training related to the use of utility model certificates as collateral for financing.

This may improve access to financing for small and medium enterprises (SMEs) based on their IP in addition to or instead of sole reliance by the businesses on tangible assets, with the possible effect of growth of local enterprises engaged in innovative activity related to the oil and gas sector. The effectiveness of these measures will however depend on the willingness of financial institutions to change lending policies to include intangible assets as a basis for providing financing, in cases where institutional policies do not include those assets.

Local enterprises working in the oil and gas industry may consider exploiting their IP assets through transactions that involve licensing or assigning the IP in cases where they do not have the capacity to engage in production using the assets. Through such an approach, it may be possible for SMEs to specialise in the production of incrementally innovative products which qualify for utility model and other IP protection.

South Africa's IP Policy of 2018 proposes the use of utility model protection to counter challenges that may underlie patentability of inventions among those who work in the country's informal sector and in the country's SME sector in general.<sup>63</sup>

#### **6.4.3 Continued Promotion of ADR in Kenya's Legal System**

Chapter two noted that the use of ADR has been supported by Kenya's judiciary.<sup>64</sup> The continued promotion of this mode of settling disputes by the judiciary is likely to be of benefit to the targeted growth of the oil and gas sector in the country. IP-related disputes may emerge from areas such as IP licences and collaborations that lead to the creation of IP. Advantages of ADR such as time and cost saving and adjudication of disputes by those familiar with the oil and gas industry have the potential to improve Kenya's profile for investment. The success of adopting ADR methods for dispute settlement however depends on a number of factors, among them the willingness of parties to use those methods.

#### **6.5 Concluding Remarks**

This thesis considered the possibility of IP law playing a role in the achievement of the economic growth goal set out by Kenya's Vision 2030 in the context of the country's oil and gas sector in the second chapter. It found that the growth of Kenya's oil and gas industry will depend on a number of factors, including the legal environment in which entities in the industry conduct their operations. A constantly changing environment in relation to *inter alia*, the pricing of oil and gas and the use of the resources in a global setting in which substitutes for the commodities are the subject of ongoing R & D means that the protection of any advantages enjoyed by entities in the industry through holding of assets, including IPRs, will be important.

Kenya's IP law may make it possible for some investments in the oil and gas industry to be protected. The application of the country's competition law may also promote competition in the industry. The practical application of the laws relating to IP assets in the industry, especially in the upstream segment of the sector, is likely to be tested over time. The application of laws relating to IP in South Africa and the UK, where there is case law related to IP that is specific to commercial mining, is a relevant reference point for Kenya because the two countries also apply

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<sup>63</sup> South Africa's IP Policy 2018 at 5.

<sup>64</sup> Gazette Notice Number 5179, Kenya Gazette Volume CXVI Number 89 dated 28th July 2014.

common law and are TRIPS member states. It is thus possible that in seeking to optimise the application of IP laws to Kenya's oil and gas sector, lessons may be drawn from the two jurisdictions.

The exploitation of IPRs that are relevant to Kenya's oil and gas sector by indigenous communities and SMEs may be enhanced through training members of the communities and entrepreneurs by institutions such as KIPi. Government policies may be developed and implemented with this goal as an additional means of optimising the use of IP assets that are produced locally. Chapters three and four of the thesis studied statutory and judicial authorities related to IPRs that are relevant to the oil and gas sector and noted that, based on the application of the legal principles in other industries in the country, the provisions would be applicable to IPRs in the country's oil and gas industry for protection of IP assets and providing flexibilities where applicable.

This study, in chapter five, looked at the possibility of using competition law provisions to support the IP law provisions that are aimed at promoting public interest related to IPRs. In relation to the oil and gas sector, the study concluded that although there is limited information currently available on the effectiveness of this approach in Kenya, the country's competition law provisions could work as a tool to protect public interest related to IP in the industry.

This chapter's proposals for the enhancement of benefits that apply to IPR holders and the public in relation to Kenya's oil and gas industry may provide a basis upon which initial steps may be taken in that direction. Over time, the initial development stages of Kenya's upstream petroleum sector will likely provide more information that may be useful in improving IP law-based solutions to challenges encountered.

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