

**INTEGRATING INTELLECTUAL PROPERTY, INNOVATION,
TRANSFER OF TECHNOLOGY AND LICENSING
IN KENYA AND AFRICA**

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ABSTRACT

The overarching argument in this essay is that Kenya and Africa have a lot of potential for, and should integrate innovation, technology development, and the protection and promotion of intellectual property (IP). The integration needs to take a three-pronged methodology and approach. First, integration is required on a doctrinal level and IP policy reforms are necessary on a sector-specific as well as an institutional level. Second, integration is necessary through legislative and regulatory reforms. These will help address serious weaknesses or limitations in the legal and regulatory frameworks on and in the interface among IP, innovation and transfer of technology valuation, commercialisation, as well as general corporate and constitutional governance. Third, there is a need for scholarship and practice to integrate business and law in Kenya with licensing, IP, innovation and transfer of technology. This will enable innovators, IP owners and other key stakeholders to benefit from the relevant forms of IP, including copyright, trademark, patent, trade secret, unfair competition, utility model, industrial design, plant or animal breeder's rights, and other forms of IP and innovation that have been developed and need to be nurtured. The key research objective and methodology include review of the legal framework on IP, innovation and transfer of technology, reconceptualization, comparative analysis of how licensing and scholarship affects the status and trends in IP, innovation and transfer of technology in Kenya.

Key words: Technology transfer, Licensing, Kenya, Africa

**1. BACKGROUND TO INTELLECTUAL PROPERTY,
INNOVATION, TRANSFER OF TECHNOLOGY AND
LICENSING IN KENYA AND AFRICA**

My overarching argument is that Kenya needs to integrate intellectual property (IP) protection and promotion, innovation, technology transfer (ToT) and licensing. The integration needs to take a three-pronged methodology and approach. First, integration is required on a doctrinal level and IP policy reforms are necessary on a sector-specific as well as institutional level. Second, integration is necessary through legislative and regulatory reforms. These reforms will help address serious weaknesses or limitations in the legal and regulatory frameworks on and in the interface among IP, innovation and ToT valuation, commercialisation, as well as general corporate and constitutional governance. Third, there is a need for scholarship and practice to integrate business and law in Kenya with licensing, IP, innovation and ToT.

What is IP, innovation and ToT under national, regional and international law? How have international and regional organisations such as the World Trade Organisation (WTO), the World Intellectual Property Organisation (WIPO), the African Regional Intellectual Property Organisation (ARIPO), the African Intellectual Property Organisation (OAPI)¹ and African regional trade agreements, conceptualised and operationalized IP, innovation and ToT? In most cases, the

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¹ The *Organisation Africaine de la Propriété Intellectuelle* See Ben Sihanya, *Intellectual Property and Innovation Law in Kenya and Africa: Transferring Technology for Sustainable Development*, (Sihanya Mentoring and Innovative Lawyering, Nairobi & Siaya, 2016); Ben Sihanya, *Intellectual Property and Innovation Law in Kenya and Africa: Cases and Materials*, (Sihanya Mentoring and Innovative Lawyering, Nairobi & Siaya, forthcoming 2020).

three are not integrated in the relevant laws, in practice and in scholarship.

The instruments under the WTO and WIPO have provided some of the most comprehensive definitions and other provisions on IP. The WTO's 1994 Agreement on Trade Related Aspects of Intellectual Property, (TRIPS Agreement) has a list of seven (7) IP doctrines: copyright and related rights, trademarks, geographical indications, industrial designs, patents, layout designs (topographies) of integrated circuits, protection of undisclosed information, and control of anti-competitive practices in contractual licenses.²

The TRIPS Agreement's definitions are largely similar to those under WIPO. This is partly because the WTO TRIPS Agreement incorporates or legislates, by reference, to some WIPO administered instruments. These include the continuing significance of the WIPO administered Berne Convention for the Protection of Literary and Artistic Works 1886 (1971), the Madrid System 1891 and 1989,³ and the Paris Convention of 1883.⁴

Remarkably, some IP and related regimes crucial to Kenya and Africa are either not prominently captured in the TRIPS Agreement or not reflected at all. These include traditional knowledge (TK) and traditional cultural expressions (TCE),⁵ and utility model (UM) protection.⁶

Relatedly, the transnational IP regime comprehensively integrates ToT. The Draft International Code of Conduct on the Transfer of Technology, 1985 defines transfer of technology (ToT) as 'the systematic transfer of skills for the

manufacture of a product or provision of a service but does not include the sale of a good.'⁷

Technology transfer takes two broad forms. The first is the transfer of skills while the second is the transfer of equipment (or hardware) with appropriate know-how. Another typology relates to contractual, voluntary or consensual technology transfer, compared to compulsory or involuntary technology transfer. The latter may include Government use.⁸

ToT has been a major question even before Kenya's and African independence in the 1950s and 1960s. Numerous transnational and regional instruments have sought to address ToT with varying degrees of success.⁹ These include the various instruments under the treaties administered by WIPO, the TRIPS Agreement, OAPI and ARIPO.¹⁰

Article 7 of the TRIPS Agreement recognizes that the protection and enforcement of IP should contribute to the transfer and dissemination of technology.¹¹ Article 66(2) requires that developed country members under the TRIPS Agreement should provide incentives to enterprises and institutions in their territories for the purpose of promoting and encouraging ToT to least developed countries (LDCs) in order to enable them to create a sound and viable technology base.¹²

² Agreement on Trade Related Aspects of Intellectual Property Rights (1869 UNTS 299; 33 ILM 1197, 1994) [hereinafter TRIPS Agreement].

³ Madrid Agreement on the International Registration of Marks (828 UNTS 391. 1891) and Protocol to the Madrid Agreement 1989.

⁴ Paris Convention for Protection of Industrial Property (21 UST 1583, 828 UNTS 305. 1883).

⁵ Happily, Kenyan and African states are engaged in debates on traditional knowledge and traditional cultural expression at national levels and in the negotiations at WTO, WIPO, UNCTAD, UNESCO, FAO among others.

⁶ Significantly traditional knowledge (TK), traditional cultural expressions (TCE) and genetic resources are actively being debated in the WTO, WIPO, UNESCO, UNCTAD, FAO and WHO as well as under the African IP and trade agreements.

⁷ See Ben Sihanya, *Constructing Copyright and Creativity in Kenya: Cultural Politics and the Political Economy of Transnational Intellectual Property* (Dissertation for the Juridical Science Doctorate (JSD) submitted to Stanford Law School, Stanford, CA, USA, 2003);

Ben Sihanya, 'Technology transfer and development in Kenya: issues in regulation and competition law,' (1995) assessed essay submitted in partial fulfillment of the Master's of Laws Degree, University of Warwick Law School, UK, Dr Andy Clark, Regulation of International Technology Transfer and Intellectual Property on file at Innovative Lawyering and Sihanya Mentoring) Nairobi & Siaya.

⁸ Industrial Property Act 2001 (Kenya) cf. s 80.

⁹ Ben Sihanya, *Intellectual Property and Innovation Law in Kenya and Africa: Transferring Technology for Sustainable Development*, (Sihanya Mentoring and Innovative Lawyering, Nairobi & Siaya, 2016).

¹⁰ *ibid.*

¹¹ Antony Taubman, Hannu Wager and Jayashree Watal (eds), *A Handbook on the WTO TRIPS Agreement* (Cambridge University Press, New York, 2012) 24.

¹² *ibid.* Similar ToT debates have taken place in important African and International debates including on environment and development, law of the sea, biodiversity, and climate change.

2. TERMINOLOGY RELATED TO INTELLECTUAL PROPERTY IN KENYA AND AFRICA

In Kenya, IP is broadly divided into two categories, namely, copyright and related rights and industrial property rights.¹³ Broadly, copyright refers to a set of exclusive rights enjoyed by the author or creator of an original work. These include the right to reproduce (e.g. hand-written, photocopy, print, scan, photograph, snapshot, downloads), distribute or adapt the work. Copyright does not protect ideas, only their expression or fixation. In most jurisdictions, copyright arises upon fixation and does not need to be registered. In Kenya, copyright owners have the exclusive constitutional and statutory right to exercise control over copying and other exploitation of the works for a specific period of time, after which the work is said to enter the public domain.¹⁴

Copyright confers two forms of rights: moral rights¹⁵ and economic rights. Moral rights consist of four categories:¹⁶ the right to be named as author; the right to integrity; the freedom from false attribution; and the right to privacy. Economic rights relate to an author's or entrepreneur's right to secure economic and financial benefits from investing in a work.¹⁷

The second category of IP is industrial property. Industrial property consists of at least ten sets of protected rights.¹⁸

Under this, there is patent, which is the certificate granted to an inventor, and the property rights of a patentee. Another protected right is the utility model (UM or petty patent) which is used to protect and promote new and industrially applicable innovations.¹⁹ Some of the utility models (UMs) granted protection and registered in Kenya include detachable concrete structures, smart GPS alarm, virtual currency or requester device, and virtual currency or mobile device.²⁰

A further right classified under industrial property is trade secret (TS). This is any confidential business information which provides an enterprise a competitive edge. To be protected, it must satisfy three criteria: first, it must be secret in the sense of not being generally known. Second, it must have commercial value because of the confidentiality or secrecy. And third, there must be an obligation to keep the information confidential.²¹ Examples in Kenya include the numerous non-disclosure agreements (NDAs), non-compete agreements, and contracts in restraint of trade in the Kenyan and African sole proprietorship, firms, corporations or organizations dealing with education, training and mentoring; lawyering and litigation; manufacturing; or distribution and delivery of various goods and services.²² An example is the black syrup base of the Coca Cola drink.²³

¹³ Some IP scholars and lawyers claim that PBR or plant variety protection (PVP) is the third distinct doctrine or category of IP and that it is not part of industrial property. They do not account for animal breeder's right (ABR). I treat ABR as significant in Kenya and Africa and, like PBR, ABR belongs to industrial property rights. In addition, there is need for a clear legal framework on ABR. See Ben Sihanya, *Intellectual Property and Innovation in Kenya and Africa: Transferring Technology for Sustainable Development* (2016).

¹⁴ Moral rights were conferred by s 7(3) of Kenya's Copyright Act 1966 at the end of a section which otherwise dealt more exhaustively with economic rights. s 32 of the Copyright Act 2001 exclusively addresses the 'moral rights of an author.'

¹⁵ Moral rights were conferred by s 7(3) of Kenya's Copyright Act 1966 at the end of a section which otherwise dealt more exhaustively with economic rights. s 32 of the Copyright Act 2001 exclusively addresses the 'moral rights of an author.'

¹⁶ Ben Sihanya, *Intellectual Property and Innovation in Kenya and Africa: Transferring Technology for Sustainable Development* (2016), 193.

¹⁷ *ibid* 194.

¹⁸ Remarkably, the TRIPS Agreement, including Trade in Counterfeit Goods focuses on seven (7) IP doctrines. See TRIPS Agreement, art 1 and ss 1-7 of Part 2. See also Daniel Gervais, *The TRIPS Agreement: Drafting History and Analysis* (Sweet and Maxwell, London, UK, 2003); 'Chapter 3 Categories of Intellectual Property Embraced by TRIPS' in *Resource Book on TRIPS and development* (UNCTAD and ICTSD, Cambridge University Press, London, UK, 2005) 37-60. *ibid*, list

and debate this at 39: '1. Literary, artistic and scientific works; 2. Performances of performing artists, phonograms, and broadcasts; 3. Inventions in all fields of human endeavor; 4. Scientific discoveries; 5. Industrial designs; 6. Trademarks, service marks, and commercial names and designations; 7. Protection against unfair competition and all other rights resulting from intellectual activity in the industrial, scientific, literary or artistic fields.'

¹⁹ Industrial Property Act 2001 (Kenya), s 82(2).

²⁰ Kenya Industrial Property, 'Journal of patents, industrial designs, utility models and trademarks' (2016) 19 *Industrial Property Journal*, KIPi, Nairobi, September 2016 <http://www.kipi.go.ke/images/docs/journals/sept_2016.pdf> accessed 18 October 2016. These are included in Annex 1.

²¹ Talhiya Sheikh, 'Trade Secrets and Employee Loyalty' (2015) 7(1) *World Intellectual Property Journal*, Sweet and Maxwell, London.

²² These are included or operate under the Law of Contract Act, Cap 23, and the Contracts in Restraint Of Trade Act, Cap 24. Cf Kenya's Competition Act, 2010; Consumer Protection Act, 2012. Uganda is one of the few African States with a legislative framework on trade secret. See Trade Secrets Act, 2009 (Uganda).

²³ The syrup is not patented but is protected under trade secret law. See Sabra Chartrand, 'Patents; many companies will forgo patents in an effort to safeguard their trade secrets' (*The New York Times*, New York, 5 February 2001) <http://www.nytimes.com/2001/02/05/business/patents-many-companies-will-forgo-patents-effort-safeguard-their-trade-secrets.html?_r=0> accessed 24 October 2016.

Moreover, trademark (TM, SM, or ®) as an industrial property is a bundle of intellectual property (IP) rights granted to distinguish the goods and services of one trademark owner, enterprise or undertaking from those of the competitors, while the unfair competition (UC) regime of industrial property is applied against acts of competition contrary to fair or honest practices in industrial and commercial matters.²⁴

For its part, a geographical indication (GI) is defined under Article 22 of the TRIPS Agreement.²⁵ Clause 2 of the Kenyan Geographical Indication Bill also defines GI stating that:

‘Geographical Indication’ in relation to goods or services, means a description or presentation used to indicate the geographical origin, in the territory of a country, or a region or locality in that territory, where a given quality, reputation or other characteristics of goods or services are exclusively or essentially attributable to geographical environment, including natural factors, human factors or both.²⁶

This relates to situations where indication of the source is a significant factor in terms of quality, sentimental value or association generally.²⁷ For example, Champagne, Chablis and Cognac are French drinks, which derive their names from their geographical origins and relate to certain quality standards.²⁸ Some key examples from Africa include Miombo woodlands of South Africa known for Marula fruits, Penja pepper in Cameroon, Oku honey in Cameroon and Ziamacenta coffee in Guinea. It is notable in this regard that Kenya has a lot of candidate products for GI protection, if only it could enact a law and negotiate these in the international

regime. Good examples could include Kisii soapstone (carvings), mnazi (coconut palm, from Coastal Kenya), Kitui or Marigat honey, Kamba carvings, special tea (such as those from Kericho, Nandi and Limuru),²⁹ and coffee (from Mt Kenya region and the Aberdares).³⁰

Another notable industrial property right is mask work or layout design of integrated circuits. This is defined under the Washington Treaty on Intellectual Property in Respect of Integrated Circuits of 1989 as:

The three-dimensional disposition, however expressed, of the elements, at least one of which is an active element, and of some or all of the interconnections of an integrated circuit, or such a three-dimensional disposition prepared for an integrated circuit intended for manufacture.³¹

A generally accepted definition of plant breeder’s rights (PBR) or Plant Variety Protection (PVP) recognises rights granted to the breeder of a new variety of plant that give the breeder exclusive control over the propagating material. Thus, PBR is exclusive rights over the commercial production and marketing of the reproductive or vegetative propagating material of the protected variety.³² In Kenya, PBR and PVP are defined under the Seeds and Plant Varieties Act 2012 at section 2 as ‘rights granted under section 17.’ For protection to be accorded, the seed or plant must be distinct, uniform and stable (DUS). In Kenya, PBR protection has been extended to products, owned by the Kenya Seed Company,³³ Pioneer Hybrid, Monsanto Kenya, and Simlaw seeds.³⁴

²⁴ See Kenyan Trade Marks Act, s 5; Competition Act 2010 (Kenya) s 10.

²⁵ TRIPS Agreement, art 22.

²⁶ Kenyan Geographical Indication Bill, Clause 2.

²⁷ Justin Hughes, ‘Champagne, Feta, and Bourbon: The spirited debate about geographical indications’ (2006) 58 *Hastings Law Journal*, at 299.

²⁸ Ben Sihanya, ‘Traditional Knowledge and Traditional Cultural Expressions in Kenya’ (2016) Volume 12, 2016 No. 2 *LSK Journal* (1-38).

²⁹ ‘Farmers must be winners in the tea trade debate’ (*Business Daily*, Nairobi, 4 August 2016) <<http://www.businessdailyafrica.com/Opinion-and-Analysis/Farmers-must-be-winners-in-the-tea-trade-debate/539548-2819848-akgppn/index.html>> accessed 24 October 2016.

³⁰ ‘Brands that could earn farmers more’ (*Daily Nation*, Nairobi, 14 December 2008) <<http://www.nation.co.ke/business/news/>

</1006/502166/-/view/printVersion/-/u5br9mz/-/index.html>> accessed 24 December 2016.

³¹ TRIPS Agreement, art 6 adopts and applies the Washington Treaty on Intellectual Property in Respect of Integrated Circuits, 1989.

³² Significantly, hardly any important IP scholar or lawyer discusses animal breeder’s rights (ABR). They do not account animal breeder’s right. I treat ABR as significant in Kenya and Africa and like plant breeder’s rights (PBRs) belong to industrial property rights.

³³ Some of their products include duma, popo and mbuni for maize seeds; serena and seredo for sorghum seeds; as well as heroe and chozi for wheat seeds.

³⁴ See Kenya Plant Health Inspectorate Service (KEPHIS) website <<https://www.google.com/url?sa=t&rct=j&q=&esrc=s&source=web&cd=3&cad=rja&uact=8&ved=0ahUKEwiltv60mObPAhXLXRoKHodCBoQFggqMAI&url=http%3A%2F%2Fwww.kephis.org%2F&usq=AFQjCNG3lesECc3H3Yg-mf1YdrIwIuiGVA&sig2=my2KWEO5Vxx2GysRcCg05w&bvm=bv.135974163,d.d2s>> accessed 19 October 2016.

The other recognised industrial property is industrial design (ID). This is protected on the basis of the originality of a combination of lines or colours giving rise to the appearance or look and feel of a product.³⁵ ID includes graphic designs, fashion designs, and textile designs.³⁶ Industrial design can be used to protect shapes, configurations, patterns or ornaments. Other items which may be the subject matter of industrial design include toys, games, and electrical equipment.

3. NOMENCLATURE ON INNOVATION IN KENYA AND AFRICA

What is innovation and how has it been conceptualised, problematised, and contextualised in Kenya and Africa? Innovation has not been significantly conceptualised and integrated into the policies and laws dealing with IP and ToT. For instance, innovation is rarely defined and different terms or concepts are used in similar or relevant contexts. Some of the concepts include creativity, invention, enterprise and entrepreneurship.

A. Linking IP to innovation, industrialization and sustainable development

Historically, social, cultural, economic and political development (especially wealth creation and distribution) were largely associated with the four factors of production known to traditional economics, that is, land, labour, capital, and entrepreneurship.³⁷

Since the early 20th century, the link among IP, innovation and technology in development has become well established, at

least in western literature. Developed countries like USA, Japan, and in the European Union (EU) attribute most of their wealth and socio-economic development to the optimal protection and promotion of IP and innovation. Remarkably, intellectual property and innovation are crucial in health, agriculture or food security, water and sanitation, energy, transport, information, communication, education and entertainment.³⁸

However, in Kenya and most of Africa, emphasis has been on real property and other traditional or tangible assets as the source of wealth. Significantly, a paradigm shift is emerging. Faster industrialization and socio-economic development will be achieved and sustained through a concerted integration of other means of wealth creation like IP and innovation.

In this essay I address the ways the Kenyan and African Governments, companies, civil society organisations (CSOs), other institutions and individuals can integrate IP, innovation and ToT to achieve wealth creation, industrialization and sustainable development.³⁹

B. Nomenclature and conceptualising innovation in Kenya and Africa: what is it?

Many people assume an innovation must be based on a new service or technology. However, innovation does not have to be technical. Technological innovations are important, but so are social and cultural innovations like newspapers, insurance, organizations (like universities), hire purchase or cultural innovations.⁴⁰ In fact, performance contracting increasingly recognises innovation in service delivery.⁴¹

³⁵ Industrial Property Act 2001 (Kenya), s 84.

³⁶ Industrial Property Act 2001 (Kenya), s 84.

³⁷ Ben Sihanya, *Intellectual Property and Innovation Law in Kenya and Africa: Transferring Technology for Sustainable Development*, (Sihanya Mentoring and Innovative Lawyering, Nairobi & Siaya, 2016). Cf. Ben Sihanya, 'Intellectual property and innovation in Kenya: legal and regulatory issues in business incubation,' in Prof Bernard Aduda (Ed) *Science and Technology Park Development for Sustainable Industrial Growth: Proceedings of the National Workshop in Commemoration of the Scientific Revival Day of Africa* (Kenya National Academy of Sciences (KNAS), Nairobi, 2006) 41-58.

³⁸ Ben Sihanya, *How can we Constitutionalize Innovation, Technology and Intellectual Property in Kenya?* (African Technology Policy Studies Network, Nairobi, 2002).

³⁹ Sustainable development here is understood in terms of the sustainable development goals (SDGs), including the preceding millennium development goals (MDGs). That includes social, economic and ecological sustainability: resource production,

distribution and use that recognizes intra-generational and inter-generational equity. See *Our Common Future* (World Commission on Environment Development, Oxford University Press, 1987).

⁴⁰ Peter Drucker, *Innovation and Entrepreneurship: Practice and Principles* (Elsevier Butterworth-Heinemann, 1985); Joseph Schumpeter, *History of Economic Analysis* (Oxford University Press, New York, 1954, 1994) (with a new Introduction by Mark Perlman) (advancing what has been referred to as 'Schumpeterian innovation'); Joseph A. Schumpeter, *Capitalism, Socialism and Democracy* (Routledge, London and New York, 1943, 1994).

⁴¹ Ben Sihanya, *Intellectual Property and Innovation Law in Kenya and Africa: Cases and Materials* (Sihanya Mentoring and Innovative Lawyering, Nairobi & Siaya, forthcoming 2020). Cf. Phillip Wambua, Gorretti Ofaa & Samuel Otor (eds), 'Performance Contracting and Academic Staffs Administrative Work Systems' for Service Delivery in Selected Kenyan Universities' (2014) *International Journal of Innovative Research & Development*

Innovation means developing a new idea and putting it into practice. It is the process of developing a valuable new process or product (a good, service or institution) and introducing it into the market or society. This includes the idea or concept formulation stage and the successful launch of the new or improved process or product in the market.⁴²

While innovation in a narrow sense could be defined to mean inventions, innovation in a broader sense includes inventions as well as cultural, institutional and commercial creativity.

4. TYPOLOGY OF INNOVATION IN KENYA AND AFRICA

Innovation may be regarded as falling under a four-pronged typology: technological, cultural, institutional and commercial.⁴³

- (a) Technological innovation. This includes product and process innovation, resulting from scientific or technological R&D. These are usually protected by industrial property doctrines like patent, utility model, industrial design, plant breeder's right, trade secret or unfair competition.
- (b) Cultural innovation. Kenya's and Africa's copyright, creative and cultural industries include book publishing, music, theatre, and film or cinema (or audio-visual works).⁴⁴
- (c) Institutional innovation. In the 1980s and 1990s, the Government of Kenya recognised institutional innovation and established research and development (R&D) institutions, Kenya Industrial Property Institute (KIPI), and the following universities: Moi, Egerton, and Jomo Kenyatta University (College) of Agriculture and Technology (JKU(C)AT), as specialized colleges or universities to emphasize scientific and technological innovation, especially in agriculture and ICT. Some of these, along with the Kenya Institute of Public Policy Research (KIPPRA) focused on the arts, humanities and social sciences as well. However, most of these do not have the desired impact.

<<http://business.ku.ac.ke/images/stories/docs/Administrative%20Work%20systems%20NOV14019.pdf>> accessed 27 June 2018.

⁴² Christopher Kalanje, 'The Role of Intellectual Property in Innovation and New Product Development' *op. cit.*; Drucker, *Innovation and Entrepreneurship: Practice and Principles*, *op. cit.*

⁴³ Ben Sihanya, 'Intellectual Property and Mentoring for Innovation and Industrialization in Kenya' (2009) Vol. 5, 2009 No. 1, *Law Society of Kenya Journal* 29-57; Ben Sihanya 'Intellectual Property for

(d) Commercial or business innovation. Successful innovation involves 'going to market.' Trademark, industrial design and geographical indication play an important role in the marketing process. The strategic use of a combination of IP rights can significantly contribute to higher profits, and related returns on investment.

An invention is the generation of new knowledge aimed at solving a specific technical problem. This relates to both products and processes, characteristically protected by patent law, as covered by section 21 of Kenya's Industrial Property Act, 2001.

Innovation and invention are crucial parameters for Kenya's industrialization, as well as human and socio-economic development. While Kenya and Africa may not effectively compete with countries party to the Organisation for Economic Co-operation and Development (OECD) such as the US, UK, Germany, and Japan on technological innovation, Kenya and Africa have many cultural innovations that can be exploited to benefit the people.

Purposeful and systematic innovation requires an analysis of existing opportunities, such as new knowledge or demographics (changes in population size, age structure, composition, employment, educational status, and income).⁴⁵ Kenyan innovators need to go out and look for innovative opportunities; ask and listen, to determine how the innovation can be utilized to meet an existing opportunity or need.⁴⁶

5. TECHNOLOGY TRANSFER AND THE WTO'S TRIPS AGREEMENT: KENYAN AND AFRICAN PERSPECTIVES

Some of the three contexts in which technology transfer takes place include: first, technology transfer in the context of agriculture and food security (hence the dynamics between biodiversity and biotechnology) in Africa; second, technology transfer in the context of health, especially the pandemics like

Innovation and Industrialisation in Kenya' (October 2008) Vol. 4. No. 2, *Convergence, Journal of the International Bar Association*, London 185-213.

⁴⁴ The three Cs are not coterminous.

⁴⁵ Peter Drucker, *Innovation and Entrepreneurship: Practice and Principles* (Elsevier Butterworth-Heinemann, 1985).

⁴⁶ *ibid.*

HIV/AIDS in Kenya and Africa; and third, technology transfer in the context of security, defence or military in Kenya and Africa.

ToT has not been dealt with sufficiently under the WTO's TRIPS Agreement, 1994. There are arguments that Article 66(2)⁴⁷ and other provisions of the TRIPS Agreement took a market-based approach to IP, innovation and ToT. Thus, TRIPS has a very limited mandate on a concessionary or preferential approach or the regulation of ToT.⁴⁸ The alternative approach which seeks to promote concessionary terms in technology transfer was a major feature in the following discussions: the quest for a new investment economic order (NIEO) through the Center on Economic Rights and Duties of States,⁴⁹ the United Nations Convention on Law of the Sea (UNCLOS); the Convention on Biological Diversity (CBD); and the United Nations Framework on Climate Change (UNFCCC).

The provisions on ToT in TRIPS have been criticised on two main grounds. First, they seem to regard technology transfer as the transfer of skills and technical know-how primarily to facilitate the implementation and enforcement of TRIPS. Second, TRIPS deals with technology transfer mainly from developed economies to the least developed countries, yet developing countries such as Kenya and other African countries also need technology transfer. And third, there are also challenges in determining exactly what technology is transferred.⁵⁰

The TRIPS Agreement has made fundamental positive changes in the conceptualisation and operationalisation of IP as Paul Goldstein and others have pointed out above and elsewhere. However, as seen in our discussions, it also poses a number of difficulties for Kenya and other African states regarding the role of IP in innovation, ToT and sustainable development.

First, TRIPS largely embodies Western standards in IP. For instance, provisions on patent, copyright, trademark, and geographical indication (GI) are largely Western. TRIPS generally seems to ignore IP systems which are important to Kenya and other developing countries such as folklore, traditional knowledge (TK), and utility model. These are not dealt with seriously, if at all, in TRIPS, yet they are important in African countries.⁵¹

Second, TRIPS is essentially a patchwork of many IP related agreements especially the Paris Convention, the Berne Convention, and the Washington Agreement on Integrated Circuits of 1989. Many have argued that this is a cut-and-paste or cut-edit job. This approach is sometimes referred to as 'legislation by metaphor' or by reference and maybe an untidy way of promulgating law.⁵² Some argue TRIPS is incoherent because of this.⁵³ But Prof Daniel Gervais and Hannu Wager, among others, have argued that other agreements can be regarded as building blocks.⁵⁴ And it is true that the travaux préparatoires or negotiating history and precedents regarding those Agreements have been useful in interpreting the TRIPS Agreement.⁵⁵

⁴⁷ TRIPS Agreement, art 66 (2). 'Where the acquisition of an intellectual property right is subject to the right being granted or registered, Members shall ensure that the procedures for grant or registration, subject to compliance with the substantive conditions for acquisition of the right, permit the *granting* or registration of the right within a reasonable period of time so as to avoid unwarranted curtailment of the period of protection.'

⁴⁸ Carlos Correa, 'Can the TRIPS Agreement foster technology transfer for developing countries?' in Keith Maskus and Jerome Reichman (eds) *International Public Goods and Transfer of Technology under a Globalized Intellectual Property Regime*, (Cambridge University Press, New York, 2005); Carlos Correa, 'Reviewing the TRIPS Agreement: Fostering the Transfer of Technology to Developing Countries' <<http://www.twinside.org.sg/title/foster.htm>> accessed 4 August 2017.

⁴⁹ *Compendium of International Arrangements on Transfer of Technology: Selected Instruments* (UNCTAD/ITE/IPC/Misc.5, UNCTAD, 2001).

⁵⁰ See Chapters 22, 23, 24, 25, 26 & 27 of Ben Sihanya, *Intellectual Property and Innovation Law in Kenya and Africa: Transferring Technology for Sustainable Development* (Sihanya Mentoring and Innovative Lawyering, Nairobi & Siaya, 2016).

⁵¹ On utility model see Chapter 6 of Ben Sihanya, *Intellectual Property and Innovation Law in Kenya and Africa: Transferring Technology for Sustainable Development* (Sihanya Mentoring and Innovative Lawyering, Nairobi & Siaya, 2016).

⁵² See Ouma M, & Sihanya B, 'Chapter 4 – Kenya' in Armstrong, de Beer, Kawooya, Schonwetter (eds.), *Access to Knowledge in Africa* (2010).

⁵³ Sihanya, *Intellectual Property and Innovation Law in Kenya and Africa: Transferring Technology for Sustainable Development*, (Sihanya Mentoring and Innovative Lawyering, Nairobi & Siaya, 2016).

⁵⁴ *ibid.*

⁵⁵ See Gervais, *The TRIPS Agreement, Drafting History and Analysis*, *op. cit.* Hannu Wager, the Secretary to the TRIPS Council expressed similar views in answer to the present author's comment on the 'patchwork' at the WIPO/WTO colloquium for IP teachers in 2005. He

Third, there is a need for comprehensive public participation conducted within various regions and IP regimes. This will help develop laws that best govern the specific areas of interest to relevant member states. There have been strong arguments that TRIPS was conceived and promulgated without sufficient involvement and participation by African countries. Some have argued that most of the provisions or clauses of TRIPS were enacted at the behest of many Western transnational corporations (TNCs) and interest groups. The conspiracy theory about the promulgation of WTO is usually supported, for example, by the following clauses which were influenced by the named parties:

- (a) the patent clauses largely by Western pharmaceutical transnational corporations (TNCs);
- (b) copyright clauses especially by Hollywood (entertainment industry) and Silicon Valley (software industries including Microsoft in particular); and
- (c) geographical indication (by the French and like-minded states).

Fourth, it has also been argued that Africa and other developing countries had very limited knowledge, skill, or aptitude, as well as human resources and financial capacity to effectively participate in negotiating TRIPS.⁵⁶ For instance, some countries had only about one to four representatives in Geneva. Some representatives participated in negotiations and attended most of the meetings to address the various issues. Agreements under discussions included TRIPS, General Agreement on Trade and Services (GATS), GATT, Sanitary and Phytosanitary Standards (SPS) and Technical Barriers to Trade (TBT). This is partly the reason why there were problems in Seattle, Cancun, Doha and Geneva trade negotiations. The representatives from the developing

countries had not sufficiently participated in the previous negotiations, since at times numerous negotiations would be going on at the same time.⁵⁷ Kenya and other African countries should ensure that they send well trained, informed and educated representatives to represent them in such negotiations. These representatives will be able to understand and negotiate from a well-informed position on the needs of their countries and also settle for the best agreements favouring their countries.

The Doha Round of negotiations recognised the difficulty the developing countries face in meeting these standards. As a result, the Doha Declaration on the TRIPS Agreement and Public Health allowed LDCs up to 2016 to meet patent related standards in pharmaceuticals. Remarkably, some countries argued in the context of the Seattle, Doha and Cancun rounds of the WTO that instead of focusing on reviewing the implementation of TRIPS, the WTO ought to focus on reviewing the terms and clauses of TRIPS itself. This is partly because TRIPS contains contested standards. And Article 27(3) on patentability of life forms was cognizant of this fact and provided that the 'provisions of this sub-paragraph shall be reviewed four years after the date of entry into force of the WTO Agreement.'⁵⁸

It is thus important that the clauses themselves be reviewed. Patentability of life forms under Article 27(3), parallel importation under Article 6 and compulsory licensing under Article 31 have been particularly controversial. Article 31 was reviewed and amended at the Hong Kong Ministerial conference (2005).⁵⁹ Reviewing the terms of TRIPS means that the relevant clause or provision is reviewed to be retained or changed on its own merits or individual terms. The US generally opposes review of clauses; it prefers to focus on how countries have implemented TRIPS rather than its

was a speaker. See also UNCTAD/ICTSD, *Resource Book on TRIPS and Development: An Authoritative and Practical Guide to the TRIPS Agreement*, (2004) *op. cit.*, at 388ff.

⁵⁶ Ben Sihanya, *Intellectual Property and Innovation Law in Kenya and Africa: Transferring Technology for Sustainable Development*, (Sihanya Mentoring and Innovative Lawyering, Nairobi & Siaya, 2016).

⁵⁷ *ibid.*

⁵⁸ Vanessa B. Kerry & Kelley Lee, 'TRIPS, the Doha Declaration and Paragraph 6 Decision: What are the remaining steps for protecting access to medicines?' (2007)

<<http://www.globalizationandhealth.com/content/3/1/3/>> accessed 7 December 2011; Cf. The WTO Hong Kong Conference in Perspective <<http://www.sudanvisiondaily.com/modules.php?name=News&file=print&sid=20513>> accessed 7 December 2011.

⁵⁹ Vanessa B. Kerry & Kelley Lee, 'TRIPS, the Doha declaration and paragraph 6 decision: what are the remaining steps for protecting access to medicines?' (2007) <<http://www.globalizationandhealth.com/content/3/1/3/>> accessed 7 December 2011; Cf. The WTO Hong Kong Conference in Perspective <<http://www.sudanvisiondaily.com/modules.php?name=News&file=print&sid=20513>> accessed 7 December 2011.

terms. This has been a problem, especially since the 1999 Ministerial conference in Seattle (and even before).

Clearly, there is a need to integrate the discourse, scholarship, business, practice, and activism regarding IP, innovation, technology transfer and licensing.

6. CONCEPTUALISING AND CONTEXTUALISING TECHNOLOGY TRANSFER IN KENYA AND AFRICA

ToT provides a practical and dynamic context for the exploitation of IP. Yet some of the technology may also not be protected by IP, or may be in the public domain.⁶⁰ There are deep debates revolving around North-South,⁶¹ intra-South, and even South-North technology transfer.⁶² This discourse has been concerned with regulating technology transfer transactions and has even sought to deal with regulating the conduct of transnational corporations (TNCs).

Technology transfer brings to the forefront a question on trade, business, commerce and their efficient and equitable regulation. It links IP protection, promotion and commercialisation and is thus a major point of convergence among the following organisations: WTO, WIPO, ARIPO, East African Community (EAC), Common Market for Eastern and Southern Africa (COMESA), Southern African Development Community (SADC), and Economic Community for West African States (ECOWAS)⁶³ and Africa Continental Free Trade Area (AfCTA), among others. Equally important are the African national IP, innovation and trade systems or regimes.⁶⁴

The nature of the technology and the relevant IP often influence the form of technology transfer adopted by the

parties. Some of the most commonly used forms of technology transfer include contractual licensing, franchising, joint venture, and foreign direct investment. But these are general typologies, which in turn, consist of numerous forms of technology transfer. In contractual licensing, a premium is placed on the consent of the parties and on market operations, while compulsory licensing is largely involuntary and state controlled. Types of technology transfer are discussed below.

A. Nomenclature on technology transfer in Kenya and Africa

Africa's share in international trade is limited to about 2%,⁶⁵ and it is even much less in IP embodied goods, services and works.⁶⁶

There are various types of technology transfer. These include licencing, assignment, securitisation, venture capital, joint venture (JV), strategic alliance (SA), special purpose vehicle (SPV), business incubation, franchising, and commercialisation by business corporations, universities and research and development (R&D) institutions. Remarkably, the military-industry complex is not common in Kenya and Africa. The various types are discussed below.

(i) Licensing

A license is permission to do something that would otherwise be unlawful.⁶⁷ It takes two broad forms which are voluntary (contractual or consensual licensing) and involuntary or compulsory licensing. In contractual licensing, the licensor and licensee agree to the terms of the license,⁶⁸ while compulsory licensing or government use occurs when a

⁶⁰ Sihanya, *Intellectual Property and Innovation Law in Kenya and Africa: Transferring Technology for Sustainable Development*, op. cit.

⁶¹ Most of the debates on ToT assume that the northern corporations and states are the suppliers of technology while southern states, corporations and other organisations and people are generally the acquirers.

⁶² Most of the North-South technology transfer relate to TK, TCE, GI, and even brain drain where nurses, doctors, and other skilled workers migrate to the North. This is under-researched.

⁶³ Economic Community for West African States.

⁶⁴ These regional economic regimes are increasing the need to integrate IP, innovation, technology transfer and anti-counterfeiting. They have registered mixed results.

⁶⁵ Evita Schmieg, 'Africa's Position in Global Trade, Free Trade Agreements, WTO and Regional Integration' (2017) <[https://www.swp-](https://www.swp-berlin.org/fileadmin/contents/products/projekt_papiere/Africas_Position_in_Global_Trade.pdf)

[berlin.org/fileadmin/contents/products/projekt_papiere/Africas_Position_in_Global_Trade.pdf](https://www.swp-berlin.org/fileadmin/contents/products/projekt_papiere/Africas_Position_in_Global_Trade.pdf)> accessed 6 April 2018.

⁶⁶ Ben Sihanya, *Intellectual Property and Innovation Law in Kenya and Africa: Cases and Materials* (Sihanya Mentoring and Innovative Lawyering, Nairobi & Siaya, forthcoming 2020).

⁶⁷ This definition is mainly associated with general English usage and real property or land and related transactions. See Paul Goldstein, *International Copyright: Principles, Laws and Practice*, (OUP, New York, 2001): 'License' has a different or more advanced meaning in IP, especially copyright. See Ben Sihanya, *Intellectual Property and Innovation Law in Kenya and Africa: Transferring Technology for Sustainable Development* (Innovative Lawyering and Sihanya Mentoring, 2016), Chapters 8 and 9; Ben Sihanya, *Intellectual Property and Innovation Law in Kenya and Africa: Cases and Materials* (Sihanya Mentoring and Innovative Lawyering, Nairobi & Siaya, forthcoming 2020).

⁶⁸ See Kenyan Copyright Act, 2001 (as amended), s 33.

Government agency such as Kenya's Industrial Property Tribunal (IPT) authorizes a third party to exploit the license.⁶⁹

Licensing can also be conceptualized or defined in terms of whether the licensee is sole, exclusive or non-exclusive. Sole licensing arises when there is only one licensee. The sole licence may be oral or evidenced in writing,⁷⁰ and the licensor may even compete with the licensee.⁷¹ Exclusive licensing occurs when no one may compete with the licensee; not even the licensor. Part I of the Nigerian Copyright Act deals extensively with licences and assignments. It provides for a guideline on the requirements and the procedure of exclusive copyright licenses.⁷²

An exclusive license must be in writing as was held in the Nigerian case *Adenuga v. Ilesanmi*.⁷³ In this case, the appellants submitted a book manuscript to the respondents, which the respondents published. The appellants, on realising the book had been published, went to court seeking damages. In court, the respondents claimed they had an exclusive license to publish the book. The court held an exclusive license must be in writing and signed by the owner or author of copyright.⁷⁴

An assignment is often similar to an exclusive license. Section 33(3) of the Kenyan Copyright Act states:

No assignment of copyright and no exclusive licence to do an act the doing of which is controlled by copyright shall have effect unless it is in writing signed by or on behalf of the assignor, or by or on behalf of the licensor, as the case may be and the written assignment of copyright shall be

accompanied by a letter of verification from the Board⁷⁵ in the event of an assignment of copyright works from outside Kenya.

Section 22 of the South African Copyright Act 1978 makes provisions for the exclusive licensing of copyright. It provides for the conditions to be fulfilled and the requirements for the licensing of copyright.⁷⁶ Non-exclusive licensing involves more than one licensee. Licensees may compete with each other and the licensor. This kind of licensing mostly arises from voluntary licensing where parties agree to accommodate competition amongst themselves.

There are also sub-licensees and bare licensees in IP and innovation.⁷⁷ A sub-license may arise in any of the foregoing scenarios provided the license agreement permitted a sub-license expressly or by conduct. A licensee in this regard cannot sue in his or her own name. The power to sue remains with the licensor.

A bare license is a situation where the interest is limited to a non-proprietary interest. A ticket to watch a movie is limited to watching; not recording. Access to a lecturer's teaching notes and materials limits the student to reading and citing them appropriately. It does not include the student reproducing or adapting the materials for publication, distribution or communication to third parties. A bare license embodies the fewest bundle of rights or privileges very far from IP ownership, an exclusive license or an assignment, which embody the highest bundle of rights.

⁶⁹ Copyright and patent maybe subject to compulsory license. A patent may be the subject of Government use under Industrial Property Act 2001 (Kenya), s 80. Trade Mark should not be compulsorily licensed under TRIPS Agreement, art 37(2).

⁷⁰ Cf Hodgkin's analysis of the implications of oral contracts and the argument for written contracts in East Africa. R. W. Hodgkin, *Law of Contract in East Africa* (East African Literature Bureau, Nairobi, 1975).

⁷¹ Kenyan Copyright Act, s 33 & Industrial Property Act 2001 (Kenya), s 5.

⁷² Nigeria Copyright Act, Part I Chapter C28 2004.

⁷³ *Adenuga v. Ilesanmi* [1991] 5 N.W.L.R 82.

⁷⁴ Charles Chudi, *Intellectual Property and Law in Nigeria*, (Malthouse Press Limited, Lagos, 2016).

⁷⁵ The Kenyan Copyright Board (KECOBO) is established by s 3 of the Kenyan Copyright Act, 2012. Its mandate includes to direct, co-ordinate and oversee the implementation of laws and international treaties and conventions to which Kenya is a party and which relate

to copyright and other rights recognised by the Act and ensure the observance thereof; (b) license and supervise the activities of collective management societies as provided for under this Act; (c) devise promotion, introduction and training programs on copyright and related rights, to which end it may co-ordinate its work with national or international organisations concerned with the same subject matter; (d) organise the legislation on copyright and related rights and propose other arrangements that will ensure its constant improvement and continuing effectiveness; (e) enlighten and inform the public on matters relating to copyright and related rights; (f) maintain an effective data bank on authors and their works; and (g) administer all matters of copyright and related rights in Kenya as provided for under this Act and to deal with ancillary matters connected with its functions under this Act.

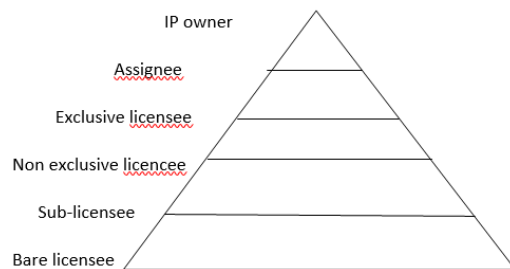
⁷⁶ South African Copyright Act 1978, s 22.

⁷⁷ Desforges Charles, *The Commercial Exploitation of Intellectual Property Rights by Licensing*, (Kaplan Hawksmere Publishers, London, 2001).

(ii) Assignment of IP Rights, Innovation and Technology Transfer in Kenya and Africa

An assignment is an agreement whereby the assignee replaces the assignor for the relevant intents and purposes with respect to all or certain rights. The assignment should specify at least three matters: the scope of the rights assigned (the conceptual market); the specific geographical market; and the specific duration.

Figure 1: Intellectual Property Pyramid



Source: Developed from Sihanya *IP and Innovation Law in Kenya and Africa* Vol. 1 & 2 (2016 and forthcoming 2020).⁷⁸

(iii) Other Forms of Commercialisation of IP, Innovation and Technology Transfer in Kenya and Africa

While assignments and licences are the main and most common ways of commercialising IP, there are other various forms of commercialisation. These forms include securitisation, venture capital, joint ventures (JV), strategic alliances (SA), special purpose vehicles (SPV), business incubation, franchising, and commercialisation by universities and research institutions, which are discussed below.

(a) Securitisation of IP, Innovation and Technology Transfer

Securitisation has been regarded as a specific aspect of commercializing IP or innovation. It is the process of

consolidating expected future payments, such as royalties, and selling them in the form of securities or collateral including shares, stocks or bonds.⁷⁹ The securities issued can be debt instruments, equity instruments, or a combination of both.⁸⁰

Securitisation of IP is therefore the conversion of an IP asset into a marketable security or collateral. Securitisation is possible for future royalty payments, for example, from licensing a patent, trademark or trade secret, or from copyrightable materials such as books and other literary and artistic works, musical compositions or recording rights of a musician.⁸¹

An example of securitisation was the matter involving the royalty payments of rock musician David Bowie in the USA.⁸² In 1997 the singer introduced an innovative form of financing when he converted his future royalties from his record sales into securities in a private bond for \$55 million.

In Kenya, the fight for the copyright and related royalties of the legendary band Les Wanyika was taken to court in *Sijali Salum Zuwa & 4 Others v. Pamela Akinyi Atieno*.⁸³ Upon the death of Omar Shaban Salim, co-founder of the band, his widow, Ms. Pamela Akinyi, received letters of administration over the estate of Omar Shaban Salim on the basis of which she claimed all the rights under copyright relating to the forty eight (48) musical works of Les Wanyika.⁸⁴ The court had to determine whether the deceased was the exclusive composer and owner of the musical works, or whether the works were the 'joint effort'⁸⁵ of the Les Wanyika band,

⁷⁸ Sihanya, *Intellectual Property and Innovation Law in Kenya and Africa: Transferring technology for Sustainable Development*, 225. See also Ben Sihanya, *Intellectual Property Innovation and Technology Transfer Law in Kenya and Africa: Cases and Materials*, (Sihanya Mentoring and Innovative Lawyering, Nairobi & Siaya, forthcoming 2020).

⁷⁹ John M. Gabala Jr., 'Intellectual Alchemy: Securitization of Intellectual Property as an Innovative Form of Alternative Financing' (2004) The John Marshall Law School, <<http://repository.jmls.edu/cgi/viewcontent.cgi?article=1054&context=ripl>> accessed on 22 April 2015.

⁸⁰ The Kenyan Capital Markets Act, Cap 485A.

⁸¹ Ben Sihanya, *Constructing Copyright and Creativity in Kenya: Cultural Politics and the Political Economy of Transnational*

Intellectual Property (Dissertation for the Juridical Science Doctorate (JSD) submitted to Stanford Law School, Stanford, CA, USA, 2003).

⁸² WIPO, 'The securitization of Intellectual Property Assets - A new trend' <http://www.wipo.int/sme/en/ip_business/finance/securitization.htm> accessed on 22 April 15.

⁸³ *Sijali Salum Zuwa & 4 Others v. Pamela Akinyi Atieno* [2016] eKLR.

⁸⁴ Les Wanyika was a band consisting of Kenyan and Tanzanian artists formed in 1978. See <<http://www.allmusic.com/artist/les-wanyika-mn0000250282>> accessed 20 January 2017.

⁸⁵ Copyright Act 2001, s 23 places some premium on labour and effort. The entry point and greater emphasis in copyright should be 'skill and judgment,' See Ben Sihanya, *IP and Innovation Law in Kenya and Africa*, (2016) *op. cit.*, 185-225.

whose members included the applicants.⁸⁶ The matter is still in court awaiting a ruling.

Similarly, the royalties of the founder of the Maroon Commandos Mr Habel Kifoto have also left the family in a tussle over the control of his music royalties.⁸⁷ A similar battle was the cause of the breakup of the Franco led TPOK Jazz after his death in the early 1990s.⁸⁸ Luambo Luanzo Makiadi (Franco) was a legendary lingala (or rumba) musician from the Democratic Republic of Congo (DRC). He left a huge copyright estate.⁸⁹

Remarkably, John M. Gabala, in 'Intellectual Alchemy,' suggests that holders of copyright can also benefit from IP securitization. He notes that in securitisation the artist does not sell their property rights.⁹⁰ Securitisation of IP in this way allows the royalty recipient to retain control over the assets (as collateral), since after the bonds mature the rights go back to the artist who is free to use them as he wishes.

The tussle between the Music Copyright Society of Kenya (MCSK),⁹¹ Safaricom Limited⁹² and majority of the Kenyan artist is an illustration of the importance of securitization of IP. The MCSK has defaulted in making payments to the artists hence the 2016 stalemate.⁹³ A section of Kenyan musicians have filed a lawsuit and also made demands to KECOBO accusing MCSK of performing its functions in a manner contrary to the law. One of their grievances was the failure by MCSK to implement a joint licensing, collection and distribution of royalties as required by the law.

Securitisation of an IP right, and especially securitisation of copyright, is complex because of valuation challenges

regarding the intangible properties of the asset. Another problem is the issue of Internet and online or mobile music piracy in this digital era that dilutes the 'royalties' of satisfactory candidates for suitable financing.⁹⁴

Copyright royalty or related assets may be used as a form of alternative financing or collateral where there is an integrated, equitable, and effective institutional and legislative framework. In May 2018, the family division of the Kenyan High Court asked the Legislature to create laws to guide the inheritance of an individual's online assets upon their death. This law, if enacted, will help bridge the gap that exists regarding definition of an individual's assets and their scope. It will also provide for their management, assessment, privacy, transfer, disposal, and use, including as security for loans to enhance incubation.⁹⁵

(b) Venture Capital, Joint Venture, Strategic Alliance and Special Purpose Vehicle in Intellectual Property and Transfer of Technology

These are agreements between or among innovators and entrepreneurs. They complement each other in terms of money, technology or know-how, human resources, or distribution network. This may be done by way of a merger or through a strategic allegiance (SA) or a special purpose vehicle (SPV) between standalone enterprises.

An illustration is the joint venture between Kenya Airways, Royal Dutch Airlines and Martin Air, which established Ken-

⁸⁶ *Sijali Salum Zuwa & 4 Others v. Pamela Akinyi Atieno* [2016] eKLR, *ibid* at para 4.

⁸⁷ Abiud Ochieng, 'Musicians' Children Fight for Royalties' (*Daily Nation*, Nairobi, 29 January 2016) <<http://www.nation.co.ke/news/Musician-children-fight-for-royalties/1056-3053358-tyve07z/index.html>> accessed 10 January 2018.

⁸⁸ Amos Ngaira, 'The Rise and Fall of TP OK Jazz' (*Daily Nation*, Nairobi, 2012) <<http://www.nation.co.ke/lifestyle/DN2/957860-1416052-jj1i6wz/index.html>> accessed 26 September 2017.

⁸⁹ *ibid*.

⁹⁰ John M. and Gabala Jr., 'Intellectual Alchemy: Securitization of intellectual property as an innovative form of alternative financing' (2003) 3 *J. Marshall Rev. Intell. Prop. L.* 3.

⁹¹ The Music Copyright Society of Kenya is a copyright collection society in Kenya tasked with the responsibility of collecting royalties

on behalf of authors, composers, arrangers and publishers of music. It is gets its mandate from Kenyan Copyright Act 2001, s 48(4).

⁹² Safaricom limited is a mobile network operator in Kenya registered under section 53 of the Kenyan Companies Act 2015.

⁹³ Abiud Ochieng 'Kenyan musicians sue copyright bodies over royalties' (*Daily Nation*, Nairobi, 31 July 2015) <<http://www.nation.co.ke/news/Kenyan-musicians-sue-copyright-royalties/1056-2815114-20aih6z/index.html>> accessed 10 January 2017. See also *Irene Mutisya & Anor v. Music Copyright Society of Kenya & Anor* Civil Case No. 262 of 2015; *Xpedia & 4 Others v. Attorney-General & 4 Others* Petition No. 317 of 2015; and *John Boniface Maina v. Safaricom Ltd & 4 Others*, High Court at Nairobi, Civil Suit 808 of 2010.

⁹⁴ 'Intellectual Property on the Internet: A Survey of Issues' (World Intellectual Property Organisation, 2002).

⁹⁵ See Elvis Ondieki, 'Family Court wants MPs to Create Online Property Inheritance Laws' (*Sunday Nation*, Nairobi, 17 June 2018).

Cargo.⁹⁶ Other examples include the 4G network venture between the Government of Kenya and mobile network operators;⁹⁷ and Mpesa (a mobile money transfer platform), a joint venture (JV) between Safaricom and Vodafone.⁹⁸ Other cases include those between African Governments and relevant companies.

Relatedly, there are numerous JV's in infrastructure development in Kenya and Africa. In 1996, the Governments of South Africa and Mozambique signed a 30 year concession with private companies to help build and operate the N4 toll road from Witbank, South Africa to Maputo, Mozambique. The companies included the Rand Merchant Asset Management, the Standard Bank and the Development Bank of South Africa.⁹⁹

Kenyan company, competition and consumer protection law are not integrated and have dubious provisions on strategic allegiances, joint ventures, and mergers and acquisitions. Hence the debate that these laws be reviewed to integrate IP, innovation, unfair competition and ToT.¹⁰⁰ Remarkably, the Kenyan Competition Act was a revision of the Restrictive Trade Practices, Monopolies, Price Control Act, 1988. Most companies enter into strategic allegiances to circumvent the provision on mergers and acquisitions (M&A). For example,

companies enter into such ventures or alliances¹⁰¹ for purposes of protecting their investments or innovations from political or economic risk. Governments may be interested in production or distribution or simply rent seeking or primitive accumulation.

(c) Business Incubation, IP and Innovation

Business incubation is an economic development facility that may integrate (any combination of) advice, support services, business facilitation, and real estate development intended to nurture innovation and businesses. Business incubators provide physical space where new businesses can begin.¹⁰² There are also shared facilities and the incubators offer support services and relevant institutional linkages to new businesses.¹⁰³ Franchising performs a similar role in the commercialisation of IP and innovation.

(d) Franchising IP and Innovation

A franchise is a form of IP transaction, licence or technology transfer whereby the franchisor authorises the franchisee to use the franchisor's copyright or trademark in exchange for royalties and related consideration.¹⁰⁴ Some of the main franchises in East Africa are Kenya's Uchumi Supermarket and Nakumatt Supermarket,¹⁰⁵ as well as the Kengeles restaurant.

⁹⁶ KenCargo International Limited was until 2004 based in Kenya. KQ held 60 per cent, Martinair Holland held 20 per cent, while KLM held 20 per cent. See Daniel Wesangula, 'Company affiliated to Raila Odinga named in questionable winding up of KQ's profitable arm' (*Standard Digital*, Nairobi, 2016) <<http://www.standardmedia.co.ke/article/2000218116/company-affiliated-to-raila-odinga-named-in-questionable-winding-up-of-kq-s-profitable-cargo-arm>> accessed 10 February 2016.

⁹⁷ These operators included Safaricom, Airtel, Orange, MTN Business, Liquid Telecoms and Essar Kenya. See 'Safaricom threatens to walk out of 4G joint venture' (*Business Daily*, Nairobi, 2016) <https://www.google.com/url?sa=t&rct=j&q=&esrc=s&source=web&cd=2&cad=rja&uact=8&ved=0ahUKewj55_z1ovPPAhWDMBoKHri7AdYQFggiMAE&url=http%3A%2F%2Fwww.businessdailyafrica.com%2FCorporate-News%2FSafaricom-threatens-to-walk-out-of-4G-joint-venture-%2F539550-1365850-view-printVersion-5b42hh%2Findex.html&usg=AFQjCNHfkbxtVPqo--vf7o7DjWCG8pGikA&sig2=MDPYhqtQTkIFQAw0Him4jw> accessed 24 October 2016.

⁹⁸ Irene Petrick & Suwan Juntiwarakij, 'The Rise of the Rest: Hotbeds of innovation in emerging markets' (2011) 54(4) *Research-Technology Management*. See Robert Osei-Kyei & Albert Chan, 'Developing transport infrastructure in Sub-Saharan Africa through public-private partnerships: Policy practice and implications' (2016) 36 (2) *Transport Reviews* 170-186.

⁹⁹ Ben Sihanya, *Intellectual Property and Innovation Law in Kenya and Africa*, Vol. 1 and 2 (Sihanya Mentoring and Innovative Lawyering, Nairobi & Siaya, 2016; forthcoming 2020).

¹⁰⁰ *ibid.*

¹⁰¹ Kenya's Competition Act, 2010.

¹⁰² Ben Sihanya, 'Intellectual property and innovation in Kenya: Legal and regulatory issues in business incubation' in Prof Bernard Aduda (ed) *Science and Technology Park Development for Sustainable Industrial Growth*, (Proceedings of the National Workshop in Commemoration of the Scientific Revival Day of Africa, June 2004, Kenya National Academy of Sciences (KNAS), Nairobi, 2004) at 41-58; Ben Sihanya 'Intellectual property for innovation and industrialization in Kenya,' (2007) in Proceedings of 2006 JKUAT Scientific, Technological and Industrialization Conference, *Harnessing Scientific and Technological Synergies for Innovation and Industrialization*, Jomo Kenyatta University of Agriculture and Technology, Nairobi, October 26-27, 2006 (published 2007), at 38-58. See also Ben Sihanya, *Cases and Materials: Intellectual Property and Innovation Law in Kenya and Africa* (IPILKA 2), (Sihanya Mentoring and Innovative Lawyering, Nairobi & Siaya, forthcoming 2020).

¹⁰³ In this sense, business incubators are related to the concept that undergirds the Kenya Industrial Estates (KIE), and the Export Processing Zones (EPZs).

¹⁰⁴ Ben Sihanya, 'Understanding Copyright' (2015) *Utafiti News* a publication of the Office of the Deputy Vice-Chancellor (Research Production and Extension), University of Nairobi (March 2015). See also Sihanya, 'Introduction to Copyright' (*Utafiti News*, University of Nairobi, July 2014).

¹⁰⁵ Uchumi and Nakumatt supermarket have faced serious financial, regulatory, tax and political challenges including competition from the politically connected Tusksys and Naivas.

Leading universities like the University of Nairobi, Makerere University and University of Dar Es Salaam also franchise some of their programmes, services or products. Other popular franchises integrated into the Kenyan and African economies include Steers, Nandos, Kenchick, Oilibya, Mr Price Home, and Deacons.

The two main merits of franchising are, first, the business relationship is already established by the franchisor for the benefit of the franchisee. In all likelihood, relationships with suppliers (and perhaps distributors) will already be in place and easier to manage.¹⁰⁶ The advantages of already established relationships with advertisers and marketing teams may also benefit the new business start-up. Second, investors are likely to secure greater benefits and are far more willing to invest in a business with an established network, secure brand and effective support structure.¹⁰⁷

The three main disadvantages are, first, the fact that the franchisee has no (or very limited) control of the business or how it is run. (The rules of the business are already established as part of the franchise agreement.) Second, there is a risk that others might damage the reputation of the business as a franchisee relies largely on the business's brand to bring customers. Third, when the franchise relationship ends (prematurely), the franchisee, licensee or investor and the Kenyan and African consumers lose out while the franchisor benefits from long-term brand recognition among others.

7. SUMMARY OF FINDINGS, CONCLUSION AND RECOMMENDATIONS

The main objective of this essay and discussion was to analyse IP, innovation, ToT, and licensing in Kenya and the relevant African states in respect to the WTO TRIPS Agreement. The overarching argument is that Kenya and Africa have a lot of potential for, and should, integrate innovation, technology

development, and the protection and promotion of IP intensive goods, services, and works. Most developing countries view technology transfer as part of the bargain in which they agreed to protect IP as pointed out by Antony Taubman, Hannu Wager and Jayashree Watal.¹⁰⁸ The TRIPS agreement includes various provisions on this.¹⁰⁹

TRIPS generally does not account for IP systems which are important to Kenya and other developing countries, such as folklore, traditional knowledge (TK), Traditional Cultural Expressions (TCE) and utility model. These are not dealt with seriously, if at all, in TRIPS, yet they are important in African countries.¹¹⁰ Remarkably, TK, TCE and GR are now being discussed at WTO, WIPO, UNCTAD and UNESCO. There is, therefore, the need to address IP systems important to Kenya and African countries. This can be done by Kenya and other African countries revising or including these neglected concepts in their national legislations. By revising their national legislations to include these principles not discussed by WTO TRIPS, Kenya and other African countries will have, to some degree, addressed the issue of use of western standards and have focused on standards relative to their scenarios.

From these discussions we can see that licensing plays a crucial role in the protection and use of IP, Innovation and ToT. Kenya and other African countries should therefore lay emphasis on sensitizing their citizenry on the importance of licensing, assignments, and JVs in the securitization and commercialisation of IP, innovation and ToT. This can be done by reviewing existing IP legislation. Key institutions such as the Kenya Copyright Board (KECOBO), the Kenya Industrial Property Institute (KIPI) and the Anti-Counterfeit Authority (ACA), should be more proactive in promoting these IP doctrines by offering relevant information and training to IP owners, managers, and the general public. Such measures will

¹⁰⁶ Domic Omondi, 'Why 400, 000 SMEs are Dying Annually' (*Standard Newspaper*, Nairobi, 30 October 2016).

¹⁰⁷ Aktalay Banu, *Intellectual Property Management Strategy in New Technology-Based Start-Up Companies* (Doctoral Dissertation, Middle East Technical University, 2004). See also 'Advantages and Disadvantages of a franchise' (The Company Warehouse, 2010) <<https://www.thecompanywarehouse.co.uk/blog/2010/10/04/adv>

antages-and-disadvantages-of-a-franchise/> accessed 24 October 2016.

¹⁰⁸ Antony Taubman, Hannu Wager and Jayashree Watal (eds), *A Handbook on the WTO TRIPS Agreement* (2012).

¹⁰⁹ *ibid.*

¹¹⁰ On utility model see Chapter 6 of Ben Sihanya, *Intellectual Property and Innovation Law in Kenya and Africa: Transferring Technology for Sustainable Development*, (2016). *ibid.*

help integrate IP, innovation, technology transfer and licensing for sustainable development in Kenya and Africa.

BIBLIOGRAPHY

- Correa C, 'Can the TRIPS Agreement foster technology transfer for developing countries?' Keith Maskus and Jerome Reichman (eds) *International Public Goods and Transfer of Technology under a Globalized Intellectual Property Regime* (Cambridge University Press, New York, 2005).
- Correa C, *Technology Transfer in the WTO Agreement* (UNCTAD, Geneva 1999).
- Dean O, and Dyer A, *Dean & Dyer's Digest of Intellectual Property Law* (Oxford University Press, New York, 2014).
- Desforges C, *The Commercial Exploitation of Intellectual Property Rights by Licensing*, (Kaplan Hawksmere Publishers, London, 2001).
- Gervais D, *The TRIPS Agreement: Drafting History and Analysis* (Sweet and Maxwell, London, UK, 2003).
- Gervais D, *The TRIPS Agreement, Drafting History and Analysis, Fourth Edition*, (Sweet & Maxwell, London, 2012).
- Goldstein P, & Marketa T, *International Intellectual Property Law: Cases and Materials, 3rd Ed* (Foundation Press, New York, 2012).
- Goldstein P, & Bernt Hugenholtz P., *International Copyright: Principles, Law and Practice* (OUP, New York, 2013).
- Goldstein P, & Anthony Reese R, *Copyright, Patent, Trademark and Related State Doctrines: Cases and Materials on the Law of Intellectual Property, 6th Rev Ed* (Foundation Press, New York, 2010).
- Goldstein P, & Anthony Reese R, *Copyright, Patent, Trademark and Related State Doctrines: Cases and Materials on the Law of Intellectual Property 7th Ed* (Foundation Press, New York, 2012).
- Goldstein P & Antony Reese R, *Copyright, Patent, Trademark and Related State Doctrines: Cases and Materials on the Law of Intellectual Property* (Foundation Press, New York, 2010).
- Goldstein P, *Copyright, Patent, Trademark and Related State Doctrines: Cases and Materials on the Law of Intellectual Property 4th Ed* (Foundation Press, New York, 1999).
- Goldstein P, *International Copyright: Principles, Law and Practice* (OUP, New York, 2001).
- Goldstein P, *Copyright, Patent, Trademark and Related State Doctrines 5th Ed* (Foundation Press, New York, 2002).
- Goldstein P, *Copyright's Highway: From Gutenberg to the Celestial Jukebox* (Stanford University Press, Stanford, CA, 2003).
- Goldstein P, *Copyright, Patent, Trademark and Related State Doctrine: University Case Book Series* (Foundation Press, New York, 2007).
- Hodgin R. W, *Law of Contract in East Africa* (East African Literature Bureau, Nairobi, 1975).
- Maskus K, & Jerome R, (eds) *International Public Goods and Transfer of Technology under a Globalized Intellectual Property Regime* (Cambridge University Press, New York, 2005).
- Ncube C, *Effects of the Intellectual Property (IP) Regime on Generating Value from Publicly Funded Research: A Study of Two South African Universities* (African Innovation Research and Training (Open AIR), University of Cape Town, Cape Town, 2012).
- Ncube C, *Intellectual Property Policy, Law and Administration in Africa* (Routledge, Taylor and Francis Group, London and New York, 2012).
- Nwabachili C, *Intellectual Property and Law in Nigeria* (Malthouse Press Limited, Lagos, 2016).
- Sihanya B, *Intellectual Property and Innovation Law in Kenya and Africa: Transferring Technology for Sustainable Development* (Sihanya Mentoring and Innovative Lawyering, Nairobi & Siaya, 2016; reprinted 2020).
- Sihanya B, *Intellectual Property and Innovation Law in Kenya and Africa: Cases and Materials* (Sihanya Mentoring and Innovative Lawyering, Nairobi & Siaya, forthcoming 2020).
- Sihanya B, *LLM Teaching Materials: Copyright and Related Rights Law* (Sihanya Mentoring and Innovative Lawyering, Nairobi & Siaya, 2020).
- Sihanya B, *LLM Teaching Materials: International Intellectual Property Law* (Sihanya Mentoring and Innovative Lawyering, Nairobi & Siaya, 2020).
- Sihanya B, *LLM Teaching Materials: Legal Aspects of International Technology Transfer Law* (Sihanya Mentoring and Innovative Lawyering, Nairobi & Siaya, 2020).
- Sihanya B, *LLB Teaching Materials: Intellectual Property Law* (Sihanya Mentoring and Innovative Lawyering, Nairobi & Siaya, 2020).
- Taubman A, Wager H, and Watal J (eds) *A handbook on the WTO TRIPS Agreement*, (Cambridge University Press, New York, 2012).
- UNCTAD & ICTSD, *Resource Book on TRIPS and Development: An Authoritative and Practical Guide to the TRIPS Agreement* (ICTSD, Cambridge University Press, Cambridge & New York, 2005).
- UNCTAD, *Impact of Technology Transfer by Foreign Small and Medium-Sized Enterprises on Technological Development in Kenya* (UNCTAD/TT/85, UN, New York, 1897).
- UNCTAD, *The Relevance of Recent Developments in the Area of Technology to the Negotiations on the Draft International Code of Conduct on the Transfer of Technology* (TD/CODETOT/55, UNCTAD, UN, New York, 1990).
- UNCTAD, *Compendium of International Arrangements on Transfer of Technology: Selected Instruments* (UNCTAD/ITE/IPC/Misc.5, 2001).
- Watal J, *Intellectual Property Rights in the WTO and Developing Countries* (Kluwer Law International, New Delhi, 2001).
- World Commission on Environment Development (WCED), *Our Common Future* (Oxford University Press, 1987).
- Ouma M, & Sihanya B, 'Access to Knowledge in Africa: The Role of Copyright: "Kenya,"' A study under the auspices of the African Copyright and Access to Knowledge (ACA2K) project

- and International Development Research Centre (IDRC) Acacia Initiative for Africa and Shuttleworth Foundation Intellectual Property Rights programme in C. Armstrong, J. De Beer, D Kawooya, A Prabhala, T Schonwetter (eds) (This book was launched on Saturday, July 31, 2010 at the University of Cape town, South Africa July 31, 2010).
- Sihanya B, 'Intellectual property and innovation in Kenya: Legal and regulatory issues in business incubation' in Prof Bernard Aduda (ed) Science and Technology Park Development for Sustainable Industrial Growth (Proceedings of the National Workshop in Commemoration of the Scientific Revival Day of Africa, June 2004, Kenya National Academy of Sciences (KNAS), Nairobi) 41–58.
- Sihanya B, 'Patents, parallel importation and compulsory licensing of HIV/AIDS drugs in Kenya' study under the auspices of the World Trade Organisation (WTO) and Adelaide University, a Chapter in Peter Gallagher, Patrick Low, and Andrew L. Stoler (eds) *Managing the Challenges of WTO Participation*, (Cambridge University Press, London, 2005).
- Sihanya B, 'Intellectual Property for Innovation and Industrialization in Kenya' in *Harnessing Scientific and Technological Synergies for Innovation and Industrialization* (Proceedings of 2006 JKUAT Scientific, Technological and Industrialization Conference) (Jomo Kenyatta University of Agriculture and Technology, Nairobi, 26-27 October 2006 (published 2007)).
- Sihanya B, 'Reflections on Open Scholarship Modalities and The Copyright Environment in Kenya' in Jeremy De Beer, Chris Armstrong, Chidi Oguamanam and Tobias Schonwetter *Innovation & Intellectual Property: Collaborative Dynamics in Africa* (UCT Press, Cape Town, 2014).
- Correa C, 'Reviewing the TRIPS Agreement: fostering the transfer of technology to developing countries' <<http://www.twinside.org.sg/title/foster.htm>> accessed 4 August 2017.
- Gabala J, 'Intellectual Alchemy: Securitization of Intellectual Property as an innovative form of alternative financing' (2004) The John Marshall Law School, at <<http://repository.jmls.edu/cgi/viewcontent.cgi?article=1054&context=ripl>> accessed on 22 April 2015.
- Hughes J, 'Champagne, Feta, and Bourbon: The spirited debate about geographical indications' (2006) 58 *Hastings Law Journal*, at 299.
- John M, & Gabala J, 'Intellectual alchemy: Securitization of intellectual property as an innovative form of alternative financing' (2003) 3 *J. Marshall Rev. Intell. Prop. L.* 3.
- Kerry V, & Lee K, 'TRIPS, the Doha declaration and paragraph 6 decision: what are the remaining steps for protecting access to medicines?' (2007) <http://www.globalizationandhealth.com/content/3/1/3> accessed 7 December 2011.
- Osei-Kyei R, & Chan A, 'Developing transport infrastructure in Sub-Saharan Africa through public-private partnerships: Policy practice and implications' (2016) 36 (2) *Transport Reviews*, 170-186.
- Petrick I, & Juntiwasarakij S, 'The Rise of the Rest: Hotbeds of Innovation in Emerging Markets' (2011) 54(4) *Research-Technology Management*.
- Sheikh T, 'Trade secrets and employee loyalty' (2015) 7(1) *World Intellectual Property Journal*, Sweet and Maxwell, London.
- Sihanya B, 'Copyright law in Kenya' (2010) *International Review of Intellectual Property and Competition Law* (IIC), Journal of the Max Planck Institute for Intellectual Property, Competition and Tax Law, Munich, Germany, Vol. 41 No. 8, 926-947 (edited by Prof William Cornish, Prof Paul Goldstein et al.).
- Sihanya B, 'Digital copyright in Kenya' (2012) Vol. 8, No. 1, *Law Society of Kenya Journal* 119-148.
- Sihanya B, 'Intellectual property audit, valuation, commercialization, securitisation and taxation in Kenya' (2018) *JKUAT Law Journal*, 41-86.
- Sihanya B, 'Kikoi and the commercial exploitation of geographical indication and traditional knowledge in Kenya' (2007) *The Advocate Magazine*, Law Society of Kenya (LSK), Nairobi (special issue of the IBA Nairobi conference).
- Sihanya B, 'Patent law and practice in Kenya' (2007) *International Review of Intellectual Property and Competition Law*, Volume 38, 6/2007, pp. 648–658, Journal of the Max Planck Institute for Intellectual Property, Competition and Tax Law (edited by Prof William Cornish, Prof Paul Goldstein et al.).
- Sihanya B, 'Rights in a performance in Kenya' (2013) *South African Intellectual Property Law Journal* 59-85, (SAIPLJ)
- Sihanya B, 'Traditional knowledge and traditional cultural expressions in Kenya' (2016) Vol. 12, 2016 No. 2 *Law Society of Kenya Journal* 1-38
- Sihanya B, 'Understanding copyright' (2015) *Utafiti News* a publication of the Office of the Deputy Vice-Chancellor (Research Production and Extension), University of Nairobi (March 2015)
- Wambua P, Ofafa G & Otor S (eds), 'Performance Contacting and Academic Staffers Administrative Work Systems' for Service Delivery in Selected Kenyan Universities' (2014) *International Journal of Innovative Research & Development* <<http://business.ku.ac.ke/images/stories/docs/Administrative%20Work%20systems%20NOV14019.pdf>> accessed 27 June 2018
- 'Farmers must be winners in the tea trade debate' (*Business Daily*, Nairobi, 4 August 2016) <<http://www.businessdailyafrica.com/Opinion-and-Analysis/Farmers-must-be-winners-in-the-tea-trade-debate/539548-2819848-akgppn/index.html>> accessed 24 October 2016
- 'Safaricom threatens to walk out of 4G joint venture' (*Business Daily*, Nairobi, 2016) <https://www.google.com/url?sa=t&rct=j&q=&esrc=s&source=web&cd=2&cad=rja&uact=8&ved=0ahUKewj55_z1ovPPAhWDMBoKHRI7AdYQFggiMAE&url=http%3A%2F%2Fwww.businessdailyafrica.com%2FCorporate-News%2FSafaricom-threatens-to-walk-out-of-4G-joint-venture-%2F539550-1365850-view-printVersion-