

ADDIS ABABA UNIVERSITY
COLLEGE OF LAW AND GOVERNANCE STUDIES
SCHOOL OF LAW



Legal and Institutional Framework for Transfer of Technology in Ethiopia

By: Yohannes Hailu

April, 2015

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**A Thesis submitted to Addis Ababa University, the school of Graduate
Studies, College of Law and Governance in Partial fulfillment of the
Requirements for the Degree of Master of Laws (LL.M) in Business Law**

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Declaration

I, the undersigned, declare that this thesis is my original work, has not been presented for a degree in any other University and that all sources of materials used have been appropriately acknowledged.

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ACKNOWLEDGMENT

The motivation to research this topic came from my advisor Dr. Biruk Haile, Asst. Professor at the School of Law of Addis Ababa University. Earlier drafts of this thesis also benefited immensely from his invaluable comments. For these and his guidance and encouragement throughout my tenure in the study of this research paper, I am particularly indebted to him.

I would also like to express my sincere gratitude to Ato Tewdrhos Nigussie, Senior Patent Expert of the Ethiopian Intellectual Office, and Ato Mulugeta Wube, Leather Technology Transfer and Development Case Team Leader of the Ministry of Science and Technology, for the extraordinary assistance they extended to me while I was visiting their offices for data gathering.

Finally, I wish to thank Arba Minch University for giving me the opportunity to pursue this master's degree program and covering all my expenses.

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List of Acronyms

ADLI	Agricultural Development Led Industrialization
EIPO	Ethiopian Intellectual Property Office
FDI	Foreign Direct Investment
FDRE	Federal Democratic Republic of Ethiopia
GATS	General Agreement on Trade in Services
GTP	Growth and Transformation Plan
IP	Intellectual Property
IPRs	Intellectual Property Rights
LDCs	Least Developed Countries
MoST	Ministry of Science and Technology
NIEO	New International Economic Order
Paris Convention	Paris Convention for the Protection of Industrial Property
TNCs	Transnational Corporations
TOT	Transfer of Technology
TRIPs Agreement	Agreement on Trade-Related Aspects of Intellectual Property Rights
TVETs	Technical and Vocational Education and Training
UN	United Nations
UNCTAD	United Nations Conference on Trade and Development
WIPO	World Intellectual Property Organization
WTO	World Trade Organization

Abstract

The relevant policy documents of the Ethiopian government identify access to and dissemination of foreign technologies as a key factor for the achievement of development goals of the country. It is also a day to day occurrence to hear high government officials through media outlets asserting the importance of technology transfer. Nonetheless, foreign technologies cannot be effectively adapted in a vacuum. In addition to having the required technological capability to absorb foreign technologies, suitable legal and institutional arrangements need to be put in place. This study paper thoroughly analyzes laws of the country that have direct or indirect impact on technology transfer activities. It also examines the powers, responsibilities and technology transfer activities of government organs which have mandates to deal with technology transfer process.

Using the method of both scholarly and legislative documents analysis and interviews with government officials, the findings of the study reveals the inadequacy and fragmented nature of the rules on transfer of technology. Contrary to prevailing foreign experiences, determining the terms and conditions of technology transfer agreements is left to the absolute autonomy of the parties, there are no packages of incentives to persons who engage in technology transfer activities and the investment law fails to provide for attractive incentive to foreigners who invest jointly with Ethiopian nationals. The patent and competition laws overlook to regulate restrictive patent licensing practices which may have the effect of defeating one of the very purposes of introducing the patent system, i.e, encouraging the transfer and adoption of foreign technology. Furthermore the country lacks compressive piece legislations that regulate franchising business and trade secrets protection.

As regards institutional setups for the transfer of technologies in Ethiopia, the study identified, among others, the Ministry of Science and Technology, Ethiopian Intellectual Property Office and the Micro and Small Enterprises Agency as government entities which have mandates that relate with technology transfer. Among other things, absence of coordination, overlap of mandates, bureaucratic hurdles, and absence of monitoring and follow up mechanisms hinder these institutions from undertaking effective and efficient technology transfer activities.

Finally, the writer of the paper suggests some solutions that may help to overcome the abovementioned shortcomings. He recommends that it is high time to adopt a technology transfer regulation that: prohibit the conclusion of restrictive technology transfer agreements; provide for mechanisms for monitoring and follow up procedures; and provide for packages of incentives for persons who engage in technology transfer activities. He also suggests for the amendment of some parts of the patent law and inclusion of some other new legal arrangements in the same. In addition, he calls for the enactment of compressive franchising and trade secretes protection laws. He further advises that a special governmental organ should be established. This government organ shall have the mandate to look over and coordinate all sorts of technology transfer activities in the country.

Chapter One

Research Proposal

3.5. Background of the Study

Contemporary scholars assert that one of the factors of economic growth, in addition to the three classical factors, i.e. land, labour and capital, is technology.¹ Accordingly, in countries which aspire to bring about rapid economic growth, access to new technologies is integrally linked to long-standing development priorities.² New technologies may be accessed through either invention or its transfer, or both.

However, accessing new technology through acquisition doesn't seem a feasible option for least developed countries (LDCs) as they lack the required research and development budgets and infrastructures to generate and acquire inventions. In fact, recent empirical data reveals that most of the world's patent right holders of new technologies are nationals of developed countries. This implies that invention processes continue to remain the provinces of these countries in the global world.³ Hence, for LDCs, the remaining option of accessing new technologies is importing the same. Even this latter option is not as such easy to LDCs, given the countries' law technological capabilities and the international patent system. But, it is a last resort as long as these countries insist in their desire to bring about and foster economic growth. Having regard to these need of developing countries, the World Trade Organization (WTO) Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS Agreement) provides for a provision that impose a duty on developed countries to formulate policies and programmes that encourage their companies to transfer technology to developing countries.

The movement of technology from one country to another is called international transfer of technology. There are two distinct types of international transfer of technology. These are

¹ See Chantal Thomas (1998) "*Transfer of Technology in the Contemporary International Order*", 22 FORDHAM Int'l. LJ, at 2096

² Keith E. Maskus & Ruth L. Okediji (2010) "*Intellectual Property Rights and International Technology Transfer to Address Climate Change: Risks, Opportunities and Policy Options*", 32 ICTSD INTELLECTUAL PROPERTY AND SUSTAINABLE DEVELOPMENT SERIES, at 3

³ Bernard M. Hoekman, Keith E. Maskus & Kamal Saggi, "*Transfer of Technology to Developing Countries: Unilateral and Multilateral Policy Options*" (Working Paper, 2004), at <http://www.betsaonline.com/SystemAnalysis/TransferTechnology.pdf>.

horizontal and vertical transfer of technology. The former refers to the movement of an established technology from one operational environment to another (for instance from one company to another).⁴ Vertical transfer of technology, on the other hand, presupposes the transmission of new technologies from their generation during research and development activities in science and technology organizations to application in the industrial sectors.⁵ In order to effectively effect international transfer of technology, whether horizontal or vertical, developing countries need to put in place suitable legal and institutional frameworks.

Accordingly, on top of the TRIPS arrangement at the interactional arena, some developing countries, especially the so called “Asian Tigers”, put in place national legal as well as institutional framework that facilitates transfer of technology (TOT). The experiences of these countries indicates that the major means of technology transfer are technology transfer agreements, management agreements, patent licensing (both voluntary and compulsory), know-how supply agreements and Foreign Direct Investment (FDI).⁶ In order to determine whether a country put in place adequate and suitable legal and institutional framework for the transfer of technology, one has to closely scrutinize the country’s laws that regulate, inter alia, technology transfer agreements, patent rights and investment activities. This writer intends to examine the issue whether the existing Ethiopian patent, investment laws are adequate enough and capable of ensuring technology transfer to Ethiopia.

Addressing the above issue is of paramount importance particularly at this point in time because the Ethiopian government is endeavoring to transform the country from agriculture led economy to industrialization. The Ethiopian government is implementing the five year transformation plan, otherwise called Growth and Transformation Plan (GTP). This document states that one of the fundamental policy directions of the Ethiopian government is ensuring accelerated and sustained industrial development.⁷ It also promises that favorable conditions will be crated to this

⁴ Vivek Shukla, “*Technology Transfer Agreements in High-Tech Industries: A Competition Law Analysis*” (Project Report, 2013, at <http://cci.gov.in/images/media/ResearchReports/Technology%20Transfer%20Agreements%20in%20High-Tech%20Industries%20A%20Competition%20Law%20Analysis.pdf>).

⁵ Id.

⁶ David M. Haug (1992) “*The International Transfer of Technology: Lessons that East Europe can Learn from the Failed Third World Experience*”, 5 HARVARD JOURNAL OF LAW & TECHNOLOGY, at 213- 217.

⁷ The Growth and Transformation Plan (2010/11- 2014/15) (2010), at 23.

end, and, there by the industry sector will play a key role in the economy of the country.⁸ With the view to implement this policy direction, the government's industry development strategy mainly focuses on industries that, inter alia, contribute to rapid technological transfer.⁹

Even in the absence of the above policy direction, since, as stated above, one of the factors of economic growth is technology, it is hardly possible for the country to achieve its economic development goals without rapid industrial developments. Hence, as a country with underdeveloped base for acquisition of technology through invention, Ethiopia is expected to put in place effective legal and institutional framework for the transfer of technology. In this regard, as can be inferred from the preambles of the patent and investment proclamations, the Ethiopian legislature pledges that one of the driving forces behind the enactment of the patent and the investment proclamations is the necessity to encourage the transfer and adoption of foreign technology by creating conducive environment to assist the national development efforts of the country. Hence, the main question this writer intends to address under this title is whether these laws created favorable conditions for the transfer of technology as promised by the legislature.

3.6. Statement of the Problem and the Research Questions

Technology transfer agreements are one of the various methods of technology transfer. These types of agreements need to be properly regulated. Otherwise, they may not bring the intended result. In Ethiopia, technology transfer agreement was governed by a regulation enacted by the Council of Ministers. This regulation, entitled "Transfer of Technology Council of Ministers regulation No. 121/1993, was enacted by the Council in accordance with the Encouragement, Expansion and Coordination of Investment proclamation No. 15/1992. Though this Proclamation was repealed by the Investment Proclamation No. 37/1996, and the latter Proclamation was also repealed by another Proclamation, i.e. Re-Enactment of the Investment Proclamation No. 280/2002, the latter two proclamations give effect to the Regulation. Yet, after a year, the Investment (Amendment) Proclamation No. 375/2003 expressly repealed the Regulation.¹⁰ Now days, the relevant active law that govern TOT agreements is the Investment Proclamation No. 769/2012. This proclamation empowers the Ethiopian Investment Commission to register TOT

⁸ Id.

⁹ Id.

¹⁰ See The Investment (Amendment) Proclamation No. 375/2003, Art. 6, (2003).

agreements. It doesn't have, however, the power to scrutinize the terms and conditions of the agreements. It registers technology transfer agreements without any evaluation criteria.

The other category of law that affects technology transfer is the patent law. Ethiopia enacted its patent legislation back in 1995. The preamble of this law, Inventions, Minor Inventions and Industrial Designs Proclamation, No. 123/1995 indicates that one of its objectives is encouraging the transfer and adaptation of foreign technology. This implies that the legislature is of the opinion that the patent system is a key channel of technology transfer. However, though nearly 20 years have elapsed since the enactment the patent law, it has not so far brought about the intended result.

The Ethiopian government has concluded scientific and technological cooperation agreements with different countries such as China and Korea as another means of transferring and adapting foreign technology. To this effect, the preamble of these agreements state, among other things, that the countries concluded the agreements because they are committed to intensify their national capacity through research collaboration, training and transfer of technology.¹¹ Yet, most these documents remains to be lib service promises with respect to technology transfer to Ethiopia are concerned.

In addition, The GTP states that micro and small enterprises development is one of the industrial development strategic directions. The Council of Ministers Regulations No. 33/1998 empowers the Federal Micro and Small Enterprises Development Agency to prepare and disseminate technology and project profiles by selecting appropriate technologies required for the promotion and development of these Enterprises.¹² However, it is questionable whether there is conducive environment for the agency to discharge this responsibility.

At the international arena, the international community noticed that the vast difference in technological capabilities among countries is a major obstacle for fair commercial competitions. This gap has also given rise to concerns of environment and public health. As a result, reducing

¹¹See Agreement on Scientific and Technological Cooperation between the Government of the Federal Democratic Republic of Ethiopia and the Government of the Republic of Korea, Preamble

¹² See The Micro and Small Enterprises Development Agency Establishment Council of Ministers Regulations No. 33/1998, Art. 6 (5), (1998).

the technological gap between the global north and south becomes very crucial.¹³ If fact, building the technological capabilities of developing countries is one part of the globalization process.¹⁴ With the view to attain this end, the international community has devised different mechanisms. One is the TRIPS Agreement. As indicated above, with the view to alleviate the impediments of the international patent system in their endeavor to import new productive technologies, developing countries succeeded in negotiating the inclusion of technology transfer clause in the WTO Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS Agreement). To this effect, Art 66 (2) of the agreement imposes positive obligation on developed countries to formulate public policies or programmes that encourage companies and other institutions to engage in technology transfer to developing countries. This provision reads:

“Developed country members shall provide incentives to enterprises and institutions in their territories for the purpose of promoting and encouraging technology transfer to least developed country members in order to enable them to create a sound and viable technological base.”¹⁵

Despite this and other arrangements, so far, the interactional community’s endeavor to transfer effective technologies from the developed north to developing countries seems futile.

The research paper, therefore, attempted to delve into the following research questions, and, then, provide some theoretical and empirical answers.

- Is the legal regime that regulates technology transfer agreements in Ethiopia adequate and appropriate?
- Has the Ethiopian patent law devised appropriate legal arrangements that will play positive role in the transfer and spillover of technology to Ethiopia?
- Do the investment, franchising (if there is any) and trade secret protection laws of the country put in place legal arrangements that may contribute to the transfer of technology in Ethiopia?

¹³ Nandakumar Krishnagar , *Impediments to International Transfer of Technology – A Developing Country Perspective*. 1 (2005). at http://www.law.nyu.edu/sites/default/files/upload_documents/krishnagarpaper.pdf

¹⁴ Ibid

¹⁵ Annex 1C of the Marrakesh Agreement , Agreement on Trade-Related Aspects of Intellectual Property Rights, (1994) I.L.M, Art. 66 (2)

- Is the Federal Micro and Small Enterprises Development Agency discharging its responsibility to prepare and disseminate technology and project profiles by selecting appropriate technologies required for the promotion and development of Micro and small Enterprises (MSEs)? Is there suitable legal and institutional arrangement that enables the Agency to play its role in this regard?
- Are the terms and conditions of the bilateral agreements Ethiopia entered in to with other countries adequate enough to facilitate transfer of technology to Ethiopia? What practical utility have these agreements brought about so far? Is there organizational set up that follow up the implementation of the agreements?
- Are developed countries discharging their duty to encourage the transfer of technology to developing countries as stipulated under Art 66 (2) of the TRIPS Agreement? If yes, how are they doing so? Is there compliance mechanism under the WTO arrangement? Is there adequate international legal framework favorable for transfer of technology to developing countries any ways?

3.7. Objectives of the Research and its Significance

The general objective of this research paper is exploring the legal and institutional arrangements put in place for the transfer of foreign technologies in Ethiopia. It demonstrated what the legal regime and institutional set ups that regulate the transfer of technology to Ethiopia look like. This endeavor aimed at expounding the role these laws and institutions are playing with respect to technology transfer. In doing so, it identified the legal and practical problems that are hindering the effective transfer of foreign technologies to Ethiopia.

This research paper is equally aimed at providing a complete picture of the international legal framework for transfer of technology. In particular, it tried to define the scope of the duty of developed countries to encourage the transfer of technology to developing countries. Furthermore, it examined the existence of compliance mechanisms to the obligation of developed countries to encourage the transfer of technology to developing countries and, if any, its effectiveness.

It is the firm belief of the researcher of this paper that the research paper would aid stakeholders to technology transfer in various ways. In particular:

- This research paper may assist concerned organs of the FDRE Government in understanding the legal and institutional hurdles that are negatively affecting the transfer and adaption of foreign technology;
- Policy makers may utilize the findings of the paper as inputs to formulate workable technology transfer policies;
- It may also assist the legislature to identify areas of laws that need to be revisited or reformed;
- It may contribute to the little to no literature in the area of transfer of technology and may instigate other researchers to come up with finest works.

3.8. The Scope of the Study

Technology transfer may take different forms. Basically, there are two types of technology transfer. These are horizontal transfer of technology and vertical transfer of technology. As stated above, the former presupposes the movement of established technologies from one operational industry to another. As opposed to horizontal transfer of technology, vertical transfer of technology refers to the transmission of new technologies from their generation during research and development activities in science and technology organizations to application in the industrial sectors. Having regard to the question whether the movement intra-national or international, transfer of technology may further be classified in to two as international transfer of technology and domestic transfer of technology. The scope of this research paper is be limited to analyzing the legal and institutional set up put in place to regulate the movement of technology from an operational environment in a foreign country to Ethiopia for industrial application. However, this should not be taken to mean that peripheral issues are not touched up on; this research paper tried to give a fair place for incidental issues which pertain to vertical and domestic transfer of technology.

3.9. Methodology of the Study

Both primary and secondary data are used in the course of the study. To begin with, he utilized secondary sources to explain the conceptual underpinnings of transfer of technology. He also used these sources to analyze legal materials, both national and international, with the view to

demonstrate what the legal regime that governs transfer of technology looks like both at the national and international level. He further used these sources to provide for a complete picture of institutional set ups involved in TOT processes. Moreover, these sources are utilized to explain the extent to which regulatory frameworks are effective in facilitating TOT. Hence, reviewing books, journal articles, reports, statistical data, policy documents, etc were crucial approaches of the study.

Coming to primary sources, the writer analyzed, *inter alia*, the Paris Convention and the TRIPs Agreement with the view to address the question whether the international legal regime is favorable for the flow of technology from developed to developing countries. In particular, the writer closely scrutinized the essence and implementation mechanisms of Art. 66 (2) of the TRIPs Agreement.

As to national laws, the writer of the paper analyzed Ethiopian laws which have direct and indirect effect on technology transfer activities. Specifically, the writer investigated the provisions of the repealed Transfer of Technology Council of Ministers regulation No. 121/1993 in order to demonstrate what the previous TOT regulatory system of the country looked like and draw historical comparison with the current regulatory system. This analysis is also used to make a comparison between the repealed regulation and the draft TOT regulation, which is prepared by the Ministry of Science and Technology (MoST). He also analyzed the provision of the patent law that have a bearing on TOT activities with the view to ascertain whether they can play positive role in the transfer and spillover of technology to Ethiopia. Furthermore, he examined, among others, the investment, trade mark and trade secrets protection laws of the country to address the question whether these laws put in place legal arrangements that may contribute to the flow of foreign technology to Ethiopia. The writer did also analyzes the Vietnamese and Ugandan laws of TOT in order to draw comparative analysis with the Ethiopian TOT regulatory system.

Moreover, first hand information which is gathered through interviews with concerned government officials was most important inputs to identify and explain the current state of TOT activities. These interviews were also used to explain the practical utility of the bilateral science and technology cooperation agreements Ethiopian concluded with other countries. They were also important inputs to address the question whether the current TOT regulatory system of the

country is adequate to facilitate the inflow of foreigner technologies. The writer also used these interviews to identify government institutions which have the mandate to undertake TOT activities and expound the activities these organization are undertaking with the view speed up the inflow of foreign technology in to the country.

3.10. Limitations of the Study

There are certain challenges that impeded the research from being full-fledged one in some respects. Absence of sufficient literature on the area is one. There is no wealth of comprehensive materials that deals with the legal aspects of transfer of technology in Ethiopian libraries. Accordingly, for the most part, the writer of the paper primarily utilizes internet sources.

The other limitation is the inaccessibility of technology transfer agreements. There are some technology transfer agreements registered before the Ethiopian Investment Commission. The agreements are concluded between companies which operate in Ethiopian and foreign companies. The officers of Commission declined to make these agreements accessible to the writer this paper. Because of this limitation, the writer of this couldn't scrutinize the terms and conditions of the agreements.

In addition, some officials of the Commission were not cooperative to the researcher to make accessible necessary information and documents as regards the inflow of technology through joint venture investment. They were also reluctant to give interview. Hence, despite the relentless efforts, the researcher couldn't access some important information which are vital to make this research paper full-fledged one.

Chapter Two

Definition and Modes of Transfer of Technology

Introduction

This chapter is designed to clarify the concept of TOT. Accordingly, the chapter explains the diverse definitions provided for the concept TOT. It also highlights the different forms and methods by which countries may bring about TOT in to their economy/industry. Furthermore, it will shade some light on the directions of technology flow in the global world. The clarification of these concepts serves as a spring board to delve deep in to the main issues of this paper. It will also, given the diverse understandings of the term TOT, clarify the kind of technology transfer this paper is concerned with.

2.1. Definition

There is no consensus among authorities as to what constitutes technology or how technology should be defined. For the purpose of this paper, technology shall be understood as the knowledge to produce and use tools to satisfy human needs either directly or indirectly. It must be noted that the word “technology” doesn’t only refers to technical machinery and equipments and their operations. It also encompasses the notion of “soft technology”. Hence, technology includes any integrally associated managerial and marketing techniques that can be systematically used for the manufacture of a product, or for the application of a process or the rendering of a service.¹

Once technology is defined, the next question is what constitutes TOT? As it is the case with other concepts, authorities have difficulties in providing a universally acceptable definition for the phrase TOT. The American Science Board defined technology transfer as “...a wide spectrum of activities, running the gamut from the exchange of ideas between visiting researchers to contractually structured research collaborations involving the joint use of facilities and equipment.”² This definition is probably the widest usage of the phrase TOT.³ As per this

¹David M. Haug (1992), “*The International Transfer of Technology: Lessons that East Europe can Learn from the Failed Third World Experience*”, 5 HARVARD JOURNAL OF LAW & TECHNOLOGY, at 212

²Yong S. Lee, “*Technology Transfer and Economic Development: A Framework for Policy Analysis*”, in 1 TECHNOLOGY TRANSFER AND PUBLIC POLICY (Yong S. Lee ed., 1997), at 22

definition, mere exchange of ideas between/among researchers can be considered as TOT. Contrary to this logical inference, the general consensus among writers is that any attempt to provide for the definition of TOT must be functional, rather than formal. In line of this understanding a certain writer defined TOT as follows:

“Technology transfer is [a] process by which a technology, expertise, knowhow or facilities developed by one individual, enterprise or organization is transferred to another individual, enterprise or organization. Effective technology transfer results in commercialization of a new product or service or in the improvement of an existing product or process.”⁴

For the purpose of the above definition, a mere exchange of ideas is not considered as a technology transfer process. It instead limited the scope of TOT to cases that result in the utilization of the transferred idea for the production or improvement of goods or services by the receiving party.

There are also other definitions which suggest that TOT requires a functional component. In this regard Harold Brook defined TOT as "the process by which science and technology are diffused throughout human activity."⁵ In a similar vein, another scholar labeled TOT as “the transmission of know-how to suit local conditions”⁶ According to both definitions, in order for there to be a true technology transfer from one person to another, there must be effective absorption of the transferred technology by the recipient party.

At the international arena, TOT is discussed in different organizations like the WTO and the UN system for years. Yet, there has not been any formal agreement within these bodies as regards the definition of phrase. This being the case, the United Nations Conference on Trade and Development (UNCTAD) tried to define technology transfer as:

³ Id.

⁴ Vivek Shukla, *“Technology Transfer Agreements in High-Tech Industries: A Competition Law Analysis@ (Project Report, 2013) 8, available at <http://cci.gov.in/images/media/ResearchReports/Technology%20Transfer%20Agreements%20in%20High-Tech%20Industries%20A%20Competition%20Law%20Analysis.pdf>*

⁵ David M. Haug, *supra* note 1, at 212.

⁶ Id.

“...the transfer of systematic knowledge for the manufacture of a product, for the application of a process or for the rendering of a service and does not extend to the transactions involving the mere sale or mere lease of goods.”⁷

Like the above functional definitions of TOT, this definition focuses primarily on the actual transfer process. It places high weight for the adaption and diffusion of the technology for industrial application. From the perspective of UNCTAD’s definition, technology transfer transactions include:

- a) *“The assignment, sale and licensing of all forms of intellectual property;*
- b) *The provision of know-how and technical expertise e.g. plans, diagrams, models, instructions, guides, formulae, etc;*
- c) *The provision of technological knowledge necessary to acquire, install and use machinery, equipment, intermediate goods and/or raw materials which have been acquired by purchase, lease or other means; and*
- d) *The provision of technological contents of industrial and technical cooperation arrangements.”⁸*

On the other hand, from the perspective of UNICTAD’s definition, TOT transactions do not include transfer of a product, such as a mere sale or lease of tractor, seed or software package. However, it doesn’t seem logical to exclude sale of goods from the ambit of TOT. Sometimes technological know-how may be embodied in machines and equipments. In the course of operating these goods, the purchaser may acquire important know-how for the manufacture or improvements of goods or service, or the operation of a process.

Coming to the Ethiopian legal system, the investment proclamation defines TOT as follows:

“ “[T]ransfer of technology” means the transfer of systematic knowledge for the manufacture of a product, for the application or improvement of a process or for the rendering of a service, including management and technical know-how as well as marketing technologies, but may not extend to transactions involving the mere sale or lease of goods”⁹

The above definition is essentially similar to the UNCTAD’s definition of TOT. It includes the transfer of both tangible and intangible technologies. It also adopt a functional definition of the phrase as it emphasizes on the application of the transferred technology for manufacturing a

⁷ _____, The Role of Intellectual Property Rights in Technology Transfer in the Context of the Convention on Biological Diversity: A Technical Study, <https://www.cbd.int/doc/meetings/ttc/egttstc-02/other/egttstc-02-oth-techstudy-en.pdf>.

⁸ Ibid.

⁹ Investment Proclamation No. 769/2012, Art. 2 (10).

product, rendering a service or improving a process. As it is the case under UNCTAD's definition, it excludes the mere sale or lease of goods from the ambit of TOT transactions. This will, in turn, subject the definition to critics which are forwarded against UNCTAD's definition.

From the above discussion, one can discern the absence of consensus among different authorities on the definition of TOT. For the purpose of this paper, the functional definition of TOT shall be adapted. Hence, throughout this paper, TOT refers to the process by which a scientific knowledge, a technology or know-how is transferred from one person to another who will, as a result, acquire the capability to manufacture a good, render a service and improve a process whose qualities are comparable to that of the technology supplier's products. Hence, TOT presupposes two parties: technology supplier and technology recipient. Technology supplier is the party who made the technology available for a transfer to the technology receiver. Whereas, the technology recipient is the party who acquires the technology with the view to manufacture a product, render a service or apply it on a process.

2.2. Types of TOT

TOT processes can be classified in to different types by taking into account the nationality and occupation of the parties involved, and the source of the technology. Hereinunder, there will be a brief explanation of the different categories of TOT. This discussion will help to clarify the type of TOT this paper is concerned with.

To begin with, based on the source of the technology, TOT processes can be classified in to two as horizontal and vertical technology transfer. The latter refers to the movement of knowledge from research institutions to industrial sector.¹⁰ This implies that in case of vertical transfer of technology, the technology supplier is a research organization. And, the technology recipient may, for example, be a manufacturing company which applies the technology for the production of goods. It is worth noting that it doesn't matter whether the research library which supplies the technology is a public or a private one. Vertical TOT is very crucial as companies often fail to develop new technologies.¹¹

¹⁰ Vivek Shukla, *supra* note 4, at 14.

¹¹ United Nations, "Facilitating Transfer of Technology to Developing Countries: A Survey of Home-Country Measures" (UNCTAD Series on Technology Transfer and Development, 2004), at:

Horizontal TOT, in contrast, refers to the transmission of “an established technology from one operational environment to another (for instance from one company to another).”¹² Logically, it follows that, in case of horizontal TOT, the technology flows from one undertaking to another. That is, both the technology supplier and the technology recipient are actors of industrial sector. It doesn’t matter whether the industries belong to same or different sector of the economy. The technology may, for example, flow from the manufacturing sector to the agriculture sector. Horizontal TOT includes the transfer of military technology to civilian application and vice versa.¹³

Having regard to the nationality of the parties involved, TOT processes can be categorized in to two as domestic and international technology transfer. If the transfer takes place between/among persons who/which reside in the same political boundary, the TOT process can be designated as domestic transfer of technology. On the contrary, international TOT refers to the movement of knowledge between/among countries. Put differently, international technology transfer refers to the process by which a firm in one country gains access to and employs technology developed in another country.¹⁴ This implies that, in case of international TOT, the technology supplier and recipient reside in different countries. At this juncture, it is worth noting that both domestic or international TOT processes can be either vertical or horizontal technology transfer having regard to the issue whether the technology supplier is a research laboratory or an industry.

This research paper primarily focuses on the legal regime that governs the flow of industrially applicable foreign technology in to Ethiopia. As such, the paper is basically concerned with horizontal international transfer of technology. This doesn’t mean, however, that side issues concerning vertical and domestic TOT processes will not be touched up on.

<http://www.researchgate.net/publications.PublicPostFileLoader.html?id=5395ffe9cf57d7900a8b46a5&key=e0b495395ffe908d75>

¹² Vivek Shukla, *supra* note 4, at 14.

¹³ *Id.*, at 13.

¹⁴ Rod Falvey & Neil Foster, *The Role of Intellectual Property Rights in Technology Transfer and Economic Growth: Theory and Evidence* 23 (United Nations Industrial Development Organization working papers, 2006), at https://www.unido.org/fileadmin/user_media/Publications/Pub_free/Role_of_intellectual_property_rights_in_technology_transfer_and_economic_growth.pdf.

2.3. Methods of TOT

Technology transfer can take place in different ways. This section is devised to briefly discuss the main channels of TOT. One of these mechanisms is FDI. The benefits of FDI to the host country may be of multifold. Empirical evidences suggest that “FDI triggers technology spillovers, assists human capital formation, contributes to international trade integration, helps create a more competitive business environment and enhances enterprise development.”¹⁵ With the view to maximize the benefits that may be derived from foreign presence in the domestic economy, developing countries have liberalized their FDI regime and introduced other policies to attract foreign investors. The question here is that how does FDI bring about technology transfer in to host countries.

As a matter of fact, Transnational Corporations (TNCs), which are the main sources of FDI, are also the sources of world’s mature technology. These companies often invest in developing markets in order to "protect the existing market, to create new markets, to bypass prohibitive barriers and import restrictions, to take advantage of cheap labor and skills, and to discover or protect raw materials.”¹⁶ These benefits can best be fulfilled by retaining ownership and control of the technology transferred to a foreign market incident to an investment in that market.¹⁷ Put differently, multinationals have much to gain from preventing the diffusion of their technologies to local firms.¹⁸ In fact, TNCs are fully aware of the fact that “transferring the production technology to the foreign country would simply create unnecessary and unwanted competition and diminish profitability.”¹⁹

Even in the presence of this restrictive practice, FDI carried out by TNCs remains to be one of the most important vehicles for TOT. To begin with, FDI may benefit the host economy through the backward and forward linkages they generate.²⁰ The suppliers of the TNCs may be local firms (backward linkages). In this case, TNCs will be forced to provide technical assistance,

¹⁵ Organization for Economic Co-Operation and Development (OECD), “*Foreign Direct Investment for Development: Maximizing Benefits, Minimizing (Costs Overview)*” 6 (2002), available at <http://www.oecd.org/investment/investmentfordevelopment/1959815.pdf> .

¹⁶ David M. Haug, *Supra* note 1, at 215.

¹⁷ *Id.*

¹⁸ Kamal Saggi 2002 “*Trade, Trade, Foreign Direct Investment, and International Technology Transfer: A Survey*”, 17 THE WORLD BANK RESEARCH OBSERVER, at 209

¹⁹ David M. Haug, *supra* note 1, at 215.

²⁰ Kamal Saggi, *supra* note 18, at 212.

training and information to the local firms to raise the qualities of their supplier's products.²¹ In this sense, the domestic affiliates of TNCs may acquire advanced technologies more directly and effectively with the assistance of the latter. The other way round, TNCs may also be suppliers of domestic firms (forward linkage). In these cases too, TNCs may assist users of their products to modernize or upgrade production facilities with the view to enable the latter to use more inputs.²² These activities, in the final analysis, will enable local firms to acquire and adopt advanced technologies. Moreover, the vertical linkage between a foreign company and competing domestic firms may result in a fierce competition between/ among the domestic firms, which relates each other horizontally. With the view to supply quality products to foreign firms, these domestic firms may be forced to acquire and adopt new technologies and advance their managerial style. This phenomenon will necessarily bring about TOT into the host country.

Secondly, the presence of foreign firms may also force horizontally related domestic firms to access and adopt advanced foreign technologies. When TNCs decide to penetrate a new market directly through investing in a country, they tend to bring with them more sophisticated technology and superior managerial practices, and compete with local firms. The competition with TNCs may force domestic firms to increase their competitiveness by reforming management styles and updating production technology.²³ This implies that FDI may bring about technology spillover because of its demonstration effects.²⁴ It must, however, be noted that the competition between TNCs and domestic firms may also bring about negative result. While competition between TNCs and domestic firms in the domestic economy is an incentive for the domestic firms to make a more efficient use of existing resources and technology or even to adopt new technologies, it may restrict the market power of domestic firms.²⁵

In addition, the presence of advanced technology users in domestic markets may reduce the cost of technology imitation and innovation. Domestic firms may hesitate to bear the cost of acquiring knowledge and fear the uncertainties of the result that may be obtained from the

²¹ United Nations, *supra* note 11, at 14.

²² Kamal Saggi, *supra* note 18, at 212.

²³ Alper Sönmez & M. Teoman Pamukçu, "Foreign Direct Investment and Technology Spillovers in the Turkish Manufacturing Industry" (TEKPOL Working Paper Series 11, 2003), at 10.

²⁴ Kamal Saggi, *supra* note 18, at 209.

²⁵ Alper Sönmez & M. Teoman Pamukçu, *supra* note 23, at 10. "The efficiency of domestic firms may ... be negatively affected through this channel, if foreign firms with advanced technologies produce at a lower marginal cost. By taking market share from domestic firms and forcing them to operate on a less efficient scale, with a consequent increase of their average costs, TNCs may lower the productivity of domestic firms."

acquired technology. However, when domestic firms observe how TNC's affiliates adopt product innovation or a new form of organization to local conditions, they may be initiated to attempt the innovation. In this regard, a certain writer asserted that "[technology transfer] take place when domestic firms improve their efficiency by copying technologies of foreign affiliates operating in the domestic market via the observation channel."²⁶ To put in slightly different word, since the interaction of domestic forms with new technology user TNC affiliates reduces uncertainties and result in diffusion of information, the presence of foreign firms encourages domestic firms to acquire and adopt new technologies through imitation. This observation effect of FDI mainly works among firms which belong to same industrial sector.²⁷

Thirdly, the presence of TNCs may bring about technology transfer through labor mobility. The idea here is that the presence of TNCs creates the possibility of hiring workers previously employed in TNCs and who have knowledge and experience of the technology and who are able to apply their knowledge and experience in domestic firms.²⁸ These workers may also set up their own new entrepreneur business and apply the knowledge and skill they acquired while they were in TNCs. It is to assert that workers trained or previously employed by multinationals may transfer important information to local firms by switching employers or may contribute to technology diffusion by starting their own firms.²⁹

At this juncture, it must be mentioned that this channel of technology transfer, i.e., TOT through labour mobility, has a possible negative impact. That is, "TNCs may attract the best workers away from domestic firms by offering higher wages and leaving them with less-skilled employees."³⁰

The other most important channel of TOT is turnkey package. Under the turnkey package method of TOT, a foreign company provides machinery, buildings, management, expertise, and production plan.³¹ The technology supplier's responsibility is the execution of the total work, including developing the industrial complex, its design, procurement of equipments and

²⁶ Dominique Foray, "Technology Transfer in the TRIPS Age: The Need for New Types of Partnerships between the Least Developed and Most Advanced Economies" 8 (ICTSD Programme on IPRs and Sustainable Development, Issue Paper No.23, May 2009), available at http://www.iprsonline.org/New%202009/foray_may2009.pdf

²⁷ Id.

²⁸ Id, at 8-9.

²⁹ Kamal Saggi, *supra* note 18, at 209.

³⁰ Organisation for Economic Co-Operation and Development (OECD), *supra* note 15, at 9.

³¹ David M. Haug, *supra* note 1, 215.

engineers, construction works and initiate operation of the plant. The involvement of the technology recipient is limited to providing capital and site for the project.³² What the technology recipient further required to do is watch up to the plant and turns the key- that is why this type of arrangement is known by the name “turn-key”.³³

As indicted above, in the turn key arrangement of technology transfer, the obligation of the technology supplier is limited to ensuring that the plant will function properly. Post start up performance of the plant and the training of local personnel is usually outside the technology supplier’s responsibility.³⁴ As a result, in many instances, after the plant has been completed and delivered by the technology supplier, technology recipients encounter serious difficulties in properly running and maintaining the plant.³⁵ To avoid this problem, technology recipients should insist to hold the technology supplier responsible for an initial management for a reasonable period of time and to train local personnel during the bargaining process.³⁶ Even in cases of such type of arrangement, another big problem remains with turnkey contracts. Technology suppliers sale the entire technology package, giving the technology recipient no opportunity to select any the parts of that package that they actually needed.³⁷

Technology licensing is also one of the main channels through which technology flows from one country to another. It can be described as the transfer of technology for compensation.³⁸ It involves the purchase of production rights which are protected by IPRs and, in many cases, the provision of technical assistance and know-how which are needed to adapt and adopt the

³² Joseph Kunkuta (1990) “*Technology and the Legal Framework of its Transfer in Zambia*” (unpublished LLM thesis, University of Zambia, Faculty of Law), at 86.

³³ David M. Haug, *supra* note 1, at 215.

³⁴ Joseph Kunkuta, *supra* note 32, at 83.

³⁵ *Id.*

³⁶ John H. Barton, “*New Trends in Technology Transfer: Implications for National and International Policy*” 25 (ICTSD Intellectual Property and Sustainable Development Series Issue Paper No. 18, February 2007), *available at* <http://www.iprsonline.org/resources/docs/Barton%20New%20Trends%20Technology%20Transfer%200207.pdf> . (In fact, this latter arrangement is called “Build Operate Transfer” (BOT) approach in which an international firm builds the plant, operates it for a period in order to gain the income to pay for the plant’s construction, and then transfers it to the developing nation.”)

³⁷ David M. Haug, *supra* note 1, at 215.

³⁸ Farok J. Contractor, *INTERNATIONAL TECHNOLOGY LICENSING: COMPENSATION, COSTS AND NEGOTIATION* (1981), at 3.

technology.³⁹ As such, it includes patent licensing, TOT agreements and technical assistance agreements.

As technology licensing is the most versatile method of TOT as compared to other methods, it is a method of transfer both technology suppliers and recipients favor. From the perspective of technology recipients, technology licensing offers flexibility in technology choice and an opportunity for the source and the receiving institution to negotiate.⁴⁰ With respect to the technology supplier, technology licensing agreements also enable the technology licensor to reap profits from the TOT without risking capital in a sometimes volatile foreign market.⁴¹

Joint venture investments are the other important methods of TOT. Joint ventures are long-term contractual relationships involving the pooling of assets, joint management, profit and risk sharing, joint marketing, servicing, and production.⁴² In such type of contractual arrangements, each party is supposed to provide some advantage that reduces the cost of joint operation.⁴³

Joint venture as an international TOT mechanism involves a partnership between local investors and foreign investors in which the foreign investor supplies technology in addition to or instead of mere monetary contribution. This is to assert that technology may be an equity contribution of a foreign partner to the joint venture.⁴⁴ Hence, in joint venture arrangements, the foreign investor will make new technology available while the domestic firm provides its knowledge of the market, the regulatory and business environment, and some other local advantages.⁴⁵

Joint venture as a mechanism of technology transfer has some advantages. In cases of TOT through joint venture, the transfer of technology is the main operation, thereby, conferring the advantages thereof. That is, there will be a relative optimal decision making as decision makings concerning the choice of technology and learning process rests on local agents. The other advantage is that, since all parties, including the technology supplier, wants to see the venture succeed, there will be equal commitments to the technology transfer to take place at a rapid pace.

³⁹ Dominique Foray, *supra* note 26, at 35.

⁴⁰ David M. Haug, *supra* note 1, at 215.

⁴¹ *Id.*

⁴² *Id.*, at 216.

⁴³ Dominique Foray, *supra* note 35, at 34.

⁴⁴ Richard J. Goossen, TECHNOLOGY TRANSFER IN THE PEOPLE'S REPUBLIC OF CHINA: LAW AND PRACTICE (1987), at 8.

⁴⁵ Dominique Foray, *supra* note 26, at 34.

In addition, from the perspective of developing countries, joint venture enterprises would be very essential where the technology under consideration is too sophisticated for a developing country to produce and operate it by itself.⁴⁶ Because of these benefits of joint venture, many countries have expressed a preference for joint ventures, with the foreign partner in a minority position, over wholly owned FDI.⁴⁷ The investment laws of some countries even oblige the foreign partner to contribute some sort of technology to the joint venture.⁴⁸

International trade also plays significant role in TOT. As discussed under section 1.1. above, while defining TOT, some authorities, including the Ethiopian investment law, exclude mere sale or lease of goods from the ambit of TOT transactions. On the contrary, some literatures recognize the trade in goods and services as a channel for international TOT provided that the purchased equipment is not commercially available in the recipient country.⁴⁹ According to the proponents of this assertion “[t]rade as a channel for [technology transfer] involves imports of goods and services — especially capital goods and high tech products – and export by firms from developed countries to lesser developed countries.”⁵⁰

In fact, the import of high- tech products and capital goods may foster local invention and technological capability through reverse engineering of the imported goods. By the same token, exporting of goods creates an opportunity for local firms to participate in the global supply chain. As a result, these firms will benefit from numerous training and technological spillover effects from their customers.⁵¹ Understood in this sense, import and export of high – tech goods can be taken as one mechanism of TOT, though an indirect one.

In addition to import and export of high tech goods, sub-contracting is another indirect form of trade related TOT.⁵² Since the sub contractor manufactures the final product under the principal’s

⁴⁶ C.G. Weeramantry, “*Human Rights, Technology, and Development*”, in 151 HUMAN RIGHTS AND SCIENTIFIC AND TECHNOLOGICAL DEVELOPMENT (C.G. Weeramantry ed., 1990), at 161.

⁴⁷ Dominique Foray, *supra* note 26, at 35.

⁴⁸ John H. Barton, *supra* note 36, at 37.

⁴⁹ See Maria Anna Corvaglia , “*South–South Technology Transfer Addressing Climate Change*” 7, at http://www.nccr-climate.unibe.ch/conferences/climate_economics_law/papers/Corvaglia_MariaAnna.pdf

⁵⁰ Dominique Foray, *Supra* note 26, at 32.

⁵¹ *Ibid.*

⁵² *Id.*, at 33. Subcontracting is a contractual arrangement “whereby the subcontractor manufactures the final product under the principal’s brand name. This allows foreign involvement without the transfer of ownership. Such an arrangement often involves the foreign partner in selecting capital equipment, training managers, engineers and technicians, and advising on production, financing, and management.”

brand name, the quality, delivery, and price of the final product are critical for the foreign investor. These concerns are likely to generate long term technical relationships for capacity building in the host country. As such, substantial learning may take place.

Hence, one can conclude that trade in high tech goods can be taken as one interesting mechanism of TOT in to a country. Nonetheless, it is important to note the limitations of TOT that may take place through this arrangement. For instance, in cases of subcontracting, it is difficult for the subcontracting company to establish international brand images as it sells the final products in the principal's brand name. The dependency of local firms on foreign companies for technologies and components may also persist for a long time.⁵³

In general, the commercial transfer and acquisition of technology can take place with the sale and purchase of equipment and other capital goods. Sales and purchases of capital goods and their import into the country can be considered, in a sense, technology transfers transactions.⁵⁴

Commercial transfer of technology may also take place in connection with the system of franchising of goods and services. A franchise or distributorship is a business arrangement whereby the reputation, technical information and expertise of one party are combined with the investment of another party for the purpose of selling goods or rendering services directly to the consumer.⁵⁵ The outlet for the marketing of such goods and services is usually based on a trademark or service mark or a trade name and a special décor (the “look”) or design of the premises.⁵⁶ The license of such a mark or name by its owner is normally combined with the supply by that owner of know-how in some form, either technical information, technical services, technical assistance or management services concerning production, marketing, maintenance and administration.⁵⁷

It must, however, be noted that all franchise agreements are not technology transfer agreements. What counts as a transfer of technology within the context of a franchise agreement is tricky and requires a close review of the type and nature of the specific franchising agreement.

⁵³ Ibid.

⁵⁴World Intellectual Property Organization, *Overview of Contractual Agreements for the Transfer of Technology*, http://www.wipo.int/export/sites/www/sme/en/documents/pdf/technology_transfer.pdf

⁵⁵ Ibid.

⁵⁶ Ibid.

⁵⁷ Ibid.

Broadly speaking, there are three types of franchising; trade name franchise, product distribution franchise and pure franchise.⁵⁸ In trade name franchising, the franchisee purchases the right to become identified with the franchisers' trade name.⁵⁹ In such type of franchising, the franchisor may provide minimal assistance to the franchisee. As a result, there might not be a TOT component in the franchising relationship of the parties. Yet, if the trade mark licensing is coupled with the provision of extensive technical assistance, trade mark franchising may still be considered as TOT arrangement. In fact, in some jurisdictions, a simple trademark license is usually not a franchise if: the business of the licensee doesn't substantially associate with licensor's marketing plan or business system; the licensor does not have significant control over licensee's business or the licensor does not provide significant assistance to the licensee.⁶⁰

In the Ethiopian legal system, the trademark law requires parties to a trademark licensing agreement to insert a provision in the agreement to the effect that the licensor shall have effective control over the quality of the goods and services of the licensee.⁶¹ This stipulation, however, will not make all trademark licensing agreements franchising arrangements. In addition to controlling, the licensor should have the obligation to provide technical and other assistances. The licensee should also have the right to use, *inter alia*, the business operation model and marketing strategy of the licensor under the agreement.

Product distribution franchise licenses the franchisee to sell specific products under the manufacturer's brand name and trademark through a selective, limited distribution network.⁶² This type of franchising agreements are suitable to lower to medium size investments whereby the franchisee sells and/or distributes products or services in his/her/its territory.⁶³ These types of franchising agreements involve TOT if the franchisor has the duty to transfer his/her/its marketing technology to the franchisee.

Pure (or comprehensive or business format) franchise provides the franchisee with a complete business format, including a license for a trade name, the products or services to be sold, the

⁵⁸ _____, "Types of Franchising", <https://www.boundless.com/business/textbooks/boundless-businesstextbook/types-of-business-ownership-6/franchising-52/types-of-franchises-257-1725/>

⁵⁹ Id.

⁶⁰ Id.

⁶¹ Trade Mark Registration and Protection Proclamation No. 501/ 2006, Art 30.

⁶² _____, *supra* note 58.

⁶³ Id.

physical plant, the methods of operation, a marketing strategy plan, a quality control process, and the necessary business services.⁶⁴ It is needs to assert that pure franchising always involve TOT.

In general, it is only franchise agreements that involve the authorization of the use of marketing technology, management, and proprietary business process, and/or specified machines that could be used for the production of goods or for rendering of a service which are one mode of TOT.

To summarize the present section, there are a number of forms by which a technology may transfer in to a country. It is difficult to put with certainty the degree of importance of each mode of transfer. In fact, the overall effectiveness of a country's ability to acquire and implement foreign technology depends on the interaction of all modes of technology transfer.

2.4. Restrictive Conditions in Technology Transfer Agreements

TOT agreements are the main form of market based technology transfer mechanisms. Different studies indicate that such type of agreements are often subject to restrictive clauses and conditions which, in varying degrees, limit developing countries' access to technology.⁶⁵ As a result, the TOT regulatory system of these countries prohibits the inclusion of such type of terms and conditions in TOT agreements. The present section briefly explains the most common types of restrictive terms and conditions.

Tie- Ins are one of the most prevalent type of restrictive terms. Tie-Ins clauses are terms and conditions which restrict the source of supply of inputs. These terms restrict the technology recipient's choice to purchase intermediate goods, capital equipments, spare parts and even experts.⁶⁶ Under TOT agreements which contain Tie-ins clauses, the technology recipient is required to obtain equipment, tools, spare parts or raw materials exclusively from the technology supplier or a designated source specified by the latter even if the inputs are available at a competitive price in domestic market.⁶⁷ "An inevitable effect of these tie-ins is to prevent the

⁶⁴ Id.

⁶⁵ Bernard M. Hoekman, Keith E. Maskus & Kamal Saggi, "*Transfer of Technology to Developing Countries: Unilateral and Multilateral Policy Options*" 22 (Working Paper, 2004), available at <http://www.betsaonline.com/SystemAnalysis/TransferTechnology.pdf>.

⁶⁶ Id, at 23.

⁶⁷ Id.

technology acquirer from obtaining these ancillary goods and services from the most competitive sources of supply.”⁶⁸

In addition to restricting technology spillover, Tie-ins clauses have other multifold implications for technology recipients. They deprived of technology recipients the possibility of exploiting market opportunities. In addition, by reason of their exclusive position, technology suppliers may charge higher prices than the price of comparable equipment and other inputs that could otherwise be obtained elsewhere.⁶⁹ Overpricing of inputs in this way constitutes a 'hidden' cost of the transfer of technology process.⁷⁰ It may also be added that the structure of the market for intermediate and other inputs which are tied to the sources of technology by the technology supplier has implied an increasing dependence on imports of capital goods and intermediate outputs.⁷¹ This creates a perpetual dependency relationship between the technology supplier and recipient, and thus makes little room for freedom of action by the latter.⁷² Furthermore, tie-ins clauses are anti- competitive.

The other most common category of restrictive terms and conditions are clauses which prohibit or limit export of the goods and services produced by the technology recipient. These terms and conditions take various forms. They may range from “express total prohibitions on exports, through permissible exports of designated products to designated markets, and to market share arrangements implied between parent and subsidiary enterprises.”⁷³ The obvious impact of this type of restrictions is hampering the growth and competitiveness of the technology recipients industry. This will, in turn, compel the technology recipient to maintain production at a minimum level. Consequently, it will not fully exploit the foreign technology. It may also be discouraged to invest new production facilities.⁷⁴

⁶⁸ Id.

⁶⁹ George Sipa-Mjah Yankey, George Sipa-Mjah Yankey, *The Role of the International Patent System in the Transfer of Technology to West Africa: Case Studies- Ghana and Nigeria* 56 (1986) (unpublished Ph.D. dissertation, the University of Warwick), at <http://go.warwick.ac.uk/wrap/39315> .

⁷⁰ Id.

⁷¹ Id.

⁷² Id.

⁷³ Bernard M. Hoekman, Keith E. Maskus & Kamal Saggi, “*Transfer of Technology to Developing Countries: Unilateral and Multilateral Policy Options*” 23 (Working Paper, 2004), available at <http://www.betsaonline.com/SystemAnalysis/TransferTechnology.pdf> .

⁷⁴ George Sipa-Mjah Yankey, *Supra* note 69, at 51.

The third most common type of restrictive terms is terms that restrict Competition. TOT agreements often contain provisions which prohibit the technology recipient from the use of other competitive techniques. Such type of clause may also prohibit the technology recipient the use of complimentary technology. These categories of terms and conditions have the effect of limiting the range of technology and sources of technologies available to the technology recipient.⁷⁵ They may also prevent the adaptation of the technology to suit local market needs.

TOT agreements may also contain clauses which impose restriction on research and development activities of the technology recipient in connection with the technology transferred. Such type of clauses may have the effect of preventing the adaptation and modification of the transferred technology to accord to local situations and to be appropriate for local consumption.⁷⁶ They may also hamper incremental innovation.

Quota retractions are the other typical restrictive terms and conditions in TOT agreements. TOT agreements may contain a provision which limit the volume of production or sale of a product produced by the technology recipient. These types of provisions have negative effect on the optimal utilization of the transferred technology by the technology recipient. They may also have adverse effect on the competitiveness of the technology recipient.

In general, restrictive terms and conditions have negative impact on technology recipient countries' desire to access and adapt foreign technologies, and develop local technological capability. They also have negative effect on their firms' competitiveness in the international market in one way or another. As a result, the TOT regulatory system of most developing countries prohibits the inclusion of restrictive terms and conditions in TOT agreements.

2.5. Dimensions of International TOT

The traditional pathway of international technology transfer was from the developed north to the developing south. Recent developments are, however, indicating that the international flow of technology is acquiring new dimension. As a result of the advent of emerging economies on the world stage, some developing countries are now becoming important suppliers of technology to

⁷⁵ Bernard M. Hoekman, Keith E. Maskus & Kamal Saggi, *Supra* note 73, at 24.

⁷⁶ *Id.*, at 23.

the global south.⁷⁷ This south- south TOT is potentially an interesting alternative to the traditional north-south technology transfer. Herein under, there will be an attempt to explain the nature and key feature of both the north south and south- south dimensions of international TOT.

For the most part of the past half century, for developing countries, acquisition of technology from the north assumed a critical importance.⁷⁸ It was believed that the acceleration of north-south technology transfer will foster competition and raise the productivity of resources employed in the south. Hence, developing countries were lobbying for the formulation of international agreement that may enhance north south TOT.

Developed countries on their part were of the position that only the inclusion of IPRs protection in the GATT, the present WTO system, that may brought the intended technology transfer.⁷⁹ They pledge that strong IPRs protection in the south would facilitate north- south flow of technology. Yet, there was no empirical evidence that conclusively suggest the link between strong IPR protection and TOT.⁸⁰

At any rate, developing countries' endeavor to make TOT a subject of a specific international agreement ended up in vein.⁸¹ As a result, TOT, especially the north-south TOT, is basically governed by the bargaining relation between the technology supplier and recipient. That is why some scholars describe the phenomenon of the north south TOT as technology commercialization or technology trade, rather than technology transfer.⁸² This is not however to suggest that there are no initiatives to regulate north- south transfer of technology. The attempts to regulate TOT issues will be elaborately discussed below under the chapter Three.

Coming to the South- south flow of technology, case studies of the south-south technology transfer indicates, spirit of partnership permeates the TOT transaction.⁸³ This sense of partnership manifests itself in different ways. First, the technology transfer projects are conceived in

⁷⁷ Maria Anna Corvaglia, *supra* note 49, at 4.

⁷⁸ *Id.*, at 3.

⁷⁹ M. Scott Taylor, *TRIPS, Trade, and Technology Transfer*, 26 THE CANADIAN JOURNAL OF ECONOMICS 625, 627 (1993)

⁸⁰ *See infra*, at 98- 101.

⁸¹ *See infra*, at 28- 31.

⁸² Biswajit Dhar & Reji Joseph, "Foreign Direct Investment, Intellectual Property Rights and Technology Transfer: The North-South and the South-South Dimensions" 3 (UNCTAD and South Centre Background Paper No. 6, March 2012), at http://unctad.org/en/PublicationsLibrary/ecidc2012_bp6.pdf

⁸³ *See Id.*, at 29- 32.

development dimension- note commercialization as it is the case in the north- south TOT. This development dimension is evident even in the case of joint ventures between two commercial entities. There are cases in which southern technology supplier company respond to the need of the technology recipient to set up a production facility even if the establishment of the joint venture would have affected the suppliers export market.⁸⁴

Secondly, the south- south technology transfer often executes broad spectrum projects that typically consist of a wide range of participation. In this regard, case studies reveal that the south-south cooperation help in strengthening institutions that are efficient for technology adaptation and implementation.⁸⁵ Obviously, this is particularly very significant advantage of the south- south dimension of TOT as technology recipient developing countries often saddled with weak institutions which are not able to provide the needed infrastructure for technology absorption and implementation.

Because of the above facets of the south-south dimension of TOT, some writers deliberately decline to use the term TOT when they refer to the south- south technology transfer phenomenon. They rather prefer to describe the phenomenon as “south- south cooperation, south-south sharing of knowledge” etc.⁸⁶ They do so mainly because of the fact that the south-south partnerships are build on a much wider “knowledge platform.”⁸⁷

By way of conclusion, it must be noted that there is no coherent and compressive international agreement that addresses the new phenomenon of the south- south TOT.⁸⁸ The different WTO agreements and other international agreements addresses essentially North–South movements of technology.⁸⁹

⁸⁴ Id, at 29.

⁸⁵ Id, at 27.

⁸⁶ Id, at 19.

⁸⁷ Ibid.

⁸⁸ Maria Anna Corvaglia, *supra* note 49, at 1.

⁸⁹ Id.

Chapter Three

Regulation of TOT at the International Arena

Introduction

History tells that today's advanced countries have built their technological capacity by imitating foreign technologies in a protected market. The present developing countries cannot follow the same path to acquire new technologies.¹ As a result of adaption of international IPR protection agreements, it becomes legally difficult to imitate foreign technologies. In addition, because of free trade rules, an indigenous firm in the developing world may not be able to begin through a protected market as, for instance, the US industrial firms of the early 19th century did.² Accordingly, developing countries have no option than accessing foreign technologies through commercial transaction. Even the commercial source is not viable source of technology for these countries as the price of most technologies is not within the financial reach of developing countries. This, in turn, aggravated the technological gap between the north and the south. To alleviate this problem, developing nations demanded the UN to restructure the technological relation between developed and developing countries. As per this request, in 1974, the general assembly, while approving a declaration and program of action on the establishment of "The New International Economic Order (NIEO)"³ made TOT as an integral part of the NIEO scheme.⁴

¹ Hoshimi Uchida, *Technology Transfer*, in 50 *THE ERA OF INDUSTRIALIZATION: A HISTORY OF THE JAPANESE ECONOMY* (Shunsaku Nishikawa & Takeji eds., 1990), at 84.

² John H. Barton, "New Trends in Technology Transfer: Implications for National and International Policy" 9 (ICTSD Intellectual Property and Sustainable Development Series Issue Paper No. 18, February 2007), at <http://www.iprsonline.org/resources/docs/Barton%20%20New%20Trends%20Technology%20Transfer%200207.pdf>.

³ Chantal Thomas (1998) "Transfer of Technology in the Contemporary International Order", 22 *FORDHAM INTERNATIONAL LAW JOURNAL*, at 2108 ("With these documents, developing-country governments consolidated an agenda for the reform of international law that had been gaining momentum since the end of World War II.")

⁴ Maria Anna Corvaglia, Anna Corvaglia, South-South Technology Transfer Addressing Climate Change 11, at http://www.nccr-climate.unibe.ch/conferences/climate_economics_law/papers/Corvaglia_MariaAnna.pdf. ("One of the fundamental tenants of the NIEO involve "access to the achievements of modern science and technology, and promoting the transfer of technology and the creation of indigenous technology.")

Yet, despite its promising terms to developing countries⁵, the NIEO collapsed immediately as industrialized nations never accepted the underlying premises of the call for NIEO. With the collapse of the NIEO, some developing countries ceased to deal with the issue of TOT as a unified and concerted coalition.⁶ Some other developing countries, however, continue to work to promote a more favorable national and international legal framework for technology transfer.

Revising the international patent system was one of the attempts of these countries.⁷ They contend that the patent system limited their access to technologies which are crucial to their development. Accordingly, they proposed less protective international standards within which national laws should apply.⁸ As can be expected, this proposal faced a fierce challenge from the then industrialized countries. The terms proposed by third world countries were considered to be a call for abolishing the international patent system.⁹ In fact, northern countries were unwilling even to negotiate on modifying the international patent system.¹⁰

The other attempt was enacting an international agreement that regulates the transfer of technology within the UN structure. As a response to this effort, the UN drafted a code of conduct on the international transfer of technology, otherwise called the International Code of Conduct on the Transfer of Technology. This endeavor also ended up in vein: the UN member countries failed to agreement on some of the provisions of the code.¹¹

The present chapter is designed to demonstrate how TOT is being regulated in the present international arena. As such, it will analyze the provisions of international agreements which directly or indirectly have a bearing on the international TOT. It also explains the enforcement mechanisms of these agreements and their effectiveness. Before embarking on this endeavor, there will be a brief explanation on the international code of conduct on the transfer of

⁵ The NIEO was intended to eliminate the economic dependence of developing countries, promote their accelerated development based on the principle of self-reliance, and introduce appropriate institutional changes for the global management of world resources.

⁶ David M. Haug (1992) “*The International Transfer of Technology: Lessons that East Europe can Learn from the Failed Third World Experience*”, 5 HARVARD JOURNAL OF LAW & TECHNOLOGY, at 220.

⁷ Peter Nanyenya- Takirambudde, TECHNOLOGY TRANSFER AND INTERNATIONAL LAW (1980), at 70.

⁸ Id.

⁹ Id

¹⁰ David M. Haug, *supra* note 6, at 224

¹¹ Id, at 223- 24. (In outlawing the need to International Code of Conduct for the Transfer of Technology, “[d]eveloped countries have consistently maintained that transfer of technology and development of indigenous technology should be the result of transactions among parties with minimal governmental interference”)

technology as many countries take the code as a bench mark to draft national TOT laws. The discussions under this chapter will enable one to discern whether there is an enabling legal environment for the accession, adoption and implementation of foreign technologies.

3.1. The Draft International Code of Conduct on the Transfer of Technology

As indicated above, the international code of conduct on TOT was drafted as a response to a variety of complaints expressed by developing countries with respect to technology transfer transactions clauses which are detrimental to developing countries.¹² Eliminating these clauses was the core and origin of the code.¹³ The rest is auxiliary or supplementary to this basic idea.¹⁴

The most important parts of the code that deserve discussion here are chapter 4 and chapter 5 of the code. Chapter 4 deals with restrictive business practices. It lists 14 restrictive business practices¹⁵ the inclusion of which under TOT agreements is prohibited. Yet, developing and developed countries couldn't agree on the nature and content of these provisions in full. One major outstanding issue is the insertion in this chapter of a general rule of reason applicable to all practices. Alternatively, each practice could be considered on an individual basis in order to decide whether to prohibit it per se or to prohibit only its unreasonable use.¹⁶

Chapter 5 of the code provides for the responsibilities and obligations of parties to TOT agreements. As it is the case with the provisions of chapter 4, the nature of the provisions of this chapter was also controversial. In view of developing countries, the provisions should be mandatory as certain obligations should be imposed on technology suppliers as they are usually the economically stronger party in TOT agreements.¹⁷ On the contrary, developed countries held the position that "once a particular technology transfer agreement has been signed by the parties,

¹² Ton J. M. Zijdwijk (1980) "*The UNCTAD Code of Conduct on the Transfer of Technology*", 24 MCGILL LAW JOURNAL, at 564. ("Examples of these are export prohibitions and grant-back provisions")

¹³ Id.

¹⁴ Id.

¹⁵ These are: 1. Grant-back provisions; 2. Challenges to validity; 3. Exclusive dealing; 4. Restrictions on research; 5. Restrictions on use of personnel; 6. Price fixing; 7. Restrictions on adaptations; 8. Exclusive sales or representation agreements; 9. Tying arrangements; 10. Export restrictions; 11. Patent pool or cross-licensing agreements and other arrangements; 12. Restrictions on publicity; 13. Payments and other obligations after expiration of industrial property rights; and 14. Restrictions after expiration of arrangement. See chapter 4 of the code

¹⁶ Ton J. M. Zijdwijk, *supra* note 12, at 571.

¹⁷ Id., at 572.

such agreement shall govern their rights and obligations in accordance with applicable law.”¹⁸ This position is the reflection of the thesis that freedom of contract is sacrosanct except when it restricts competition.¹⁹

As a result of the above-mentioned and other differences, the adoption of international code of conduct was abounded in the middle of ongoing disputes. Despite these failures, some developing countries continued to express their desire to access improved technologies in various international forums, especially within the WTO regime.²⁰ As a result, in the past two decades, specific provisions on transfer of technology have been incorporated into various international instruments.²¹

3.2. TOT and the International Legal Regime

As noted above, developing countries have expressed in various international legal *fora* their need to access foreign technologies since 1970s. As a result of this endeavor, developing countries’ need to access foreign technologies is recognized in different international treaties. Now days, over 80 international instruments and numerous sub-regional and bilateral agreements contain measures related to transfer of technology and capacity building.²²

These international instruments have some common characteristics. Their main feature is that they distinguish between categories of addressees, namely developed and developing countries, and some times, least developed countries. The objective of such distinction is assigning different obligation and rights to different addressees so much so that an enabling legal environment for the flow of technology from developed to developing countries, more particularly LDCs, will be put in place.²³ “Thus, the technology-related provisions refer specifically to developing countries or LDCs as beneficiaries of TOT arrangements.”²⁴

¹⁸ Id.

¹⁹ Id.

²⁰ United Nations, *Compendium of International Arrangements on Transfer of Technology: Selected Instruments 5* (United Nations Publication Sales No. E-01.II.D.28, 2001), available at <http://unctad.org/en/docs/psiteipcm5.en.pdf>

²¹ Id.

²² Id, at 3.

²³ Id, at 6

²⁴ For example, the Agreement on Technical Barriers to Trade, the Montreal Protocol and the TRIPS Agreement recognize, in their respective preambles, the special situation and needs of developing countries and LDCs.

It must also be noted that TOT related provisions of international instruments are designed to meet a certain objective. The objective may, however, be a broad or specific one. For instance, as explained below, both the General Agreement on Trade in Services (GATS) and the TRIPs Agreements refer to technology in a broader sense, whereas the Law of the Sea Convention deals specifically with marine technologies and capacity building in the management, exploration and exploitation of marine resources.²⁵ This difference in objectives has far reaching consequences. For instance, though different treaties use the same term “technology transfer”, the meaning of the term may vary having regard to the objectives of the respective treaties under consideration.²⁶ The type of technology must also be related to the objective pursued by the technology transfer related provision.

The other common feature of technology- related provisions of international agreements relates with their method of implementation. Normally, the adoption of technology related provisions is often taken as states’ willingness to cooperate internationally to redress or reduce the asymmetric distribution of scientific and technological capability across the world. Accordingly, most of these provisions contain only “best efforts” commitments rather than mandatory provisions.²⁷ Herein under, among the various international instruments which contain technology related provisions, the most significant and general ones are explained in a fairly detailed manner.

3.2.1. The International Law on Intellectual Property Rights and TOT

The international law on intellectual property is mainly consists of the Bern convention, the Paris Convention and the TRIPs Agreement. These agreements are primarily standard setting instruments. As such, they aim to provide a balance between the rights and obligations of the IPR owner of a work and the potential users of that work. The implementation of the standards set forth in these instruments is also relied on national measures. Meaning, parties to the agreements need to promulgate IPRs protection legislations that meet the minimum standards set in the agreements.

²⁵ United Nations, Facilitating Transfer of Technology to Developing Countries: A Survey of Home-Country Measures 6 (UNCTAD Series on Technology Transfer and Development, 2004), available at: <http://www.researchgate.net/publications/PublicPostFileLoader.html?id=5395ffe9cf57d7900a8b46a5&key=e0b495395ffe908d75>.

²⁶ This assertion is in line with the Vena Convention on the law treaties. According to Art. 31, of the convention, in the absence of a generally accepted definition of a term, the terms of a convention should be interpreted in accordance with, *inter alia*, the treaty’s objective and purpose.

²⁷ United Nations, *supra* note 20, at 5.

As far as TOT is concerned, international IPRs protection agreements contain provisions which directly or indirectly relate to the diffusion of technologies from the global north to the developing south. Under this section, an attempt will be made to explain how some provisions of international agreements on intellectual property protections relate, directly or indirectly, to the transfer of technology from developed countries to developing ones. A particular emphasis, however, will be given to the TRIPs Agreement as the remaining agreements are incorporated in to it by reference and it has effective implementation mechanism. It is also the TRIPs Agreement that has directly and explicitly dealt with the issue of TOT.

3.2.1.1. The Paris Convention for the Protection of Industrial Property

Since its adoption, the Paris Convention has gone through various revisions. Particularly, the idea of revising the convention to include additional provisions of special benefit to developing countries was favored in 1974.²⁸ The group which was in charge of revising the convention adopted at that time a declaration of the objectives of the revision. One of these objectives was the development of technology by developing countries and the improvement of the conditions for the transfer of technology in to developing countries under fair and reasonable terms.

Despite the relentless efforts of developing countries to revise the provisions of the Paris Convention which affect them most, due to the fierce resistance of developed countries, the provisions of the convention fundamentally remains the same. Below, technology transfer related provisions of the convention will be explained.

A. The Principle of National Treatment (Art. 2)

The essence of the principle of national treatment is that nationals of the country under consideration and foreign nationals have to be treated alike. By the same parlance, the Paris Convention disallows member countries of the union from discriminating patent applicants and owners who are nationals of the union. Art. 2 (1) of the convention reads:

“Nationals of any country of the Union shall, as regards the protection of industrial property, enjoy in all the other countries of the Union the advantages that their respective laws now grant, or may hereafter grant, to nationals; all without prejudice to the rights specially provided for by this Convention.

²⁸ Id.

*Consequently, they shall have the same protection as the latter, and the same legal remedy against any infringement of their rights, provided that the conditions and formalities imposed upon nationals are complied with.”*²⁹

The above quoted provision entitles nationals of the union to enjoy same right as nationals of the other union may derive from their domestic patent laws. Put differently, by virtue of the principle of national treatment of the Paris Convention, foreigners and nationals are equal before the patent jurisdiction of a granting member country so long as the foreign patent applicant complied with the conditions and formalities that are imposed on the nationals of the host country. This implies that no matter the level of underdevelopment and scientific and technological capability, a member country cannot discriminate in favor of its nationals as a means of encouraging indigenous inventiveness and initiative, including TOT.³⁰

Formal equality as provided for by Art. 2 would operate to the mutual advantage of the convention countries had they were either at or almost at the same level of technological and economic development. In face of the present immense diversity in technological capabilities between the developed and the less developed member countries, the principle would simply be against the interest of developing countries and confer more benefit to developed countries.³¹

The above is not, nonetheless, to conclude that the principle of national treatment has only negative implication on developing countries. Seen from the perspective of TOT, as a result of the principle of national treatment, foreign inventors may be encouraged to apply for patent protection and license their right to exploit the invention to local firms if the patent system of the host country seem advantageous to them. This may give an opportunity to local firms to acquire new technologies. The acquisition of new technology by local firms may, in turn, result in the diffusion of the technology throughout the host country.

In addition, as stipulated under Art. 2 (1) of the Paris Convention, a foreign inventor who seek to get patent right protection in another country is required to fulfill the conditions and formalities imposed on the nationals of the host country. One of the most common condition for the grant of

²⁹ Paris Convention for the Protection of Industrial Property (as amended on September 28, 1979) I.L.M. Art. 2 [hereinafter Paris Convention].

³⁰ George Sipa-Mjah Yankey, George Sipa-Mjah Yankey, *The Role of the International Patent System in the Transfer of Technology to West Africa: Case Studies- Ghana and Nigeria* 86 (1986) (unpublished Ph.D. dissertation, the University of Warwick), available at <http://go.warwick.ac.uk/wrap/39315>.

³¹ Id.

patent right protection under the domestic law of most, if not all, countries is industrial application of the invention. As a result, it is presumed that inventors apply for patent protection whenever they intend to exploit the invention in the host country. Obviously, the industrial application of a patented invention has a positive implication on the spillover of technology in to the host country. To explain this point a little bit, the industrial application of the invention may enforce the inventor to employ local personnel. These local employees may acquire the know-how to operate the invention. In the long term, when the invention enters in the public domain, these employees may establish their own business and use the know-how they acquired from their previous employer. This, in turn, may ease the effort of the host country to adopt and implement foreign technologies.

Moreover, if the patent right owner fails to industrially exploit the patented invention in the host country, the invention may become a subject of compulsory licenses under the domestic law of the host country. A compulsory license may also be granted to an inventor whose invention cannot be worked effectively without the invention of the foreigner. For same reasons mentioned above, the application of the invention as a result of a grant of compulsory license may bring about technology diffusion to the host country.

Furthermore, as it is the case with other rights, domestic laws subject patent rights to various limitations. Among other things, interested parties of the host country can use the patented invention freely for non-commercial, scientific and research purposes. The use of the patented invention for these purposes may build the technological capability of the host country.

B. Protection of Imported Products Manufactured by a Process in the Importing Country

The Paris convention contains various provisions which entitle a patentee to import monopoly. One of these provisions is Art. 5 quarter. This provision stipulates:

“When a product is imported into a country of the Union where there exists a patent protecting a process of manufacture of the said product, the patentee shall have all the rights, with regard to the imported product, that are accorded to him

by the legislation of the country of importation, on the basis of the process patent, with respect to products manufactured in that country.”³²

The above quoted provision entitles a patentee of a patented process of manufacture to enjoy same right as a patentee who manufacture a product in the host country using a patented process of manufacture, though the former manufacture the products in other countries. This stipulation may encourage patentees to manufacture their produces abroad and import in to the host country. Such type of activities undermine developing countries’ effort to build their technological capability through the local workings of patented invention as, as far as TOT is concerned, local working of patents cannot be substituted for the importation of patented products for these countries. In fact, though import is useful conduit of TOT, the stand of developing countries against import is so strong that they do not recognize it as a medium of technology transfer.³³

Hence, it is possible to assert that Art. 5 quarter of the Paris Convention undermines the effort of developing countries to acquire new technologies through the local working of patented processes of manufacture. In addition, since, in practical terms, if patentees do not exploit their patented process of manufacture within the territory of developing countries, Art. 5 quarter entails acceptance of import monopoly if sale and use privileges are present, as it is almost always the case, in their national legislation.³⁴ These negative effects of the above provision clearly suggest that developing countries do not derive any merit from the sustenance of this provision.³⁵ It rather negatively affect the countries’ effort to acquire new technologies.

C. Protection Against Unfair Competition

The Paris Convention bound state parties of the Union to assure national of the Union effective protection against unfair competition.³⁶ The convention further lists down acts that constitute unfair competition and, thereby, need to be prohibited by national legislations. In particular, Art 10bis (3) (1) provides that state parties of the union shall prohibit “all acts of such a nature as to create confusion by any means whatever with the establishment, the goods, or the industrial or commercial activities of a competitor.”³⁷ As this stipulation, state parties of the Union are

³² Paris Convention, *supra* note 29, Art. 5quarter.

³³ George Sipa-Mjah Yankey, *Supra* note 30, at 103.

³⁴ *Id.*, at 104.

³⁵ *See also* *Ibid.*

³⁶ *See* Paris Convention, *supra* note 29, Art. 10bis (1).

³⁷ *Id.*, Art. 10bis (3) (1).

obliged to prohibit all acts of such a nature that may create confusion with, *inter alia*, the goods, commercial or industrial activity of a competitor. Seen from the perspective of TOT, the provision clearly outlaws any attempt to imitate the goods or commercial activity of a foreign company as imitation obviously creates confusion. This implies that the provision closes the door for transfer of technology through imitation.

D. The Compulsory License Regime

A “compulsory license” is an authorization given by a national authority to a person without or against the consent of the title holder for the exploitation of a subject matter protected by a patent or other IPR.³⁸ Yet, this authorization may not be given arbitrarily. Compulsory license is normally granted to a third party up on the fulfillment of certain grounds. The most common grounds for the grant of compulsory license are failure to work or insufficient working before the expiration of a specific years from the date of application for the patent, or from the date of the grant of the patent whichever period expires last.³⁹ Even if these grounds are fulfilled, a compulsory license may not be granted to a third party if the title holder justifies his/her inaction by "legitimate reasons".⁴⁰

The Paris Convention recognizes the right of state parties of the Union to grant of compulsory license to third parties under Art. 5A (2). As per this provision, state parties of the convention have the right to grant compulsory license to prevent abuse of patent right. The whole text of this sub-Article reads:

*“Each country of the Union shall have the right to take legislative measures providing for the grant of compulsory licenses to prevent the abuses which might result from the exercise of the exclusive rights conferred by the patent, for example, failure to work.”*⁴¹

Now days, it is hardly possible to find a country which doesn’t enact legislation which provide for the grant of compulsory license. It is to assert that almost all national patent laws stipulate the grounds up on the fulfillment of which a compulsory license may be granted. Obviously, the

³⁸ Carlos M. Correa, “*Intellectual Property Rights and the Use of Compulsory Licenses: Options for Developing Countries*” 11 (South Centre Working Papers No. 5, October 1999), available at http://www.iatp.org/files/Intellectual_Property_Rights_and_the_Use_of_Co.pdf .

³⁹ Id.

⁴⁰ Id.

⁴¹ Paris Convention, *supra* note 29, Art. 5A (2)

most dominant ground up on the fulfillment which compulsory license may be granted to a third party is non-working and insufficient working of the invention in the host country. Such type of stipulations inevitably urges the patent right holder to sufficiently work the invention. In case he/she fails to sufficiently work the patented invention, the concerned authority may grant compulsory license to a third party who may apply to exploit the invention. This implies that the possibility by which a patented invention may be industrially applied in the host country by either the right holder or a third party, in case the former fails to do so, is very high. The exploitation of a patented technology, whether by the patent right holder or a third party, in the host country will, in turn, result in the diffusion of technology in to the host country.

However, the utility of the compulsory license regime of the Paris Convention to developing countries endeavor to acquire foreign technology is minimal for various reasons. Firstly, developing countries' firms haven't the required technological capability to industrially apply new inventions. As a matter of fact, only a small proportion of patented inventions are directly worked in developing countries. Theoretically speaking, this problem of non-working of patented inventions should have been addressed by compulsory license. Contrary to this logical inference, developing countries' firms do not require for the grant of compulsory license due to, *inter alia*, lack of technical capability to apply new inventions. As a result, the compulsory license procedure of developing countries remains to play little importance for inward flow of technology.

Secondly, even from theoretical point of view, some of the preconditions that have to be fulfilled for the grant of compulsory license are excessively stringent. In this regard, Art. 5A (4) can be mentioned by way of example. This provision states:

*“A compulsory license may not be applied for on the ground of failure to work or insufficient working before the expiration of a period of four years from the date of filing of the patent application or three years from the date of the grant of the patent, whichever period expires last; it shall be refused if the patentee justifies his inaction by legitimate reasons. Such a compulsory license shall be non-exclusive and shall not be transferable, even in the form of the grant of a sub-license, except with that part of the enterprise or goodwill which exploits such license.”*⁴²

⁴² Id, Art. 5A (4)

The strict application of the above stipulation will likely prolong the time required to obtain a compulsory license more than the period indicated in the provision. This may particularly be the case especially where prior examination of the substance is required before the grant of the license. As a result, compulsory license is neither used nor easily available to developing countries' firms. In fact, empirical evidences suggest that the compulsory license as a legal remedy for the abuse of patent protection in developing countries (especially LDCs) is almost non-existent due to insufficient indigenous technological capability.⁴³

To sum up this section, some provisions of the Paris Convention have their own bearing the movement of technology from developed to developing countries. But, for the most part, these provisions do not create conducive environment for TOT. Accordingly, there are scholars who conclude that developing countries, especially LDCs, do not derive any significant benefit from the international patent system, especially as regards technology transfer.⁴⁴

3.2.1.2. The TRIPs Agreement

As explained above, the Paris Convention doesn't provide any significant benefits to LDCs as far as their desire to technology acquisition is concerned. As a result, some scholars have gone to the extent of suggesting that developing countries should abandon the international patent system.⁴⁵ However, while LDCs do accept the view that the cost involved in their participation in the international patent system greatly outweighs the benefits, they do not, at least by their continuing participation, seem to sympathized with the idea of abandonment. Instead they have so far preferred the revision of those provisions of the convention which had adverse effects on their economic development.⁴⁶

In various rounds for the revision of the Paris Convention, developing countries set the acceleration of development of their technological capability and improving the conditions for the transfer of technology in to their territory as one objective of the revision. By 1986, the negotiation between developed and developing countries over the revision of the Paris

⁴³ Getachew Menigiste (2009) "*The Impact of the International Patent System on Developing Countries*", XXIII JOURNAL OF ETHIOPIAN LAW, at 172.

⁴⁴ George Sipa-Mjah Yankey, *supra* note 30, at 104

⁴⁵ Id.

⁴⁶ Id.

Conversion was dead locked at the World Intellectual Property Organization (WIPO). It is in this crucial time that the ministerial conference of GATT comes in to picture.

During the Uruguay round of negotiation, the GATT contracting parties have set out the objectives of their negotiation. One of these objectives was the establishment of a new multinational IP agreement. In the beginning, most developing countries were opposing the discussion on IPRs issues within the realm of GATT. The claim of these countries was that only the WIPO had the institutional competency to IPRs issues. However, this claim was rejected for various reasons and by the early 1990s, virtually all negotiating parties accepted as inevitable the inclusion of minimum standards for intellectual property protection and enforcement in the GATT framework.⁴⁷ In describing the reasons for this change of attitude, a certain writer put:

“Such a change of attitude was largely the result of the United States’ aggressive strategies toward the hardliner opposition countries, its successful ‘divide and conquer’ tactics, the economic crises confronting many of these countries, and the successful lobbying of the European Communities, Japan, and the United States by global intellectual property industries. By the time Canada proposed to create a new multilateral trade organization in October 1990, its proposal, along with the less developed countries’ fears of being excluded from such an organization, ‘effectively ended the debate on the earlier developing country position of WIPO as the appropriate forum for lodging the results of the TRIPS negotiations’.”⁴⁸

Thereafter, the negotiating parties embarked on discussing the terms and conditions of the TRIPs Agreement. At the beginning of the TRIPs negotiation, developing countries primarily focused on resisting the inclusion of new standards for the protection and enforce of IPRs in the GATT. However, they soon realized that they were fighting a lose battle. Accordingly, they began to insist on linking intellectual property protection to the promotion of social, economic and technological development.⁴⁹

With the view to advance their concerns like other interest groups, developing countries proposed their own draft text during the TRIPs negotiation.⁵⁰ The concerns of developing countries as stated under this draft are finally incorporated under Art.7 and Art.8 of the TRIPs

⁴⁷ Peter K. Yu, “*The Objectives and Principles of the TRIPs Agreement*” 2 (2009), at <http://www.peteryu.com/correa.pdf>

⁴⁸ Id, at 3.

⁴⁹ Id, at 8.

⁵⁰ Id, at 9. (“As Abdulqawi Yusuf recounted, some of the provisions in this text ‘were either directly based on or inspired by those of the Draft International Code of Conduct on the Transfer of Technology which was negotiated under the auspices of UNCTAD but was never adopted as an international instrument’.”)

Agreement. That is, the contents of these provisions are derived from Art.2 of the draft text of developing countries to the TRIPs Agreement.

Art. 7 and Art. 8 of the TRIPs Agreement provide for the objectives and principles of the agreement. Close reading of these provisions indicates that the objectives and principles of the TRIPs Agreement mainly focus on technology development and transfer related issues. In fact, the objectives of Article 7 focus significantly on technology-related intellectual property rights.⁵¹

Apart from Art. 7 and Art 8, as indicated above, the TRIPs Agreement has also devoted a specific provision that imposes positive obligation on developed countries to encourage their companies and institutions to transfer technology to WTO member LDCs. This obligation is enshrined under Art. 66 (2) of the agreement.

Seen from face value of the above discussion, it seems a paramount place is given to TOT under the TRIPs Agreement. Herein under, the essence and utilities of the above mentioned provisions will be analyzed to ascertain whether the TRIPs Agreement in fact put in place a favorable legal environment for the flow of technology from developed to developing countries.

I. The Objectives and Principles of the TRIPs Agreement and TOT

As discussed above, the objectives of the TRIPs Agreement are enshrined under Art. 7 of the agreement. This provision reads:

*“The protection and enforcement of intellectual property rights should contribute to the promotion of technological innovation and to the transfer and dissemination of technology, to the mutual advantage of producers and users of technological knowledge and in a manner conducive to social and economic welfare, and to a balance of rights and obligations.”*⁵²

From the above quoted provision, it is possible to pin point the objectives of protecting and enforcing IPRs with the WTO structure. These objectives are:

1. Promoting technological innovation;
2. Transferring and disseminating technology;

⁵¹ Id.

⁵² Annex 1C of the Marrakesh Agreement , Agreement on Trade-Related Aspects of Intellectual Property Rights, (1994) I.L.M, Art. 7 [hereinafter the TRIPs Agreement]

3. Striking a balance between the interest of producers and users of technological knowledge;
4. Promoting social and economic welfare; and
5. Striking “a balance of rights and obligations”.

The first three objectives— technological innovation, the transfer and dissemination of technology, and the production and use of technological knowledge— emphasize significantly on technology-related intellectual property rights. A certain writer explains the reasons for this over emphasis on technology- related issues as follows:

“This imbalance [in the focus] is possibly attributable to developing countries’ preoccupation about the impact of higher standards of IPR protection on the access to innovations and the products and services derived there from. Negotiations on issues not directly related to access to and use of technology were overall less controversial between the North and the South, while they often created considerable tensions between developed countries themselves.”⁵³

The drafting history of the TRIPs Agreement also confirms the above assertion. As indicated above, during the TRIPS negotiation, developing countries had advanced their own draft text for consideration. Art. 7 of the TRIPs Agreement simply adopted Art 2(2) and Art. 2(3) of this draft text. Since developing countries were deeply aware of their weakness in generating new science and technology, they feared that stronger intellectual property protection ‘would give too much power to title-holders and limit access to, and transfer of, technology.’⁵⁴ Hence, they wanted any negotiation on intellectual property rights to take in to account their special needs. This concern of developing countries essentially explains the over emphasis of Art. 7 of the agreement on technology- related issues of IPRs. At any rate, from the above discussion, one can note the paramount importance attached to TOT under Art 7 of the TRIPs Agreement.

Coming to the practical utility of Art. 7 of the TRIPs Agreement, the importance of the objectives of the TRIPS Agreement, as enshrined under Art 7, is controversial. From the stand point of treaty interpretation, Art. 7 is a “should” provision, as compared to a “shall” provision. This word choice has led some to argue that the provision is a mere hortatory one.⁵⁵ Others, on the other hand, having regard to the location of the provision, discarded this argument. In this

⁵³ Peter K. Yu, *supra* note 47, at 10.

⁵⁴ *Id.*, at 9.

⁵⁵ *Id.*, at 10.

regard, a certain scholar noted that ‘[t]he fact that a provision of this nature is contained in the body of the agreement, and not in the preamble, would seem to heighten its status.’⁵⁶

This latter view is supported by various decisions of the WTO Appellate Body. Furthermore, since provisions of a treaty are intended to establish rights and obligations, Art. 7 of the TRIPS Agreement inevitably carries greater weight in the process of interpretation and implementation of the agreement. This implies that the objectives of the TRIPS Agreement have greater weight than general statements of intent as usually expressed in the preamble of a treaty.⁵⁷ Hence, the first three objectives listed above provide support to, *inter alia*, those provisions of the TRIPS Agreement that outline the obligations of developed countries to promote technology transfer, technical cooperation, and legal assistance.⁵⁸

From the perspective of policy development, Art. 7 has greater utility. The provision makes it clear that IPRs protections are not an end in themselves. It provides room for member countries to formulate IP policy which strike a balance between IPRs protection and other public needs. For instance, the third objective highlights the equal importance of both producers and users of technological knowledge. It therefore makes a strong case that exceptions and limitations in the TRIPS Agreement should be treated as important as the rights provided in the Agreement.⁵⁹

In general, from the above discussion it is possible to infer that the objectives of the TRIPS Agreement focus on technology-related IPRs protection. This over emphasis on technology-related IPRs protection is attributable to developing countries concern during the TRIPS negotiation that stronger IPR protection may undermine their endeavor to build their technological capability and competitiveness.

The inclusion of a provisions that deals with the objectives of a treaty in its body, not only in the preamble, not only heightens the status of the objectives. It also enables that provision to play a paramount importance in the course of the interpretation of the treaty and policy development. This can also be inferred from the various decisions rendered by the WTO dispute settlement

⁵⁶ Ibid.

⁵⁷ Id, at 11.

⁵⁸ Id, at 12.

⁵⁹ Id. (This is in fact “an argument commentators have made with respect to exceptions and limitations in the domestic intellectual property system”.)

bodies as regards Art. 7 of the TRIPs Agreement. As such, this provision provides for rooms for flexibility to formulate IP policies and laws that facilitate access and adoption of technologies.

Coming to the essence and utilities of the principles of the TRIPs Agreement, the interpretative and normative principles of the Agreement are enshrined under Art. 8. Sub. Art. 1 of this provision reads as follows.

“Members may, in formulating or amending their laws and regulations, adopt measures necessary to protect public health and nutrition, and to promote the public interest in sectors of vital importance to their socio-economic and technological development, provided that such measures are consistent with the provisions of this Agreement.”⁶⁰

This provision authorizes state parties to the agreement to formulate laws and regulations that promote, *inter alia*, their technological development. As such, part of the above stipulation normally echoes the Preamble of the TRIPs Agreement. The relevant part of the preamble of the agreement states that parties to the treaty enter in to the agreement, among other things, by recognizing

“...the special needs of the least-developed country Members in respect of maximum flexibility in the domestic implementation of laws and regulations in order to enable them to create a sound and viable technological base.”⁶¹

Hence, theoretically speaking, it is possible to conclude that Art 8 (1) of the TRIPs agreement, coupled with Art. 7, confers broad and unfiltered discretion to member countries to peruse public objectives so long as the measures they may adopt do not contravene other provisions of the agreement. Interestingly, the provision specifically mentions that the public interest measures may aim at technological development of the concerned country. This indicates the importance the TRIPs Agreement attached to technological development objectives of member countries.

The provision of Art. 8 allows member states to peruse this objective against abusive acts of individual right holders. More specifically, Sub Art. 2 of the provision authorize member states to take necessary measures against IPRs abuses that may hinder, among other thing, the international transfer of technology. It stipulates:

⁶⁰ TRIPs Agreement, *supra* note 52, Art. 8 (1).

⁶¹ Id, Preamble.

*“Appropriate measures, provided that they are consistent with the provisions of this Agreement, may be needed to prevent the abuse of intellectual property rights by right holders or the resort to practices which unreasonably restrain trade or adversely affect the international transfer of technology.”*⁶²

The above quoted provision fundamentally has similar structure with that of sub. Art. 1 of Art. 8. Like the latter provision, it stipulates TRIPs consistency requirement. That is, the measures that may be taken to combat the abuse of intellectual property rights to the detriment of the international transfer of technology should not violate the TRIPs Agreement under both sub Articles. Because of this and other reasons, some writers assert that Art. (2) of the TRIPs Agreement is somewhat a redundant provision. In this regard, it is worth quoting the statements of Peter K. Yu’s statement at length.

*“Virtually all the public policy objectives mentioned in the provision have already been addressed elsewhere in the Agreement. For example, Article 30 allows member states to ‘provide limited exceptions to the exclusive rights conferred by a patent’ on the condition that such exceptions satisfy the three-step test—that is, they ‘do not unreasonably conflict with a normal exploitation of the patent and do not unreasonably prejudice the legitimate interests of the patent owner, taking account of the legitimate interests of third parties’. Article 31(k) enumerates special conditions for members to issue compulsory licenses in an effort ‘to remedy a practice determined after judicial or administrative process to be anti-competitive’. That provision also allows ‘[t]he need to correct anti-competitive practices . . . [to] be taken into account in determining the amount of remuneration in such cases’. In addition, Article 40 permits member states to take appropriate measures to curb ‘an abuse of intellectual property rights having an adverse effect on competition in the relevant market’.”*⁶³

Though the above assertion is correct and Art 8 (2) seems superfluous, undeniably, the provision has its own importance. Historically, it serves as a conspicuous reminder of what LDCs initially considered the mandate of the GATT negotiation. As indicated above, Art. 8 is taken from the draft text proposed by developing countries. As such, it symbolizes what these countries considered to be trade related intellectual property matter. During the TRIPs negotiation, developing countries⁶⁴ were fiercely arguing that “it was only the restrictive and anti-competitive practices of the owners of the IPRs that could be considered to be trade-related because they

⁶² Id, Art. 8 (2).

⁶³ Peter K. Yu, *supra* note 47, at 18.

⁶⁴ Id, at 19. (“Notably, India ‘did not regard the other aspects of IPRs [discussed in the Group at that time] to be trade-related’, that is, not within the mandate set up by the Punta del Este Declaration.”)

alone distorted or impeded international trade.”⁶⁵ These historical accounts may influence the interpretation of the TRIPs Agreement.

In general, Art. 7 and Art. 8 of the TRIPs Agreement have multiple uses in the interpretation and implementation of the agreement. First, they can facilitate a more flexible interpretation and implementation of the agreement. They provide important tool to the WTO dispute settlement bodies to take in to account the interests of developed and developing countries in the course of settling disputes. In face of the historical accounts of the provisions of Art. 7 and Art. 8 of the TRIPs Agreement and their content, it wouldn't be logical and reasonable to this bodies only to give effect to high standards of protection and that ignore the special needs of developing countries. They must also take in to consideration developing countries side of the bargain as enshrined under Art. 7 and Art. 8 of the agreement. Otherwise, the legitimacy of the agreement will remain questionable.⁶⁶ Flexible interpretations of the TRIPs agreement which may result from the application of Art 7 and Art 8 may, in turn, help developing countries to formulate laws and policies which facilities, *inter alia*, the transfer of technology in to their political territories. It will also enable these countries to take legislative measures to create a sound and usable technological base.

Second, Art. 7 and Art. 8 of the TRIPs Agreement may serve as shield to defend member states' use of flexibilities that have been built in to the TRIPs Agreement. These provisions made references to “social and economic welfare” and “a balance of rights and obligations”. These references could serve to justify exceptions to exclusive rights when the right holder failed to participate in social and economic development or, in other words, use his/her rights without discharging his/her obligations.⁶⁷ In this regard, the use of Art. 7 and Art. 8 to: promote access to essential medicine in less developed countries; justify the validity of fair use privilege; and determine whether a member state has provided an effective *sui generis* system to protect plant varies is explained by various commentators. Nonetheless, there is no wealth of literatures which

⁶⁵ Id, at 18- 19.

⁶⁶ Some authorities question the legitimacy of the TRIPs Agreement due to its high standard of protection and enforcement that often ignores the interest of less developed member states.

⁶⁷ Peter K. Yu, *supra* note 47, at 26. (“Although exceptions and limitations in the ... patent systems are generally examined through the three-step test laid out in Articles 13 and 30 of the TRIPS Agreement, it is important to keep in mind the Appellate Body’s reminder in Canada—Patent Protection of Pharmaceutical Products. As it stated, the Vienna Convention requires those interpreting and implementing the TRIPS Agreement to bear in mind the goals and limitations stated in Articles 7 and 8(1) when they examined the limiting conditions outlined in the three-step test.”)

explored the use of the two provisions in other areas including international TOT. At any rate, Art. 7 and Art. 8 of the TRIPs Agreement may be used by developing countries to justify their TOT laws by explaining how the laws bring about technology transfer without unduly violating the exclusive rights of IPRs owners.

Third, Art. 7 and Art. 8 of the TRIPs Agreement may also be used as a sword to challenge the existing high standard of IPRs protection regimes of developed countries. In this regard, a certain writer noted that Art 7 and 8 “could be invoked to limit an obligation to protect or enforce a given intellectual property right where no promotion of intellectual innovation and/or transfer or dissemination of technology can be proven.”⁶⁸ The contextual analyses of the provisions support this suggestion. Yet, it is difficult for a complainant to provide such proof in reality.⁶⁹ Whatever the case may be, the provisions can be used at least to demand the strict application of provisions of the TRIPs Agreement which are meant to promote the interest of developing countries. It is to assert that, in the words of Peter K. Yu,

“[a]lthough the provisions may not provide the legal basis for challenging intellectual property laws and policies in developed countries in the WTO dispute settlement process, both provisions can be used to strengthen other operative provisions that promote social and economic welfare or that help preserve the balance of the intellectual property system.”⁷⁰

Art. 66 and Art. 67 are among the provisions of the TRIPs Agreement which are designed to promote social and economic welfare. These provisions require developed countries to provide technical assistance to developing countries in their endeavor to access advanced technologies and build a sound technological base. These provisions, with fortifications from Articles 7 and 8, are likely to become even more robust and effective. Understood in this sense, Art. 7 and 8 of the TRIPs Agreement can be used to build a national legal regime that facilitates the international transfer of technology from developed countries in to developing ones.

II. Authorization to Prohibit Restrictive Patent License Agreements

There are a number of restrictive practices in licensing agreements. These restrictive practices may defeat the very objectives of the TRIPs Agreement unless state parties to the agreement

⁶⁸Id, at 27.

⁶⁹Id.

⁷⁰Id, at 28.

prohibit the practices under their domestic laws. Taking this fact in to consideration, member states of the agreement agreed that some licensing agreements' terms and conditions may impede the transfer and dissemination of technology by restricting competition.⁷¹ Accordingly, the agreement authorized member states to take appropriate measure to prevent or control restrictive licensing conditions. In particular, Art. 40 of the agreement stipulates:

“Nothing in this Agreement shall prevent Members from specifying in their legislation licensing practices or conditions that may in particular cases constitute an abuse of intellectual property rights having an adverse effect on competition in the relevant market. As provided above, a Member may adopt, consistently with the other provisions of this Agreement, appropriate measures to prevent or control such practices, which may include for example exclusive grantback conditions, conditions preventing challenges to validity and coercive package licensing, in the light of the relevant laws and regulations of that Member.”

The cumulative reading of Art. 40 (1) & (2) of the TRIPs Agreement provides that state parties can prohibit anti- competitive practices that may impede the transfer and dissemination of technology even if the prohibition goes against other provisions of the agreement. The anti-competitive practices may in particular cases constitute an abuse of intellectual property rights. The TRIPs Agreement, however, left the notion of IPRs abuse undefined, leaving its definition to each member state. Nonetheless, it enumerated three cases of IPRs abuse by way of example. These are: 1) Exclusive grant back conditions;⁷² 2) conditions preventing challenges to validity;⁷³ and 3) coercive package licensing.

At this juncture, it must be noted that IPRs abuse is not limited to anti- competitive practices. The TRIPs Agreement doesn't also oblige member states to limit the scope of IPRs abuse to the same. As a result, member countries may consider abusive any use of an IPR that defeats its core purpose of promoting innovation and technology dissemination, even where the IPR holder in

⁷¹ TRIPs Agreement, *supra* note 52, Art. 40 (1)

⁷² The draft code of conduct for the international transfer of technology defined “exclusive grantback conditions “ as those contractual practices “requiring the acquiring party to transfer or grant back to the supplying party, or to any other enterprise designated by the supplying party, improvements arising from the acquired technology, on an exclusive basis, without offsetting consideration or reciprocal obligations from the supplying party, or when the practice will constitute an abuse of a dominant market position of the supplying party”.

⁷³ The same code defined the term “conditions preventing challenges to validity” as “conditions requiring the acquiring party to refrain from challenging the validity of patents and other types of protection for inventions involved in the transfer or the validity of other such grants claimed or obtained by the supplying party, recognizing that any issues concerning the mutual rights and obligations of the parties following such a challenge will be determined by the appropriate applicable law and the terms of the agreement to the extent consistent with that law”.

question is not in a position of market dominance. By enabling members to do so, Art. 40 of the TRIPs Agreement gives state parties the opportunity to craft TOT friendly domestic IP laws.

III. Art. 66 (2) of the TRIPs Agreement

As noted above, during the TRIPs negotiation, it was certainly recognized that the proposed agreement would have an adverse impact on the interest of developing countries. These countries accepted the terms and conditions of the TRIPs Agreement partly because industrialized countries made concessions for their interest. One of these arrangements is the stipulated under Art 66 (2). As stipulated under this provision, developed countries agreed to provide incentives for their companies and institutions to transfer technology to least developed WTO member countries. Herein under, the essence and nature of these obligations will be explained in a fairly detail manner.

During the TRIPs negotiation, developing countries were of the opinion that it was the vast differences in technological advancements among countries which is a major obstacle to commercial competition. They do not also lose sight of the fact that they were potentially the most to lose from the implementation of the TRIPs Agreement.⁷⁴ It was asserted at that time that the ill effects of technological gap would be alleviated if the TRIPs Agreement imposed a kind of obligation on developed countries to transfer technology to WTO member LDCs. It is in this sense the provision of Art. 66 (2) incorporated under the TRIPs Agreement. This provision states:

“Developed country Members shall provide incentives to enterprises and institutions in their territories for the purpose of promoting and encouraging technology transfer to least-developed country Members in order to enable them to create a sound and viable technological base.”⁷⁵

From the above provision it is possible to discern some points. First, as it is the case in most TOT-related provisions of international treaties, it distinguishes categories of addresses. It imposes a positive obligation on WTO member developed countries. It doesn't impose the

⁷⁴ Some developing countries rightly argued that since the major IP owners were OECD countries, higher IPRs protection would naturally result in the transfer of wealth from developing countries to developed ones through IPRs licensing schemes.

⁷⁵ TRIPs Agreement, *supra* note 52, Art. 66 (2).

obligation on private firms. This implies that the provision has nothing to do with market-based technology transfer, which largely occurs through private channel.

The other category of addressees of the provision are WTO member LDCs. This implies that developing countries are not beneficiaries of the provision even if they are WTO member states. In addition, even LDCs which are not member to the WTO are not eligible to benefit from the provision. Despite this distinction, as will be explained below, developed countries seldom make such type of distinctions when they undertake technology transfer activities with the view to discharge their obligation under Art. 66 (2) of the TRIPs Agreement.⁷⁶

Secondly, as regards the nature of the obligation, the provision doesn't oblige developed countries to carry out the technology transfer themselves. It only requires these states to provide incentives to their enterprises and institutions to transfer technology in to WTO member LDCs.⁷⁷ Put differently, the exact obligation of developed countries is formulating laws and policies which encourage their firms to carry out technology transfer activities in WTO member LDCs.

Thirdly, Art. 66 (2) is a "shall" provision. This word choice indicates that the provision is not a mere hortatory stipulation. It is to assert that the provision is not meant to make a suggestion. It is rather mandatory provision. It establishes a positive obligation on developed countries. The mandatory nature of the provision is further affirmed by the 2001 WTO Doha Decision on Implementation Issues.⁷⁸

Last, but not least, as far as the purpose of the obligation is concerned, the enterprises or institutions of developed countries should carry out technology transfer activities with the view to enable LDCs to create a sound and viable technological base. Instant establishment of a subsidiary company in LDCs with the view to make profit may not be considered as TOT activities for the purpose of the provision. The incentives they may be provided by developed countries must also take in to account the broad purpose of the provision.

⁷⁶ See *infra*, at 128.

⁷⁷ Suerie Moon, Does TRIPS Art. 66.2 Encourage Technology Transfer to LDCs? An Analysis of Country Submissions to the TRIPS Council (1999-2007) 2 (UNCTAD - ICTSD Project on IPRs and Sustainable Development Policy brief No. 2, December 2008), at http://unctad.org/en/docs/iprs_pb20092_en.pdf.

⁷⁸ See WTO Ministerial Decision on Implementation-Related Issues and Concerns Para. 11 (WT/MIN(01)/17) (14 November 2001)

In general, Art. 66 (2) of the TRIPs Agreement imposes a positive obligation on developed countries to provide incentives to their companies and institutions to transfer technology in to developing countries. This obligation is a mandatory one and a Council is established for the purpose of monitoring its implementation.⁷⁹ Seen from its face value, it may enable one to conclude that Art. 66(2) TRIPs Agreement is friendly to the international flow of technology from developed to developing countries. Practical issues that may arise in relation to the implementation of this provision will be explained under the forthcoming section 3.2.

IV. The Compulsory License Regime of the TRIPS Agreement and TOT

As stated above in relation to the discussion on the Paris Convention, compulsory license is one type of limitation to the exercise of exclusive patent rights. A compulsory license allows the use of an invention by a third party up on the fulfillment of certain conditions. From the perspective of TOT, it has been further noted that the grant of compulsory license may result in the diffusion of technology in to the host country as, normally, the licensee is supposed to industrially apply the patented invention. Herein under, the situations up on the fulfillment of which a compulsory license may be granted under the TRIPs Agreement will be discussed.

The TRIPs Agreement authorizes WTO member countries to provide for different forms of compulsory licenses in respect of patents.⁸⁰ A close looks at to the provisions of Art. 31 of the TRIPs Agreement reveal that the grounds up on the fulfillment of which states are authorized to grant compulsory license are: the right holder's refusal to deal; public interest concerns; anti-competitive practices of the rights holder; governmental use; need to facilitate the use of dependent patents. Below, the conditions to grant compulsory license under each grounds will be explained briefly.

To begin with, in principle, the right of the patent owner to give or not give a license to a third party is recognized. Yet, the right holder should not use this right to prevent the use of the invention unreasonably. Unreasonable refusal to license the use of the invention constitutes acts of abuse of patent. In these cases of abuse of patent, the TRIPs Agreement authorizes member states to grant compulsory license. Specifically, part of Art. 31 (b) of the agreement reads:

⁷⁹ See *infra* at 57-63.

⁸⁰ See TRIPs Agreement, *supra* note 52, Art. 31.

“[Compulsory license] may only be permitted if, prior to such use, the proposed user has made efforts to obtain authorization from the right holder on reasonable commercial terms and conditions and that such efforts have not been successful within a reasonable period of time...”⁸¹

From the above quoted provision, it is possible to infer that states are authorized to grant compulsory license to a person who has made efforts to obtain authorization from the right holder on reasonable commercial terms and conditions and ended up in vain. In accordance with this authorization, the “refusal to deal” as a ground for granting a compulsory license has been provided in many national laws.

The possibility of the grant of a compulsory license in case of refusal to deal contributes to the diffusion of technology in to the host country in many ways. First, this regime may have the effect of stabilizing the price of patented technologies. If technologies are available at reasonable price, business persons may license these technologies to produce goods or render services. In case the right holder fix unreasonably high price, they will resort to the compulsory license regime to use the patented technology for same end. This implies that, one way or another, technologies may not remain ideal for unreasonable ground.

Coming to public interest concerns, according to Art. 31 (b) of the TRIPs Agreement, member states may grant compulsory license in case of national emergency or other circumstances of extreme urgency. Accordingly, the "public interest" is established in many laws as a ground for the grant of compulsory licenses. As opposed to cases of refusal to deal, in these latter cases, prior negotiation with the right holder to obtain authorization in reasonable commercial terms is not required. Yet, he/she should be served with a notice as to the grant of the compulsory license. In this regard, the TRIPs Agreement provides:

“In situations of national emergency or other circumstances of extreme urgency, the right holder shall, nevertheless, be notified as soon as reasonably practicable. In the case of public non-commercial use, where the government or contractor, without making a patent search, knows or has demonstrable grounds to know that a valid patent is or will be used by or for the government, the right holder shall be informed promptly.”⁸²

⁸¹ Id, Art. 31 (b).

⁸² Id.

There seems no relation between the grant of compulsory license in case of public interest and TOT. The same holds true as regards the grant of compulsory license in cases of anti-competitive practices of the rights holder and governmental use. As to the grant of compulsory license to facilitate the use of dependant patents, The TRIPs Agreement permits the granting of compulsory licenses when the use of an invention (a dependent invention) is not possible without infringing another (the principal invention). Yet, the agreement sets out a number of conditions which have to be met if such licenses are to be granted.⁸³ At any rate, by paving the way to exploit an invention using another patented invention, the permission to grant a compulsory license has positive impact on the inflow of technology in to the country.

As noted above, under the Paris Convention, the non- working or insufficient working of an invention is one ground for the grant of compulsory license. The issue whether such a ground is available under the TRIPs Agreement is far from clarity. Article 27 (1) of the TRIPs Agreement stipulates that “patent rights shall be enjoyable without discrimination ... whether the products are imported or locally produced.” There are writers who understood Article 27 (1) as a provision which prohibit national laws from imposing an obligation to execute locally a patented invention. On the other hand, others argue that the TRIPs Agreement does not prevent the granting of compulsory licenses in cases of lack of or insufficient working.⁸⁴ The proponents of this argument assert that

“[t]he Preamble of the [TRIPs] Agreement, as well as Articles 7 and 8, make it clear that one of the objectives of the Agreement is to promote technology transfer, which may be ensured in some circumstances by means of compulsory licenses on grounds of non-working.”⁸⁵

The controversy will likely continue among the academia until the WTO procedures finally settle it provided that a dispute thereon arises between WTO Members. The trend under the domestic laws of developed countries indicates that the obligation to locally work a patent could be satisfied by means of mere importation of the patented product.⁸⁶ Put differently, in these countries, the local working requirement will be satisfied on the domestic market by import of

⁸³ See Id, Art, 31 (l) (i-iii).

⁸⁴ Carlos M. Correa, *supra* note 38, at 17.

⁸⁵ Id.

⁸⁶ Id, at 19. (For instance, the Spanish patent law provides: “the exploitation of the patented invention by means of imports coming from the practicing of the invention in a member state of the World Trade Organization shall have the same effect as the practicing of the invention in the national territory”.)

products manufactured in other countries. In one case, the European Court of Justice has endorsed this line of thinking.⁸⁷

Developing countries should resist the extension of the above rule in to the WTO system. They should insist that non working or insufficient working a patent is one ground to grant compulsory license. For these countries, especially as regards TOT, import cannot be a substitute for local workings of inventions. In fact, the adoption of the above rule in the WTO system will undermine the objective of the TRIPs Agreement as enshrined under the preamble and Art. 7 of the agreement.

3.2.2. The International Investment Law and TOT

Though the corpus of the international investment law is embodied in Bilateral Investment Treaties (BITs), it is the TRIMs Agreement that lay the basic principles to which these treaties has to adhere to. The TRIMs agreement applies to investment measures which relate to trade in goods and services. The agreement provides, *inter alia*, that member states shall not apply any investment measures that are inconsistent with the principle of national treatment (Art. III GATT) and the prohibition of quantitative restriction (Art. XI GATT).⁸⁸ The annex to the TRIMs Agreement contains illustrative lists that are labeled as incompatible with these obligations.⁸⁹

⁸⁷ Id, at 20. (The case arises in relation to Italy's patent law. "... the introduction into, or the sale in the territory of, Italy of items manufactured in foreign countries was not considered by Italian law to constitute working of the invention. However, in 1992 the European Court of Justice condemned Italy and established that the working requirement was satisfied on the domestic market by imports of products manufactured in another EC member state. The Court held that if, after 3 years from the date of grant of a patent, or 4 years from the filing date of the application, the proprietor of a patent or his successor in title has not worked the patented invention, directly or through one or more licensees, by way of production in the territory of the state, *or by way of importation from one of the member states of the European Community*, or has worked it to an extent seriously disproportionate with the needs of the country, a compulsory license for the non-exclusive use of the invention may be granted to any person applying for it. (emphasis added))

⁸⁸ See Annex 1A of Marrakesh Agreement, Agreement on Trade-Related Investment Measures, (1999) I.L.M, Art. 2. [hereinafter TRIMs Agreement]

⁸⁹ The whole text of the annex reads:

"1. TRIMs that are inconsistent with the obligation of national treatment provided for in paragraph 4 of Article III of GATT 1994 include those which are mandatory or enforceable under domestic law or under administrative rulings, or compliance with which is necessary to obtain an advantage, and which require:

(a) the purchase or use by an enterprise of products of domestic origin or from any domestic source, whether specified in terms of particular products, in terms of volume or value of products, or in terms of a proportion of volume or value of its local production; or

(b) that an enterprise's purchases or use of imported products be limited to an amount related to the volume or value of local products that it exports.

A close look at the prohibited lists of investment measures as stipulated under the annex reveal that the prohibition is basically constituted by local content requirements and export requirements. Other types of performance requirements, like export requirement, product mandating requirement and joint venture requirement, are not listed or indicated by way of illustration under the prohibited lists. This implies that state parties to the agreement may freely apply these investment measures to achieve a certain objective.

As noted under chapter two, one of the most important mechanisms of TOT is joint venture. It has been explained that, due to its inherent advantages as compared to other modes of TOT, many countries have expressed a preference for joint ventures, with the foreign partner in a minority position, over wholly FDI.⁹⁰ The TRIMs Agreement, by allowing state parties to stipulate joint venture requirement as a performance requirement, enable them to utilize this mode of TOT to the fullest extent. The idea here is that the freedom of state parties to the agreement to specify joint venture requirement as a performance requirement enables member countries to formulate their investment law in a way that bring about technology diffusion in some selected priority areas, as joint venture is an effective mode of TOT.

In addition, the TRIMs Agreement provides that developing countries may freely deviate temporarily from the Principle of National Treatment to the extent and in such a manner as Article XVIII of GATT 1994.⁹¹ This authorization may provide room for developing nations to provide special treatment to their companies until they build their technological capability.

The above being the positive aspects of the TRIMs Agreement as regards TOT, it has its own pitfalls. The prohibition to provide for local content requirement is one of the negative aspects of

2. TRIMs that are inconsistent with the obligation of general elimination of quantitative restrictions provided for in paragraph 1 of Article XI of GATT 1994 include those which are mandatory or enforceable under domestic law or under administrative rulings, or compliance with which is necessary to obtain an advantage, and which restrict:

- (a) the importation by an enterprise of products used in or related to its local production, generally or to an amount related to the volume or value of local production that it exports;
- (b) the importation by an enterprise of products used in or related to its local production by restricting its access to foreign exchange to an amount related to the foreign exchange inflows attributable to the enterprise; or
- (c) the exportation or sale for export by an enterprise of products, whether specified in terms of particular products, in terms of volume or value of products, or in terms of a proportion of volume or value of its local production.”

⁹⁰ See also Dominique Foray, *Technology Transfer in the TRIPS Age: The Need for New Types of Partnerships between the Least Developed and Most Advanced Economies* 35 (ICTSD Programme on IPRs and Sustainable Development, Issue Paper No.23, May 2009), available at http://www.iprsonline.org/New%202009/foray_may2009.pdf.

⁹¹ See TRIMs Agreement, *supra* note 88, Art. 4.

the TRIMs Agreement. From the perspective of TOT, local content programs are useful instruments to facilitate development and diffusion of new technologies.⁹² In fact, local content requirements have often been used to encourage TOT — certainly in Japanese and Korean technological development, and more recently in Brazil, India and China.⁹³ The prohibition of such type of programs necessarily narrows down the available ways to access and adopt new technologies. It must, however, be borne in mind that although they may be a way to transmit technological innovation, local content requirements necessarily imply discrimination between imported and domestic goods, and for this reason are inconsistent with the principle of national treatment included in the TRIMs Agreement, as specified in the Annex.⁹⁴

The other drawback of the international investment law as regards TOT is the exclusion of technology transfer requirements from the scope of the TRIMs Agreement. During the Uruguay round of negotiation, the US strongly argued that technology transfer requirements are particular mode of trade distorting measure. The TRIMs Agreement, however, would have been ideal framework for regulation of TOT embodied in FDI.⁹⁵ Most importantly, technology transfer requirements would have helped to diffuse in the receiving country the knowledge necessary to reproduce products that would otherwise been imported by the host country.⁹⁶

In general, the TRIMs Agreement is meant to promote open trade regime. As a result, it prohibits states from stipulating various requirements and restrictions which may distort free trade. Among other things, stipulating joint venture requirement is not, however, prohibited under the TRIMs Agreement. Hence, developing countries may facilitate TOT by stipulating joint venture requirement as a performance requirement in their domestic investment law. In addition, they may also effectively utilize their entitlement to deviate from the national treatment principle and favor their companies which endeavor to adopt and implement foreign technologies.

Moreover, the creation of an open trade regime, which is the main objective of the TRIMs Agreement, by itself, may facilitate TOT. Open trade normally expected to attract FDI. As explained under chapter two, FDI is one mode of technology transfer as the host country can

⁹² John H. Barton, *supra* note 2, at 40.

⁹³ *Id.*

⁹⁴ Maria Anna Corvaglia, *supra* note 4, at 32.

⁹⁵ *Id.*, at 31.

⁹⁶ *Id.*

profit from the positive learning externalities related to inward FDI. Open trade also enable firms to have easy access to capital equipment and capital equipments embodying foreign technologies.

To wrap up this section, there is no comprehensive international agreement that regulate TOT. Yet, some treaties have their own bearing on the international transfer of technology. Among this treats, the Paris Convention, the TRIPs Agreement and the TRIMs Agreement are the principal ones. These agreements regulate the international TOT in a fragmented fashion. In fact, a specific reference to TOT is only found under the TRIPs Agreement. Art. 66 (2) of this agreement oblige developed nations to provide incentives to their companies and enterprises with the view to encourage them to transfer technology in to WTO member LDCs. The forthcoming section will examine the compliance mechanisms to this provision.

3.3. Compliance Mechanisms to Art. 66 (2) of the TRIPs Agreement

As explained above, Art. 7 and Art. 8 of the TRIPs Agreement identify TOT as an objective intellectual property protection laws should be supportive of. It is also noted that Art 66 (2) of the agreement impose mandatory obligation on developed countries to provide incentives to their companies and institutions to transfer technology to developing countries.

The implementations of these promising provisions have been questioned by several developing countries. Some of these countries expressed their concern for the absence of unilateral pressure and lack of actual implementation of Art 66 (2). In this regard, the issue of implementation of Art 66 (2) to the benefit of LDCs has been raised by Egypt, India, Dominican Republic, Honduras and the African group.⁹⁷ These countries noted that no concrete step has been demonstrated by developed countries with regard to their obligation under Art. 66 (2).⁹⁸

Taking note of this concern of developing countries, the Doha Council has passed a decision regarding, *inter alia*, the issue of implementation of Art. 66 (2) of the TRIPs Agreement in 2001. In this decision, otherwise called “the 2001 WTO Doha Decision on Implementation Related Issues and Concerns, the Ministerial Council reaffirmed the mandatory nature of Art. 66 (2) of

⁹⁷ Carlos M. Correa (1999) “*Review of the TRIPS Agreement: Fostering the Transfer of Technology to Developing Countries*”, 2 JOURNAL OF WORLD INTELLECTUAL PROPERTY, at 130.

⁹⁸ *Id.*, at 31.

the TRIPs Agreement. It also authorizes the TRIPs Council to put in place a mechanism for ensuring the full implementation of the provision. The full text of paragraph 11.2 of the decision reads:

“Reaffirming that the provisions of Article 66.2 of the TRIPS Agreement are mandatory, it is agreed that the TRIPS Council shall put in place a mechanism for ensuring the monitoring and full implementation of the obligations in question. To this end, developed-country Members shall submit prior to the end of 2002 detailed reports on the functioning in practice of the incentives provided to their enterprises for the transfer of technology in pursuance of their commitments under Article 66.2. These submissions shall be subject to a review in the TRIPS Council and information shall be updated by Members annually.”⁹⁹

As can be inferred from the quoted paragraph, the decision doesn't only authorize the TRIPs Council to devise a mechanism for ensuring the monitoring and full implementation of the agreement. It also obliges developed countries to submit regular report as to the incentives they provided to their companies and institutions with the view to discharge their obligation under Art 66 (2). Now, the questions are: What mechanisms the TRIPs Council put in place to ensure the full implementation of Art 66 (2) of the TRIPs Agreement; Are developing countries submitting periodic report to the TRIPs Council as envisaged under the ministerial decision; If so, what are the most common incentives developed countries provided for their enterprises to encourage them to transfer technology to developing countries; And, are these incentives effective in bringing about the intended result?

To begin with the mechanisms devised by the TRIPs Council for ensuring the monitoring and full implementation of the obligations under Art. 66 (2), the Council passed a decision in 2003 in which it agreed that developed countries should submit annual reports on actions taken or planed in performance of their commitments under Art. 66 (2).¹⁰⁰ The decision also obliges member countries to provide new detailed reports every three years.¹⁰¹ As to the contents of these submissions, paragraph 3 of the decision provides the following lists.

- a) *“An overview of the incentives regime put in place to fulfill the obligations of Article 66.2, including any specific legislative, policy and regulatory framework;*

⁹⁹ WTO Ministerial Decision on Implementation-Related Issues and Concerns, supra note 78, para. 11.

¹⁰⁰ Id.

¹⁰¹ Id, Para. 1.

- b) *Identification of the type of incentive and the government agency or other entity making it available;*
- c) *Eligible enterprises and other institutions in the territory of the Member providing the incentives; and*
- d) *Any information available on the functioning in practice of these incentives, such as:*
 - ✓ *Statistical and/or other information on the use of the incentives in question by the eligible enterprises and institutions;*
 - ✓ *The type of technology that has been transferred by these enterprises and institutions and the terms on which it has been transferred;*
 - ✓ *The mode of technology transfer;*
 - ✓ *Least-developed countries to which these enterprises and institutions have transferred technology and the extent to which the incentives are specific to least-developed countries; and any additional information available that would help assess the effects of the measures in promoting and encouraging technology transfer to least developed country Members in order to enable them to create a sound and viable technological base.*¹⁰²

The information submitted to the council as per the above stipulation is subject to revision by the same. The Council is required to review the submissions at its ending of meeting each year.¹⁰³

The decision entitles member states to pose question concerning the information submitted, the effectiveness of the incentives in achieving their purpose (i.e, promoting and encouraging TOT to WTO member LDCs) and the operation of the reporting procedure established by the decision.¹⁰⁴

The above being the reporting mechanism put in place by the TRIPs Council, the next question that has to be addressed is whether developed countries submit periodic report to the council in accordance with the Council's decision.

In theory, developed countries could have begun submitting their reports in 1995, when the agreement – and therefore the article 66.2 obligation – first went into force.¹⁰⁵ However, members began to submit their report after the 2001 Doha Ministerial conference mandated the TRIPs Council to put in place a monitoring and implementation mechanism for the provisions of Art. 66 (2) of the TRIPs Agreement. Literatures indicate that there is a significant increase in

¹⁰² Id, Para. 3.

¹⁰³ Id, para. 2.

¹⁰⁴ Id.

¹⁰⁵ Suerie Moon, *supra* note 77, at 3.

both volume and level of detail from 2003 onward.¹⁰⁶ The reports submitted to the council are subject to various shortcomings.

First, since the data rely on self reporting, the possibility of over- statement is very high. Developed countries likely state at the maximum level the extent to which they met their obligation under Art. 66 (2). Second, there is no uniform reporting format among members. In fact, even individual members don't report in a consistent format year to year.¹⁰⁷ Last, but not least, there is a wide variety in the level of details provided regarding target countries, size of of programmes, length of time of programmes, and other crucial elements of information.¹⁰⁸ These short comings have made methodological coding of the data very difficult.¹⁰⁹

As to the question how broad and regular is reporting among developed countries, a certain writer has the following to say:

“The answer depends very much on how one chooses to define “developed country”. If one takes the OECD as proxy, 21 of 30 (70 per cent) of OECD members have submitted a report at least once, while nine (30 per cent) have not. However, the EU reports separately from many of its member States; if one accepts that EU-level policies fulfill the obligations of all EU member States, then Greece, Hungary, Luxembourg, Poland and Portugal, which never submitted reports, are covered, and the rate of developed country participation increases to 83 per cent. In contrast, if one uses the World Bank’s high income countries as proxy, then only about one third (3 per cent) of 60 countries participated.”¹¹⁰

It must also be noted that “[n]o member submitted a report every year.”¹¹¹ On top of this, submitting a report doesn't necessary provide accurate reflection of the nature of a government's technology transfer policies. Despite these limitations, the reports provide some indication of a Government's commitment to meeting its obligation.¹¹²

Coming to the types of polices considered as incentives for TOT, developed countries consider and report the following types of activities as technology transfer incentives.

1. Financing purchase of technologies;

¹⁰⁶ Id.

¹⁰⁷ Id.

¹⁰⁸ Id.

¹⁰⁹ Id.

¹¹⁰ Id, at 5.

¹¹¹ Id.

¹¹² Id.

2. Providing Incentives for FDI;
3. Matching business in developed countries with those in LDCs for skill building purposes;
4. Training (including various scholarships and other educational opportunities) in technological field;
5. Support to education system;
6. Providing venture capital;
7. Providing insurance against the risk of doing business in LDCs for technology- related firms;
8. Building a technical component in to aid projects; and
9. Sending skilled nationals to volunteer in technical capacity in LDCs.¹¹³

The above list is very broad in the sense that some of the programs are not either technical in nature or do not include a transfer component. For example, support for primary education is too far from processes of technology transfer to qualify as meeting Art. 66 (2) obligation. In addition, most of the above-mentioned activities do not fall within the ambit of activities envisaged under Art. 66 (2) of the TRIPs Agreement.

As explained above, the provision obliges developed countries to formulate laws and policies which provide incentives to their firms with the view to encouraging the latter to transfer technologies to WTO member LDCs. Contrary to this stipulation, some of the activities listed above by no means can be considered as incentives for developed countries' firms to transfer technology to developing countries. For instance, support of education system and training nationals of LDCs hardly encourage developing countries' companies to carry out technology transfer activities.

In addition, all the programs do not target WTO member LDCs as envisaged under Art. 66 (2) of the TRIPs Agreement. According to a study conducted in 2008, among 292 programs reported by developed countries as technology transfer activities, only 64 (22%) meet the criteria of targeting WTO member LDCs.¹¹⁴ This implies that beneficiaries of most of these activities were developing countries, whether LDC or not and WTO member or not.

¹¹³ Id.

¹¹⁴ Id, at 6.

Coming to the issue whether programmes and policies are attractive enough to encourage developed countries' companies and institutions technology transfer to LDCs, the effectiveness of the reported activities in bringing about technology diffusion in to LDCs is questionable. As stated above, some of the programs have nothing to do with the activities of developed countries' companies. Hence, if a stricter application of the conditions of Art. 66 (2) is adopted, the programs and policies qualified as TOT activities will be lowered. Furthermore, even if some of these programs, such as providing training to scientists explicitly include a technology transfer component, the reports do not make it clear how these activities would lead to TOT. For the most part, there is no as such credible relationship between the TOT activities and the intended result.

Nonetheless, the above should not be taken to mean all the reported activities will not incentivize developed countries' companies to undertake TOT activities in LDCs. For instance, the provision of insurance against the risk of doing business in LDCs for technology- related firms, provision of venture capital and providing incentives for FDI may encourage these companies to carry out TOT activities in LDCs.

In general, so far, the only mechanism for monitoring the implementation of Art. 66 (2) of the TRIPs Agreement is periodic reporting. Developed countries are required to submit annual report to the TRIPs Council concerning their technology transfer activities. Though not regularly, some developed countries submit the report to the council. These reports are often over stated ones: Most of the activities reported as TOT activity do not have immediate and direct impact on the beneficial countries' access to foreign technology. In fact, as a certain writer rightly put, "[m]any of the activities in the country reports fall under the umbrella of traditional official development assistance."¹¹⁵ Moreover, contrary to the requirements of Art. 66 (2) of TRIPs Agreement, developed countries do not target WTO member LDCs. In most cases, they provide the incentives to all developing countries alike. Some of the programs also do not aim at encouraging private firms to undertake TOT activities in LDCs. Finally, it must be noted that there is no sanction for a state's failure to submit the annual report as required by the decision of the TRIPs Council.

¹¹⁵ Id.

3.4. Intergovernmental Organizations' Initiatives to Facilitate TOT

Now days, the issue of technology is one of the agendas of different international organizations. The present section is devised to shade some light on the TOT activities of intergovernmental organizations, like the WTO, WIPO and UNICTAD.

To begin with, the WTO plays an important role on norm settings that have direct impact on TOT. As such, TOT is a legal concept reflected in several WTO agreements, like, most importantly, the TRIPs Agreement. Yet, TOT had not warranted attention in its own right until the creation of the Working Group on Trade and Transfer of Technology through the Doha Mandate.¹¹⁶

The Working Group was established by the Doha Ministerial Declaration in 2001 to examine, under the auspices of the General Council, the relationship between trade and transfer of technology, and make any possible recommendations on steps that might be taken within the mandate of the WTO to increase flows of technology to developing countries.¹¹⁷ As regards the first mandate, the Working Group has undertaken a lot of analytical work on the relationship between trade and TOT. As regards the second mandate, it has developed and proposed a format in accordance of which developed countries shall submit the TOT related activities they have undertaken with the view to discharge their obligation under Art 66 (2) of the TRIPs Agreement. Despite these piecemeal works, it is not possible to assert that the Working Group is successful. It has failed to agree on basic premises to follow up on analytical work and to make the necessary practical policy recommendations to the General Council on how to foster transfer of technology to developing countries.¹¹⁸

Coming to the TOT activities of WIPO, in addition to IPRs standard settings, TOT is the mandate of the WIPO. However, the issue of technology transfer at WIPO has been treated like a subsidiary issue to the work of WIPO. It has relegated its work on technology transfer to two narrow technology specific work areas. While the first work area used to focus on Small and

¹¹⁶ South Centre, “*The Agenda For Transfer of Technology: The Working Group of The WTO on Trade and Transfer Of Technology*” 6 (Trade-Related Agenda, Development and Equity (TRADE) Analysis Series, October 2005), available at http://www.southcentre.int/wp-content/uploads/2013/07/AN_IP1_Working-Group-of-WTO-on-Trade-and-Transfer-Technology_EN.pdf.

¹¹⁷ Id, at 11.

¹¹⁸ Id, at 16.

Medium Enterprises, the second one has focused on a training program called the WIPO University Initiative which involves the training of Intellectual Property coordinators from developing countries to be better equipped in exploiting R&D and decision making in the area of licensing and technology transfer.¹¹⁹

Dissatisfied with the fragmented TOT activities of the WIPO, Argentina and Brazil, in their proposal for the integration of development dimension in to the IP system and the WIPO's activities, suggested for the establishment of an international regime that would promote access by the developing countries to the results of publicly funded research in the developed countries.¹²⁰ They have also called for the mainstreaming of the issue of TOT in existing and future WIPO agreements. Accordingly, TOT became one of the most important pillars of the WIPO Development Agenda, which is established in October 2007.¹²¹ Then after, the WIPO has widen its TOT activities which can be categorized it to six as : (i) analysis of the impact of IPRs protection rules on TOT; (ii) organization of seminars and conferences on TOT; (iii) Provision of awareness and capacity building trainings (technical cooperation); (iv) making available patent information and IP infrastructure; (v) developing technology platforms; and (vi) other activities and publications that build on partnerships and collaborations between technology holders and technology users.¹²² Nonetheless, it is not possible to assert that these activities are adequate enough to bring about the intended result.

As to UNCTAD's TOT activities, UNCTAD has a historical tie to the topic of technology transfer at the multilateral level in that it was the first forum to address this issue and out of its early work drafted the International Code of Conduct on Technology Transfer.¹²³ Though the draft code has never come in to effect, UNCTAD has continued to pay a pivotal role in the area. Its works can be summed up in three words: think, debate, and deliver. The most important work

¹¹⁹ Id, at 4.

¹²⁰ World Intellectual Property Organization (WIPO), *Proposal by Argentina and Brazil for The Establishment of A Development Agenda for WIPO* 3 (WO/GA/31/11, August, 2004), available at http://www.wipo.int/edocs/mdocs/govbody/en/wo_ga_31/wo_ga_31_11.pdf .

¹²¹ See William New, *WIPO Development Agenda* (2008), <http://www.bibalex.org/a2k/attachments/speakers/WIPO%20development%20agenda.pdf> .

¹²² WIPO Standing Committee on the Law of Patents, *WIPO's Activities on Transfer of Technology* 3- 13 (2012), available at http://www.wipo.int/edocs/mdocs/scp/en/scp_18/scp_18_7.pdf .

¹²³ South Centre, *supra* note 116, at 5.

of UNCTAD in the area of TOT is publishing reflections on issues of TOT.¹²⁴ It produces often-innovative analyses that form the basis for recommendations to economic policymakers.¹²⁵

It is it publishes TOT related works through an Expert meeting on Technology Transfer and publications on technology Transfer (in the Doha Round Briefing Series and other publications) and the running of the website on Science and Technology Diplomatic Initiative as an electronic gateway to build negotiating capacity for diplomats, scientists and policy makers.¹²⁶ UNCTAD also has a Commission on Investment, Technology and Related Financial issues which has engaged in identifying best practices for transfer of technology and capacity building.¹²⁷ This is not to assert that UNCTAD doesn't offer direct assistance to developing countries. It provides direct technical assistance to developing countries and countries with economies in transition with the view to help them to build the capacities they need to become equitably integrated into the global economy.¹²⁸

¹²⁴ <http://unctad.org/en/Pages/Home.aspx> .

¹²⁵ Id

¹²⁶ South Centre, *supra* note 116, at 5.

¹²⁷ Id

¹²⁸ <http://unctad.org/en/Pages/Home.aspx> .

Chapter Four

The legal and Institutional Framework for Technology Transfer in Ethiopia

Introduction

Various reports indicate that Ethiopian economy is growing at an alarming rate. It is one of the fastest growing economies among sub-Saharan African countries.¹ This economic growth can only be sustained if the country is able to either develop indigenous technologies or adopt foreign ones. Having regard to the country's level of industrialization, it is pretty clear that self-development of independent technology is hardly an option. As a result, the introduction of technologies developed elsewhere is crucial to sustain the economic development of the country. Under its various policy documents, the Ethiopian government also acknowledges the immense role of accessing foreign technologies in sustaining the economic development of the country and achieving the country's vision to be a middle income earner within a short period of time.

In order to bring about TOT, suitable legal and institutional framework should be put in place. The present chapter is designed to address the question whether there is a suitable legal and institutional arrangement for the transfer of technology in Ethiopia. Accordingly, the chapter analyzes the laws of the country which directly or indirectly affect the inflow of foreign technology in to the country. Furthermore, the chapter closely examines the TOT activities of government organs which are mandated to deal with TOT processes. In this regard, the organizational structure, responsibilities and objectives and TOT activities of the Ministry of Science and Technology, Ethiopian Intellectual Property Office (EIPO) the Investment Agency and the Small and Micro Enterprises Agency will be explained.

Before embarking on this endeavor, however, it is of a paramount importance to explore the policy environment for the transfer of technology in to Ethiopia. As a result, the economic, science and technology, education and IP polices of the country will be examined. The place of TOT in the GTP will also be explored.

¹ US- Africa Gateway, Sub-Saharan African Countries – Fastest-Growing Economies, <http://usafricagateway.biz/sub-saharan-african-countries-fastest-growing-economies/>

6.1. Policy Environment for TOT in Ethiopia

As stated under the GTP, the country's vision is to reach the level of middle income- economy as of 2020-2030.² To this end, the government is implementing various policies and strategies. Above all, the Ethiopian government is convinced that the developmental state approach is the only way forward for Ethiopia to bring about economic growth in a short period of time. The policies and strategies of the country are, accordingly, molded by this line of thinking. This section is designed to ascertain the place of TOT under the Ethiopian developmental state paradigm.

Accordingly, the present section is divided in to two sub- sections. The first sub-section explains the place of TOT in the developmental state approach. The second sub-section is meant to analyze the Ethiopian government policy documents with the view to ascertain the issue whether there is a coherent policy environment for the transfer of technology in to Ethiopia.

6.1.1. Developmental State and TOT

The term “developmental state” refers to a state that intervenes in the economy of the country to guide the direction and pace of economic development.³ The level of the economic intervention varies from country to country. Yet, the common characteristics of this intervention of developmental states is not only just to rectify market failure, but also to direct the whole economy in to what it wants. It must also be noted that its heavy intervention does not imply that the developmental state uses heavy public ownership. Developmental state requires the existence of such a private sector that actively responds to government policies and cooperatively participates in its schemes.⁴

As indicated above, Ethiopia officially claimed to be a developmental state. The government adopted the developmental state model with the intention to radically transform the state management paradigm, politically and economically, from the system in which rent seeking is

² See The Growth and Transformation Plan (2010/11- 2014/15) (2010), at 21.

³ Ayenachew Aseffa, “*Indicia of the Developmental State Concept in the Ethiopian Higher Education*” (2014) (unpublished Master’s thesis, University of Tampere), at 19, at <https://tampub.uta.fi/bitstream/handle/10024/95990/GRADU-1408537281.pdf?sequence=1>

⁴ Id.

the dominant behavioral pattern to the system in which value creation is central.⁵ To this end, the government is implementing various policies and strategies. One of these strategies is, as it is the case in any other developmental state, government involvement in some selected areas of investment.

The government established various public enterprises to involve in the manufacturing of goods and the rendition of services to which the private sector may not respond effectively and adequately. Among these public enterprises, the FDRE Metal and Engineering Corporation is the prominent one. This corporation aimed at, by bring about technology transfer, supporting the government's initiation to accelerate the economic development of the country. The corporation works in collaboration with various foreign companies. It is, in fact, becoming center of technological excellence.

As regards the involvement of private investors in the economy, the developmental state model of Ethiopia is trying to attain a political regime in which policies that punish rent seeking and encourage value creation investments are implemented with strong government guidance.⁶ To this end, the government is preparing conditions for mobilizing available resources to create institutions, policies, and incentive systems to stimulate domestic value creation. It claims to give incentives (carrots) and disincentives (sticks) to economic actors such as farmers, workers, merchants, entrepreneurs, and foreign investors to adopt behavioral patterns based on value creation rather than rent seeking.⁷

The strategy of combining carrots and sticks is most clearly seen in the leather and leather product industry. The goal of this industry set by the Ethiopian government is to supply finished leather or finished leather products for export and domestic sales by acquiring management and technology capabilities to process what has hitherto been sold as raw or semi-finished leather.⁸ As sticks, a ban on raw material export and a high tax on semi-finished leather have been introduced. As carrots, a large number of supporting measures have been offered to the industry

⁵ GRIPS Development Forum (GDF), Democratic Developmentalism and Agricultural Development Led Industrialization 6, http://www.grips.ac.jp/forume/pdf_e12/JICA&GDFReport_Ethiopia_phase1/Intellectual_Partnership_for_Africa/Final_Report_ch5.pdf.

⁶ Id, at 36.

⁷ Id, at 8.

⁸ Id, at 15.

including (i) establishment of the Leather and Leather Product Technology Institute (LLPTI) to provide training, quality tests, and some production processes; (ii) donor assistance, foreign advisors, and twinning with a foreign institution for strengthening LLPTI; (iii) preference in finance and foreign currency allocation; (iv) business matching between domestic shoe producers and European firms; and (v) monthly government-business meetings to monitor the industry and solve its problems.⁹ Furthermore, as regards investment incentives, while investors who involve in the tanning of hides and skins up to finished level, manufacture of leather products (luggage, hand bags, leather balls and similar products), manufacture of leather shoe, and manufacture of accessories of leather products are eligible for income tax exemption for five years, investors who invest in the tanning of hides and skins below finished level are not eligible for income tax exemption at all.¹⁰ Other similar policies in other areas of investment are being implemented so as to install developmentalism (i.e., to replace rent seeking with value creation).

From the above short description of the Ethiopian developmental state model, one can infer that the government is interested in and favor investments that create value. This implies that the government's policies encourage investors to invest in the manufacturing sector, rather than in the provision of services that do not add value to recourses. This view, in fact, has been repeatedly reflected by government high officials, especially by the late Prime Minister Meles Zenawi.

Investment in the manufacturing sector requires high- tech and skilled man power. The existing indigenous knowledge of production and manpower is not sufficient to satisfy the needs of investors who may invest in this sector. This low technological capability of the country will make it imperative for the investor to look for expatriates and foreign technology. Accordingly, TOT would be very crucial for the success of the Ethiopian developmental state model. Higher level government officials confirm this assertion in their statements. It is also reflected in different policy documents which are formulated after the government officially claims to follow the developmental state paradigm.

In addition, one pillar of the Ethiopian developmental state paradigm is learning from others. More specifically, the government openly announced that it follows the developmental model of

⁹ Id.

¹⁰ See Investment Incentives and Investment Areas Reserved for Domestic Investors Council of Ministers Regulation No. 270/2012, FEDERAL NEGARIT GAZETA, 19th Year No. 4, annex, (2012). [herein after Council of Ministers Regulation No. 270/2012].

Asian-Tigers. It is known that, at their early stage of development, these countries built their technological capability by imitating foreign technology and reverse engineering. With the same parlance, the Ethiopian government alleges that the country will bring about rapid technological development through imitation of foreign technologies and technology transfer. This again confirms the paramount importance of TOT in the Ethiopian developmental state model.

6.1.2. Overview of Various Policy Documents Regarding TOT

Agricultural Development Led Industrialization (ADLI) is one of the guiding principles of the Ethiopian development policies. It refers to a development strategy that aims to achieve initial industrialization through robust agricultural growth and close linkage between the agricultural and the industrial sector.¹¹ According to this strategy, a productive agricultural sector is expected supply food (for the working force and urban dwellers) and raw materials to the industrial sector. The industry is, in return, expected to supply machineries, fertilizer, other agricultural inputs and consumer goods. This direct input and output link between the two sectors is known as Core ADLI. The idea here is that, in the final analysis, if the ADLI strategy is turn out to be successful, it will be changed in to industry led development strategy.

The main motivation behind the adaption of ADLI strategy in Ethiopia has been the recognition that Ethiopia is an agrarian society in which the bulk of the population resides in rural areas earning a livelihood from land. The government emphasizes that economic development and structural transformation should be initiated through robust agricultural growth, and that peasant farmers and pastoralists should be the main agents of agricultural transformation and economic growth.¹² The ADLI strategy targeted smallholder farms, especially crop producers, so as to achieve rapid growth in agricultural production, raise income for rural households, attain national food self-sufficiency, and produce surpluses which could be marketed to the urban or industrial sectors. Unfortunately, the Ethiopian farmers and pastoralists utilize backward technologies to undertake their farming activities. In face of this fact, it would be unwise to expect these farmers and pastoralists to play this vital role unless they were equipped with modern and productive technologies.

¹¹ GRIPS Development Forum (GDF), *supra* note 5, at 21.

¹² *Id.*, at 3.

Accordingly, during the early stage of implementation of the ADLI strategy, the government introduced measures to provide smallholder farmers with technology and better farming practices, improved seeds, fertilizers, irrigation, rural roads, and marketing services.¹³ Yet, this endeavor didn't bring about fundamental change as regards the productivity of the agricultural sector, and output remained volatile due to heavy dependency on the amount and timing of rainfall.¹⁴ This failure necessitated the broadening of the policy scope from smallholder agriculture to other sectors, especially the industry sector and the urban sector.

Hence, in what may be called Enhanced ADLI, strong emphasis was placed on growth acceleration, which was to be attained through commercialization of agriculture and private sector development.¹⁵ Policy targets in this Enhanced ADLI were not limited to smallholder farmers in rural areas. Large-scale commercial agriculture (including flower farms), urban micro and small producers, medium and large manufacturers, and foreign-invested firms all came within the purview of Ethiopian industrial policy.¹⁶ Despite this policy adjustments, the Ethiopian export continues to be dominated by unprocessed commodities. Once again, as a result, looking for another policy option became imperative.

The current scope of Ethiopian industrial policy is sufficiently flexible that all policy options for industrial development, including those not compatible with Core ADLI, are freely studied and implemented.¹⁷ At any rate, the above failures indicate that the ADLI strategy cannot be successful without disseminating modern and productive technologies to Ethiopia farmers. This fact make TOT central in the implementation of the ADLI strategy.

6.1.2.1. Ethiopian Rural Development Policy and Strategies

The key element of the Ethiopian economic objective is assuring accelerated economic growth. Taking in to account the available factors of production in the country, the FDRE Government

¹³ Id.

¹⁴ Id, at 4.

¹⁵ Id, at 5.

¹⁶ Id, at 28.

¹⁷ Id, at 30. (In face of this fact, one has to raise the question is Ethiopia currently implementing the ADLI strategy? A certain writer asked same question and answered it beautifully as follows. "What is the meaning of ADLI, a concept which is supposed to guide the unique developmental path of Ethiopia? One possibility is that ADLI is a statement of political assurance that the interests of farmers and rural communities will never be sacrificed or forgotten no matter what industrial strategy may be adopted by the government.)

decided that the development strategy of the country shall center on agricultural and rural development to promote a judicious use of the available factors of production.¹⁸

Accordingly, the government formulated a rural development policy and strategy in 2002. As stated in this document, one of the basic directions of the agricultural development policy is the adoption of labor incentive production method.¹⁹ However, the document clearly states that this doesn't mean the agriculture sector employs backward technology and traditional agricultural practices. It rather envisages the use of advanced technologies and farming methods that are not labor displacing in nature.²⁰ Put differently, though the document favors advanced technologies, it doesn't promote the use of extensive technology by few people. It asserts that the labor-intensive strategy is capable of yielding sustained results in terms of increasing agricultural productivity and promoting technological growth.²¹

It is not, however, specifically stated in the policy document whether such a policy direction includes the adoption of foreign technology. The strategy focuses on educating and training the agricultural labor force to build up skills and enhance labor initiations. It also recognizes that educating and training the labor force would not be meaningful unless farmers accessed relevant technologies which enable them to increase productivity.²² Hence, the document states that duplication and diffusion of contentiously improving technologies is part and parcel of the task of enhancing the productive capacity of the people.²³

As far as the type technologies that need to be disseminated to the farmers is concerned, the document mentions four characteristics. The technologies should be: labour intensive; market sensitive; responding to the needs of the varied agro- ecological conditions and practicable. When the document states that the technology should be labor intensive, it is referring to technologies that do not replace labour with advanced technologies and capital. The technologies must be based on the use of labour.²⁴

¹⁸ The Rural Development Policy and Strategies (2003), at 10. The policy document identified labour and land as the most available factors of production in the country .

¹⁹ Id, at 16.

²⁰ Id.

²¹ Id, at 15.

²² Id, at 21.

²³ Id.

²⁴ Id.

As to the source of the technologies, recognizing the low technological capability of the country to generate new technologies, the document indicates that the main source of technology would be technologies that are available globally. In this regard, the document in plain language states that

“... it takes quite a long time to train researchers, make them competent and to apply their expertise to generate new technologies. We also recognize that inventing new technologies through research is a time-consuming process. If we try to base our agricultural development on the time it would take to enhance our research capacity and generate new technologies based on this increased capacity, the objective of accelerated development will be no more than an aspiration. As our intent is to accelerate agricultural development, we cannot afford to rely solely on our own research findings.

We realize that the level of technological development in Ethiopia is extremely low as compared to that of the rest of the world. Technology in use elsewhere is invariably new to us. Yet, a great many of these technologies are compatible with conditions in our country. It would be foolish not to take advantage of what is available globally. Indeed, there is no reason to retard our development by not adopting and adapting such technologies. Hence, the main source of our technology will be from other countries rather than those indigenously developed.”²⁵

From the above quote, it is possible to infer that the document mainly focuses on selecting and adopting technologies available abroad. It envisages that the selected technologies will be disseminated to the farmers through the agricultural extension service.²⁶

The above discussion reveals that the Ethiopian rural development policy and strategies recognizes the importance of accessing foreign technology to bring about accelerated agricultural development. The document lists out the tasks that need to be accomplished to guarantee technology diffusion among farmers. These are development of strong agricultural extension service and establishing close link between research and extension service institutions.

6.1.2.2. The Ethiopian Science, Technology and Innovation Policy

the present Ethiopian science, technology and innovation policy is formulated in 2012. The policy document acknowledges that the economic growth of the country will not be sustainable

²⁵ Id, at 22.

²⁶ Id.

unless a strong national technological capability is established in the country.²⁷ Accordingly, it asserts that focus must also be given to Science, Technology and Innovation (STI).²⁸ The document aimed at:

*“... the creation of a national framework that will define and support how Ethiopia will ... search for, select, adapt, and utilize appropriate and effective foreign technologies as well as addressing the establishment of national innovation system.”*²⁹

The document aspires “[t]o see Ethiopia entrench the capabilities which enable rapid learning, adaptation and utilization of effective foreign technologies by the year 2022/23.”³⁰ To achieve this vision, the document lists some objectives. Establishing and implementing an appropriate national technology capability accumulation and transfer system, and creating conducive environment to strengthen the role of the private sector in technology transfer activities sustainably are among these objectives of the policy. This indicates the paramount place given to TOT under the policy document.

In addition, the document identified eleven critical policy issues. Technology transfer is identified as one of these crucial policy issues.³¹ As it is the case with other crucial policy issues, the document further presents the policy direction and strategies required to address this issue.

The document states that the issue of technology transfer should primarily focus on devising a system of learning, adapting and utilizing as well as disposing of imported technologies in order to meet national demand.³² To this end, the document lists five strategies which may help in building the capability to learn, adapt and utilize foreign technology. These are:

- 1. “Import effective and appropriate foreign technologies and create capabilities of adaptation and utilization of these technologies in manufacturing and service providing enterprises;*
- 2. A system to search, select, adapt, utilize as well as dispose imported technologies should be established and implemented;*

²⁷ The Science, Technology and Innovation Policy (2012), at 2.

²⁸ Id.

²⁹ Id, at 4.

³⁰ Id.

³¹ Id, at 6. (The remaining are: “[H]uman resource development, manufacturing and service providing enterprises, research, financing and incentive schemes, national quality infrastructure development, universities, research institutes, TVET institutions and industries linkage, intellectual property system, science and technology information, environmental development and protection, and international cooperation.”)

³² Id.

3. *Establish and implement a system to use foreign direct investment (FDI) and other ways of supporting technology transfer;*
4. *Strengthen technology transfer among and between various manufacturing and service providing enterprises;*
5. *Strengthen wide use of intellectual propriety, standards and other related information in support of technology transfer.*³³

The other critical policy issue identified by the document is human resource development. The document recognizes the need for competent local technicians, engineers and scientists to search for, select, diffuse, adapt and use technologies from other countries.³⁴ Taking the shortage of trained manpower to undertake these activities in to consideration, the policy document pledges that the national education and training system will place emphasis on producing engineers and natural scientists in manufacturing and service providing enterprises; qualified in understanding and utilizing appropriate technologies.

Intellectual property rights are another crucial policy issue identified by the policy document. It noted that “Intellectual Property system is said to play a valuable role if it contributes to technology transfer as well as to technology capability building through FDI and technology licensing.”³⁵ It further states that Ethiopian IPRs protection system has played minimal role in facilitating technology transfer and expansion of local innovation activities. Accordingly, it asserts that the Ethiopian IP system needs to be designed in such a way that, among other things, supports the endeavor of technology learning.³⁶

The other crucial policy issue is Science and technology information. The document noted that collecting, organizing, analyzing, disseminating, and using information related to science and technology is of significant importance for successful technology transfer. Recognizing the absence of no well organized science and technology information source or system as required by manufacturing and service providing enterprises, higher education, researcher institutes and other entities, the document set developing and establishing a national science and technology

³³ Id, at 7.

³⁴ Id, at 8.

³⁵ Id, at 15.

³⁶ Id, at 15- 16.

information system to fill the gaps and bring expected results, including the acceleration of technology transfer, as one of its strategies.³⁷

The last, but not least, crucial policy issue is international cooperation. The policy document state that cooperation in the area of science and technology is essential for accessing technological information, manpower training, expert assistance, scientific visit, joint ventures in technology transfer and funding of scientific and technological projects.³⁸ It further noted that the prime focus of the country's international relations should be to encourage cooperation with developed and developing countries as well as with various international and regional organizations with the objective of building national technological capabilities.³⁹

As regards the implementation of the policy, the main actors of innovation system are: National Science, Technology and Innovation Council; Ministry of Science and Technology; and other related ministries and Innovation Support and Research System. The National Science, Technology and Innovation Council is established by government. The members of council are comprised government officials, scientists and prominent individuals from the private sector. These members and the chairperson of the council are appointees of the government.⁴⁰

The National Science, Technology and Innovation Council is in charge of initiating, coordinating, monitoring and evaluating the implementation processes of the policy and the overall science. Technology and innovation developments in the country. In particular, the Council has the following tasks to do.

- a) *“Based on consultation present recommendations on the selection and prioritization of national technology capacity building programs; Monitor and evaluate technology adaptation and utilization activities in all national priority programs;*
- b) *Present recommendations for resource allocation for technology capacity building out of the gross domestic product (GDP); Monitor and evaluate its implementation*
- c) *Recommend national priority areas where support should be provided in the creation of competent human resource in science and technology, and to subsequently monitor and evaluate the implementation of such recommendations;*

³⁷ Id, at 17.

³⁸ Id, at 19.

³⁹ Id, at 20.

⁴⁰ Id, at 23.

d) Create and promote an environment of integration and synergy among all actors innovation system.”⁴¹

The policy document imposes the responsibility to implement the recommendations of the Council on the Ministry of Science and Technology. The ministry also serves as secretariat of the council. Furthermore, it coordinates all actors of technology transfer activities involved in technology searching, selection, acquisition, learning, adaption and utilization.⁴²

From the above explanation, it is possible to conclude that TOT is give due attention in the Ethiopian Science, technology and innovation policy. The policy recognizes the importance of accessing foreign technology to sustain the economic growth of the country. it also consider the capacity to adopt and implement foreign technology as a prerequisite to develop indigenous technologies.

6.1.2.3. Education Policy

The Ethiopian education policy is principally embodied in the FDRE Education and Training Policy. This policy is formulated in 1994. Thereafter, the government has developed various action plans to implement this policy document. One is the Education Sector Development Program IV. Here in under, the place given to TOT under these documents will be explained briefly.

The issue of technology transfer is recognized under both documents. The Education and Training Policy gives a generic recognition to technology transfer where it identifies one of the objectives of education and training to be the creation of competent citizens who, among other things, “...show positive attitude towards the development and dissemination of science and technology in society.”⁴³ Normally, it is TVETs and higher education institutions which are expected to disseminate technology in the society.

Taking this fact in to consideration, Education Sector Development Program IV provides that TVET providers and institutions strengthened to be centers for technology capabilities’ accumulation and transfer.⁴⁴ It also states the major emphasis of higher education institutions

⁴¹ Id, at 23-24.

⁴² Id, 25.

⁴³ The Education and Training Policy (1994), at 4.

⁴⁴ The Education Sector Development Program IV (ESDP IV):2010/2011 - 2014/2015, (2010), at 63

will be, among other things, the sustainable development of research capacity for knowledge creation and technology transfer in priority sectors.⁴⁵ This requires qualified manpower in the science and technology field. As a result, the Education Sector Development Program IV targeted to evolve the ratio of intakes Science and technology to Social Sciences and Humanities from 58:42 in 2008/09 to 70:30 in 2014/15.⁴⁶ The ministry of education has announced that this target was already met before the planned year.

The above explanation indicates general idea of technology transfer is among the major dimensions of the Ethiopian TVETs and higher education addressed in policy documents. On top of these, The objectives of higher education, as sated under Higher Education Proclamation No. 650/2009, emphasizes the importance of technology transfer. As per Art. 4 (2) of this proclamation, objectives for higher education that include “promote and enhance research focusing on knowledge and technology transfer consistent with the country's priority needs.” The proclamation further directs the attention of research at institutional and individual level to focus on problem solving through technology transfer. The relevant part of Art. 24 of the proclamation reads:

“1/ The focus of research in any institution shall be on promoting the relevance and quality of education and on the country's development issues focusing on transfer of technology.

...

3/ More specifically, every institution shall undertake research that shall:

- a) Take into account the priority needs of the country and enable the country to solve its challenges and build its capacity through technology transfer;*
- b) Equip students with basic knowledge and skills that enable them to undertake further and relevant studies and research.”⁴⁷*

Besides, as per Art. 25 (2) of the proclamation, every institution is required to allocate sufficient fund specifically earmarked for research focusing on technology transfer and innovation. Institutions and their academic staff are also entitled to “enter into joint research and receive research funds from external and foreign sources if the research falls within the research

⁴⁵ Id.

⁴⁶ Id.

⁴⁷ Higher Education Proclamation No. 650/2009, Art 24 (1) & Art. 24 (3).

standard, code of professional ethics, and norms of the institution.”⁴⁸ This entitlement provides higher education institutions the opportunity to do research with advanced systems and tap the available research funds in the international academic arena. In doing so, it creates better chance of technology transfer not only in the content of the research itself but also in using the research facilities of the partner institutions, and learning more advanced methodologies.⁴⁹

Moreover, the proclamation authorizes higher education institutions to offer short term trainings with the goal of “imparting knowledge and skills in specific fields, and award appropriate certificates.”⁵⁰ This flexibility in designing programs and trainings would enable the institutions to be responsive to the needs of market and the industry. Trainings focused on disseminating specific knowledge, building particular skills, or transferring knowhow learned from elsewhere would be possible with such flexibility at disposal.⁵¹

In general, as described in policy documents and the Higher Education Institutions Proclamation, learning from others, through research focusing on technology transfer, adaptation to fit to local needs and circumstances and dissemination of results to industry and society in general, forms one of the pillars of the Ethiopian education policy. This indicates the central place given to TOT under these documents. Empirical researches assert, however, that though the general idea of technology transfer is recognized in Ethiopian education policies and discussed on different platforms, it is put in practice far less.⁵²

6.1.2.4. Intellectual Property Rights Protection Policy

So far, Ethiopia doesn't have a distinct and comprehensive IPRs policy. Nonetheless, since it is believed that, apart from enacting IP laws and establishing an institution to administer same, a national IP framework is needed to ensure the contribution of IP to the realization of the country's development goals, there is a process under way to issue a comprehensive IP policy. The consultant in charge of preparing IP policy has developed a draft IP policy to Ethiopia and tabled it for discussion by stakeholders. Here in under, the place given to TOT under this draft IP policy and strategy will be assessed.

⁴⁸ Id, Art. 24 (4).

⁴⁹ Ayenachew Aseffa, *supra* note 3, at 70.

⁵⁰ Higher Education Proclamation No. 650/2009, *supra* note 47, Art. 19 (3).

⁵¹ Ayenachew Aseffa, *supra* note 3, at 70.

⁵² Id, at 69.

The draft policy recognizes IP as an instrument for, *inter alia*, stimulating the transfer and use of foreign technologies.⁵³ As a result, facilitating the transfer of foreign technologies to Ethiopia is mentioned as one of the mission⁵⁴ and objectives⁵⁵ of the IP policy of the country. Furthermore, the draft document identified the transfer of foreign technology as one of the crucial issues of the IP policy of the country.⁵⁶ With the view to address this policy issue the draft document enumerates strategies that will be implemented. These are:

- a) *“Reviewing and amending existing intellectual property laws, enacting new intellectual property laws and joining relevant regional and international intellectual property agreements aiming at strengthening the intellectual property system and stimulating the transfer of foreign technology.*
- b) *Promoting the existence of the Intellectual property system in Ethiopia and encourage increased use of the system by foreign technology holders using various tools including programs aiming at attracting foreign investment.*
- c) *Establishing and regularly updating a national data-base on the status of transfer of foreign technology.*
- d) *Setting up centers, facilitating access to and promoting the use of technological and information sources such as patent documents available in EIPO and other sources as a means to acquire, adapt and exploit foreign technologies that form part of the public domain.*
- e) *Establishing a feedback mechanism to evaluate and document the use and contribution of patent documents and related sources in adapting and exploitation of technologies in the public domain.”*⁵⁷

It is questionable whether the above listed strategies will bring about the intended result, i.e, facilitating the inflow of foreign technology in to the country. For instance, the international IP system is more of protectionist. Joining international IP agreements may only strengthen the country’s IP system towards protectionism. Making available data bases on technology is not also as such determinant factor in facilitation the inflow of foreign technology.

Beside the above mentioned drawbacks, one of the goals of the policy document is the use of IPR in selected key priority areas like the leather and textile industries.⁵⁸ To achieve these goal,

⁵³ Getachew Mengistie, “Draft National Intellectual Property Policy and Strategy of the Government of the Federal Republic of Ethiopia” (August 2013), at 6.

⁵⁴ Id, at 36. (The mission of the draft policy is “...improv[ing] and promot[ing] increased use of intellectual property in encouraging creative, inventive and innovative activities, *stimulating transfer of foreign technology*, promoting orderly trade and strengthening competitiveness of Ethiopian industry and business in and outside of the country. (emphasis added).)

⁵⁵ Id. (One of the main objectives of the draft IP policy is “...stimulat[ing] and foster the generation, protection and commercialization of IP assets in Ethiopia and facilitate transfer and acquisition of foreign technology.”)

⁵⁶ Id, at 37-38.

⁵⁷ Id, at 42.

the draft policy pelage to “provide incentives to encourage the generation, protection and commercialization of intellectual property assets in the creative, textile and leather industries and facilitate or stimulate the transfer of foreign technology.”⁵⁹ If the country has the courage to put this incentive mechanism in to practice, it will facilitate the inflow of foreign technologies in to the country in the stated priority areas. at any rate, the above brief discussion indicates the paramount importance given to TOT under the draft IP policy.

6.1.2.5. The Place of TOT under the GTP

The Ethiopian government has been implementing the GTP since 2010. Though the GTP period is expected to be completed at the end of the current budget year, government officials and different media outlets are indicting that the second part of the plan will commence at the beginning of the next budget year. With the hope that the next part of the GTP will essentially be the same with the present one, the writer of this paper found it important to examine the place of TOT under the GTP. The following is an explanation of the place given to TOT under the GTP.

As stated above, the GTP states that one of the fundamental policy directions of the Ethiopian government is ensuring accelerated and sustained industrial development. It also promises that favorable conditions will be crated to this end, and, there by the industry sector will play a key role in the economy of the country. It further states that a particular emphasis will be given to the support and expansion and development of micro and small enterprises (MSEs), and medium and large industries.

As regards MSEs, the plan provides that development of SMEs is strategic focus of the industrial development direction of the country. As a result, it promises that conducive environment to expand the quality and quantity of SMEs will be put in place. It further states that, as an implementing strategy, TVETs will serve as skill and technology centers that support MSEs through technical skill and entrepreneurship training, and technology transfer and improvements.⁶⁰ This implies that the plan designated TVETs as technology transfer centers of SMEs.

⁵⁸ Id, at 45.

⁵⁹ Id.

⁶⁰ The FDRE Ministry of Finance and development, *supra* note 2, at 70

With respect to medium and large enterprises, the GTP identified the followings as priority areas of the industrial development strategy.

1. *“Textile and Garment industries*
2. *Leather and leather related industries*
3. *Sugar and sugar related industries*
4. *Cement industry*
5. *Metal and engineering industries*
6. *Chemical industries*
7. *Pharmaceutical industry*
8. *Agro-processing industry.”*⁶¹

Given the low technological capability of the country, the development of the above-mentioned industrial sector requires the adoption of foreign technology. In this regard, the GTP states that foreign technical support will be reoriented, inter alia, to enhance TOT. It also states that the capacity of Ethiopian investors to collaborate with foreign investors will be built⁶²

From the above discussion, it is possible to conclude that though the GTP recognizes the role of TOT in implementing the industrial development direction, it raise the issue incidentally. It doesn't mention the activities that must be done in order to access foreign technologies.

6.2. The Legal Regime for TOT in Ethiopia

Under the previous section, it has been noted that different policy documents of the FDRE government acknowledge the importance of TOT in fostering and sustaining the country's economic growth. In particular, the science, technology and innovation policy targeted to bring about systematic TOT in to the country starting from 2015. To achieve this goal, there must be favorable legal environment for technology transfer activities. In fact, the mission of the policy document is:

*“...creat[ing] a technology transfer framework that enables the building of national capabilities in technological learning, adaptation and utilization through searching, selecting and importing effective foreign technologies in manufacturing and service providing enterprises.”*⁶³

⁶¹ Id, at 69.

⁶² Id, at 70.

⁶³ The Federal Democratic Republic of Ethiopia, *supra* note 27, at 4.

This normally includes putting in place conducive legal environment for TOT processes. In this regard, the previous science and technology and innovation policy of the country⁶⁴ mandated the Ministry of Science and Technology to draft laws and regulations on TOT. Yet, the policy document expired before the ministry enacted a law that specifically governs TOT. The only specific law that is entirely devoted to govern TOT in Ethiopia was Transfer of Technology Council of Ministers regulation No. 121/1993. As explained below, this regulation is expressly repealed in 2003.

Nonetheless, there are other areas of laws which directly or indirectly regulate and have a bearing on the technology transfer activities. Cases in point are the patent law, the investment law, trademark law, trade secrets protection law. This section is designed to analyze the TOT-related provisions of these laws with the view to address the issues whether these pieces of legislations are adequate enough to govern TOT processes, and whether they created favorable legal environment for technology transfer in Ethiopia.

6.2.1. Regulation of TOT Agreements

As explained above, one of the methods through which technology transfer takes place in to a country is contractual agreement. It is further stated that the terms and conditions of such type of agreements need to be carefully regulated as the agreements may contain various forms of restrictive terms and conditions. In this sub section, the Ethiopian law on TOT agreements will be explained in a fairly detail manner. Yet, before embarking on this endeavor, it is found important to explain how such type of agreements are regulated in other countries with the view to draw a comparative analysis with the Ethiopian regulatory system.

6.2.1.1. Regulation of TOT Agreements in other Jurisdictions

The discussion here in under gives some picture of the regulatory framework for TOT agreements in Vietnam and Uganda. The experience of these jurisdictions is selected based on their relevance to the Ethiopian situation. The Ethiopian government repeatedly announced that it follows the Asian Tigers development model to transform the country in to middle income

⁶⁴ This policy document is entitled “National Science, Technology and Innovation Policy: Building Competitiveness through Innovation. It was formulated in 2010 and expired up on the adoption of the present Science, Technology and Innovation Policy in 2012.

economy within a short period of time. The Vietnamese experience is selected having this fact in mind. Put differently, the Vietnamese experience is selected as a representative of Asian Tigers law on TOT agreements. Ugandan experience is selected because of Uganda's geographical proximity to Ethiopia, and its economic and technological conditions similarity with Ethiopia.

C. The Vietnamese Experience

In Vietnam, TOT agreements are governed by the Vietnamese Law on Technology Transfer No. 80/2006/QH11. This piece of legislation regulates TOT activities conducted in Vietnam, both from Vietnam to abroad and from abroad into Vietnam. The substantive part of the legislation provides for, *inter alia*, the rights and obligations of persons engaged in technology transfer activities; the competence of state management agencies in regulating such activities; and the measures that has to be taken by government agencies to encourage and promote technology transfer.⁶⁵

The Vietnamese Law on Technology Transfer recognizes the right of technology owners to transfer the ownership and use of their technology under Art. 8. One of the methods by which technology owners may exercise this right is by entering in to an independent technology transfer contract.⁶⁶ This contract is subject to various formality requirements. The contract must be made in written form or in other equivalent forms, including telegram, telex, fax, data message or other forms as provided for by law.⁶⁷ As far as registration is concerned, it doesn't seem a mandatory requirement. Pursuant to Art. 25 (1) of the Law on Technology Transfer, parties to a technology transfer agreements are required to register their agreements before the competent state authority whenever they intend to enjoy preferences and incentives provided under the law. This implies that registration doesn't affect the validity of the agreement.

The law also provides for the limitations to the right of technology owners to transfer their technology. It imposes retraction on the transfer of some technologies for the purpose of protecting Vietnamese national interest, human health, values of culture, animals, plants, natural resources and the environment.⁶⁸ In addition, as per Art. 11 of the Vietnamese Law on

⁶⁵ Vietnamese Law on Technology Transfer No. 80/2006/QH11, Art. 1 (2006).

⁶⁶ *Id.*, Art. 12 (1).

⁶⁷ *Id.*, Art. 14 (1).

⁶⁸ *Id.*, Art. 8 (1)- (4).

Technology Transfer, the transfer of some other technologies may be banned for security, economic, social and cultural concerns. Furthermore, the parties to a technology transfer contract are duty bound “[n]ot to reach agreement on anti-competition clauses banned under the Competition Law.”⁶⁹

Art 8 of the Vietnamese law on competition lists down agreements that constitute restraint of competition. Some of these agreements include:

1. *“Agreements to restrain or control the quantity or volume of goods and services produced, purchased or sold;*
2. *Agreements to restrain technical or technological developments or to restrain investment;*
3. *Agreements to impose on other enterprises conditions for signing contracts for the purchase and sale of goods and services or to force other enterprises to accept obligations which are not related in a direct way to the subject matter of the contract;*
4. *Agreements which prevent impede or do not allow other enterprises to participate in the market or to develop businesses; and*
5. *Agreements which exclude from the market other enterprises which are not parties to the agreement.”*⁷⁰

Art. 9 of the same law prohibit contracting parties from entering in to the above mentioned agreements. The cumulative reading of this stipulation with Art. 20 (f)⁷¹ of the Vietnamese Law on Technology Transfer provides that parties to a technology transfer contract may not enter in to the listed agreements. This implies that the Vietnamese Law on Technology Transfer prohibits the inclusion of restrictive terms and conditions in TOT Agreements.

As to measures that have to be taken by competent state authorities to encourage and promote technology transfer, the Law on Technology Transfer states that the Vietnamese government encourages organizations and individuals to participate in developing the technology market in form of investment “in the building of technology market infrastructure, including technology marketplaces, technology fairs, technology exhibitions, technology exchanges.”⁷² It provides for various incentives, including income tax exemption and custom duty exemption, to persons who

⁶⁹ Id, Art. 20 (f).

⁷⁰ Vietnamese Law on Competition No. 27-2004-QH11, Art. 8 (2005).

⁷¹ As explained above, this provision prohibits parties to a technology transfer contract from entering in to terms and conditions which are banned under the Vietnamese Law on Competition.

⁷² Vietnamese Law on Technology Transfer, *supra* note 65, Art. 34.

engage in TOT activities in areas of vital importance to Vietnam.⁷³ It also sets up a national technological renewal program and fund with the view to encourage and promote technology transfer.⁷⁴

To sum up the present discussion, under the Vietnamese Law of Technology Transfer, TOT agreements need to be made in written form. The law regulates the content of these agreements. In particular, the parties to the agreement may not enter in to an agreement for the transfer of a technology that may have adverse effect on national interest human health, animals, the environment etc. In addition, the law prohibits the parties from entering in to agreements on terms and conditions which have restrictive effects. These prohibited terms and conditions are enlisted under Art. 8 of the Vietnamese Law on Competition. More interestingly, the law provides for different incentives to persons who may engage in TOT activities in different forms and areas.

D. Ugandan Experience

In Uganda, TOT agreements are regulated by the Ugandan Investment Code. Specifically, Part IV of the Ugandan Investment Code Act stipulates formality requirements for and conditions in TOT agreements. To begin with, any agreement for the transfer of foreign technology in to Uganda need to be registered before the Ugandan Investment Authority.⁷⁵ Implicit in this

⁷³ More specifically, the Vietnamese Law on Technology Transfer provides, for instance, income tax exemptions to organizations and individuals which/who participate in technology transfer activities in rural, mountainous, socio-economic difficulty- stricken or exceptional socio-economic difficulty- stricken areas under Art. 44 (7). This provision states: Organizations or individuals that transfer technologies in the priority domains to rural, mountainous, socio-economic difficulty-stricken or exceptional socio- economic difficulty-stricken areas are entitled to a 50% reduction of income tax on incomes earned from the transfer of technologies or the supply of plant varieties or animal breeds.”

⁷⁴ See Vietnamese Law on Technology Transfer, *supra* note 65, Art. 38 and 39 of the law. As per the former Article is established with the view to: “a) raise the national technological capacity and transfer technology efficiency; (B) serve the national key economic programs; (c) create favorable conditions for medium- and small- sized enterprises to replace backward technologies, apply advanced technologies and master technologies transferred from abroad into Vietnam; (d) increase technological resources in rural, mountainous, socioeconomic difficulty-stricken or exceptional socio-economic difficulty stricken areas.” Art. 39 states: “The national technological renewal fund is set up for the following purposes:

a/ To support medium- and small-sized enterprises in the transfer, renewal or perfection of technologies encouraged for transfer defined in Article 9 of this Law; b/ To promote technology transfer in service of agricultural, forestry and fishery development in rural, mountainous, socio-economic difficulty stricken or exceptional socio-economic difficulty-stricken areas; c/ To support technology and technology business incubation; d/ To support the training of human resources in the scientific and technological domains in service of technology transfer, renewal and perfection.”

⁷⁵ Ugandan Investment Code Act, Section 29 (1)

requirement is that TOT agreements must be made in written form as registration presupposes the same.

As to the conditions in TOT agreements, as indicated in the above paragraph, the power to register TOT agreements is vested with the Ugandan Investment Authority. The authority may register an agreement for the transfer of technology upon fulfilling certain conditions. In particular, the authority may register a TOT agreement, under the same, if:

1. The royalties and fees which may be paid to the technology transferor are fair and reasonable having regard to the use of the technology concerned;
2. Payments of royalties and fees are supposed to be ceased upon lawful termination of the agreement or if that technology or expertise becomes public knowledge otherwise than through the fault of the licensee;
3. The royalties and fees will be reduced if a third party acquires and uses the technology concerned otherwise than through the fault of the technology recipient.
4. Any technical assistance shall, where necessary, include technical personnel as well as full instructions and practical explanations expressed in clear and comprehensive English on the operation of any equipment involved;
5. The transferor shall provide technical assistance in connection with marketing programmes and purchasing equipment involving the use of that technology or expertise;
6. The transferee shall acquire the right to continued use of that technology or expertise after the termination of the agreement; and
7. The transferor shall, if the transferee so requires, continue to supply spare parts and raw materials for a period of up to five years following the termination of the agreement.⁷⁶

Furthermore, the authority is required to make sure that the agreement doesn't contain conditions which:

- (a) *“Restricts the use of other competitive techniques;*
- (b) *Restricts the manner of sale of products or exports to any country;*
- (c) *Restricts the source of supply of inputs; or*
- (d) *Limits the ways in which any patent or other know-how may be used.”*⁷⁷

⁷⁶ Id, Section 30 (1)

⁷⁷ Id, Section 30 (2)

The above discussions indicate that a person who agrees to transfer technology to a Ugandan firm will be subject to a number of conditions. The law prescribes these conditions with the view to reap as much benefits as possible from TOT agreements. It also aimed at generating significant impacts on the technology absorption capacity and economic viability of domestic investment partners.⁷⁸

Apart from specifying the above conditions, the code provides for incentives to persons who may undertake TOT activities. The code stipulates that any person who contribute to three or more of the objectives of the code, as mentioned under Section 12) is eligible for investment incentives. As per Section 12 (d) of the code, the introduction of advanced technology or upgrading of indigenous technology is one of objectives of the country's investment law. This implies that parties to TOT agreements may be eligible to incentives if their agreement contributes to the introduction of foreign technology. This incentive may motivate parties to TOT agreements to design the terms and conditions of their agreement in the way that contribute to the rapid inflow of foreign technology in to Uganda.

In short, the Ugandan Investment Code Act stipulates the formality requirements TOT agreements must fulfill. TOT agreements must be made in written form and register before the Uganda Investment Authority. Before registering the agreement, the authority is required to ascertain the fulfillment of the conditions specified under Section 30 of the code. This provision specifies terms and conditions that have to be incorporated in any TOT agreements. It also states prohibited terms and conditions of TOT agreements. In general, under the Ugandan TOT regulatory system, TOT agreements which contain restrictive terms and conditions will not be registered by the authority and gibe effect.

6.2.1.2. Regulation of TOT Agreements in Ethiopia

The first piece of legislation enacted to specifically deal with TOT in Ethiopia was the Transfer of Technology Council of Ministers regulation No. 121/1993. This regulation is enacted by the Council of Ministers in accordance with the Encouragement, Expansion and Coordination of Investment proclamation No. 15/1992. The regulation governs, *inter alia*, the formality

⁷⁸ United Nations, “*Development Dimensions of Intellectual Property in Uganda: Transfer of Technology, Access to Medicines and Textbooks*” 24 (UNCTAD-ICTSD Project on Intellectual Property Rights and Sustainable Development report, 2010), at http://unctad.org/en/docs/diaepcb200913overview_en.pdf.

requirements for TOT agreements, evaluation criteria for the approval and registration of TOT agreements and grounds for the cancellation of registered TOT agreements. Yet, this regulation is expressly repealed by the "Investment (Amendment) Proclamation No. 375/2003."⁷⁹ Even a single TOT agreement was not registered during this 10 year realm of the regulation.⁸⁰ This may be one reason for the abolishing of the regulation.

Now days, the relevant active law that governs TOT agreements is the Investment Proclamation No. 769/2012. Before addressing the question how this proclamation regulate TOT, the writer of this paper found it imperative to discuss the substance of the repealed TOT regulation with the view to make historical comparative analysis with the present regulatory system. Accordingly, herein under, the substance of the regulation will be analyzed.

To begin with formality requirements, the regulation stipulates that TOT agreements shall be made in written form.⁸¹ It further states that the language of the agreement shall be English. The other formality requirement is registration. A technology transfer agreement which is not registered before the investment office has no legal effect.⁸² Before registering any TOT agreement, the office was required to evaluate the agreements against the grounds of evaluation as provided under the regulation. The grounds of evaluation are listed from Art. 10 up to Art. 21 of the regulation. A close looks at to these provisions reveals that the regulation is very much intrusive in to the parties' autonomy. And try to regulate each detail of technology transfer agreements.

In particular, the regulation obliges the technology supplier to guarantee ownership and validity of industrial property, the suitability of the technology for the manufacture of goods and services as stipulated under the agreement, and the comprehensiveness and efficiency of the technology for attaining the desired result.⁸³ It also obliges the technology supplier to provide training for

⁷⁹ Investment (Amendment) Proclamation No. 375/2003, Art. 6.

⁸⁰ Interview with Ato Mulugeta Tiruneh, Senior Licensing and Registration Expert of the Ethiopian Investment Commission, in Addis Abeba (April 2, 2015).

⁸¹ Transfer of Technology Council of Ministers Regulation No. 121/1993, Art. 6 (5)

⁸² The government organ which was in charge of registering TOT agreements during the reign of the regulation was the investment office (now the Investment Commission).

⁸³ Transfer of Technology Council of Ministers Regulation No. 121/1993, *supra* note 81, Art. 12

local personnel, supply accessories, components and spare parts, and provide technical services to the technology recipient.⁸⁴ In addition, it regulates the payment obligations of the parties.⁸⁵

The above grounds of evaluation suggest that the regulation adopted a rigid TOT regulatory framework. It is only up on the fulfillment of these grounds that the TOT agreement may be approved. An agreement approved having regard to the grounds of negotiation shall be registered forthwith. The grounds for refusal for registration are listed under Art. 23 (1) of the regulation. The part of the text of this provision reads:

“1. The Office shall, depending on the nature and type of the technology, refuse to approve and register agreements involving the transfer of technology in cases where:

- a) Restrictions are imposed on research and development adaption and modification of activities by the recipient! in connection with the technology transferred;*
- b) The technology to be transferred is proved to be obsolete and/or unsuitable or available in Ethiopia;*
- c) Where the agreement includes clause that enable the technology supplier directly or indirectly control or to intervene in the management of the recipient;*
- d) The agreement contains obligations to transfer or to use industrial property rights or improvement obtained by the technology recipient, with or without compensation, of information embodies an element or reciprocity or an advantage to the recipient;*
- e) The agreement is fixed for unduly long duration;*
- f) The agreement contain clauses prohibiting or restrictive without valid grounds, the use of complementary technology;*
- g) The recipient is required to obtain equipments, tools, spare parts or raw materials exclusively from a specified source, when alternative supply or facilities exist on the national or international market or to accept additional technologies, future innovations and improvements, goods and services not wanted by him;*
- h) Reproduction volumes are limited or sale or resale prices are imposed on the recipient national production or exports;*

...⁸⁶

The above listed grounds to reject registration of TOT agreements indicate that TOT agreement which might have negative effect on national economic, security and social interests would not

⁸⁴ Id, Art. 17.

⁸⁵ Id, Art. 21.

⁸⁶ Id, Art. 23 (1)

have been given effect. This requirement is the norm in the TOT regulatory system of almost all countries of the world. In addition, the quoted provision prohibited the inclusion of restrictive terms and conditions in TOT agreements. This also makes the previous regulatory system similar with the Vietnamese and Ugandan counter parts.

Apart from approving and registering TOT agreements, the regulation mandated the office to monitor the implementation of the terms and conditions specified under the agreement. It is also authorized to receive periodic reports concerning the benefits derived from the technology transferred, steps taken on the establishment of R & D, measures undertaken on the absorption and adaption of the transferred technology etc.

From theoretical point of view, the above explanation indicates that the regulation created a strong regulatory framework for TOT agreements. The agreements were supposed to be subjected to close scrutiny by the office before and after approval and registration. Yet, as stated above the regulation was expressly repealed after 10 years of tenure by Art. 6 of the Investment (Amendment) Proclamation No. 375/2003.

Coming to the present regulatory system of TOT agreements, the relevant active law is the Investment Proclamation No. 769/2012. This proclamation devoted two provisions to deal with the definition of TOT and registration of TOT agreements.⁸⁷ The reading of these provisions indicates that the proclamation adopted an extremely lenient regulatory system. It doesn't provide for provisions which prohibit respective terms and conditions of TOT agreements. It doesn't also provide for the grounds to reject the registration of a TOT agreement. In fact, it seems that the Investment Agency has no authority to refuse to register TOT agreements based on any ground. This implies that agreements for the transfer of foreign technology are not subject to any conditions. This is a U turn shift when it is compared to the previous TOT agreements regulatory system. As compared to the Vietnamese and Ugandan experience, it is also possible to assert that, in Ethiopia, TOT agreements are de-regulated juridical acts.

At this juncture, one may ask whether it is reasonable to totally do away from the rigid TOT agreements administration and adopt a lenient one. Ato Mulugeta Wube, who is an officer of the

⁸⁷ The two provisions are Art 2 (10) and Art 21 of the investment proclamation. While Art 2 (10) provides for the definition of TOT, Art 21 stipulates the procedures of registration of TOT agreements.

Ministry of Science and Technology, states that investors have so many alternative countries to invest in. He further asserts that If a country adopt a rigid TOT regulatory system, foreign companies may decline to enter in to TOT agreements with the nationals of that country. Accordingly, he concluded, it was not timing and wise to adopt the regulation at the transitional period as the country was not in a situation to select technologies at that time.⁸⁸ Though he didn't find it wrong to repeal the regulation in 2003, he is of the opinion that it is high time to adopt a regulation that govern TOT agreements as the inflow of technology is increasing at an alarming rate.⁸⁹ The officer of the legal directorate of the Ministry, Ato Ephrame Hailu, also buys this idea. He asserts that the present legal framework is not adequate to regulate TOT.⁹⁰ Accordingly, he stated, the ministry is developing a draft TOT regulation to be adopted by the Council of Ministers after deliberation by various stakeholders.

The writer of this paper is of the opinion that it is not wise to let foreign technology suppliers and local recipients to freely agree on the terms and conditions of TOT agreements as they wish. TOT agreements must be subject to a number of important conditions so as to generate some significant impact on local technological absorption capability. It is important to impose various conditions that range from the requirement to train local personnel to prohibiting the inclusion of restrictive terms in TOT agreements. As regards the latter, in most developing countries, parties to a TOT agreement may not contain a condition which: (a) Restricts the use of other competitive techniques; (b) Restricts the manner of sale of products or exports to any country; (c) Restricts the source of supply of inputs; or (d) Limits the ways in which any patent or other know-how may be used.⁹¹ These prohibitions do not only facilitate TOT, they also restrict anti- competitive practices. Hence, Ethiopia shall adopt same rule to acquire foreign technologies and curb anti competitive practices.

In addition, the adoption of stronger regulatory system may alive the problem of information asymmetry, which is an inherent feature of the trade in technology. Ethiopian firms in general have poor access to information concerning new developments in the technological field. The

⁸⁸ Interview with Ato Mulugeta Wube, Leather Technology Transfer and Development Case Team Leader of the Ministry of Science and Technology, in Addis Ababa (January 23, 2015).

⁸⁹ Ibid.

⁹⁰ Interview with Ato Ephrame Hailu, Legal Affairs Directorate Director of the MoST, in Addis Ababa (December 1, 2014).

⁹¹ See *supra*, at 84- 88.

technology may not also be available to them for purpose of examination prior to its acquisition. As a result, they may not have full information concerning the technology they aspire to acquire. On the contrary, technology suppliers often know everything about the technology. This information gap may distort the whole bargain process of the technology supplier and recipient and the technology recipient may agree to buy/license a technology which may not be useful to the intended purpose. This problem can be alleviated by, for example, adopting a TOT regulatory system that obliges technology suppliers to guarantee the suitability of the technology for manufacturing of goods or rendering of services as agreed upon between the parties and stipulated in the agreement.

Moreover, the current economic situation of the country warrants for the regulation of TOT agreements. As stated above, even a single TOT agreement was not registered during the 10 year tenure of the repealed TOT regulation. This may be attributable to the absence of FDI inflow and economic situation of the country at that time. Now days, the country's economic reality is not the same as it was the case 15 years back. The economy of the country has started to show progress. The country is becoming an attractive investment destination for foreign investors. More and more local firms are starting to invest in the manufacturing industry. As a result, after the regulation was repealed, the Ethiopian Investment Commission has managed to register about 23 TOT agreements.⁹² These changes warrants for the regulation of the subject matter.

Furthermore, in order to facilitate TOT, persons who involve in this activity should be entitled to certain incentives. The government should also put in place a mechanism to assist local firms in their endeavor to acquire foreign technology. To this end, it is imperative to regulate TOT transactions.

As indicated above, the government also buys the idea that it is high time to regulate TOT transactions. As a result, the Ministry of Science and Technology is developing a draft regulation on the choice, search, selection, introduction, use, and adaption and disposition technology. This draft regulation incorporates provisions which regulate TOT agreement from technology choice

⁹² Interview with Ato Muhamednur Yesuf, Licensing and registration Directorate Director of the Ethiopian Investment Commission, in Addis Abeba (January 30, Addis Abeba)

phase to disposition.⁹³ Under the forthcoming subsection, the relevant provisions of the draft TOT regulation will be analyzed in light of the international code of conduct on TOT.

6.2.1.3. Regulation of Technology Transfer under the Draft TOT Regulation

The draft TOT the regulation stipulates the formality requirements of TOT agreements, the powers and duties of institutions which may participate in TOT activities, the rights and obligations of the parties to TOT agreements, and the grounds to approve and refuse to register TOT agreements. As regards formality requirements, it states that TOT agreements should be made in written form.⁹⁴ It also stipulates that the language of the agreements should be Amharic and English, and, in case of discrepancies, the latter shall prevail.⁹⁵ The agreement is also need to be registered. The grounds for evaluating TOT agreements and refusing registration of the same are almost carbon copies of the grounds stipulated under the repealed regulation.

Art 13 of the draft regulation enlists the grounds for rejecting the registration of a TOT agreement. As per this provision, the government organ in charge of registering TOT agreements may reject the registration of the same if:

- A. Restriction is imposed on research and adaptation of the technology;
- B. The technology to be transferred is proved to be obsolete and/or unsuitable or available in the country;
- C. The technology poses danger to national security, human health or the environment;
- D. The agreement contain clauses that enable the supplier directly or indirectly to control or to intervene in the management of the technology recipient;
- E. The agreement imposes restriction on the technology recipient not to improve the technology; and
- F. The agreement contains clauses that prevent or restrict, without valid ground, the use of complementary technologies.

⁹³ Interview with Ato Mulugeta Wube, *supra* note 88.

⁹⁴ The FDRE Ministry of Science and Technology, Draft Regulation to Search, Choice, Introduce, Use, adapt and Dispose a Technology, Art. 5 (1) (2014). [Herein after Draft TOT Regulation]

⁹⁵ *Id.*, Art. 5 (2) & (3)

Some these grounds are listed under chapter 4 of the international code of conduct as restrictive business practices.⁹⁶ The rationale for the prohibition of these restrictive terms in general seem: Mitigating the prevalence of restrictive business practices that hinder the spillover of technology; protection of national security, human health and the environment; protecting domestic industries; and outlawing anti-competitive business practices in TOT transactions.

Furthermore, the draft regulation further provide for mandatory provisions to which TOT agreements must adhere to. As per Art. 4 of the draft regulation, TOT agreements shall clearly stipulate the mechanisms of transferring the technology under consideration. The agreement should also oblige the technology supplier to, *inter alia*, furnish sufficient spare parts and accessories during the time of the agreement and provide training to local personnel as regards the use, maintenance and adaptation of the technology. It must also stipulate the period of time within which payment has to be effected to the technology supplier. It is the authority of the MoST to monitor and evaluate the inclusion of these provisions in the agreement. It must be noted that the above mentioned mandatory provision a TOT agreements shall incorporate are listed under chapter 5 of the draft international code of conduct.⁹⁷

As to institutions which may participate in TOT processes, the draft TOT regulation provides MoST shall participate in the choice, search, selection, adaptation and disposition of foreign technologies. More specifically, as per Art 6 (d), the ministry is responsible to search and select foreign technologies which may contribute to the promotion of the country's economic policies and strategies. The ministry is also empowered to participate in the negotiation of technologies.⁹⁸ In addition, it is required to provide advisory services to technology recipients up on the request of the latter.⁹⁹ Empowering the ministry with these powers and responsibilities will have a paramount importance in alleviating the problem of information asymmetry which is prevalent in TOT negotiations.

The other most important power of the ministry is following up. The draft regulation empowered the ministry to follow and evaluate the implementation of TOT agreements in accordance with the stipulations of the regulation. In particular, it is responsible to make sure that:

⁹⁶ Draft International Code of Conduct on the Transfer of Technology (1985 version), chapter 4 section B (4) & (7).

⁹⁷ See *Id*, chapter 5 section C.

⁹⁸ The Draft TOT Regulation, *supra* note 94, *Id*, Art. 8.

⁹⁹ *Id*, Art. 8 (2).

- a. The technology supplier agreed to provide adequate technical services to the technology recipient;
- b. The Technology supplier agreed to supply equipments, tools and spare parts for a certain period of time;
- c. The agreement contain provisions which provide for program of action to train the technology recipient's personnel;
- d. In cases where the TOT agreement include the use of the trade mark and trade name of the technology supplier, the inclusion of a provision in the TOT agreement which stipulates the obligation of the technology supplier to control the quality of the goods or services to be produced;
- e. The inclusion of a provision in the TOT agreements which provides for the use of local goods and services when necessary; and
- f. The incorporation of a provision in the TOT agreement which oblige the technology recipient to guarantee that the transferred technology will give the intended result.¹⁰⁰

It seems the above listed requirements are taken from the draft international code of conduct on TOT. The code stipulates them as responsibilities of technology suppliers under chapter 5.

The other institutions which may participate in TOT processes under the draft regulation are research institutions, higher education institutions and TVETs. These institutions may participate in the choices and adaptation of foreign technologies.¹⁰¹ This stipulation is one of the peculiar features of the draft TOT regulation, as compared to the repealed TOT regulation. The participation of these institutions in TOT processes is very crucial. Yet, it overlooked the EIPO and the Federal Micro and Small Enterprises Agency. These institutions should be mandated to participate in some aspects of TOT processes.

The draft regulation further regulates the disposition of foreign technologies. It states that technologies should be disposed in accordance with international standards.¹⁰² In cases where the disposition of a technology is difficult, the TOT agreement to the transfer of the technology

¹⁰⁰ Id, Art 16 (a)- (f).

¹⁰¹ Id, Art. 11 (1).

¹⁰² Id, Art. 14 (2).

should contain a provision to the effect that the technology supplier will participate in the disposition of the technology.¹⁰³ This is also one peculiarity of the draft TOT regulation.

As compared to the Vietnamese and Ugandan TOT laws, the draft TOT regulation is similar with these laws as regards formality requirements and conditions to give effect to TOT agreements. As opposed to the Ugandan law and the repealed TOT regulation, the draft doesn't regulate the price of technologies and mode of payment. It doesn't also provide for packages of incentives to persons who may engage in TOT activities unlike the Vietnamese and Ugandan TOT laws.

In general, the draft TOT regulation provides for a system of TOT regulation which empowers the government to involve in each phase of TOT process. The regulation provides that that the government shall participate in the choice, search, selection, negotiation, adaptation and disposition of the foreign technologies. It is also empowered it to follow up the implementation of TOT agreements in accordance with its stipulation. In doing so, it seems, the draft regulation aimed at restoring to the pervious TOT regulatory system. This is to assert that the draft regulation is fundamentally the same as the repealed regulation No. 121/1993. This is particularly true as regards the grounds to approve and refuse to register TOT agreements. They also stipulate same content of TOT agreements. This doesn't mean, however, that the two regulations are identical. There are, of course, some important differences between the two.

To mention some of the differences between the two regulations, while the repealed regulation regulates the price and mode of payment of a technology, the draft regulation left this matter to the agreement of parties. In addition, unlike the draft regulation, the repealed regulation doesn't regulate the disposition of technologies. Moreover, where as the draft regulation provides that research institutions, higher education institutions and TVETs participate in the choice and adaptation of foreign technologies, the latter hasn't similar stipulation. Finally, it must be noted that the draft regulation incorporates most of the provisions of the international code of conduct on TOT.

6.2.2. Patent Law

Ethiopia has got its patent law during the transitional period, specifically in 1995. This patent legislation is entitled as the "Inventions, Minor Inventions and Industrial Designs, Proclamation,

¹⁰³ Id, Art. 14 (1).

No. 123/ 1995.” The country still applies this proclamation to govern the patent system. The rationales for the introduction of the patent system, as stated under the preamble of the proclamation, include encouraging local inventiveness, fulfilling the country’s demand for harmonious scientific and technological progress and encouraging the transfer and adaptation of foreign technology. This implies that TOT is one of the driving forces behind the introduction of the patent law in the Ethiopian legal system. More specifically, as regards TOT, paragraph 2 of the preamble of the proclamation provides “...[I]t has been found essential to encourage the transfer and adoption of foreign technology by creating conducive environment to assist the national development efforts of the country.”¹⁰⁴

Now, the questions are whether the introduction of a patent legislation in the legal system of a country guarantees the acceleration of TOT, and whether the Ethiopian patent law created conducive legal environment for TOT as promised under the preamble of the proclamation. This sub-sub section is designed to address these issues. Accordingly, the present sub-sub section is further organized in to two sections. The first section is meant to examine the role of domestic patent laws in the transfer of technology in to the host country. The second section analyzes the provisions of the Ethiopian patent law which are relevant to TOT with the view to ascertain whether they created conducive legal arrangement for the transfer of foreign technology in Ethiopia.

6.2.2.1. The Role of Domestic Patent Legislations in Technology Transfer

The relationship between IPRs protection and the volume and direction of technology inflow in to host countries is not conclusively established in both theoretical and empirical studies. To begin with theoretical arguments, there are literatures which advance the idea that the existence of strong patent system in a country will facilitate technology transfer in to the host country. The logic of the proponents of this idea is simple and traditional. It goes as follows:

“[The availability IPRs protection is] a prerequisite for the international transfer of new technologies.... One would expect companies to be reluctant to lose control over technologies that may have cost them millions of dollars to develop in countries where domestic firms can [freely] adopt the technologies and produce goods that will compete with those of the technology owners. Accordingly, the

¹⁰⁴ Inventions, Minor Inventions and Industrial Designs, Proclamation No. 123/ 1995, at Preamble [hereinafter the Patent Proclamation]

only way that companies would feel encouraged to transfer proprietary technologies is where IPRs protection is strong enough for them to charge license fees high enough to reflect the costs of innovation, or alternatively by means of FDI or joint ventures where they maintain more control over these technologies.”¹⁰⁵

The above quoted statements just re-affirm the oft-repeated claim. That is, it support the claim that if strong IPRs protection are not put in place in developing countries, developed countries’ corporations will not offer their technologies, and will prefer to make their direct investment elsewhere. Some writers further assert that patent protection is of vital importance to facilitate TOT directly by stimulating the introduction of foreign technology and indirectly by making available technological information through patent documents.¹⁰⁶ These arguments, however, are not acceptable to all.

There are literatures which made counter argument to the above-mentioned claim. They argue that IPRs protection inhibit the international transfer of technology. A certain writer summarized the view of the proponents of this latter view as follows:

*“As an intervention in the free market, patents restrict the number of people who could otherwise freely make, use, sell or import the protected products and processes, and enable owners to avoid a situation where the price of their products or processes is driven down towards the marginal cost of reproduction. If IPRs are available in a developing country, license fees for protected technologies may be too high for most domestic firms.”*¹⁰⁷

The idea here is that since IPRs protection result in the expensiveness of patented technologies, the price of technologies will be out of the financial reach of developing countries’ firms. As a result, advanced technologies will be unaffordable to local firms. This situation, they allege, in turn, perpetuate the technological inequality between the global north the developing south.

The above being theoretical analysis, coming to the practical implications of IPRs protection in the inflow of technology in to the host country, as indicated above, the findings of empirical studies concerning the link between IPRs protection and technology transfer are also hardly conclusive. There are some studies which assert that the inflow of foreign technology is affected

¹⁰⁵ Graham Dutfield, “Literature Survey on Intellectual Property Rights and Sustainable Human Development” 61, http://www.iprsonline.org/unctadictsd/docs/GDutfield_LiteratureSurveyOnIP_April2003.pdf

¹⁰⁶ Getachew Menigiste (2009) “The Impact of the International Patent System on Developing Countries”, XXIII JOURNAL OF ETHIOPIAN LAW, at 172

¹⁰⁷ Graham Dutfield, *supra* note 105, at 62.

by IPRs protection availability in the host country.¹⁰⁸ These studies found that TNCs are not willing to share technologies on concessional terms in countries with companies that could use their technology freely to produce competing products for sale there or in other markets.¹⁰⁹

On the other hand, there are also other empirical studies which dismiss the above findings. A study conducted in turkey, for example, found that the banning of pharmaceutical patents appeared to have no significant effects on levels of FDI, technology transfers or domestic innovation.¹¹⁰ These studies in particular assert that strong IPRs protection will hinder, rather than facilitating, technology transfer in to the host country in the early stage of industrialization where technological learning principally takes place through imitation and reverse engineering of imported products.¹¹¹ There are also other categories of empirical studies which assert that IPRs protection is only one of the several factors that may facilitate technology transfer.¹¹²

Despite the above varied arguments, one fact is undeniable: IPRs protection is one of the factors that affect the inflow of technology in to a country. Whatever the level of development of a country may be, strengthening IPRs will involve unavoidable costs (in terms of legislation, administration and enforcement), as well as benefits for developing countries.¹¹³ Since, as one writer put, since “we have had a patent system for a long time, it would be irresponsible, on the basis of our present knowledge, to recommend abolishing it”¹¹⁴, developing countries should develop legal arrangements that will enable them to reap as much fruits as possible from the benefits of IPRs protection as regards TOT.

When we turn our face to role the introduction of patent law may play in the inflow of technology in to Ethiopia, the economic reality and the level of industrialization of the country suggest that the country’s technological capability to undertake imitation and reverse engineering

¹⁰⁸ Ibid. (For instance, “Edwin Mansfield’s well-known study indicated that a large proportion of respondents from the chemical and pharmaceuticals industries claimed that their FDI decisions were affected by the levels of IPR protection available.”)

¹⁰⁹ Id, at 63.

¹¹⁰ Id, at 62.

¹¹¹ Linsu Kim, *Technology Transfer & Intellectual Property Rights: The Korean Experience 7* (UNCTAD-ICTSD Project on IPRs and Sustainable Development Issue Paper No. 2, June 2003), available at <http://www.iprsonline.org/resources/docs/Kim%20-%20ToT%20and%20IPRs%20%20Blue%202.pdf>

¹¹² Graham Dutfield, *supra* note 97, at 62.

¹¹³ Id.

¹¹⁴ Peter K. Yu, Peter K. Yu, “*The Objectives and Principles of the TRIPs Agreement*” 28 (2009), at <http://www.peteryu.com/correa.pdf>.

is very low. In face of this fact, it is not possible to assert that the introduction of the patent law has hindered the transfer of technology in to the country through imitation and reverse engineering channels. Though more that 20 years have passed since the coming in to effect of the Inventions, Minor Inventions and Industrial Designs, Proclamation, No. 123/ 1995, it is questionable whether the introduction of the patent law fostered the inflow of technology in to Ethiopia through FDI, joint venture and licensing.

6.2.2.2. Analysis of Ethiopian Patent Law in Relation to TOT

As noted above, one of the driving forces behind the introduction of patent law in Ethiopia is the need to encourage technology transfer. To achieve this objective, the proclamation is expected to crate conducive legal framework to the dissemination of technology in to the country. Herein under, the provisions of the proclamation which have direct or indirect impact on the transfer and dissemination of technology in to Ethiopia will be analyzed with the view to ascertain whether the proclamation crated a favorable condition for same.

I. Patent Eligibility Criteria

Art. 3 of the Inventions, Minor Inventions and Industrial Designs, Proclamation, No. 123/ 1995 lays down the patent eligibility criteria. As per this provision, an invention is patentable if it is new, involves inventive step and industrially applicable. An application for the grant of a patent right will not be grated unless the application meets all these three requirements. Below, the impacts of these patentability requirements on technology transfer will be explained.

The first requirement for the grant of a patent is novelty (i.e, the invention must be new). The proclamation adopted a universal approach to define novelty. As per Art. 3 (2) of the proclamation, the novelty requirement will not be satisfied if there is no prior art publicly available in any form in any part of the world. This is a strict novelty standard in the sense that any written or oral prior art publicly available in any country destroys the novelty of an invention claimed in Ethiopia. This standard of novelty is stricter even than the standards of the international patent system. According to section 3(9) of the Harare Protocol, only such prior art

that has been disclosed in written form or by use or exhibition shall be considered as destroying novelty.¹¹⁵ As opposed to Art. 3 (2) of the proclamation, there is no reference to oral disclosure.

As regards TOT, this strict novelty requirement has its own utility. By restricting the possibilities to claim existing inventions as new, the absolute novelty requirement contributes to the safeguarding of a public domain needed for domestic firms' and researchers' freedom to operate. That is, Ethiopian firms and researchers can freely use a technology which is disclosed by any means in any part of the world for the production of goods and the rendition of services. No one can come thereafter and stop them from using the technology. Understood in this sense, the strict novelty requirement adopted by the proclamation can potentially accelerate the inflow and dissemination of technology in to the country.

The second patentability requirement is non-obviousness. For the purpose of the proclamation, an invention is deemed to be non-obvious if it is not obvious to a person who has ordinary skill in the art concerned.¹¹⁶ The proclamation makes it clear that the assessment of non-obviousness of an invention is not only based on local persons skilled in the art concerned. It must also be assessed having regard to skills existing anywhere in the world, including technologically advanced countries. This is also a strict standard. This strict standard has the effect of preserving technological developments that are predictable from existing arts in the public domain.

The third requirement is industrial applicability of the invention. The proclamation stipulates that an invention is said to be industrially applicable "where it can be made or used in handicraft, agriculture, fishery, social services and any other sectors."¹¹⁷ This implies that research tools for which no particular use has been specified will not be patentable.

From the perspective of TOT, the industrial applicability requirement may play a significant role in facilitating the transfer and the dissemination of technology in to the country. It may create the platform for local firms to distinguish between industrially applicable technologies from innovations which may not be industrially applicable. The idea here is that, local firms may access the list of invention which may be industrially applicable by simply consulting the

¹¹⁵ Harare Protocol on Patents and Industrial Designs Within the Framework of the African Regional Industrial Property Organization (ARIPO), (as amended 2013), I.L.M. Section 3 (9)

¹¹⁶ The Patent Proclamation, *supra* note 104, Art. 3 (4).

¹¹⁷ *Id.*, Art. 3 (5)

documents of the IP office. It will also widen researchers' freedom to operate and combine existing prior arts for the manufacture of goods or/and the rendition of services.

II. Disclosure of Patented Inventions

Patent is basically a bargain between an inventor and the society at large. In this bargain, the society enter in to a concession to grant exclusive right for an inventor to use or otherwise exploit the invention for a specified period of time. The inventor, in lieu of the grant of this exclusive right, makes publicly available the information necessary to use the invention. This bargain side of the inventor manifests itself through the disclosure of the use of the patented invention in the application for the grant of patent. As discussed below, this disclosure plays a significant role in the transfer and dissemination of technology in to a country in one way or another. As a result, the domestic law of all countries require an inventor to disclose at least one method of working of the invention before the grant of a patent right.

The Inventions, Minor Inventions and Industrial Designs, Proclamation, No. 123/ 1995 requires a person who is looking for the grant of patent right to describe the invention in his/her application for the grant of patent. The description must disclose the invention in a clear manner so as to enable a person having ordinary skill in the art concerned to carry out the invention. More specifically, Art. 9 (4) (b) of the proclamation states:

“[T]he description shall disclose the invention in a manner sufficiently clear and complete for the invention to be carried out by a person having ordinary skill in the art, and shall, in particular, indicate at least one mode known to the applicant for carrying out the invention. The description may be used to interpret the claims;”¹¹⁸

According to the above quoted provision, the inventor is required to disclose the invention in a clear manner. He/she may not disclose the invention in a sophisticated manner or in such a way that may be difficult to be understood by an average professional in the art concerned. Most importantly, the inventor is required to disclose at least one mode for carrying out the invention.

Such discloser may facilitate technology transfer in one way or another. First, it will enable potential licensees to be familiar with the information necessary to carry out the invention. In case the inventor, who may be a foreigner, refuses to deal with them, they may require for the

¹¹⁸ Id, Art 9 (4) (b).

grant of compulsory license and carry out the invention as described by the inventor. In addition, after the expiry of the period of protection, they may use the disclosure freely to carry out the invention.

At this juncture, it must be noted that the disclose requirement as stipulated under the proclamation is not as strict as the international standard. According to Art. 29 (1) of the TRIPs Agreement, member states may “...require the applicant to indicate **the best mode for carrying out the invention** known to the inventor at the filing date or, where priority is claimed, at the priority date of the application.” (emphasis added) On the contrary, under the Ethiopian patent law, the inventor is required to disclose at least one (not the best) mode of carrying out the invention. Hence, it would not be wrong for one to conclude that, by requiring the inventor to disclose at least one mode of carrying out the invention, the Ethiopian patent law doesn’t use the full advantage of the flexibility provided under Art. 29 (1) of the TRIPs Agreement.

Requiring inventors to disclose the best mode of carrying out the invention is crucial to help local inventors and researchers to fully comprehend the technology claimed in the patent. In fact, as stated above, the traditional justification for granting exclusive rights rests upon the assumption that in exchange for the grant, society should benefit from the new technology incorporated in the invention.¹¹⁹ Many areas of today’s technologies are so complex that patent applications alone are often not comprehensible to potential competitors of the patentee. A “best mode” requirement would thus be an important step towards the creation of a pro-competitive environment for technology development and follow-on innovation.¹²⁰ It is only when local firms and researchers are able to understand the technology claimed in a patent that development of patent information may service to support innovation and technology transfer.

III. Experimental Use Exception

Patent right is not an absolute right. It is subject to various limitations. One of these limitations is the right of other persons to freely use the patented invention for experiment purpose. As it is the case under the patent law of other countries, the Inventions, Minor Inventions and Industrial Designs, Proclamation, No. 123/ 1995 provides for the experimental use exception as a limitation

¹¹⁹ United Nations, *supra* note 72, at 26.

¹²⁰ *Id.*, at 29.

the exclusive right of the patent holder. The proclamation stipulates that the right of the patentee shall not extend to excluding others from using “... the patented invention solely for the purposes of scientific research & experimentation”¹²¹ This exception is put in place not to hinder scientific and technological progress.

The idea here is that researchers involved in basic research must experiment on the use of a patented invention to gain new knowledge on the subject matter of the patent itself. They must also use the invention as a research tool in order to develop new products and, thus, contribute to the scientific and technological progress. Hence, the rationale behind the experimental use exception is that, while the availability of exclusive rights provides an important incentive for inventors to engage in inventive activity, the privatization of certain substances and processes must not at the same time hinder scientific and technological progress. Understood in this sense, the experimental use exception carves out a “safe harbor” for research activities that might otherwise be blocked by patents.¹²² Obviously, experimental activities inevitably contribute to the technological development of a country and promote TOT.

As to the scope of the experimental use exception, the issue whether the exception includes commercial research as experimental use is controversial in other jurisdictions. To clarify the issue a little bit, a question arises concerning the extent to which researchers in commercial enterprises are authorized to conduct applied research on or with patented inventions for the purpose of developing commercial products based on the protected subject matter, such as improvements or adaptations of existing products or processes, or for discovering ways to “invent around” the patented invention (commercial research).¹²³ At the international arena, the TRIPS Agreement is silent on this issue. The WTO panel has not also any authoritative interpretation of article 30 of the TRIPS Agreement with respect to the question of whether and to what extent it allows commercial research.¹²⁴

At national level, there are domestic laws which adopt broader scope of the experimental use exception so as to include commercial research. In this regard, the Ugandan Industrial Property Bill can be mentioned by way of example. As per Section 44(a) of the Ugandan Industrial

¹²¹ The Patent Proclamation, *supra* note 104, Art. 25 (1) (b).

¹²² United Nations, *supra* note 98, at 26.

¹²³ *Ibid.*

¹²⁴ *Ibid.*

Property Bill, using a patented invention without the authorization of the patent holder “...to carry out any acts related to experimental use on the patented invention, whether for scientific or commercial purposes is exempted from patent infringement claims. ”

On the contrary, a close look at Art 25 of the Inventions, Minor Inventions and Industrial Designs, Proclamation, No. 123/ 1995 reveal that the Ethiopian patent law adopted a narrower scope of the experimental use exception. This can specifically be inferred from the phrase “... solely for the purposes of scientific research...” under sub Art. 1 (b) of Art. 25. Furthermore, Art. 25 (a) provides that limitations to the right of the patentee shall only be limited to “... acts done for non-commercial purposes.” Hence, it is possible to conclude that, under the Ethiopian patent law, the scope of the experimental use exception is not wide enough to include commercial research.

Yet, the proclamation should have included commercial researches within the scope of the experimental use exception so long as the objective of the research is generating new knowledge on the protected substance, as opposed to the mere promotion of the competitor’s commercial activity. In this regard, a certain writer notes:

“New knowledge in this sense should be knowledge that was not contained in the original patent claims or their equivalents, and may take the form of either new uses of the patented existing substance, or of new knowledge enabling the manufacture of a new product with potentially superior qualities.”¹²⁵

Same understanding is adopted in the United Kingdom legal system. In one case, the United Kingdom’s high court upheld that:

“...the view that a commercial purpose behind a competitor’s use of patented substances does not automatically rule out the possibility of invoking the experimental use exception. Most pharmaceutical research is driven by commercial considerations. However, the purpose of the experimental use defence/exception is not to promote competitors’ commercial activities, but to enable the generation of new knowledge on the protected substance. Thus, the defendant in a patent infringement suit needs to show that the immediate purpose of his activities was not to generate revenue, but to gain new knowledge on the patented product (e.g. to enable future modifications of a drug). Where the defendant’s activities have mixed purposes, the generation of new knowledge

¹²⁵ Id, at 26-27.

*needs to be the preponderant purpose, while the generation of revenue may constitute a secondary purpose.*¹²⁶

Such type of interpretation is very important for the promotion of technological progress. Accordingly, it is imperative to adopt broader scope of the experimental use exception under the Ethiopian patent system.¹²⁷ Otherwise, the present narrow scope of the experimental use exception may cause a serious bottle neck in the transfer of know-how needed for the marketing of new technologies to the industry. Such blocking effects could be mitigated by invoking an experimental use exemption that enables the industry to use the results of basic research to develop new or follow-on technologies.¹²⁸

In short, the experimental use exception plays a significant role in facilitating TOT by enabling researchers to freely use patented inventions for research purposes. The role of this exception can be heightened by adopting a broader scope of the experimental use exception that includes commercial researches. If its scope is broadened accordingly, the exception can play a pivotal role in promoting scientific and technological progress.

IV. Patent of Introduction

Under the Ethiopian patent law, patent of introduction is a right which is given to a person who introduced a technology in the political territory of Ethiopia. This right is given to the technology introducer up on the fulfillment of the following requirements.

1. The invention must be patented abroad;
2. The patent shall not be expired;
3. The invention should not be a patented one in Ethiopia; and
4. The invention must be new¹²⁹, involve inventive step and industrially applicable.¹³⁰

¹²⁶ Id, at 27.

¹²⁷ Nonetheless, it is equally important to take utmost care not compromise the normal exploitation of the invention in the course of adopting a broader scope of the experimental use exception.

¹²⁸ United Nations, *supra* note 98, at 27.

¹²⁹ See Ermias Biadgleng, “*Domestic Legislation and Court Decisions on Intellectual Property Rights and Public Health in Ethiopia*” 2 (UNCTAD Country Analysis, December 2011), at http://mpa.ub.uni-muenchen.de/36584/1/MPRA_paper_36584.pdf. (Some authorities question the “... how a patent of introduction can be validly granted when it still has to meet the novelty standard. If a patent has been disclosed and granted abroad, the disclosure will already destroy the novelty of the claim when application is made in Ethiopia. In the opinion of the writer of this paper, the standard of novelty under the patent of instruction regime is not same as the patent law. It adopted a national novelty standard.)

Up on the fulfillment of these conditions, patent of introduction may be granted to the applicant. The introducer is entitled to exercise same right as a patentee for a period of 10 years. But, the introducer is required to prove the working of the invention each year as from the third year after the right is granted.¹³¹

At this juncture, it is worth noting that the patent of introduction regime has its own limitations: It doesn't provide for protection to persons who introduce technologies which are found in the public domain elsewhere. Yet, these technologies might be relevant to the Ethiopian situation. Hence, it would have been better had the patent of introduction regime grant a kind of exclusive right for a certain period of time for persons who might introduce a technology which is not available in Ethiopia.

At any rate, by adopting this regime of patent of introduction, the proclamation attempts to encourage persons to introduce foreign technology in to Ethiopia. Hence, as regards TOT, the patent of introduction regime can potentially play a significant role for the adaption and implementation of foreign technology in Ethiopia. So far, the EIPO granted 148 patent of introduction protection.¹³² These technologies would not have introduced in to the country had the country doesn't adopt the patent of introduction regime.

V. Compulsory License

Under the Ethiopian patent law, a compulsory license may be granted to a third person contrary to the will of a patentee in three situations. These are when: 1) An invention cannot be worked effectively without an earlier invention; 2) an earlier invention cannot be worked effectively without a latter invention; and 3) The patentee fails to work the invention after the expiration of three years from the date of the grant of patent or four years from the date of filing the application.¹³³

¹³⁰ See The Patent Proclamation, *supra* note 104, Arts.18 & 19

¹³¹ Id, Art. 21

¹³² Interview with Ato Tewdrhos Nigussie, Senior Patent Expert of the Ethiopian Intellectual Office, in Addis Ababa (February 2, 2015).

¹³³ The Patent Proclamation, *supra* note 104, Art. 29

The grant of compulsory license is non exclusive. That is, EIPO is authorized to grant another compulsory license in respect to the same invention to another person.¹³⁴ The patent owner may also exploit the invention as he/she likes, including through patent licensing agreements.¹³⁵ This implies that other individuals, who might have been hesitating to work the invention for fear of market uncertainties, may start to exploit the invention at the detriment of the first licensee. To alleviate this problem free ridership, it would have been better had the patent proclamation entitled the licensee to exploit the invention exclusively for a certain period of time under certain conditions.

This legal arrangement, as explained in relation to the compulsory license regimes of the Paris Convention and the TRIPs Agreement, may foster the technology transfer in to the country. The working of the invention normally requires the acquisition of know –how and other necessary information. It may also require the participation of many professional personnel. The exposure of these personnel to new technologies inevitably results in the spillover of technology in to the country. Nonetheless, so far, the EIPO didn't grant even a single compulsory license to a third party as local firms haven't the technological capability to use patented technologies.

VI. Utility Model Certificate

Utility model certificate generally provides protection to inventions that do not fulfill the “inventive step (non-obviousness)” test under the patent law, but that contribute a new and useful product to the society. In most legal systems, the other requirements for the grant of patent, i.e, novelty and industrial applicability, must be satisfied for the grant of utility model certificate. The same holds true under the Ethiopian legal system.

As per Art. 38 (1) of the Inventions, Minor Inventions and Industrial Designs, Proclamation, No. 123/ 1995, “[a] minor invention that possesses novelty & industrial applicability shall give rise to a right to protection in favor of the author there of.” Nonetheless, the novelty test is not as strict as that of patent law. For the purpose of the utility model certificate regime, a minor invention is considered to be new if, at the time of filling of the application, it has not been described in printed publication, made available to the public or publicly used in Ethiopia.¹³⁶ As opposed to

¹³⁴ Id, Art. 30 (2).

¹³⁵ Ibid.

¹³⁶ Id, Art. 39 (1).

the case of patent, oral disclosure of the minor invention or its working abroad does not destroy the novelty of the minor invention.

The right to a utility model certificate protection is evidenced by a utility model certificate issued by the EIPO.¹³⁷ The certificate confers exclusive right to exploit the minor invention to the certificate holder and prevent third parties from exploitation the minor invention without the authorization of the same.¹³⁸ The duration of the certificate is five years. However, it may be renewed for a further five years period provided that proof is furnished to the effect that the minor invention is being worked in Ethiopia.¹³⁹ As to the content of the right, the provisions of the proclamation that provide for the rights of a patentee are applicable, *mutatis mutandis*, to utility model certificate holders.¹⁴⁰

These terms of protection can be justified against the need to provide some incentives to local inventors to engage in potentially costly and time consuming R & D activity. More specifically, as regards TOT, utility model protection encourages local firms to adapt foreign technologies for local circumstances. This makes the utility model certificate regime compatible with the objectives of the patent legislation as enshrined under the proclamation. So far, the office granted 659 utility model certificates.

VII. The Duty to Locally Work the Invention

As explained in relation to the compulsory regimes of the TRIPs Agreement and the Paris Convention, the local working of an invention is crucial for the inflow of foreign technology in that country. As a result, it is further noted that developing countries impose the obligation to sufficiently work the invention on the patent owner at the pain of granting compulsory license to a third party who is capable to locally work the invention. It is also discussed that, in developed countries, there is a trend to substitute the duty of local working of the invention with the duty to import products of the invention. Yet, as regards TOT, it is asserted that import cannot be a substitute to local working of the invention. In fact, the principal way in which patents may contribute directly to the transfer of technology to the host country is through the exploitation of

¹³⁷ Id, Art. 38 (2).

¹³⁸ Id, Art. 38 (2)

¹³⁹ Id, Art. 44

¹⁴⁰ See Id, Art. 45

the patented technology in the host country by the foreign patent owner himself/herself or with his/her consent by third parties.¹⁴¹ Accordingly, in developing countries, local working of the invention continues to be one of the main obligations of the patentee. And, Ethiopia is not an exception in this regard.

Art. 27 of the Inventions, Minor Inventions and Industrial Designs, Proclamation, No. 123/ 1995 oblige patentees of an invention to work the patented invention or to authorize a third party to work the invention in Ethiopia. The provision states that “[t]he patentee shall have the duties to work the patented invention or to authorize other persons to do the same in Ethiopia.” Furthermore, the proclamation requires the patentee to work the invention in a scale which is adequate and reasonable in the circumstance. Failure to do so is one of the grounds for the grant of a compulsory license to a third party.¹⁴²

The above discussion makes it clear that, under the Ethiopian legal system, a patentee has the obligation to sufficiently work the invention locally or authorize a third party to do so at the pain of granting a compulsory license to a third party. Obviously, the working of an invention locally results in the spillover of technology in to the country. Hence, the duty to work or authorizing a third party to do the same plays a pivotal role in facilitating the transfer of technology in to the country. Nonetheless, the EIPO didn’t develop a mechanism to follow up the sufficient working of patented technologies in Ethiopia.¹⁴³ In fact, it depends on the self reporting of patent holders to extend the period of protection for a patent¹⁴⁴

VIII. Absence of Prohibited Terms in Patent Licensing Agreements

One of the modes by which a patentee may exploit his/her invention is by licensing others to work the invention. This mode of exploiting the patented invention is indicated under Art. 22 (1) of the Inventions, Minor Inventions and Industrial Designs Proclamation. This provision states that “[a] patentee shall have the exclusive right to make, use or otherwise exploit the patented invention. A third party cannot exploit the patented invention without securing the patentee's consent.” The phrase “...otherwise exploit...” in the first lib of the provision suggests that a patent

¹⁴¹ Getachew Menigiste, *supra* note 106, at 170.

¹⁴² The Patent Proclamation, *supra* note 104, Art. 29 (1).

¹⁴³ Interview with Ato Twedrhos Nigussie, *supra* note 132.

¹⁴⁴ *Id.*

author may exploit the invention, among other things, by assigning or licensing it. The last lib of the provision also confirms this assertion. Its *acontrario* reading provides that a third party may exploit the patented invention only if the patentee authorizes him/her/it to do so. The patentee may give his/her permission to a third party to exploit the invention by a licensing agreement.

In other jurisdictions, licensing agreement is needed to be registered before the respective countries' IP office. The patent law of these countries authorizes the register to refuse to register the license contract if the register is of the opinion that any clause in the license contract imposes unjustified restrictions on the licensee. This implies that there are prohibited terms in a license agreement. The main objective of prohibiting some terms of license agreements is to promote technology spillover from a patent holder (in case of developing countries, mostly a foreign) to local licensees.

At the international arena, the TRIPs Agreement is not against provisions which prohibit restrictive terms of licensing agreements. As explained above, according to article 7 of the TRIPs Agreement, one of the main objectives of the agreement is the promotion of technology transfer and dissemination. Art. 8 (1) of the agreement authorizes members to formulate their laws in a way that is conducive of promoting "the public interest in sectors of vital importance to their socio-economic and technological development". Article 8 (2) of the TRIPs Agreement authorizes members to adopt appropriate measures to, *inter alia*, prevent practices by intellectual property holders that adversely affect the international transfer of technology. Hence, it would be illogical had the TRIPs Agreement was against provisions which prohibit restrictive licensing practices. In fact, the agreement explicitly authorizes member states to prohibit in their domestic laws such terms under Art. 40.

When we turn our face to the Ethiopian patent law, it seems that the proclamation fails to regulate restrictive patent licensing practices. There is no specific provision in the proclamation which prohibits respective licensing terms and conditions. In fact, let alone prohibiting restrictive terms and conditions, the proclamation fails to provide for the formality requirements of license agreements. This legal lacuna may provide an opportunity to foreign patent owners to take advantage of the technological needs of local firms to enter in to a license agreement which is highly restrictive. These terms may limit technological learning and mastery by local firms. As such, the country IP system may give effect to patent licensing agreements which contain terms

and conditions which are inconsistent with the objectives of the patent law of the country, more specifically, the objective to encourage the transfer and adaptation of foreign technology.

Furthermore, the proclamation fails to address a number of other important anti-competition practices and IPRs abuses. As stated above, the TRIPs Agreement enumerates exclusive grant back conditions and conditions preventing challenges to validity as anti-competitiveness.¹⁴⁵ The agreement authorizes member states to prohibit such type of practices as they are against the objective of the TRIPs Agreement to transfer and disseminate technology. By failing to prohibit such type of terms and conditions, the Ethiopia patent law opens the door for foreign parent owners to enter in to licensing agreements which may defeat the purpose of the proclamation.

To wrap up the present sub section, the Inventions, Minor Inventions and Industrial Designs Proclamation promises to create conducive legal environment for the inflow of foreign technology into the country. The analysis of the substantive parts of the proclamation reveals that while there are provisions which may encourage TOT in one way or another, some other provisions and legal lacunas may work against the objective of the proclamation to foster technology diffusion in to the country. The patentability requirements, the patent of introduction regime, the compulsory license regime, the protection accorded to minor inventions and the duty to work the invention locally are some of the most important legal arrangements devised by the proclamation with respect to the promotion of TOT. On the other hand, the proclamation doesn't seem adopt the rules on disclosure and experimental use exceptions in such a way that may bring about maximum utility.

With respect to the rule on disclosure, the proclamation requires the applicant to disclose at least one mode of carrying out the invention. It would have been better had had the proclamation required the applicant to disclose the best mode of carrying out the invention, as it is the case under the TRIPs Agreement. As to the experimental use exception, the proclamation limited the scope of this exception to cases of basic researches. It excluded commercial researches from the ambit of the exception. The exception could have result in more spillover of technology in to the country had the proclamation extended the scope of the exception to include cases of commercial researches which primarily aimed at the creation of new knowledge.

¹⁴⁵ See The Patent Proclamation, *supra* note 104, Art. 4 (2).

Coming to the legal lacuna that may work against the objective of the proclamation, it fails to address IPRs abuse issues. In particular, the proclamation fails to prohibit restrictive patent licensing practices. It also fails to provide for cases IPRs abuse. This legal lacuna may provide an opportunity to patentees to license their invention to local firms in a way that hinder the diffusion of the technology in the country.

6.2.3. Investment Law

Since the transitional period, as indicated above, Ethiopia has seen four investment proclamations, one repealing/amending the other. Now days, the active investment law consists of the investment proclamation No. 769/2012 and the regulations and directives enacted there from. The investment proclamation provides for, *inter alia*, the country's investment objectives, areas of investment reserved for the government, areas of investment reserved for Joint Investment with the Government, Areas of Investment Reserved for Domestic Investors, Areas of Investment Allowed for Foreign Investors and the powers and responsibilities of the Investment Agency (now Commission). Under this sub section, the provisions of the proclamation which directly or indirectly relate with TOT in to Ethiopia will be analyzed.

To begin with, as stated under the preamble of the investment proclamation, one of the driving forces behind the enactment of the proclamation is the need to speed up the transfer of foreign technology in to the country.¹⁴⁶ In addition, advancing the inflow of foreign technology in to the country is stated as one objective of the country's investment law. Part of Art. 5 of the proclamation stipulates:

“The investment objectives of the Federal Democratic Republic of Ethiopia are designed to improve the living standards of the peoples of Ethiopia through the realization of sustainable economic and social development, the particulars of which [include]...advanc[ing] the transfer of technology required for the development of the country.”¹⁴⁷

The preamble statement and the above quote provision indicate the paramount place given to TOT under the country's investment law. What matters most, however, is the suitability of the substantive laws for facilitating the inflow of foreign technology in to the country. The discussion follow scrutinizes the legal arrangements put in place by the country's investment law

¹⁴⁶Investment Proclamation No. 769/2012, at preamble

¹⁴⁷ Id, Art. 5 (8).

with the view to address the issue whether the investment law created a favorable legal condition for the inflow of technology in to the country.

As stated above, the proclamation specified investment areas totally reserved for the government and investment areas to be undertaken jointly with the government. The investment areas exclusively reserved for the government are listed under Art. 6 (1).¹⁴⁸ Sub Art. 2 of the same provision lists the investment areas in which private investors may invest only jointly with the government. The whole text of Art. 6 (2) reads:

“2/ Investors shall be allowed to invest in the following areas only jointly with the government:

- a) Manufacturing of weapons and ammunition;*
- b) Telecom services.”¹⁴⁹*

The rationale for allowing joint investment of private investors and the government in the above listed areas of investment may be the need to access foreign technology. The manufacturing of weapons and ammunition inevitably triggers security issues. These are areas of investment where the production the production process employs sophisticated technologies. In addition, the production process of these materials is held in secret. It is with the view to acquiring these technologies that the investment law allowed private investors to engage in the manufacture of these products jointly with the government.

With respect to the Telecom sector, in addition to security issues, the government doesn't opt the involvement of the private sector in this area of investment for economic reasons. By the same token, it is only with the view to access foreign technologies the government allow the involvement of private investors in the telecom service jointly with the government. Yet, to date, there are no private investors who invest jointly with the government in the abovementioned investment areas.

Coming to investment areas exclusively reserved for domestic investors, Art. 7 authorizes the Council of Ministers to determine same by regulation. As per this authorization, the Council of

¹⁴⁸ Id, Art. 6 (1). (These are:

“a) transmission and distribution of electrical energy through the integrated national grid system;
b) postal services with the exception of courier services;
c) air transport services using aircraft with a seating capacity of more than fifty passengers.”)

¹⁴⁹ Id, Art. 6 (2).

Ministers enacted the Investment Incentives and Investment Areas Reserved for Domestic Investors Council of Ministers Regulation No. 270/2012. Art. 3 of this regulation lists investment areas exclusively reserved for domestic investors. These are:

- a) *“Banking, insurance and micro- credit and saving services;*
- b) *Packing, forwarding and shipping agency services;*
- c) *Broadcasting service;*
- d) *Mass media services;*
- e) *Attorney and legal consultancy services;*
- f) *Preparation of indigenous traditional medicines;*
- g) *Advertisement, promotion and translation works; [and]*
- h) *Air transport services using aircraft with a seating capacity up to 50 passengers.”*¹⁵⁰

It seems that the government exclusively reserved the above listed investment areas to domestic investors because of economic and cultural reasons. Yet, since some of these investment areas, like the financial sector, needs to employ new technologies to be competitive in the international market, it would have been better had foreign investors were allowed to invest in these areas jointly with domestic investors.

As to investment areas in which foreign investors are allowed to invest, Art 8 of the regulation indicates that foreign investors are encouraged to participate in the manufacturing sector. Since one mode of TOT is FDI, the involvement of foreign investors in the manufacturing industry will result in technology diffusion in to the country. In this regard, the question that needs to be addressed is whether the investment law crates favorable ground to attract FDI.

The proclamation guarantees foreign investors against expropriation.¹⁵¹ It also entitles them to, in respect of their approved investment, to make the remittances out of Ethiopia.¹⁵² Furthermore, it requires the investment agency to provide one-stop shop services.¹⁵³ All these arrangements are meant to create conducive legal environment for FDI. Hence, by attracting FDI, the proclamation is trying to create conducive environment for the transfer of technology in to the country.

¹⁵⁰Id, Art 3 (1).

¹⁵¹Id, Art. 25.

¹⁵²Id, Art. 26.

¹⁵³Id, Art. 30.

As explained under chapter two, the other method of acquiring foreign technology is joint venture. To achieve its objective of advancing the inflow of foreign technology in to the country, the investment law is expected to encourage joint venture investments between foreign investors and domestic investors by, for instance, providing attractive incentives to such type of investments.

The investment proclamation tries to provide some incentives for foreign investors who jointly invest with domestic investors by lowering the minimum capital required to allocate for a single investment. According to Art. 11 (1), a foreign investor is required to allocate a minimum capital of USD 200,000 for a single investment project. However, if the foreign investor invests jointly with a domestic investor, the minimum capital he/she is required to allocate for a single investment will be lowered to USD 150,000.¹⁵⁴ If the investor is investing in architectural or engineering works or related technical consultancy services, technical testing and analysis or in publishing work, the minimum capital required of will be reduced by USD 100,000.¹⁵⁵ In both cases, the proclamation reduces the minimum initial capital a foreign investor should allocate for a single investment by USD 50,000 if the investor invests jointly with a domestic investor. This can be taken as an incentive for a foreign investor to invest jointly with domestic investors.

This incentive is not, however, adequate enough to influence foreign investors' decision making so as to jointly invest with a domestic investor in lieu of wholly owned FDI. Put in a slightly different word, the net USD 50,000 is so nominal to influence foreign investors' decision making. Hence, it is possible to conclude that this incentive hardly contribute to the country's endeavor to access foreign technology through joint venture projects. This incentive may bring about tangible change if the gap between the minimum capital required for wholly owned FDI and joint venture projects is meaningful so as to influence the mind set up of foreign investors.

The other way by which the investment law may encourages the inflow of technology in to the country is by providing different incentives to investors to encourage them to engage in investment areas where there is high technological gap, and set as priority areas. In this regard,

¹⁵⁴Id, Art. 11 (2)

¹⁵⁵Id, Art. 11 (3). (This provision states that “[t]he minimum capital required of a foreign investor investing in architectural or engineering works or related technical consultancy services, technical testing and analysis or in publishing work shall be:

a) USD 100,000 if the investment is made wholly on his own;
b) USD 50,000 if the investment is made jointly with a domestic investor.”)

the proclamation authorizes the Council of Ministers to specify investment incentives. In specifying these investment incentives, the proclamation demand the council to take the investment objectives listed under Art. 5 of the proclamation. As explained above, one of the investment objectives of the country is speeding up the inflow of foreign technology in to the country. Hence, one can reasonably expect that the Council of Ministers provides for attractive investment incentives to investors who may invest in areas of investment in which there is high technological gap, and areas of investment set as priority areas in different policy documents of the country. Herein under, the provision of the regulation will be analyzed with the view to ascertain the same.

As discussed under chapter two, the investment proclamation doesn't consider purchase of capital goods as technology transfer transaction. Nonetheless, it is further noted that the commercial transfer and acquisition of technology can take place with the sale and purchase of equipments and other capital goods. Hence, purchases of capital goods and their import into a country may, in a sense, foster the inflow of foreign technology. Put differently, the imports of capital equipments inevitably enhance a country's technological capability.

As a result, many countries encourage the inflow of capital goods by providing different incentives to impostors of these goods. Ethiopia is not an exception in this regard. The Investment Incentives and Investment Areas Reserved for Domestic Investors Council of Ministers Regulation provides for cases in which investors may import capital goods free from custom duty. As per Art. 13 of the regulation, any investor who engaged in any of the areas of investment other than real estate development, publishing, export of trade of raw agricultural products and petroleum trade may import duty-free capital goods and construction materials necessary for establishment of new enterprises. They are also entitled to same exemption where they import capital equipments to upgrading existing enterprise.¹⁵⁶

These investment incentives to some extent minimize the cost of establishing enterprises which require high- tech materials. They may, in effect, encourage investors to invest in these areas of investment. As a result, the know-how embodied in the operation of high- tech equipments may be acquired by local personnel. Apart from the operation of these machineries, the local

¹⁵⁶Council of Ministers Regulation No. 270/2012, *supra* note 10, Art. 13 (1).

personnel may conduct improvement researches with the view to make the technology more suitable to local realities. Understood in this sense, the custom duty exemption of import of capital goods may speed up the inflow of foreign technology in to the country.

The other investment incentive provided under the regulation is income tax exemption. The regulation stipulates that investors who invest in some selected areas of investment are entitled to income tax exemption from one year to 12 years, having regard to the areas of investment and the place of the investment.

As explained above, the agriculture, leather and textile sectors are identified as priority areas in which the government is eager to attract investors. Different policies and strategies identified these sectors as priority areas in which the government aims at bringing about rapid technology transfer. Consistently with this policy choice, the investment regulation entitles investors who invest in these areas of investment for higher duration of income tax exemption. In addition, any investor who expands or upgrades his/her existing enterprise is entitled to same income tax exemption with respect to the additional income generated by the expansion or upgrading.¹⁵⁷ Moreover, if the investor exports or supplies his/her product to an exporter as production or service input, at least 60% of his/her products or services will be entitled to income tax exemption for additional two years.¹⁵⁸

These investment incentives may encourage investors to establish new manufacturing enterprises and/or expand or upgrade existing ones by importing high- tech machineries. This may, in turn, bring about diffusion of foreign technologies in to the country.

At this juncture, it is important to note that the incentives are provided to both domestic and foreign investors alike. This can be inferred from the use of phrase “any investor...” under Art. 6 and Art. 13 of the regulation. This equal treatment of foreign and domestic investors may attract foreign investors to invest in Ethiopia. As explained under chapter two, one of the ways by which technology may inflow in to a country is FDI. Hence, it is possible to assert that, by attracting FDI, these incentives may facilitate the diffusion of foreign technology in to Ethiopia.

¹⁵⁷ Id, Art. 6 (1).

¹⁵⁸ Id, Art. 7.

The investment proclamation also aims at bringing about technology transfer in to Ethiopia by stipulating the need to replace expatriates by Ethiopian nationals. Technological know-how may be transferred to nationals of a country wherever they can operate sophisticated technologies. The proclamation entitles foreign investors to employ duly qualified expatriates required for the operation of their business.¹⁵⁹ Yet, they can employ these expatriates only for a limited period of time. They are responsible to replace these expatriates by Ethiopians by arranging necessary training thereof.¹⁶⁰

The rationale behind this requirement is transferring the skills and know-how of the expatriates to Ethiopians, and, thereby, bringing TOT in to the country. As to the period of time within which the expatriates need to be replaced by Ethiopian nationals is not specified. The law simply states “within a limited period....” This rather vague term should be interpreted on a case by case basis having regard to the circumstances of each case. However, practically, the Ethiopian Investment Commission requires expatriates to renew their work permit every three years.¹⁶¹ This extension may only be granted up on the approval of senior government officials.¹⁶²

At this juncture, it must be noted that the Ethiopian Investment Commission is mandated to give work permit to expatriates who work in manufacturing sectors. If an expatriate work in other sectors, it will be the mandate of the Ministry of Labor and Social Affairs to grant, renew or extend his/her work permit.¹⁶³ The Ministry grants and extends work permits having regard to the educational background of the expatriate.¹⁶⁴

It is also worth noting here that the above legal arrangement doesn't work as regards expatriates of top management of enterprises. Foreign investors have the right to employ expatriate employees on top management position for their enterprises without any restriction.¹⁶⁵ It doesn't matter whether there are Ethiopian professionals who can effectively run the businesses of the investor. In addition, the work permit of an expatriate may freely be renewed if the works in a

¹⁵⁹ Investment Proclamation No. 769/2012, *supra* note 146, Art. 37 (1).

¹⁶⁰ *Id.*, Art. 37 (2)

¹⁶¹ Interview with Ato Mohamedur Yesuf, *supra* note 92.

¹⁶² *Ibid.*

¹⁶³ Labour Proclamation No. 377/2003, Art. 174.

¹⁶⁴ Interview with Ato Daniel Lemma, Expatriate Work Permit Service Team Coordinator of the Ministry of Labour and Social Affairs, in Addis Abeba (January 15, 2015).

¹⁶⁵ Investment Proclamation No. 769/2012, *supra* note 146, Art. 37.

foreign company which enter in to an agreement with the government to build infrastructures. His/her work permit will be freely renewed until the company finished the project.¹⁶⁶

To wrap up this section, speeding up technology transfer in to Ethiopia is one of the rationales behind the enactment of the country's investment law. This can be inferred from both the preamble and substantive parts of the investment proclamation No. 769/2012. To achieve this objective, the proclamation created different legal arrangements.

To state some of the legal arrangements created by the investment proclamation that seem to take in to account this objective of the law in to consideration, it exempts the import of capital goods from custom duties. It also provides for income tax exemption from 1 year to 12 years from the date of production. These investment incentives may encourage investors to import high- tech machineries and establish new enterprises or expand/upgrade the existing ones. This, in effect, may facilitate the diffusion of foreign technologies in to the country. In addition, since the investment incentives are provided to both foreign and domestic investors alike, they may attract FDI. As noted repeatedly, FDI is one method of TOT. Hence, by encouraging foreign investors to invest in the country, the proclamation aimed at, *inter alia*, bringing about technology diffusion in to the country.

Moreover, the proclamation also provides for legal arrangement by which an expatriate need to be replaced by Ethiopian national. It specifically requires firms to provide necessary training to Ethiopians with the view to enable them to replace expatriates within a limited period of time. In doing so, the proclamation aimed at transfer of technological know-how from foreign nationals to Ethiopians. Such type of knowledge transfer, in one way or another, speed up the spillover of technology in to the country.

As regards TOT through joint venture, the proclamation lowers the minimum capital a foreign investor should allocate for a single project by USD 50,000 if the foreign investor invests jointly with domestic investors. This investment incentive is nominal so as to influence the decision making of a foreign investor. Since joint venture is most important mode of TOT, the proclamation should have provided for attractive investment incentives for joint venture projects between foreign and domestic investors.

¹⁶⁶ Interview with Ato Daniel Lemma, *supra* note 164.

By way of final remark, the Ethiopian investment law doesn't envisage the possibility of investment in technology, let alone providing packages of incentives to the same. The proclamation defines investment as "expenditure of capital in cash or in kind or in both by an investor to establish a new enterprise or to expand or upgrade one that already exists."¹⁶⁷ Investment in technology, i.e expenditure of capital to generate technology, doesn't fall within the ambit of this definition.

6.2.4. Franchising Business Regulation

As stated under chapter two, one of the methods of TOT is franchising. Franchising is a long-term cooperative relationship between two entities—a franchisor and one or more franchisees—that is based on an agreement in which the franchisor provides a licensed privilege to the franchisee to do business.¹⁶⁸ It is also noted that the privilege may pertain to the use of a trade name, brand name, methods of production, service and marketing, and an entire business operational method. Due to its importance, many countries regulate franchising business.

In Ethiopia, there is no specific legislation which regulates franchising agreements. In fact, the term "franchise" is not mentioned both in the civil and commercial code. There is also no government organ explicitly authorized to regulate franchising businesses. Yet, this should not be taken to mean there are no relevant laws which may be applicable to business franchises in Ethiopia. There are, indeed, patchworks of disparate laws that incidentally affect the activities of franchisors in Ethiopia.¹⁶⁹

One of these legislations is the Investment Proclamation No. 769/2012. As stated above, under a franchise agreement, the franchisor and the franchisee may enter in to an agreement which entitle the latter to use the methods of production, service and marketing, or the entire business operation model of the former. Such types of agreements are considered as TOT agreements under the investment proclamation. As per Art. 2 (1) of the proclamation, TOT agreement refers to, *inter alia*, the transfer of systemic knowledge for the manufacture of a product, for the application or improvement of a process or for the rendering of a service, including management and marketing technologies.

¹⁶⁷ Investment Proclamation No. 769/2012, *supra* note 146, Art. 2(1).

¹⁶⁸ <http://www.Franchoise.com/franchising-consulting-reques?origin=home&destination=consultGlobal>

¹⁶⁹ Id.

Accordingly, franchising agreements which transfer the methods of production, service and marketing, or the entire business operation model to an Ethiopian franchisee may be required to be registered before the Investment Commission in accordance with Art 21 (1) & (2) of the proclamation.¹⁷⁰ However, one should not lose sight the fact that transfer of knowledge doesn't always presupposes transfer of business models as it is in the case of franchising. The franchisor may simply transfer its trademark or other designations that represent his/her/it's goodwill, but may not introduce certain patented machinery for the manufacture of the goods of the franchisee. In these cases, the franchise agreement will not be subject to the investment proclamation. It is only in cases where the franchise agreement includes, for example, the transfer of marketing technology, management and proprietary business process that the franchise agreement will be subject to the requirements of the investment proclamation.

The other piece of legislation that may regulate franchise agreements in Ethiopia is the Trademark Registration and Protection Proclamation No. 501/2006. As per Art. 26 of this proclamation, it is only owners of a registered trademark who shall have the right to, *inter alia*, license the use of a trademark. Hence, in order to license his/her/its trade mark, a foreign franchisor is required to register the trademark before the EIPO. Furthermore, the franchise agreement for the use of the trademark itself needs to register before the same office.¹⁷¹

Now, the question is whether a franchise agreement for the use of a trademark by an Ethiopian firm may have any bearing on the inflow of foreign technology in to the country. The proclamation stipulates that a license contract on a registered trade mark should contain a provision which provides for effective control by the licensor on the quality of the goods or services of the licensee in connection with which the mark is used. Failure to do so results in the nullification of the agreement. In the word of the proclamation,

¹⁷⁰ Investment Proclamation No. 769/2012, *supra* note 146, Art. 21(1). (This provision stipulates that “[w]here any investor concludes a technology transfer agreement related to his investment, he shall submit same to the Agency for registration.” The sanction for failure to comply with this requirement is provided under sub Art. (4) of the same proclamation. It reads: “A technology transfer agreement which is not registered with the Agency in accordance with this Article shall have no legal effect.”)

¹⁷¹ Trademark Registration and Protection Proclamation No. 501/2006, Art. 29 (2). (As per this provision, “[a] license contract on a registered trademark or an application for registration of a trademark, a as well as modification or termination of the license contract shall be submitted to the Office. The Office shall register the contract as well as its modification and termination and, by keeping the details as confidential, cause it publication an Intellectual property gazette or a newspaper having nationwide circulation. The license shall have no effect against third parties until so registered.”)

“[a]ny license contract on a registered trademark or an application for registration of a trademark shall be null and void when it does not contain a provision for an effective control, by the licensor, of the quality of the goods or the services in connection with which the trademark may be used.”¹⁷²

The rationale behind the above stipulation may be the need to protect consumers. The idea is that the use of the trademark by a licensee may mislead consumers as to the quality of the goods unless the licensor effectively control the quality of the goods. Whatever the case may be, in order to produce goods and render services which have comparable qualities with the goods and services provided abroad, the franchisee may need the technical assistance of the franchisor. The franchisor may, as a result, provide training to the personnel of the franchisee and/or supply advanced technologies to the franchisee with the view to enable the latter to produce goods and render services which are up to the standard. This will inevitably result in the spillover of technology in to the country.

In addition, even in the absence of the above stipulation, since international franchisors are akin to maintain the goodwill built in relation to their trademark, they may transfer production, management and marketing technologies to the franchisee by their own initiation. As a result, local firms will access foreign technology. Understood in this sense, trademark franchise may promote TOT.

At this juncture, it must be noted that, as opposed to the patent law, the trademark proclamation outlaws restrictive clauses in trademark licensing agreements. As per Art. 31. (1) of the proclamation, clauses in a trademark license contract shall be null and void in so far as they impose upon the licensee unjustified restrictions. Yet, restrictive clauses may be given effect if the clauses are derived from the rights conferred by the registration of the trademark or necessary for the safeguarding of these rights.¹⁷³ In addition, for the purpose of the trademark proclamation, limitation concerning, *inter alia*, the territory in connection with which the trademark might be used is not considered as restrictive business practice.¹⁷⁴

The Inventions, Minor Inventions and Industrial Design Proclamation No. 12/1997 is the other piece of legislation which is relevant to the regulation of franchise business in Ethiopia. This is

¹⁷² Id, Art. 30.

¹⁷³ Id, Art 31 (1) .

¹⁷⁴ See Id, Art. 31 (2) (a).

particularly the case where the franchise agreement involves the use of the franchisor's intellectual property by the franchisee. In order to license the use of his/her/its intellectual property, the franchisor normally applies for the grant of patent or any other related rights. In doing so, the franchisor is required to disclose at least one way of carrying out the technology. This disclose, as explained above in relation to the role of the patent law in TOT, result in the spillover of technology in to the country.

To sum up, so far, Ethiopia doesn't have comprehensive franchise law. This doesn't mean, however, that franchise business is totally unregulated subject matter. There are rules that are scattered here and there in different pieces of legislations. While some types of franchise agreements are supposed to be registered before the Investment Commission in accordance with the investment proclamation, some others are subject to the trademark proclamation. The remains are governed by the IP law of the country. This implies that, in Ethiopia, franchise agreements are not subject to the same legislations. This will inevitably create legal uncertainty. In fact, the lack of interest among international franchisors to do business with Ethiopian firms may partly be attributed to this legal uncertainty. Given the pivotal role franchising agreements may play in technology transfer, it is imperative to enact comprehensive legal and regulatory framework for the operation of a franchise business in Ethiopia.

6.2.5. Trade Mark Law

As explained above, the Trade Mark Proclamation No. 501/2006 stipulates that a trademark licensing agreement shall incorporate a provision which entitle the licensor to exercise effective control over the quality of the goods and services of the licensor in connection with which the trademark may be used.¹⁷⁵ This stipulation, for the reasons stated above in relation to franchising regulation¹⁷⁶, promotes the transfer of technology by the Ethiopian firms in case where the licensor is a foreign company or a subsidiary of same which operates in Ethiopia.

6.2.6. Trade Secrets Law

The definition of the term "trade secret" may vary from jurisdiction to jurisdiction. In most legal systems, any confidential business information which provides an enterprise a competitive edge

¹⁷⁵ Trade Mark Proclamation No. 501/2006, *supra* note 171, Art. 30.

¹⁷⁶ See *supra*, at 123- 124.

may be considered a trade secret.¹⁷⁷ It consists of any formula, pattern, devise or combination of information which is used in one's business, and which give a businessperson an opportunity to obtain an advantage over his/her/its competitors who do not use the information.¹⁷⁸ The trade secret may also be patentable technology.

Now days, the importance of trade secret agreement is growing in the world of commerce of technology. Technology owners may prefer trade secret protection over patent for various reasons. Some of the advantages of trade secret protection are:

- *“Trade secret protection has the advantage of not being limited in time (patents last in general for up to 20 years). It may therefore continue indefinitely as long as the secret is not revealed to the public.*
- *Trade secrets involve no registration costs (though there may be high costs related to keeping the information confidential).*
- *Trade secrets have immediate effect.*
- *Trade secret protection does not require compliance with formalities such as disclosure of the information to a Government authority.”¹⁷⁹*

As regards TOT, the existence of strong trade secret protection laws protects technology developers and entrepreneurs. Such protection may give foreign investors some confidence to transfer certain technologies to domestic counterparts. The commercial success of a trade secret user in the domestic market may also instigate local firms to discover the secret through honest commercial means, such as reverse engineering, imitation or independent development of the technology.¹⁸⁰ It is against this background that the trade secret protection regime of Ethiopia will be analyzed under this section.

In Ethiopia, there is no specific legislation which regulates trade secret issues. Yet, there are scattered provisions here and there under the Trade Competition and Consumer Protection Proclamation No. 813/2014, the Commercial Code and the Civil Code which are relevant to issues of trade secret protection. Art. 8 of the proclamation enumerates acts that constitute unfair

¹⁷⁷ _____, What is a Trade Secret?, http://www.wipo.int/sme/en/ip_business/trade_secrets/trade_secrets.htm

¹⁷⁸ Id.

¹⁷⁹ Id.

¹⁸⁰ United Nations, *supra* note 98, at 98. (“It must be noted that trade secrets protection is based on the concept of “unfair competition” which does not rule out the discovery and appropriation of someone else’s undisclosed information through honest commercial means, such as independent development and reverse engineering. On the contrary, patent on a product prevents the unauthorized reverse engineering of that product and even its independent development. As a result, independent development of the protected information or its discovery through reverse engineering constitutes a defense to trade secrets infringement claims.”)

competition practices. Pursuant to sub Art. 2 (b) of this provision, any act of disclosure, possession or use of information of another business person, without the consent of the rightful owner contrary to honest commercial practices is considered as unfair competition act. Any person who commits any of these acts may face administrative, criminal and civil sanctions.

To begin with administrative sanctions, any person who discloses, possess or uses of the trade secret of a business person contrary to honest commercial practices may be punished with a fine from 5% up to 10% of his/her/its turnover.¹⁸¹ This administrative penalty is not grave enough to deter persons from violating the provisions of Art. 8 (2) (b) of the proclamation. As to criminal penalties, any person who found guilty of infringement of the trade secret protection provision of the proclamation (i.e, Art 8 (2) (b)) may be punished with a fine from Birr 5,000 to Birr 50,000 and with simple imprisonment. This criminal penalty is again nominal to deter trade secret protection infringements.

Coming to civil sanctions, the Commercial Code and the Civil Code devoted some provisions to deal with unfair competition. A close looks at to this provisions reveal that the two codes do not specifically mention the disclosure, possession and use of the information of a business person contrary to honest commercial practices as acts of unfair competition.¹⁸² Yet, thanks to the provisions of Art. 8 (2) (b) of the Trade Competition and Consumer Protection Proclamation, it is possible to read trade secret infringement acts in these provisions. This implies that the civil sanctions provided under the two codes as remedy for acts of unfair competition in general are applicable to trade secret infringement cases.

The civil sanctions for the commission of acts of unfair competition are provided under Art. 132 & Art. 134 of the Commercial Code and Art. 2163 of the Civil Code. One of these sanctions is injunction of the commission of the act by the order of a court of law. This sanction is clearly

¹⁸¹ Trade Competition and Consumers Protection Proclamation No. 813/2014, Art. 42 (3).

¹⁸² See The 1960 Commercial Code of Ethiopia, Proclamation No. No. 3/1960, Art. 133. (As per this provision, acts that constitute unfair competition are:

- (a) “any acts likely to mislead customers regarding the undertaking, products or commercial activities of a competitor;
- (b) Any false statements made in the course of business with a view to discrediting the undertaking, products or commercial activities of a competitor.”)

See also the 1960 Civil Code of Ethiopia, Proclamation No. 165/1960, Art. 2057. (This provision, captioned as “Unfair competition” provides that “[a] person commits an offence where, through false publications, or by other means contrary to good faith, he compromises the reputation of a product or the credit of a commercial establishment.”)

stipulated under the provisions of Art. 134 (1) (b). As per this provision, “the court may, in cases of unfair competition, ... make such orders as are necessary to put an end to the unfair competition.” The other civil remedy is indemnity for the damage sustained as a result of the unfair competition practice. The court of law is authorized to order that damages may be paid by the unfair competitor.¹⁸³ As to the amount of the damages, the Civil Code provides that:

*“Whosoever has derived a gain from the work or property of another without just cause shall indemnify the person at whose expense he has enriched himself to the extent to which he has benefited from his work or property.”*¹⁸⁴

The above stipulation reaffirms the rule “damages equals damage”. When compared to the administrative and criminal penalties, the civil sanctions seem beneficial to the victim of the unfair competition practice. Yet, it is not possible to assert that there is effective trade secret protection law in Ethiopia. Contrary to the experience of other jurisdictions, it is not clear whether the use of the protected information by the defendant (to be shown by the plaintiff) may constitute a prima facie case of trade secrets misappropriation. At any rate, since having effective trade secrets protection could possibly strike an appropriate balance between the interest of foreign investors and local competitors, the government should consider enacting separate and comprehensive trade secret protection legislation. Doing so may enable the country to build domestic technological capacities through informal means of technology transfer.

6.3. Multilateral and Bilateral Avenues for TOT in Ethiopia

As stated under chapter two, there is no comprehensive multi-national agreement that regulate TOT. However, various multinational agreements deal about the subject of TOT in one way or another. Case in point is the WIPO constituting act and the TRIPs Agreement. Two states may also conclude to cooperation agreement in the science and technology field. Such type of bilateral cooperation agreements often give due attention for the transfer of technology from one of the parties to the agreement to the other. Among the multilateral agreements, Ethiopia is not a Party to the TRIPs Agreement. Yet, it concluded a number of bilateral science and technology cooperation agreements with various countries. This section is designed to assess whether Ethiopia has lost nothing, as far as TOT is concerned, as a result of its failure to accede to the

¹⁸³ Id, Art. 134 (1) (a).

¹⁸⁴ The Civil Code, *supra* note 182, Art. 2163.

WTO trade regime. It is also devised to explain the contents of bilateral science and technology cooperation agreements to which Ethiopia is a party.

As stated above, the TRIPs Agreement is among the multi-lateral agreements which deals with international TOT. It is further explained that Art. 66 (2) of this agreement obliges developed countries to provide incentives to their enterprises and institutions to transfer technology to Least developed WTO member countries. The provision gives the impression that WTO member LDCs receive special entitlement to acquire westerns' technology. This triggers the issue whether Ethiopia lost anything as far as TOT is concerned as a result of its failure to accede to the WTO.

As indicated under chapter three, developed countries seldom make a distinction between WTO member LDCs and non member countries when they undertake technology transfer activities with the view to discharge their obligation under Art. 66 (2). According to a research conducted in 2008, out of 292 unique programmes or policies reviewed, only 31 per cent were targeted specifically towards WTO member LDCs; 16 per cent were targeted toward non-member LDCs, and the remainder were targeted either to non-LDC developing countries (15 per cent), to regions in which LDCs may or may not be present (17 per cent), to developing countries as a whole (31 per cent), or globally (all foreign countries) (6 per cent).¹⁸⁵ This implies that, as an LDC, Ethiopia might have benefited, and will benefit, from Art. 66 (2) of the TRIPs Agreement even if it is not a member to the WTO trade regime. Hence, it is possible to conclude that, as regards TOT, Ethiopia hasn't lost any thing as a result of its failure to accede the WTO.

Coming to bilateral avenues for TOT, the Ethiopian government entered in to scientific and technological cooperation agreements with different countries with the hope to access foreign technology.¹⁸⁶ The writer of this paper has had a look at to the agreements conclude between Ethiopia and China and Korea. The content of these agreements is essentially the same. The following is a brief explanation of the content of these agreements.

¹⁸⁵ Suerie Moon, Does TRIPs Art. 66.2 Encourage Technology Transfer to LDCs? An Analysis of Country Submissions to the TRIPs Council (1999-2007) 5 (UNCTAD - ICTSD Project on IPRs and Sustainable Development Policy brief No. 2, December 2008), available at http://unctad.org/en/docs/iprs_pb20092_en.pdf.

¹⁸⁶ It must be noted that these cooperation agreements are not bilateral agreements in the strict sense of the term. They do not pass through the formal ratification process. They have the nature of a memorandum of understanding.

The preamble of both agreements recognizes the importance of science and technology for the sustainable development of the economy of the parties to the agreement. It also states the commitment of the countries to intensify their national capacity through research collaboration, trade and technology transfer.¹⁸⁷

The substantive parts of the agreements begin with capitalizing on the importance of equality and mutual benefit in implementing the agreement. They also give due recognition to both international and domestic laws, including IPRs protection laws. This implies that the agreements may not be implemented in violation of international and domestic laws.

The agreements then list down the forms of the cooperation. Undertaking joint research projects, organizing and participating in joint scientific meetings, conferences, symposia etc, exchanging scientific and technological documents, and training of young scientists are listed as the major forms of cooperation.

Both agreements also designate the respective countries' science and technology ministers as the executive organs of the agreements. For purpose of implementation, the agreements establish a joint committee on science and technology cooperation (Joint Committee). This committee is composed of representatives designated by the contracting parties. The task of the both Joint Committees established by the agreements is almost the same. They are:

- a. *“Identifying the priority areas of cooperation in the field of science and technology;*
- b. *Creating favorable conditions for the implementation of this Agreement;*
- c. *Facilitating implementation of joint programmes and projects;*
- d. *Exchange of experience arising from the bilateral scientific and technological cooperation and examination of proposals for its further development.*¹⁸⁸

Both agreements stipulate that scientific and technological results that are derived from the cooperation activities under the agreement may be announced, published or commercially exploited. In doing so, the agreements stipulate, the countries should not ignore national laws of the parties and international agreements to which one or both of the countries is/are a party.

¹⁸⁷ In fact the term TOT is only found in the preamble of the Ethio-korean science and technology cooperation agreement.

¹⁸⁸ On Scientific and Technological Cooperation between the Government of the Federal Democratic Republic of Ethiopia and the Government of the people's Republic of China, Art. 3.

Both agreements also have dispute settlement clauses. They stipulate that any dispute that may arise on the interpretation or implementation of the agreements shall be settled amicably through consultation/negotiation between the contracting parties. The possibility of resolving disputes through mediation, arbitration or litigation is not envisaged under both agreements.

As to the duration of the agreements, both agreements stipulate that the agreements remain in force for a period of 5 years. They also envisage the possibility of renewing the agreements after the expiry of the 5 year period. According to both agreements, one of the parties may terminate the agreement by giving the other party a 6 month prior written notice expressing its intention to terminate the agreement. Otherwise, the agreement will be extended to a further period of time. As to the period of time the agreements may be extended, there is difference between the two agreements. Under the Ethio- China agreement, unless this notice is served, the agreements will automatically be extended for a further period of 5 years. Whereas, under the agreement between Ethiopia and Korea, the agreement may automatically be extended for a successive period of 3 years. It is worth noting that the termination of the agreements will not affect the completion of projects or programs carried out in accordance with the agreements and don't fully excused at the time of the expiry or termination of the agreements.

As to the practical utility of these agreements, though there are some TOT projects undertaken based on these agreements, most of the agreements didn't serve any purpose than political rituals through media outlets. So far, it is only based on the agreements concluded with Asian Tigers that TOT projects are being implemented in Ethiopia. For instance, under the umbrella of the agreement concluded with North Korea, the North Korean Science and Technology Policy Institute- International Innovation Cooperation Center (STEPI-IICC) transferred some advanced machineries and methods of production to Wenji Sugar Factory.¹⁸⁹ It also provided critical mass training as regards TOT to relevant officers of the MoST.¹⁹⁰ In addition, it has participated in the development of the Country's Science and Technology master plan.¹⁹¹

There are also some helpful activities that are being undertaken based on the Science and Technology Cooperation agreement concluded between Ethiopia and China. In accordance with

¹⁸⁹ Interview with Ato. Tewdrhos Molalign, International Relations Expert of the Ministry of Science and Technology, in Addis Ababa (February 10, 2015)

¹⁹⁰ Id

¹⁹¹ Id

the implementation plan of this agreement, the Ethio- China Leather Technology Institute is established in 2013.¹⁹² The Chinese government has agreed to train 30 Ethiopian nationals who will fully run the institute after 5 years.¹⁹³ It also agreed to make available advanced leather technologies to the institute.¹⁹⁴

The above are the only significant TOT projects that are being undertaken based on international science and technology cooperation agreements. Given the bulk of agreements in the shelf of the MoST, these projects are not satisfactory. Most agreements fail to be implemented because of bureaucratic hurdles, lack of commitment in the part of foreign partners and the problem of symbolism (focusing only on political rituals).¹⁹⁵

6.4. Institutional Frameworks for the Transfer of Technology in to Ethiopia

So far, the writer of this paper tried to explain the policy and legal environment for the inflow of foreign technology in to Ethiopia. Yet, having these polices and laws is meaningless unless efficient institutional framework for the implementation of the policies and the laws put in place. As a result, the FDRE government established a number of institutions which are responsible to implement TOT related polices and laws. Herein under, the powers, duties and TOT related activities of these institutions will be discussed briefly.

6.4.1. The Ministry of Science and Technology (MoST)

As stated under the FDRE Science, Technology and Innovation Policy, MoST is the central government organ which is in charge of monitoring and supporting the country's endeavor to build its technological capability.¹⁹⁶ More specifically, the policy document assigns the ministry to coordinates all actors of technology transfer activities.¹⁹⁷ As a result, the ministry is mandated to actively involve in the activities of this actors in respect to technology search, selection, learning, adaptation and utilization. These powers and mandates are reaffirmed in different

¹⁹² Id

¹⁹³ Id

¹⁹⁴ Id

¹⁹⁵ Interview with Ato Addis Taldele , International Relation Expert of the Ministry of Science and Technology, in Addis Ababa ((February 10, 2015).

¹⁹⁶ The Federal Democratic Republic of Ethiopia, *supra* note 27, at 24.

¹⁹⁷ Id, at 25.

legislations, especially under Proclamation No. 69/2010 and the Draft Technology Transfer Regulation.

The proclamation vested the ministry with wide ranges of powers and duties. As regards TOT, the proclamation empowers the ministry to register technology transfers made in every sector.¹⁹⁸ In practice, however, the ministry is not discharging this duty. It doesn't have any inventory concerning transferred technologies in to the country.¹⁹⁹

Consonance with the Science, Technology and Innovation Policy, the proclamation does also mandate the ministry to coordinate science and technology development activities, including TOT activities.²⁰⁰ In this regard, the ministry is coordinating sectoral TOT forums.²⁰¹ Furthermore, the proclamation authorized the ministry to establish a system for technology need assessment, identification, acquisition, packaging, utilization and disposal, and follow up the implementation of same.²⁰²

With the view to discharge this responsibility, the ministry established Technology Transfer and Development Directorate in 2010 as one of its core processes. The objectives of the directorate are: 1) establishing a system of technology transfer and development for learning, adapting and utilizing as well as disposing of imported technologies in order to meet national demand; and 2) establishing a system that can be effectively implemented in technology transfer and development on the basis of significant benchmarks of different countries.²⁰³

Coming to the tasks of the directorate, it is, among other things, responsible to:

- Import effective and appropriate foreign technologies and create capabilities of adaptation and utilization of these technologies in manufacturing and service providing enterprises;

¹⁹⁸ Definition of Powers and Duties of the Executive Organs of the Federal Democratic Republic of Ethiopia Proclamation No. 691/2010, Art. 22 (3).

¹⁹⁹ Interview with Ato Mulugeta Wube, *supra* note 88.

²⁰⁰ Definition of Powers and Duties of the Executive Organs of the Federal Democratic Republic of Ethiopia Proclamation No. 691/2010, *supra* note 198, Art. 22 (4).

²⁰¹ Interview with Ato Mulugeta Wube, *supra* note 88. (“Sectorial TOT forums are established by the Science and Technology Council. There are 17 sectorial TOT forums which are categorized based on areas of economic activity.”)

²⁰² Definition of Powers and Duties of the Executive Organs of the Federal Democratic Republic of Ethiopia Proclamation No. 691/2010, *supra* note 198, Art. 22 (2).

²⁰³ www.most.gov.et/.

- Promote the development of domestic technological capabilities for the effective absorption of foreign technologies;
- Establish and implement a system to search, select, adapt, utilize as well as dispose imported technologies; and
- Establish and implement a system to use foreign direct investment (FDI) and other ways of supporting technology transfer.²⁰⁴

Practically, the directorate is only forming the necessary organizational arrangement to undertake the above listed activities.²⁰⁵

6.4.2. Ethiopian Intellectual Property Office (EIPO)

EIPO is a government body which is established to implement or follow up the implementation of national laws governing intellectual property.²⁰⁶ Apart from monitoring the implementation of the country's IP laws, the office has the objective to facilitate the exploitation of intellectual property, both domestic and foreign, in the country.²⁰⁷ It also has the objective to collect, organize and disseminate technological information contained in patent documents and encourage its utilization in the country.²⁰⁸

The powers and duties of the office are specified under Art. 6 of the Ethiopian Intellectual Property Office Establishment Proclamation No. 320/2003. According to this provision, the office has, *inter alia*, the power and duty to:

- 1) *“Follow up the exploitation of legally protected foreign and local inventions and issue compulsory licenses when necessary;*
- 2) *Publish and disseminate Intellectual property rights Gazette;*
- 3) *Create an information system on intellectual property; Select and disseminate technological information contained in patent documents in priority areas and encourage their utilization for economic and social benefits; and*
- 4) *Facilitate conditions that will help to create linkages between intellectual property owners and entrepreneurs.”*²⁰⁹

²⁰⁴ Id.

²⁰⁵ Interive with Ato Mulugeta Wuba, *supra* note 88.

²⁰⁶ Ethiopian Intellectual Property Office Establishment Proclamation No. 320/2003, preamble (2003).

²⁰⁷ Id, Art. 5 (1)

²⁰⁸ Id, 5 (2)

²⁰⁹ Id, Art. 6 (2), (5), (6), (8) & (15)

These powers of the agency have their own significance in facilitating the inflow of foreign technology in to Ethiopia and the country's endeavor to build its technological capability. For instance, following up the exploitation of protected foreign inventions in the country may enforce foreign IP owners to work their inventions in Ethiopia for the fear that a compulsory license may be garneted to a third party by the office. The dissemination of technological information may also enable local firms to be aware of recent technological developments in the area of their activity. This awareness may, in turn, motivate them to import the technology and work it in Ethiopia.

In order to effectively exercise the above mentioned powers and duties, the office formed Technology Transfer Division as one of its core processes. As regards TOT, so far, the office has undertaken a couple activities. One of these activities is disseminating technology information to universities, TVETs and the industry.²¹⁰ The other is creating link between patent owners, mostly utility model certificate holders, and the industry.²¹¹ In this regard, it tried to create a link for 17 utility model certificate holders.²¹² It has also written 60 support letter to small and micro enterprise to get assistance to utilize technologies.²¹³ Nonetheless, the office didn't follow up the effectiveness of the activities it has undertaken. In fact, the office doesn't develop a procedure to follow up the working of a protected patent. To aggravate the problem, the office extends the period of protection of patent of introduction by additional five year based on the self report of the right holder. The officers of the office will examine the actual working of the patent only if the right holder invites the office to visit his/her/its project.²¹⁴

6.4.3. The Federal Micro and Small Enterprises Development Agency

The Federal Micro and Small Enterprises Agency is established by Council of Ministers regulation No. 33/98 and renamed as such by regulation No. 104/2004.²¹⁵ The objectives for

²¹⁰ Interview with Ato Yared Tesfaye, head of the Transfer of Technology Division of the Ethiopian Intellectual Property Office, in Addis Ababa (February 27, 2015).

²¹¹ Id

²¹² Id

²¹³ Id

²¹⁴ Interview with Tewdhros Nigeuse, *supra* note 132.

²¹⁵ See Micro and Small Enterprises Development Agency Establishment (Amendment) Council of Ministers Regulation No 104/2004, Art. 2. (The amendment regulation only renamed the designation 'Micro and Small Enterprises Development Agency' appearing in Regulation No. 33/98 in to "Federal Micro and Small Enterprises Development Agency" and deleted Art. 8,9 &10 of the same.)

establishing the agency is encouraging, coordinating and assisting institutions which provide support to the development and expansion of micro and small enterprises.²¹⁶ One of the mechanisms by which the agency may support or assist these institutions is by disseminating technologies which are relevant to micro and small enterprises. In fact, doing so is one of the proclaimed duties of the agency.

As per Art. 6 (5) of the regulation, the agency is responsible for preparing and disseminating “technology and project profiles by selecting appropriate technologies required for the promotion and development of Micro and Small Enterprises.” With the view to discharge this obligation, the agency prepares prototype of some goods and transfer them TVETs.²¹⁷ It also adopts foreign technologies to local circumstances and transfers them to TVETs.²¹⁸ The agency transfer these goods and technologies to TVETs by providing training to TVET staffs. The latter is expected to transfer the technology to micro and small enterprises. The agency doesn’t have and develop a mechanism to follow up whether the adopted technologies are transferred to the relevant target group.²¹⁹ In fact, there is no as such remarkable technology transfer achievement recorded in this regard.²²⁰

6.4.4. The Ethiopian Investment Commission

As explained under chapter two, among the mechanisms of TOT, FDI and Joint Venture are the most prominent ones. Foreign companies may engage in these forms of investments whenever there is, *inter alia*, efficient administration of investment matters. Recognizing the importance of efficient investment administration system to attract foreign investment, the Council of Ministers established the Ethiopian Investment Commission by regulation No. 313/2014.

The commission has the objective to implement transparent and efficient investment administration system, and, thereby, encourage and expand investments in the country.²²¹ With the view to enable the commission to achieve this objective, it is vested with range of powers and

²¹⁶ The Micro and Small Enterprises Development Agency Establishment Council of Ministers Regulations No. 33/1998, *supra* note 12, Art. 5.

²¹⁷ Interview with Eng. Anteneh Lakew, Senior Mechanical Engineer of the Federal Micro and Small Enterprises Development Agency, in Addis Ababa (March 6, 2015).

²¹⁸ Id

²¹⁹ Id

²²⁰ Id

²²¹ Investment Proclamation No. 769/2012, *supra* note 146, Art. 9.

responsibilities. These powers and duties are specified under Art. 28 of the Investment Proclamation No. 769/2012 and other relevant laws.

The proclamation designated the Commission as a nucleus for matters of investment.²²² The commission is in charge of coordinating and enhancing investment activities. It is empowered to undertake different activities with the view to enhance and attract foreign investment.²²³ As far as TOT agreements are concerned, as explained above, the commission is responsible to register TOT agreements related to investment.²²⁴ Yet, it has no power to examine the content of the agreements.

6.4.5. Sectorial Institutes

The Council of Ministers established about seven sectorial institutions which are mandated to undertake R&D activities in their respective area. These undertake almost similar activities in their respective fields.²²⁵ They attempt to prototype and adopt foreign technologies and make available to local firms.²²⁶ They also provide training to TVET instructors and SME associations.²²⁷ They also assist and advise local firms in technology selection and installation.²²⁸

²²² Id, Art. 28 (1).

²²³ See Id, Arts. 28 (2)- (26)

²²⁴ See *supra*, at 87- 90.

²²⁵ Interviews with Ato Berhanu Serjabo, Corporate Communication Directorate Director of the Leather Industry Development institute, in Addis Ababa (April 17, 2015) & Interview with Ato Tesfaya Alebachew, Technology Transfer and Training Directorate Director of Textile Industry Development Institute (April 17, 2015)

²²⁶ Ibid.

²²⁷ Ibid.

²²⁸ Ibid.

Chapter Five

Conclusion and Recommendations

7.1. Conclusion

Technology is vital for sustained economic growth both in industrialized economies and developing countries. In fact, it is considered as one of the factors of economic production, of course, in addition to the traditional three factors of production, i.e, land, labour and capital. Accordingly, it plays an important role in the global trading system. In addition, it contributes a lot to meet urgent human needs. All these make the acquisition of technology, either through independent innovation or its transfer from foreign sources, one of the priority agendas of almost all countries of the world.

Due to their low level of innovative capability and industrialization, developing countries may primarily acquire technology through its transfer from developed countries. These countries consider access to industrialized countries' technology as a prerequisite for their economic development and participation in the international trading system. On the contrary, the technology "haves" view the maintenance of technological dominance as crucial to sustain their economy in the increasingly competitive international economy. These differences highly affected international negotiations. While developing countries demanded for the adoption of international agreements that promote the inflow and dissemination of technology in to their territories, industrialized countries bargain for a protectionist international legal regime. The respective domestic laws of the technology "haves" and "have nots" also reflect these diverse interests.

This paper analyzed the provisions of some international agreements with the view to ascertain whether the interest of developing countries to access foreign technologies is well addressed in the international arena. It also examined the legal and institutional legal framework Ethiopia put in place to, as a developing country, access and disseminate foreign technologies.

To begin with, the paper found that the endeavor of developing countries to establish an international legal regime that accelerate TOT ended up in vain. The present international technology and investment related agreements incline to protectionism which promotes the

interest of developed countries. This doesn't mean that the interest of developing countries to access foreign technology is disregarded altogether. There are a number of international agreements which deal with the transfer of technology from the global north to the developing south. Among these international instruments, the TRIPs Agreement deserves brief summary.

Under the TRIPs Agreement, as regards TOT, the concern of developing countries is principally reflected under Arts. 7, 8, 40 and 66 (2). Arts. 7 and 8 respectively provide for the objectives and principles of the agreement. Three of the five objectives of the TRIPs Agreement focus on technology related IPRs protection. Most importantly, part of the provision of Art 7 provides that the protection and enforcement of IPRs should contribute to the transfer and dissemination of technology. Art 8 of the agreement, on its part, authorizes member countries to formulate laws and regulations that promote technological development and take measures against IPRs abuses that may hinder the international transfer of technologies.

Although, theoretically, the above stipulations could have multifold utilities, there are a number of factors which limit the practical importance of the provisions. The major factor is the subordination of the two provisions to other stipulations of the agreement. Both Articles state that state parties may not take measures contrary to other provisions of the TRIPs agreement. The problem is that most of these "other provisions" of the TRIPs Agreement set high standard of IPRs protection which in effect undermine the endeavor of developing countries to access foreign technologies.

Art. 40 of the TRIPs Agreement authorizes member states to prohibit restrictive IPRs licensing practices that may defeat the objectives and principles of the TRIPs Agreement, including the transfer and dissemination of technology. In doing so, the agreement provides room for policy flexibility which enables state member countries to enact TOT friendly laws. In particular, they may enact IPR laws that prohibit restrictive licensing practices which may hinder the inflow and dissemination of foreign technologies in to their territory.

The other crucial TOT related provision of the TRIPs agreement is Art. 66 (2). This provision imposes a mandatory obligation on developed countries to provide incentives to enterprises and institutions in their territory to transfer technology to least developed WTO member countries. During the TRIPs negotiation, it was hoped that this provision will alleviate the technological

gap between the north and the south. Nonetheless, the provision has not brought about the intended result due implementation related limitations.

The primary means of monitoring the implementation of Art 66 (2) of the TRIPs Agreement is periodic report. Developed countries seldom submit their TOT activities regularly. In fact, there is no single country which submits its TOT activities every year. In addition, even the reliability of the submitted reports themselves is questionable. Since the data rely on self reporting, there is the problem of overstatement. Moreover, most of the reported TOT activities have also no direct and immediate relation with TOT. The activities do not also target WTO member LDCs. Furthermore, the reported programmes are not adequate enough to encourage developed countries' companies and institutions to undertake TOT activities in LDCs. These problems make the TOT arrangement of the TRIPs Agreement ineffective.

Coming to the legal and institutional framework put in place in Ethiopia with the view to access and disseminate foreign technologies, this paper analyzed the country's laws that have direct and indirect impact on the inflow and dissemination of foreign technologies. The analysis revealed the inadequacy of the present legal regime that governs TOT agreements. It also found some shortcomings of the patent law of the country that may hinder the dissemination of foreign technologies. The absence of adequate incentive in the investment law of the country that may encourage foreigners to transfer technology through joint venture is another finding. Furthermore, it identified that the absence of comprehensive franchise and trade secret protection laws will be an obstacle for foreigners to transfer their technology to Ethiopian partners through franchising and trade secret agreements. The writer has further concluded that most of the science and technology cooperation agreements concluded between the Ethiopian government and other countries are only ceremonial. It also found the absence of coordination and overlap of mandates among government organs charged with the duty to select, choose, adapt and disseminate foreign technologies. Below, these findings will be elaborated in a few words.

TOT laws primarily regulate the transfer of technology through TOT agreements. Since TOT agreements have a far reaching consequence in the security, health, and economic and technological development of a country, most countries subject them to strict governmental regulation. Most importantly, in addition to regulating the content of the agreements, the TOT

laws of developing countries provide different incentives to persons who engage in TOT activities. Cases in points are the TOT laws of Vietnam and Uganda.

In Ethiopia, there was a specific regulation that governs TOT agreements. This regulation, namely called "Transfer of Technology Council of Ministers Regulation No. 121/1993", provided for the formality and validity requirements of TOT agreements. In particular, it renders void agreements for the transfer of technologies that have an adverse effect on national security, public health and the environment. It also outlaws TOT agreements that contain restrictive clauses that hinder, in one way or another, the spillover, development and adaptation of the transferred technology. Nonetheless, this regulation was expressly repealed in 2003 by the Investment (Amendment) Proclamation No. 375/2003. Thereafter, the terms and conditions of TOT agreements are not subject to governmental scrutiny.

The present TOT agreements regulatory system, as embodied under the Investment Proclamation No. 769/2012, left determining the contents of TOT agreements to the absolute autonomy of the parties. As specified under the proclamation, the Ethiopian Investment Commission is duty bound to register TOT agreements regardless of the contents of the agreements and the nature of the technology transferred. The practice confirms the same. There is no also inceptive scheme provided to persons who may engage in TOT activities through contractual terms. The Government officials and experts interviewed assert that, given the country's endeavor to bring about accelerated economic growth, this lenient TOT is not appropriate and adequate. It seems the government also buys this idea and, accordingly, the MoST is developing a draft TOT regulation.

The Draft TOT regulation governs each phases of TOT, starting from technology search to disposition. Specifically, it provides for the grounds of registering, refusing to register TOT agreements. These grounds are similar with the grounds of registering and refusing to register TOT agreements stipulated under the repealed regulation. In this regard, it is possible to assert that the draft regulation is restoring the repealed regulation. It outlaws the transfer of technologies which endanger national security and public health. It also prohibit terms and condition that may hinder the adaptation, effective use and dissemination of the transfer of technology in Ethiopia. In addition, it stipulate that transferred technologies should be disposed in accordance of international standards, when necessary, with the participation of the

technology supplier. It also states that the government participates in technology negotiation and provides advisory services to technology recipients. These are good moves. This doesn't, however, mean that the draft regulation doesn't have drawbacks.

One of the weaknesses of the draft regulation is its failure to provide for incentives to persons who may engage in TOT activities. As indicated above, the experience of Vietnam and Uganda indicates that it is common to provide different incentives to person who undertakes TOT activities. The other weakness of the draft regulation is its failure to establish a separate entity that monitor and follow up its implementation. The draft charged the MoST with wide ranges of crucial powers and responsibilities. It is questionable whether this bureaucratic government organ will discharge these powers and responsibilities effectively with minimal bureaucratic handle. The draft regulation also doesn't specify the government organ which will be responsible to register TOT agreements.

The other piece of legislation that affects TOT activities is the patent law. Undeniably, the Ethiopian patent provides for legal arrangements that may promote the transfer and dissemination of technology. The patentability requirement, the disclosure requirement, the experiment use exception, the legal protection accorded to patent of introduction and utility model, the compulsory license regime and the duty to work locally can be mentioned in this regard. Yet, there are some shortcomings arising from the present patent law that may negatively affect the transfer and dissemination of foreign technology.

Firstly, the policy choices made to craft the disclosure requirement and the experimental use exception are not optimal. The Ethiopian patent law requires the patentee to disclose at least one mode of carrying out the invention in the patent application. It would have been possible to require the patentee to disclose the best mode for carrying out the invention. In fact, the TRIPs Agreement also authorizes member countries to provide for same requirement under their domestic laws. Requirement the patent to disclose the best mode of carrying out the invention helps local technology users, innovators and researchers to fully understand the technology claimed in the patent. By requiring the patentee to disclose only one mode of carrying out the invention, the Ethiopian patent law undermined the role the disclosure requirement could play in the dissemination of technologies.

As to the experimental use exception, the Ethiopian patent law limited the scope of the exception to cases of basic research. It excluded commercial researches from the ambit of the exception. Since commercial research could result in more spillover of technologies in to the country, it would have been better had the scope of the experimental use exception is wide enough so as to include commercial researches which primarily aimed at the creation of new knowledge.

Secondly, the Ethiopian patent law failed to effectively address IPRs abuse issues. In particular, it failed to prohibit restrictive patent licensing practices. To aggravate the problem, the country's competition law doesn't also address these issues. This legal lacuna may provides an opportunity to patent right holders to license their inventions to local firms under terms and conditions which may have the effect of hindering the adaption, further development and dissemination of the technology.

The investment law has also its own bearing on the transfer and dissemination of foreign technology. As explained above, FDI and joint venture are important methods of TOT. As a result, most countries try to attract these forms of investment by providing different packages of incentives and devising efficient investment administration system. Ethiopia is not an exception to this general trend.

The Ethiopian investment law provides for different guarantees and protections for foreign investors. It also provides for various investment incentives to investors who invest in areas in which the country tries to bring about rapid development and technological progress. The common forms of incentives are custom duty and income tax exemptions. The income tax exemption ranges from 1 year to 12 years having regard to the areas and place of the investment. As regards joint venture, in addition to the above mentioned incentives, the minimum capital a foreign investor required to allocate for a single project will be reduced by USD 50, 000 provided that he/she/it invest jointly with Ethiopian national/s. There are no other packages of incentives put in place joint venture. The reduction alone is not adequate enough to encourage foreigners to invest jointly with Ethiopians.

Trade secretes protection and franchising laws are the other areas of laws that affect the inflow and dissemination of foreign technology. The existence of strong trade secretes protection law gives foreign investors some confidence to transfer their technologies to domestic counterparts.

Since it doesn't rule out the discovery and appropriation of someone else's undisclosed information through honest commercial means, such as independent development and reverse engineering, it also provides a possibility for local competitors to access technology-relevant information, which may ultimately result in the dissemination of the technology.

In Ethiopia, there is no a comprehensive piece of legislation on trade secrets protection. There rules trade secrets are found in the Commercial Code, the Civil Code and Trade Competition and Consumer Protection Proclamation No. 813/2013. These legislations provides for criminal, administrative and civil remedies for a person whose trade secrets are disclosure and appropriated contrary to honest commercial practices. Despite the civil sanction, the remedies provided are not adequate enough to deter the trade secrets protection infringer. They are not also as beneficial to the victim of the unfair competition practice.

With the same parlance, though one of the mechanisms of TOT is franchising, there is no specific bill that regulate this crucial business in Ethiopia. This doesn't mean, however, that franchising is totally unregulated subject matter. The rules that govern franchising are fragmented ones and found here and there. Having regard to the subject matter of agreements of the parties, a franchising agreement can be subject to the investment law, the trade mark proclamation or the patent law of the country. Accordingly, the agreement may need to be registered before either the Ethiopian Investment Commission (in cases where the agreement involves licensing of production methods) or EIPO (in case where the agreement includes the use of the trade mark or trade name of the franchisor and the use of patented technologies). This obviously crates legal uncertainty. This legal uncertainly, in turn, may make international franchisors hesitate to do franchising business in Ethiopia. This is detrimental to the country's endeavor to access and adapt foreign technologies.

Concerning the international and bilateral avenues for the transfer of technology, Ethiopia is not a member to major international IPRs agreements, notably the TRIPs Agreement. As noted above, the TRIPs Agreement devised a special arrangement for the transfer of technology from developed countries to WTO member LDCs. Yet, empirical research findings indicate that developed countries seldom make a distinction between WTO member and non- WTO member LDCs while they provide TOT related assistance to LDCs. This implies that, as regards TOT, Ethiopia has lost nothing as a result of its failure to accede to the WTO administered TRIPs

Agreement. As regards bilateral avenues, though Ethiopia has concluded science and technology cooperation agreements with so many countries, most of these agreements haven't brought about significant practical utilities. So far, only the agreements concluded with Korea and China are put in practice to some extent. The remaining have no practical importance than political ritual.

As far as the institutional framework put in place for the transfer of technology in Ethiopia is concerned, the Ethiopian the MoST, the EIPO, Investment Commission and the Federal Micro and Small Enterprises Agency involves in TOT activities in one way or another. The Science, Innovation and Technology Policy and the draft TOT regulation designate the MoST as the nucleus of TOT activities of the country. With respect to TOT, it is empowered to develop TOT law, register TOT activities, monitor and follow up the effective implementation of TOT activities, coordinate organs which engage in TOT activities. So far, the ministry didn't effectively exercise any of these powers. It is tied up with bureaucratic hurdles. As a result, it is not possible to conclude that the ministry is playing the role it is expected to play in assisting the country's endeavor to acquire foreign technologies. The only remarkable job of the ministry is that it attempted to distribute technology information to various stakeholders.

The EIPO is empowered to, *inter alias*, follow up the exploitation of legally protected foreign and local inventions, select and disseminate technological information contained in patent documents in priority areas and encourage their utilization for economic and social benefits; and facilitate conditions that will help to create linkages between intellectual property owners and entrepreneurs. These powers are very important in facilitation the dissemination of technologies in the country. Yet, the office is not exercising these powers effectively. It doesn't develop a mechanism to follow up the local exploitation of IPRs. It didn't also develop patent documents and information which are relevant to priority areas. Moreover, it didn't take any other measure that writing support letter to crate facilitating condition that may help patent owners to crate linkage with entrepreneurs. As it is the case with MoST, among its duties, the Office is only effective in disseminating technology information to stakeholders.

The Federal Micro and Small Enterprises Agency has a promulgated power to prepare and disseminate technology and project profiles by selecting appropriate technologies required for the promotion and development of Micro and Small Enterprises. With the view to discharge this responsibility, the agency adapt foreign technologies to local circumstances and prepare

prototype of products and transfer them to TVETs. The latter is expected to transfer the technologies to MSEs. The agency doesn't have and develop a mechanism to follow up whether the adapted technologies are transferred to the relevant target group.

The Ethiopian investment agency primarily contributes to the country's effort to access and disseminate foreign technologies by establishing a transparent and effective administration of investment matters. In this regard, it is providing a one-stop shop service. In doing so, the commission aspires to attract FDI and joint venture investments. In addition, the commission has the power to register TOT agreements. However, it hasn't the power to examine the content of the agreements. As such, it wouldn't be wrong to conclude that the commission is a mere custodian of TOT agreements.

7.2. Recommendations

The above findings highlight the inadequacy and fragmented nature of the legal and institutional framework that regulate TOT in Ethiopia. The writer of this paper recommends that the government should take the following measures in order to create conducive legal and institutional arrangements to facilitate the inflow and dissemination of foreign technologies in the country.

- The governments should enact the draft TOT regulation by making the necessary improvements.
- A new provision should be inserted in the draft TOT regulation that provides for different packages of incentives to persons who engage in TOT activities. It is very important to give special preference to investors who introduce foreign technology and adopt same to local circumstances.
- The draft TOT regulation should also establish a special governmental agency that monitor and follow up TOT activities. The organ should be staffed with multidisciplinary personnel who have the required competency to efficiently deal with the complex issues of TOT.
- A new provision should be added to the Inventions, Minor Inventions and Industrial Designs, Proclamation, No. 123/ 1995 which prohibit restrictive patent licensing practices.

- The patent law should also require the patent applicant to disclose the best mode of carrying out the invention.
- The patent law should further be amended with the view to widen the scope of the experimental use exception so as to include commercial researches which primarily aimed at the creation of new knowledge.
- The investment law should provide adequate incentives to foreigners who invest jointly with Ethiopians by contributing technology to the business venture. In particular, in income tax exemption to a certain period of time and other preferences should be considered.
- The administrative and criminal penalties imposed on trade secrets protection infringers should be reconsidered to increase the penalties. In addition, the government should consider the need to enact a specific bill on trade secrets protection.
- A comprehensive piece of legislation that governs franchising business should be enacted.
- As regards institutional frameworks for TOT, apart from establishing a separate entity that monitor and follow up TOT activities as suggested above, the EIPO, the MoST and the Federal Micro and Small Enterprises Agency should coordinate each to avoid redundancy of efforts. In particular, the mandate of the Federal Micro and Small Enterprises Agency should be redefined to enable it to directly transfer the technologies it has adopted to SMEs. Or else, it should develop a monitoring mechanism by which it could ascertain whether the technologies it has adopted reach the intended target groups.
- On top of amending existing legislation and introducing new laws as recommended above, the government should work hard to develop the country's technological capability to absorb and adapt foreign technologies. This can be achieved by establishing technology incubator centers and supporting R & D activities.

BIBLIOGRAPHY

I. Laws

A. Domestic Laws

1. The 1960 Civil Code of Ethiopia, Proclamation No.165/1960
2. The 1960 Commercial Code of Ethiopia, Proclamation No.166/1960
3. The Investment (Amendment) Proclamation No. 375/2002
4. Investment Proclamation No. 769/2012
5. Transfer of Technology Council of Ministers Regulation No. 121/1993
6. Inventions, Minor Inventions and Industrial Designs Proclamation No. 123/ 1995
7. The Micro and Small Enterprises Development Agency Establishment Council of Ministers Regulations No. 33/1998
8. Labour Proclamation No. 377/2003
9. Ethiopian Intellectual Property Office Establishment Proclamation No. 320/2003
10. Trademark Registration and Protection Proclamation No. 501/2006
11. Micro and Small Enterprises Development Agency Establishment(Amendment) Council of Ministers Regulation No 104/2004
12. Higher Education Proclamation No. 650/2009
13. Definition of Powers and Duties of the Executive Organs of the Federal Democratic Republic of Ethiopia Proclamation No. 691/2010
14. Investment Incentives and Investment Areas Reserved for Domestic Investors Council of Ministers Regulation No. 270/2012
15. Trade Competition and Consumers Protection Proclamation No. 813/2014

B. Treaties

1. Annex 1C of the Marrakesh Agreement, Agreement on Trade-Related Aspects of Intellectual Property Rights, adopted on 15 April 1994, entered in to force on 1 January 1995
2. Annex 1A of Marrakesh Agreement, Agreement on Trade-Related Investment Measures, 15 April 1994, entered in to force on 1 January 1995
3. Paris Convention for the Protection of Industrial Property, adopted on 20 March 1883, entered it to force on 20 March 1883

4. Harare Protocol on Patents and Industrial Designs Within the Framework of the African Regional Industrial Property Organization (ARIPO), adopted on 10 December 1982, entered into force on April 25 1984

II. Books

1. Farok J. Contractor, *International Technology Licensing: Compensation, Costs and Negotiation* (Lexington Books, 1981) USA
2. Peter Nanyenya- Takirambudde, *Technology Transfer and International Law* (Praeger Publishers Inc, 1980) UK
3. Richard J. Goossen, *Technology Transfer in the People's Republic of China: Law and Practice* (Kluwer Law International, 1987) USA

III. Chapters in Books

1. Hoshimi Uchida, *Technology Transfer*, in Shunsaku Nishikawa & Takeji eds., *The Era Of Industrialization: A History of the Japanese Economy* (Iwanami Shoten, 1990) Japan
2. Yong S. Lee, *Technology Transfer and Economic Development: A Framework for Policy Analysis*, Yong S. Lee ed., in *Technology Transfer and Public Policy* (Quorum Books, 1997) UK
3. C.G. Weeramantry, *Human Rights, Technology, and Development* , in C.G. Weeramantry ed., *Human Rights and Scientific and Technological Development* (United Nations University Press, 1990) Japan

IV. Journal Articles

1. Carlos M. Correa, Review of the TRIPS Agreement: Fostering the Transfer of Technology to Developing Countries, *Journal of World Intellectual Property, Vol. 2 No. 6* (1999)
2. Chantal Thomas, Transfer of Technology in the Contemporary International Order, 22 *Fordham International Law Journal, Vol. 2 Iss. 5* (1998)
3. David M. Haug, The International Transfer of Technology: Lessons that East Europe can Learn from the Failed Third World Experience, *Harvard Journal of Law & Technology, Vo. 5 Spring Issue* (1992).
4. Getachew Menigiste, The Impact of the International Patent System on Developing Countries, *Journal of Ethiopian Law, Vol. XXIII, No. 1* (2009)
5. Kamal Saggi, Trade, Foreign Direct Investment, and International Technology Transfer: A Survey, *The World Bank Research Observer, Vol. 17 No. 2* (2002).

6. M. Scott Taylor, TRIPS, Trade, and Technology Transfer, *The Canadian Journal of Economics*, Vol. 26, No. 3 (1993)
7. Ton J. M. Zuijdwijk , The UNCTAD Code of Conduct on the Transfer of Technology, *Mcgill Law Journal*, Vol. 24 Iss. (1980)

V. Electronic Sources

1. Alper Sönmez & M. Teoman Pamukçu, Foreign Direct Investment and Technology Spillovers in the Turkish Manufacturing Industry (TEKPOL Working Paper Series 11, 2003). (UNCTAD Series on Technology Transfer and Development, 2004) <[http://www.researchgate.net/publications.PublicPostFileLoader.html?id=5395ffe9cf57d7900a8b46a5&key=e0b495395ffe908d75](http://www.researchgate.net/publications/PublicPostFileLoader.html?id=5395ffe9cf57d7900a8b46a5&key=e0b495395ffe908d75)>
2. Bernard M. Hoekman, Keith E. Maskus & Kamal Saggi, Transfer of Technology to Developing Countries: Unilateral and Multilateral Policy Options (Working Paper, 2004), <<http://www.betsaonline.com/SystemAnalysis/TransferTechnology.pdf>>
3. Biswajit Dhar & Reji Joseph, Foreign Direct Investment, Intellectual Property Rights and Technology Transfer: The North-South and the South-South Dimensions (UNCTAD and South Centre Background Paper No. 6, March 2012) <http://unctad.org/en/PublicationsLibrary/ecidc2012_bp6.pdf>
4. Carlos M. Correa, Intellectual Property Rights and the Use of Compulsory Licenses: Options for Developing Countries (South Centre Working Papers No. 5, October 1999) <http://www.iatp.org/files/Intellectual_Property_Rights_and_the_Use_of_Co.pdf>
5. Dominique Foray, Technology Transfer in the TRIPS Age: The Need for New Types of Partnerships between the Least Developed and Most Advanced Economies (ICTSD Programme on IPRs and Sustainable Development, Issue Paper No.23, May 2009) <http://www.iprsonline.org/New%202009/foray_may2009.pdf>
6. Ermias Biadgleng, Domestic Legislation and Court Decisions on Intellectual Property Rights and Public Health in Ethiopia (UNCTAD Country Analysis, December 2011), <http://mpra.ub.uni-muenchen.de/36584/1/MPRA_paper_36584.pdf>
7. Graham Dutfield, Literature Survey on Intellectual Property Rights and Sustainable Human Development <http://www.iprsonline.org/unctadctsd/docs/GDutfieldLiteratureSurveyOnIP_April2003.pdf>

8. GRIPS Development Forum (GDF), Democratic Developmentalism and Agricultural Development Led Industrialization
<[http://www.grips.ac.jp/forume/pdf_e12/JICA&GDFReport_Ethiopia_phase1/Intellectual Partnership for Africa/Final Report_ch5.pdf](http://www.grips.ac.jp/forume/pdf_e12/JICA&GDFReport_Ethiopia_phase1/Intellectual_Partnership_for_Africa/Final_Report_ch5.pdf)>
9. John H. Barton, New Trends in Technology Transfer: Implications for National and International Policy (ICTSD Intellectual Property and Sustainable Development Series Issue Paper No. 18, February 2007)
<<http://www.iprsonline.org/resources/docs/Barton%20New%20Trends%20Technology%20Transfer%202007.pdf>>
10. Keith E. Maskus & Ruth L. Okediji, Intellectual Property Rights and International Technology Transfer to Address Climate Change: Risks, Opportunities and Policy Options, (ICTSD Intellectual Property and Sustainable Development Series, 2010)
<<http://www.ictsd.org/downloads/2011/12/intellectual-property-rights-and-international-technology-transfer-to-address-climate-change.pdf>>
11. Linsu Kim, Technology Transfer & Intellectual Property Rights: The Korean Experience (UNCTAD-ICTSD Project on IPRs and Sustainable Development Issue Paper No. 2, June 2003) <<http://www.iprsonline.org/resources/docs/Kim%20-%20ToT%20and%20IPRs%20%20Blue%202.pdf>>
12. Maria Anna Corvaglia , South–South Technology Transfer Addressing Climate Change
<http://www.nccr-climate.unibe.ch/conferences/climate_economics_law/papers/Corvaglia_MariaAnna.pdf>
13. Nandakumar Krishnachar , Impediments to International Transfer of Technology – A Developing Country Perspective (2005)
<http://www.law.nyu.edu/sites/default/files/upload_documents/krishnacharpaper.pdf>
14. Organization for Economic Co-Operation and Development (OECD), Foreign Direct Investment for Development: Maximizing Benefits, Minimizing (Costs Overview) (2002)
<<http://www.oecd.org/investment/investmentfordevelopment/1959815.pdf>>
15. Peter K. Yu, The Objectives and Principles of the TRIPs Agreement (2009),
<<http://www.peteryu.com/correa.pdf>>
16. Rod Falvey & Neil Foster, The Role of Intellectual Property Rights in Technology Transfer and Economic Growth: Theory and Evidence (United Nations Industrial Development

- Organization working papers, 2006)
 <http://www.unido.org/fileadmin/user_media/Publications/Pub_free/Role_of_intellectual_property_rights_in_technology_transfer_and_economic_growth.pdf>
17. South Centre, The Agenda For Transfer of Technology: The Working Group of The WTO on Trade and Transfer Of Technology (Trade-Related Agenda, Development and Equity (TRADE) Analysis Series, October 2005) <http://www.southcentre.int/wp-content/uploads/2013/07/AN_IP1_Working-Group-of-WTO-on-Trade-and-Transfer_Technology_EN.pdf>
 18. Suerie Moon, Does TRIPS Art. 66.2 Encourage Technology Transfer to LDCs? An Analysis of Country Submissions to the TRIPS Council (1999-2007) (UNCTAD - ICTSD Project on IPRs and Sustainable Development Policy brief No. 2, December 2008), <http://unctad.org/en/docs/iprs_pb20092_en.pdf>
 19. United Nations, Development Dimensions of Intellectual Property in Uganda: Transfer of Technology, Access to Medicines and Textbooks (UNCTAD-ICTSD Project on Intellectual Property Rights and Sustainable Development report, 2010) <http://unctad.org/en/docs/diaepcb200913overview_en.pdf>
 20. United Nations, Compendium of International Arrangements on Transfer of Technology: Selected Instrument (United Nations Publication Sales No. E-01.II.D.28, 2001) <<http://unctad.org/en/docs/psiteipcm5.en.pdf>>
 21. US- Africa Gateway, Sub-Saharan African Countries – Fastest-Growing Economies <<http://usafricagateway.biz/sub-saharan-african-countries-fastest-growing-economies/>>
 22. Vivek Shukla, Technology Transfer Agreements in High-Tech Industries: A Competition Law Analysis (Project Report, 2013), <http://cci.gov.in/images/media/ResearchReports/Technology%20Transfer%20Agreements%20in%20High-Tech%20Industries%20_A%20Competition%20Law%20Analysis.pdf>
 23. William New, WIPO Development Agenda (2008) <<http://www.bibalex.org/a2k/attachments/speakers/WIPO%20development%20agenda.pdf>>
 24. WIPO Standing Committee on the Law of Patents, WIPO's Activities on Transfer of Technology (2012), <http://www.wipo.int/edocs/mdocs/scp/en/scp_18/scp_18_7.pdf>

25. World Intellectual Property Organization, Overview of Contractual Agreements for the Transfer of Technology <http://www.wipo.int/export/sites/www/sme/en/documents/pdf/technology_transfer.pdf>
26. World Intellectual Property Organization (WIPO), Proposal by Argentina and Brazil for The Establishment of A Development Agenda for WIPO (WO/GA/31/11, August, 2004) <http://www.wipo.int/edocs/mdocs/govbody/en/wo_ga_31/wo_ga_31_11.pdf>
27. <<http://unctad.org/en/Pages/Home.aspx>>
28. <<http://www.Franchoise.com/franchising-consulting-reqes?origin=home&destination=consultGlobal>>
29. _____, Types of Franchising, <https://www.boundless.com/business/textbooks/boundless-businesstextbook/types-of-business-ownership-6/franchising-52/types-of-franchises-257-1725/>
30. _____, Analyzing Technology Trade and Transfer: Conceptual Issues and Policy Choices <<https://www.princeton.edu/~ota/disk3/1984/8428/842804.PDF>>
31. _____, What is a Trade Secret? <http://www.wipo.int/sme/en/ip_business/trade_secrets/trade_secrets.htm>
32. _____, The Role of Intellectual Property Rights in Technology Transfer in the Context of the Convention on Biological Diversity: A Technical Study <<https://www.cbd.int/doc/meetings/ttc/egttstc-02/other/egttstc-02-oth-techstudy-en.pdf>>

VI. Other Materials

A. Government Documents

1. The Federal Democratic Republic of Ethiopia Education and Training Policy (1994).
2. The FDRE Ministry of Finance and development Rural Development Policy and Strategies (2003).
3. The FDRE Ministry of Finance and development Growth and Transformation Plan (2010/11-2014/15). (2010)
4. The FDRE Federal Ministry of Education Education Sector Development Program IV (ESDP IV):2010/2011 - 2014/2015 (2010)
5. The Federal Democratic Republic of Ethiopia Science, Technology and Innovation Policy (2012)

B. Foreign Laws

1. Ugandan Investment Code Act No. _____
2. Vietnamese Law on Competition No. 27-2004-QH11
3. Vietnamese Law on Technology Transfer No. 80/2006/QH11

C. Unpublished Works

1. Ayenachew Aseffa, Indicia of the Developmental State Concept in the Ethiopian Higher Education, Master's thesis (University of Tampere, 2014) <https://tampub.uta.fi/bitstream/handle/10024/95990/GRADU-1408537281.pdf?sequence=1>
2. George Sipa-Mjah Yankey, The Role of the International Patent System in the Transfer of Technology to West Africa: Case Studies- Ghana and Nigeria, Ph.D. dissertation (University of Warwick, 1986), available at <http://go.warwick.ac.uk/wrap/39315> .
3. Getachew Mengistie, Draft National Intellectual Property Policy and Strategy of the Government of the Federal Republic of Ethiopia (August 2013).
4. Joseph Kunkuta, Technology and the Legal Framework of its Transfer in Zambia, LLM thesis (University of Zambia, Faculty of Law, 1990).
5. The FDRE Ministry of Science and Technology, Draft Regulation to Search, Choice, Introduce, Use, adapt and Dispose a Technology (2014)
6. Agreement on Scientific and Technological Cooperation between the Government of the Federal Democratic Republic of Ethiopia and the Government of the Republic of Korea

VII. Interviews

1. Interview with Ato Addis Taldele , International Relation Expert of the Ministry of Science and Technology, February 10, 2015
2. Interview with Eng. Anteneh Lakew, Senior Mechanical Engineer of the Federal Micro and Small Enterprises Development Agency, March 6, 2015
3. Interview with Ato Berhanu Serjabo, Corporate Communication Directorate Director of the Leather Industry Development institute, April 17, 2015
4. Interview with Ato Daniel Lemma, Expatriate Work Permit Service Team Coordinator of the Ministry of Labour and Social Affairs, January 15, 2015
5. Interview with Ato Epheram Hailu, Legal Affairs Directorate Director of the MoST, December 1, 2014

6. Interview with Ato Mohamednure Yesuf, Licensing and registration Directorate Director of the Ethiopian Investment Commission, January 30, Addis Abeba
7. Interview with Ato Mulugeta Tiruneh, Senior Licensing and Registration Expert of the Ethiopian Investment Commission, April 2, 2015
8. Interview with Ato Mulugeta Wube, Leather Technology Transfer and Development Case Team Leader of the Ministry of Science and Technology, January 23, 2015
9. Interview with Ato. Tewdrhos Molalign, International Relations Expert of the Ministry of Science and Technology, February 10, 2015
10. Interviews & Interview with Ato Tesfaya Alebachew, Technology Transfer and Training Directorate Director of Textile Industry Development Institute, April 17, 2015
11. Interview with Ato Tewdrhos Nigussie, Senior Patent Expert of the Ethiopian Intellectual Office, February 2, 2015
12. Interview with Ato Yared Tesfaye, head of the Transfer of Technology Division of the Ethiopian Intellectual Property Office, February 27, 2015