Journal of Law, Policy and Globalization
ISSN 2224-3240 (Paper) ISSN 2224-3259 (Online)
Vol.55, 2016

The Legal Framework for the Transfer of Technology in Ethiopian

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Abstract
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. Nonetheless, so far, 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 TOT. This implies that is a last resort as long as these countries insist in their desire to bring about and foster economic growth. oreign experiences indicate 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).[4] 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, investment and capital goods leasing. This writer intends to address the issue whether the existing Ethiopian patent, investment and capital goods leasing laws are adequate enough and capable of ensuring technology transfer to Ethiopia.

1. Introduction to the Concept of Transfer of Technology

This section is designed to clarify the concept of transfer of technology (TOT). Accordingly, the section explains what TOT is. It also highlights the methods by which countries may bring about TOT in to their economy. Finally, the common restrictive clauses of TOT agreements will be discussed.

1.1. 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 also 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.[5]

Now, the question is what constitutes TOT? As it is the case with other concepts, authorities have difficulties in providing a single workable definition for the term 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.''[6] This definition is probably the widest usage of the tem TOT.[7] As per this definition, mere exchange of ideas between/among researchers can be considered as TOT. Contrary to this logical inference, the

[1] Chantal Thomas, *Transfer of Technology in the Contemporary International Order*, 22 FORDHAM INTERNATIONAL LAW JOURNAL. 2096, 2096 (1998)
[2] Keith E. Maskus & Ruth L. Okediji, *Intellectual Property Rights and International Technology Transfer to Address Climate Change: Risks, Opportunities and Policy Options*, 32 ICTSD INTELLECTUAL PROPERTY AND SUSTAINABLE DEVELOPMENT SERIES. 3, (2010).
[3] Bernard M. Hoekman, Keith E. Maskus & Kamal Saggi, *Transfer of Technology to Developing Countries: Unilateral and Multilateral Policy Options* (Working Paper, 2004), *available at* http://www.betsaonline.com/SystemAnalysis/TransferTechnology.pdf .
[4] David M. Haug, *The International Transfer of Technology: Lessons that East Europe can Learn from the Failed Third World Experience*, 5 HARVARD JOURNAL OF LAW & TECHNOLOGY. 209, 213- 217, (1992).
[5] David M. Haug, *supar note 4*, at 212.
[6] Yong S. Lee, *Technology Transfer and Economic Development: A Framework for Policy Analysis, in* 1 TECHNOLOGY TRANSFER AND PUBLIC POLICY 22 (Yong S. Lee ed., 1997).
[7] Ibid.

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*."[1]

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.[2] In a similar vein, another scholar labeled TOT as "the transmission of know-how to suit local conditions . . . ."[3] 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 term. This being the case, the United Nations Conference on Trade and Development (UNCTAD) tried to define technology transfer as:

> "*...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.*"[4]

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.*"[5]

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 a 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*"[6]

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 term as it emphasizes on the application of the transferred technology for manufacturing a product, rendering a service or improving a process. As it is the case under UNICTAD'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 similar critics.

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,

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[1] 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%20_A%20Competition%20Law%20Analysis.pdf*

[2] David M. Haug, *Supra* note 4, at 212.

[3] Ibid.

[4] , 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 .

[5] Ibid.

[6] Investment Proclamation No. 769/2012, FEDERAL NEGARIT GAZETA, 18th Year No. 63, Art. 2 (10), (2012).

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.

1.2. 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."[1] 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."[2] 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.[3] Put differently, multinationals have much to gain from preventing the diffusion of their technologies to local firms.[4] 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."[5]

Nonetheless, 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, may benefit the host economy through the backward and forward linkages they generate.[6] The suppliers of the TNCs may be local firms (backward linkages). In this case, TNCs will be forced to provide technical assistance, training and information to the local firms to raise the qualities of their supplier's products.[7] 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.[8] 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 forms 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 in to 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.[9] This implies that FDI may bring about technology spillover because of its demonstration effects.[10] It must, however, be noted that the

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[1] 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 .
[2] David M. Haug, *Supra* note 4, at 215.
[3] Ibid.
[4] Kamal Saggi, *Trade, Trade, Foreign Direct Investment, and International Technology Transfer: A Survey*, 17 THE WORLD BANK RESEARCH OBSERVER 191, 209 (2002).
[5] David M. Haug, *Supra* note 4, at 215.
[6] Kamal Saggi, *Supra* note 17, at 212.
[7] United Nations, *supra* note 11, at 14.
[8] Kamal Saggi, *Supra* note 17, at 212.
[9] Alper Sönmez & M. Teoman Pamukçu, *Foreign Direct Investment and Technology Spillovers in the Turkish Manufacturing Industry* 10 (TEKPOL Working Paper Series 11, 2003).
[10] Kamal Saggi, *Supra* note 4, at 209.

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.[1]

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 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."[2] 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.[3]

Thirdly, the presence of TNCs may bring about technology transfer through labor mobility. The idea here is that the presence of TNCs crates 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.[4] 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.[5]

At this juncture, it must not be left unmentioned 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."[6]

The other most important channel of TOT is turnkey package. Under the turn key package method of TOT, a foreign company provides machinery, buildings, management, expertise, and production plan.[7] The technology supplier's responsibility is the execution of the total work, including developing the industrial complex, its design, procurement of equipments and 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.[8] 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".[9]

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.[10] 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.[11] 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.[12] Even in cases of such type of

[1] Alper Sönmez & M. Teoman Pamukçu, *Supra* note 22, 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."

[2] 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

[3] Ibid.

[4] Id, at 8-9.

[5] Kamal Saggi, *Supra* note 17, at 209.

[6] Organisation for Economic Co-Operation and Development (OECD), *supra* note 14, at 9.

[7] David M. Haug, *Supra* note 4, 215.

[8] Joseph Kunkuta, Technology and the Legal Framework of its Transfer in Zambia 86 (1990) (unpublished LLM thesis, University of Zambia, Faculity of Law).

[9] David M. Haug, *Supra* note 4, at 215.

[10] Joseph Kunkuta, *Supra* note 31, at 83.

[11] Ibid.

[12] 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%20%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

arrangement, another big problem remains with turnkey contracts. Technology suppliers sale the entire technology package, giving the technology recipient no opportunity to select only the parts of that package that they actually needed.[1]

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.[2] It involves the purchase of production rights which are protected by IP rights and, in many cases, the provision of technical assistance and know-how which are needed to adapt and adopt the technology.[3] As such, it includes patent licensing, TOT agreements and technical assistance agreements.

Literatures assert that, 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.[4] 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.[5]

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.[6] In such type of contractual arrangements, each party is supposed to provide some advantage that reduces the cost of joint operation.[7]

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.[8] 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.[9]

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. 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.[10] 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 FDI.[11] The investment laws of some countries even oblige the foreign partner to contribute some sort of technology to the joint venture.[12]

International trade is 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.[13] According to the proponents of this assertion "[t]rade as a channel for TT involves imports of goods and services — especially capital goods and high tech products – and export by firms from developed

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.")

[1] David M. Haug, *Supra* note 4, at 215.

[2] Farok J. Contractor, INTERNATIONAL TECHNOLOGY LICENSING: COMPENSATION, COSTS AND NEGOTIATION 3 (1981)

[3] Dominique Foray, *supra* note 25, at 35.

[4] David M. Haug, *supra* note 4, at 215.

[5] Ibid.

[6] Id, at 216.

[7] Dominique Foray, *Supra* note 25, at 34.

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

[9] Dominique Foray, *Supra* note 25, at 34.

[10] C.G. Weeramantry, *Human Rights, Technology, and Development , in* 151 HUMAN RIGHTS AND SCIENTIFIC AND TECHNOLOGICAL DEVELOPMENT 161 (C.G. Weeramantry ed., 1990).

[11] Dominique Foray, *Supra* note 25, at 35.

[12] John H. Barton, *Supra* note 35, at 37.

[13] Maria Anna Corvaglia , South–South Technology Transfer Addressing Climate Change 7, *available at* http://www.nccr-climate.unibe.ch/conferences/climate_economics_law/papers/Corvaglia_MariaAnna.pdf

countries to lesser developed countries."[1]

In fact, the import of high- tech products and capital goods may foster local invention and technological capability through reveres engineering of the imported goods. By the same taken, 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.[2] 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.[3] Since the sub contractor manufactures the final product under the principal's 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 sub-contracting 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.[4]

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.[5]

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.[6] 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.[7] 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.[8]

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.

Broadly speaking, there are three types of franchising; trade name franchise, product distribution franchise and pure franchise.[9] In trade name franchising, the franchisee purchases the right to become identified with the franchisers trade name.[10] 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.[11]

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.[12] This stipulation, however, will not make all trademark licensing

[1] Dominique Foray, *Supra* note 25, at 32.
[2] Ibid.
[3] 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."
[4] Ibid.
[5] 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
[6] Ibid.
[7] Ibid.
[8] Ibid.
[9] , Types of Franchising, https://www.boundless.com/business/textbooks/boundless-businesstextbook/types-of-business-ownership-6/franchising-52/types-of-franchises-257-1725/
[10] Ibid.
[11] Ibid.
[12] Trade Mark Registration and Protection Proclamation No. 501/ 2006, FEDERAL NEGARIT GAZETA, 12th Year No. 37, Art 30, (2006)

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.[1] 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.[2] 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 physical plant, the methods of operation, a marketing strategy plan, a quality control process, and the necessary business services.[3] 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.

1.3. Restrictive Conditions in Technology Transfer Agreements

As explained under the preceding section, 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.[4] 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 is devised to briefly explain the most common types of restrictive terms and conditions.

1.3.1. Tie- Ins

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.[5] 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.[6] "An inevitable effect of these tie-ins is to prevent the technology acquirer from obtaining these ancillary goods and services from the most competitive sources of supply."[7]

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.[8] Overpricing of inputs in this way constitutes a 'hidden' cost of the transfer of technology process.[9] 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.[10] This creates a perpetual dependency relationship between the technology suppler and recipient, and thus makes little room for freedom of action by the latter.[11] Furthermore, tin-ins clauses are anti- competitive.

1.3.2. Export Restrictions

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

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[1] _____, *supra* note 57.
[2] Ibid.
[3] Ibid.
[4] 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 .
[5] Id, at 23.
[6] Ibid.
[7] Ibid.
[8] 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), *available at* http://go.warwick.ac.uk/wrap/39315 .
[9] Ibid.
[10] Ibid.
[11] Ibid.

to designated markets, and to market share arrangements implied between parent and subsidiary enterprises."[1] 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 in invest new production facilities.[2]

1.3.3. **Competition Restrictions**

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.[3] They may also prevent the adaptation of the technology to suit local market needs.

1.3.4. **R & D Restrictions**

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.[4] They may also hamper incremental innovation.

1.3.5. **Quota Restriction**

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' competiveness in the international market in one way or another. As a result, the TOT regulatory system of most developing countries prohibits their inclusion.

2. Regulation of TOT at the International Arena

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.[5] 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.[6] This in turn demands the analysis of international agreements that relate with TOT.

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.

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.

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[1] 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 .

[2] George Sipa-Mjah Yankey, *Supra* note 64, at 51.

[3] Bernard M. Hoekman, Keith E. Maskus & Kamal Saggi, *Supra* note 72, at 24.

[4] Id, at 23.

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

[6] John H. Barton, *supra* note 31, at 9

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.[1] 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. 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.*"[2]

The above quoted provision entitles nationals of the union to enjoy same right as nationals of the other union may drive 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.[3]

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.[4]

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 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

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[1] Ibid.

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

[3] 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 .

[4] Ibid.

country, the invention may be 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 he 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 thing, 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*."[1]

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.[2]

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.[3] These negative effects of the above provision clearly suggest that developing countries do not derive any merit from the sustenance of this provision.[4] 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.[5] The convention further lists down acts that constitute unfair competition and, thereby, need to be prohibited by national legislations. In particular, Art 10*bis* (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."[6] As this stipulation, state parties of the Union are 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.[7] 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 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.[8] Even if these grounds are fulfilled, a compulsory license may not be grated to a third party if the title holder justifies his/her inaction by "legitimate

[1] Paris Convention, *Supra* note 79, Art. 5*quarter.*
[2] George Sipa-Mjah Yankey, *Supra* note 68, at 103.
[3] Id, at 104.
[4] Ibid.
[5] Paris Convention, *Supra* note 79, Art. 10*bis* (1).
[6] Id, Art. 10*bis* (3) (1).
[7] 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 .
[8] Ibid.

reasons".[1]

The Paris convention recognizes the right of state parties 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.*"[2]

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 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 is the diffusion of technology in to the host country.

Nonetheless, 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 strange. In this regard, Art. 5A (4) can be mentioned by way of example. This provisos 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.*"[3]

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 prevision. 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.[4]

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 provisos do not crate conducive environment for TOT. Accordingly, there are scholars who conclude that developing countries, especially LDCs, do not drive any significant benefit from the international patent system, especially as regards technology transfer.[5]

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.[6] However, while LDCs do accept the view that the cost involved in their participation in the international patent system greatly outweighs the benefits, they

[1] Ibid.
[2] Paris Convention, *Supra* note 29, Art. 5A (2)
[3] Id, Art. 5A (4)
[4] Getachew Menigiste, *The Impact of the International Patent System on Developing Countries*, XXIII JOURNAL OF ETHIOPIAN LAW 161, 172 (2009).
[5] George Sipa-Mjah Yankey, *Supra* note 68, at 104
[6] Ibid.

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.[1]

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 Conversion was dead locked at the 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.[2] 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'."*[3]

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. [4]

With the view to advance their concerns like other interest groups, developing countries proposed their own draft text during the TRIPS negotiation.[5] The concerns of developing countries as stated under this draft are finally incorporated under Art.7 and Art.8 of the TRIPS 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.[6]

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 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*

[1] Ibid.
[2] Peter K. Yu, *The Objectives and Principles of the TRIPs Agreement* 2 (2009), *available at* http://www.peteryu.com/correa.pdf
[3] Id, at 3.
[4] Id, at 8.
[5] 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'.")
[6] Ibid.

conducive to social and economic welfare, and to a balance of rights and obligations."[1]

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;
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."*[2]

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.[3] 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.[4] Others, on the other hand, having regard to the location of the provision, discarded this argument. In this 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.'[5]

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 grater wait in the process of interpretation and implementation of the agreement. This implies that the objectives of the TRIPS Agreement have grater wait than general statements of intent as usually expressed in the preamble of a treaty. [6] 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.[7]

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 stick 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.[8]

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.

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[1] 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]
[2] Peter K. Yu, *supra* note 97, at 10.
[3] Id, at 9.
[4] Id, at 10.
[5] Ibid.
[6] Id, at 11.
[7] Id, at 12.
[8] Ibid. (This is in fact "an argument commentators have made with respect to exceptions and limitations in the domestic intellectual property system".)

The inclusion 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 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."*[1]

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.*"[2]

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 provisions of Art. 8 allow 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:

> *"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."*[3]

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 violet 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'."*[4]

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.

[1] TRIPs Agreement, *supra* note 102, Art. 8 (1).
[2] Id, Preamble.
[3] Id, Art. 8 (2).
[4] Peter K. Yu, *supra* note 97, at 18.

During the TRIPs negotiation, developing countries[1] 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 alone distorted or impeded international trade."[2] 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.[3] 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.[4] In this regard, the use of Art. 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 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 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."[5] The contextual analyses of the provisions support this suggestion. Yet, it is difficult for s complainant to provide such proof in reality.[6] 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."*[7]

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.

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[1] 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.")
[2] Id, at 18- 19.
[3] 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.
[4] Peter K. Yu, *supra* note 97, 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."
[5] Id, at 27.
[6] Ibid.
[7] Id, at 28.

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 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.[1] 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 sub Art.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;[2] 2) conditions preventing challenges to validity;[3] 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 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.[4] 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."*[5]

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[1] TRIPs Agreement, *supra* note 102, Art. 40 (1)

[2] 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".

[3] 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".

[4] 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.

[5] TRIPs Agreement, *supra* note 102, Art. 66 (2).

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 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.[1]

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.[2] 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.[3]

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.

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. 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.

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.[4] A close looks at to the previsions 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. Nonetheless, 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:

> *"[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...."*[5]

[1] S*ee infra,* at 32.
[2] 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), *available at* http://unctad.org/en/docs/iprs_pb20092_en.pdf .
[3] WTO Ministerial Decision on Implementation-Related Issues and Concerns Para. 11 (WT/MIN(01)/17) (14 November 2001)
[4] TRIPs Agreement, *supra* note 102, Art. 31.
[5] Id, Art. 31 (b).

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 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."*[1]

There seems no relation between the grant of compulsory license in case of public interest and TOT. The same holders 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.[2] 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.[3] 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."*[4]

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.[5] Put differently, in these countries, the local working requirement will be satisfied on the domestic market by import of products manufactured in other countries. In one case, the European Court of Justice has endorsed this line of thinking.[6]

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[1] Ibid.
[2] Id, Art, 31 (l) (i-iii).
[3] Carlos M. Correa, *supra* note 88, at 17.
[4] Ibid.
[5] 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".)
[6] 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

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.

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 inconsistence with the principle of national treatment (Art. III GATT) and the prohibition of quantitative restriction (Art. XI GATT).[1] The annex to the TRIMs Agreement contains illustrative lists that are labeled as incompatible with these obligations.[2]

A close looks at to 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 feely 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.[3] 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 Principe of National Treatment to the extent and in such a manner as Article XVIII of GATT 1994.[4] 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 the TRIMs Agreement. From the perspective of TOT, local content programs are useful instruments to facilitate development and

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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))

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

[2] 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.

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."

[3] *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.

[4] *See* TRIMs Agreement, *supra* note 88, Art. 4.

diffusion of new technologies.[1] 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.[2] 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.[3]

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.[4] 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. [5]

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 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. Analysis of TOT Related Ethiopian Laws

The present section 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.

3.1. 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, No. 123/ 1995." The country still applies this proclamation to govern the patent system. 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

[1] John H. Barton, *supra* note 35, at 40.
[2] Ibid
[3] Maria Anna Corvaglia, *supra* note 48, at 32.
[4] Id, at 31.
[5] Ibid.

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.[1] 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.[2] 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 predicable 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."[3] 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 crate the platform for local firms to distingue 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 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;"*[4]

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

[1] Harear protoclaol Harare Protocol on Patents and Industrial Designs Within the Framework of the African Regional Industrial Property Organization (ARIPO), (ast amended 2013), I.L.M. Section 3 (9)
[2] Inventions, Minor Inventions and Industrial Designs, Proclamation, No. 123/ 1995, NEGARIT GAZETA, 54thYear No. 25, Art. 3 (4) , (1995) [hereinafter the Patent Proclamation]
[3] Id, Art. 3 (5)
[4] Id, Art 9 (4) (b).

be a foreigner, refuses to deal with them, they may require for the 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.[1] 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.[2] 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 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"[3] 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 hinders scientific and technological progress. Understood in this sense, the experiment use exception carves out a "safe harbor" for research activities that might otherwise be blocked by patents.[4] 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 arise 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).[5] 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.[6]

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 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. "

[1] United Nations, *supra* note 72, at 26.
[2] Id, at 29.
[3] Patent Proclamation, supra note 147, Art. 25 (1) (b).
[4] 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), *available a*t http://unctad.org/en/docs/diaepcb200913overview_en.pdf.
[5] Ibid.
[6] Ibid.

On the contrary, a close looks at to 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."*[1]

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 needs to be the preponderant purpose, while the generation of revenue may constitute a secondary purpose."*[2]

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.[3] 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.[4]

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 heighted 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 new[5], involve inventive step and industrially applicable.[6]

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

[1] Id, at 26-27.
[2] Id, at 27.
[3] Nonetheless, it is equally important to take outmost care not compromise the normal exploitation of the invention in the course of adopting a broader scope of the experimental use exception.
[4] United Nations, *supra* note 153, at 27.
[5] Ermias Biadgleng, *Domestic Legislation and Court Decisions on Intellectual Property Rights and Public Health in Ethiopia* 2 (UNCTAD Country Analysis, December 2011), *available at* http://mpra.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.)
[6] *See* The Patent Proclamation, *supra* note 96, Arts.18 & 19

to prove the working of the invention each year as from the third year after the right is granted.[1]

It must be noted that the patent of introduction regime of Ethiopia is not compatible to the TRIPs Agreement. 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.[2] These technologies would not have enter in to the country had had the country didn'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.[3]

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.[4] As opposed to 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.[5] 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.[6] 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.[7] 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. [8]

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 grated 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

[1] Id, Art. 21
[2] Interview with Ato Tewdrhos Nigussie, Senior Patent Expert of the Ethiopian Intellectual Office, in Addis Ababa (February 2, 2015).
[3] The Patent Proclamation, *supra* note 147, Art. 29
[4] Id, Art. 39 (1)
[5] Id, Art. 38 (2)
[6] Id, Art. 38 (2)
[7] Id, Art. 44
[8] *See* Id, Art. 45

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 patens may contribute directly to the transfer of technology to the host country is through the exploitation of the patented technology in the host country by the foreign patent owner himself/herself or with his/her consent by third parties.[1] 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.[2]

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.[3] In fact, it depends on the self reporting of patent holders to extend the period of protection for a patent[4]

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 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 inconsistence with the objectives of the patent law of the country, more specifically, the objective to encourage the transfer and adaption of foreign technology.

Furthermore, the proclamation fails to address a number of other important anti-competition practices

[1] Getachew Menigiste, *supra* note 93, at 170.
[2] The Patent Proclamation, *supra* note 147, Art. 29 (1).
[3] Interview with Ato Twedrhos Nigussie, *supra* note 163
[4] Ibid.

and IPRs abuses. As stated above, the TRIPs Agreement enumerates exclusive grant back conditions and conditions preventing challenges to validity as anti-competitiveness.[1] 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 experiential 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.

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.

3.2. 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.[2] 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."*[3]

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 with the view to address the issue whether the investment law crated 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).[4] Sub Art. 2 of the same provision lists the investment areas in which

[1] The Patent Proclamation, *supra* note 147, Art. 4 (2).
[2] Investment Proclamation No. 769/2012, FEDERAL NEGARIT GAZETA, 18th Year No. 63, preamble, (2012).
[3] Id, Art. 5 (8).
[4] 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.")

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."[1]

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 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."[2]

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.[3] It also entitles them to, in respect of their approved investment, to make the remittances out of Ethiopia.[4] Furthermore, it requires the investment agency to provide one-stop shop services.[5] 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.

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.[6] If the investor is investing in architectural or engineering works or related technical consultancy services, technical testing and

[1] id, Art. 6 (2).
[2] Id, Art 3 (1).
[3] Id, Art. 25.
[4] Id, Art. 26.
[5] Id, Art. 30.
[6] Id, Art. 11 (2)

analysis or in publishing work, the minimum capital required of will be reduced by USD 100,000.[1] 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, 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.

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 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.[2] 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.[3]

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

[1] Id, 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.")
[2] Id, Art. 6 (1).
[3] Id, Art. 7.

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 my 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.

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.[1] 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.[2]

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.[3] This extension may only be granted up on the approval of senior government officials.[4]

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.[5] The Ministry grants and extends work permits having regard to the educational background of the expatriate.[6]

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.[7] 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 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.[8]

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

[1] Investment Proclamation No. 769/2012, *supra* note 136, Art. 37 (1).
[2] Id, Art. 37 (2)
[3] Interview with Ato Mohamedur Yesuf, Licensing and registration Directorate Director of the Ethiopian Investment Commission, in Addis Abeba (January 30, Addis Abeba).
[4] Ibid.
[5] Labour Proclamation No. 377/2003, FEDERAL NEGARIT GAZETA, 10thYear No. 12, Art. 174 , (2003).
[6] 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).
[7] Investment Proclamation No. 769/2012, *supra* note 136, Art. 37.
[8] Interview with Ato Daniel Lemma, *supra* note 192.

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.

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."[1] Investment in technology, i.e expenditure of capital to generate technology, doesn't fall within the ambit of this definition.

3.3. Franchising 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.[2] 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.[3]

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.

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.[4] 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.[5]

Now, the question is whether a franchise agreement for the use of a trademark by an Ethiopian firm

[1] Investment Proclamation No. 769/2012, *supra* note 178, Art. 2(1).
[2] http://www.Franchoise.com/franchising-consulting-reques?origin=home&destination=consultGlobal
[3] Ibid.
[4] *I*nvestment Proclamation No. 769/2012, *supra* note 178, 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.")
[5] Trademark Registration and Protection Proclamation No. 501/2006, FEDERAL NEGARIT GAZETA, 12thYear No. 14, Art. 29 (2), (2006). (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.")

may has 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,

> *"[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."*[1]

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.[2] 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.[3]

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 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 luck 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.

3.4. Trade Secret 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 may be considered a trade secret.[4] 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.[5] 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

[1] Id, Art. 30.
[2] Id, Art 31 (1) .
[3] Id, Art. 31 (2) (a).
[4] _____, What is a Trade Secret?, http://www.wipo.int/sme/en/ip_business/trade_secrets/trade_secrets.htm
[5] Ibid.

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."*[1]

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.[2] 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 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 compaction 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.[3] 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.[4] 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 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

[1] Ibid.

[2] United Nations, *supra* note 153, at 27. ("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.")

[3] Trade Competition and Consumers Protection Proclamation No. 813/2014, FEDERAL NEGARIT GAZETA, 20th Year No. 28, Art. 42 (3), (2013).

[4] The Commercial Code of the Empire of Ethiopia No. 3/1960, NEGARIT GAZETA, 19thYear No. 3, Art. 133, (1960). (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 Civil Code, *supra* note 76, 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.")

by the unfair competitor.[1] 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."*[2]

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.

Conclusion and Recommendation

The writer this paper analyzed the country's laws that have direct and indirect impact on the inflow and dissemination of foreign technologies. The writer finds no piece of legislation that regulate TOT agreements. The analysis of some laws which relates with TOT 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 dissimilation of foreign technologies. The absence of adequate incentive in the investment law of the country that may encourage foreigners to transfer technology trough joint venture is another finding. Furthermore, it identified that the absence of comprehensive franchise and trade secretes protection laws will be an obstacle for foreigners to transfer their technology to Ethiopian partners through franchise and trades secretes agreements.

Hence, the writer of this paper recommends that the Ethiopian 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.

- Determining the terms and conditions of TOT agreements should not be left to the absolute autonomy of the parties to the agreement. TOT agreements are not ordinary agreements. They have far reaching consequence in national security, public health, and economic and technological development. Because of this many country subject TOT agreements to close scrutiny of government entities. There is no reason to adopt lenient TOT regulation in Ethiopia contrary to this general trend. Accordingly, it is high time to 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 to encourage investors to involve in TOT activities. The writer of this paper suggest that persons who engage in TOT activities should be entitled to addition income tax exemption from 1 year to 3 years having regard to the relevance of the transferred technology to the priority needs of the country.
- The draft TOT regulation should also establish a special governmental agency that monitor and follow up TOT activities. In its present form, the draft empowers MoST to follow up all phases TOT processes, from technology search to disposition. Yet, since the ministry is an organ which is tied up with bureaucratic hurdles, and, as a result, would not effectively discharge these important responsibilities, a special organ should be established. 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. Restrictive patent licensing practices have the effect of hindering the adaptation and dissemination of the licensed technology. This effect is contrary to the very purpose of adopting the patent legislation as one of the objectives of introducing the patent regime is speeding up the dissemination of technologies. Since the patent and the competition laws of the country do not prohibit restrictive patent licensing practices, patentees may license their agreements under terms and conditions that defeat the very purpose of the patent law. Hence, the patent law should be amended so as to include a provision that 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 requires the patent applicant to disclose at least one mode of carrying out the invention. The patent applicant may disclose the mode of carrying out the invention which makes it

[1] Ibid, Art. 134 (1) (a).
[2] The Civil Code of the Empire of Ethiopia, Art. 2163.

difficult to understand the technology claimed under the patent. The patent law could avoid the problem and, thereby, help local technology users by requiring patent applicants to disclose the best mode of carrying out the invention. Accordingly, it is recommendable to amend the patent legislation so as to adopt this requirement.

- The patent law should further be amended with the view to widen the scope of the experimental use exception. The patent law limited the scope of the experimental use exception to cases of basic research. It excludes commercial research even if it primarily aimed at the creation of new knowledge. Since commercial researches result in more technology spillover, the scope of the experimental use exception should be widen 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. Under the present legal arrangement, a foreigner who invests jointly with Ethiopian partner is entitled to only a reduction of the minimum capital he/she is required to allocate for a single investment by USD 50,000. This amount is not adequate enough to influence the decision of a foreigner to invent in a wholly owned FDI or jointly with Ethiopian partner. In addition to the reduction, income tax exemption to a certain period of time and other preferences should be considered.
- The administrative and criminal penalties imposed on trade secretes protection infringers should be reconsidered. The administrative penalty the infringer may face is a fine form 5% to 10 % his/her turnover. The criminal penalty is a fine from Birr 5,000 to Birr 50,000 and simple imprisonment. These penalties are not grave enough to deter a person from infringing the trade secrets of another. The Trade Competition and Consumer Protection Proclamation No. 813/2013 should be amended so as to specify sensible penalty on trade secretes infringers. Incidentally, the government should also consider enacting a specific bill on trade secrets protection.
- A comprehensive piece of legislation that governs franchising business should be enacted. Now days, the franchising business is subject to different rules scattered here and there under the investment proclamation, the trade mark proclamation and the patent law. This fragmentation of the rules in different legislation crates legal uncertainty. This legal uncertainty may make international franchisors hesitant to do business in Ethiopia. This, in turn, may hinder the country from reaping technologies that could inflow in to the country had there were legal certainty in the area of franchising business. Accordingly, it is advisable to enact a specific bill on franchising.
- On top of amending existing legislations 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. Otherwise, crating suitable legal environment by itself is meaningless as technological capability is crucial factor to master foreign technology.