

The Role of Foreign Investment in Promoting the International Transfer of Technology

Dr. Shaikhah Alhelali

Assistant Professor of Commercial Law
Kuwait International Law School

Abstract

The role of foreign investment is one of the key factors that assist the promotion of the international transfer of technology. Developing countries use the foreign direct investment (FDI) as a tool in which it can achieve economic development. At the same time such tool can assist in transferring technologies to developing countries.

The World Trade Organization (WTO) has incorporated some provisions related to international transfer of technology (ITT) under its Annexed Agreement Trade Related Aspects of Intellectual Property (the TRIPS Agreement). Therefore, a marriage started between trade and intellectual property. Such linkage between international transfer of technology and the economic development and growth resulted in increasing of the Foreign Direct Investment as a tool that developing countries required to promote in order to encourage the international transfer of technology.

The linkage between international transfer of technology and trade and economic growth is reflected in most of the provisions of the TRIPS Agreement. Therefore, exploring how can foreign direct investment be a tool to promote the international transfer of technology to developing countries an essential question that need to be answered.

Key words: technology, international trade, digital economy, developing country, economic development, intellectual property.

Introduction

No one denies the importance of international transfer of technology (ITT) to developing countries. Intellectual creativity plays a key role in economic development for all countries, worldwide⁽¹⁾. That is why countries protect all types of intellectual property (IP) rights, providing an IP owner a number of exclusive rights that are protected by law⁽²⁾. Whenever a country lacks effective legal protection for IP rights, it will be less attractive with regard to foreign investment in IP or patents⁽³⁾.

Transferring such technologies on the international level requires international enforcement to market transactions to developing countries. In fact, ITT is defined as “the process of transferring technology as a total system from the IP owner in a developed country (transferor) to a secondary user or recipient in a developing country (transferee) in a way that enables the transferee to absorb the technology and use all IP rights related to such technology independently for the purpose of achieving the TRIPS objectives”⁽⁴⁾. As per such transfer, the transferee can get access to technical information related to such technology.

The promotion of ITT increases the capabilities of developing countries and assists them to gain more independency. This will lead to more economic development. This is why the Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS Agreement) fosters, to some extent, ITT to developing countries through foreign direct investment (FDI).

The Legal concept of the International transfer of Technology (ITT) will be the subject of Part 1 of this research paper, in which have a look on the definition of international transfer of technology in the related conventions, treaties and agreements, in addition to some international concerned organizations such World Intellectual Property Organization (WIPO), World Trade Organization (WTO), The Organization for Economic Co-Operation and Development (OECD)...etc.

Moving to Part 2 FDI as a tool for promoting International Transfer of

(1) Suerie Moon, ‘Meaningful Technology Transfer to the LDCs: A Proposal for a Monitoring Mechanism for TRIPS Article 66.2: ICTSD Programme on Innovation, Technology and Intellectual Property. ICTSD’ (2011) <<http://ictsd.org/downloads/2011/05/technology-transfer-to-the-lDCs.pdf>> accessed 11 January 2017.

(2) WIPO, ‘What is Intellectual Property?’ (WIPO-Administered Treaties, n.d.) <http://www.wipo.int/edocs/pubdocs/en/intproperty/450/wipo_pub_450.pdf> accessed 12 February 2017.

(3) Daniel J Gervais, ‘Intellectual Property, Trade & Development: The State of Play’ [2005] 74(2) Fordham Law Review 505-535

(4) Shaikhah Alhelali, *The International Transfer of Technology under the TRIPS Agreement*. Unpublished manuscript, University of Nottingham for the degree of Doctor of Philosophy at the School of Law, 2017.

Technology (ITT). This includes highlight of the most common FDIs. Lastly, the conclusion with some recommendations will be proposed.

Part 1- The Legal Concept of International Transfer of Technology (ITT) to Developing Countries

Looking deeply in the existence definitions in literature about the ITT leads to having several definitions for the ITT in a way that it seems to be difficult to differentiate between ITT and technology diffusion. A developing country has to know what the transfer contents are and how can it be achieved and when can that be. Defining ITT is a key part of any research related to how to achieve economic development through ITT. Such a definition will avoid the analysis and evaluation of situations that do not have any linkage to ITT.

Many international agreements and treaties, in addition to specialized institutions and organizations in the same field try to address the importance of ITT, how to promote it and its effects on developing countries and least developing countries (LDCs). Nevertheless, rarely we can find a definition of the ITT that enables us to build a clear understanding of what the concept is really about and how can it be achieved. Promoting ITT to developing countries requires as primary step to build a clear understanding of the concept of ITT.

ITT must be dealt with as a global package or a total system. the licensee (host developing country) is expected to obtain all information, technical assistance, IP rights, equipment... etc. and then enabling the licensee to produce the same, either the technology itself or the products or equipment or services that have the same quality standards of the licensor with the licensor's technology⁽⁵⁾.

It is important to ensure that contents of this total system or global package or total system shall be left open 'until the goal is achieved'⁽⁶⁾. The contents of the ITT shall include various types of transactions like the assignment, sale and licensing of all forms of IP and patents, know-how and technical expertise, whenever applicable. For instant, it must clearly specify all related forms of 'feasibility studies, plans, diagrams, models, instructions, guides, formulae, basic or detailed engineering designs, specifications and equipment for training, services involving technical advisory and managerial personnel, and personnel training'⁽⁷⁾.

(5) ICC, *ICC International Technology Transfer Contract* (ICC Publication No 674 2009) 9–10.

(6) *ibid.*

(7) UNCTAD, <Transfer of Technology> [2001] n.d UNCTAD Series on Issues in International Investment Agreements <http://unctad.org/en/docs/psiteiitd28.en.pdf>, accessed 9 September 2016.

Depending on the dynamic nature of the technology itself, a full bundle of technology might be required sometimes in order to produce the same product. In other types of technologies, a product may require different types of technology, for example, a digital camera may require different types of technology for image capture, storage, transmission and so on⁽⁸⁾. Also, with respect to software, a separate application would usually constitute a distinct technology on this basis⁽⁹⁾.

1.1.1: The TRIPS Agreement:

A successful ITT shall achieve the objectives stated in the TRIPS Agreement. Articles 7 and 8 state a set of objectives like:

- a) preventing any abuse of IP rights by their holders,
- b) resorting to practices that unjustifiably limit trade,
- c) the promotion of technological innovation,
- d) the encouragement of the transfer and dissemination of technology and the establishment of measures to protect public health and nutrition⁽¹⁰⁾.

To promote ITT in developing countries, we have to assure that the method used confirms the following:

- a) ITT is treated as total system or a global package.
- b) ITT provisions in the method of transfer address the objectives of the TRIPS agreement.
- c) The types of technology required must be in line with the state's economic development plans.
- d) The transfer must result in enabling the host developing country to produce the same technology independently.

Although the TRIPS Agreement includes some provisions related to ITT, to some contents, but it has not defined it. The provisions available in the TRIPS Agreement related to the responsibility of developed countries to provide technical support and cooperation. The TRIPS Agreement sets out a number of objectives in Article 7. The enforcement of IP protection should

(8) Steven D Anderman and John Kallaughner, *Technology Transfer and the New EU Competition rules: Intellectual Property Licensing after Modernisation* (Oxford UP 2006).

(9) *ibid.*

(10) TRIPS Council, *Special Discussion on Intellectual Property and Access to Medicines*, IP/C/M/31, (July 10, 2001) <https://docs.wto.org/dol2fe/Pages/FE_Search/FE_S_S009-DP.aspx?language=E&CatalogueIdList=90911&CurrentCatalogueIdIndex=0&FullTextSearch=>, accessed 15 November 2016.

contribute to the promotion of technological innovation and to the transfer and dissemination of technology, to the mutual advantage of producers and users of technological knowledge and in a manner conducive to social and economic welfare and to the balance of rights and obligations⁽¹¹⁾.

Therefore, technological innovation, the transfer and dissemination of technology, and the production and use of technological knowledge are the first three objectives, and their main focus is technological development. At the same time, these objectives may not affect all types of IP rights⁽¹²⁾. The two objectives related to social and economic welfare and the balancing of rights and obligations apply to all types of IP rights, as they have a broader context⁽¹³⁾.

The principles of the TRIPS Agreement are set out in Article 8, which is entitled 'Principles'. The principles are mentioned in two provisions of Article 8. Article 8.1 empowers Members of the WTO to adopt measures in the interests of the protection of public health and nutrition, and the promotion of the public interest in certain sectors of vital importance to their socio-economic and technological development. The measures that are adopted must be consistent with the provisions of the TRIPS Agreement⁽¹⁴⁾.

Article 8.2 states that appropriate measures, as long as they are consistent with the provisions of the TRIPS Agreement, may be needed for the prevention of the abuse of IP rights by right holders or the resort to practices that unreasonably restrain trade or adversely affect TOT⁽¹⁵⁾. It is important to note that the condition that any measures must be consistent with the provisions of the TRIPS Agreement exists only in the TRIPS Agreement: neither the Paris Convention nor the Berne Convention contains comparable statements⁽¹⁶⁾.

The objectives and principles of the TRIPS Agreement are of great importance as they reflect various issues that are important to developing countries. First, the objectives and principles actually include an express recognition of the policy objectives that are fundamental to the new international IP law established by the TRIPS Agreement. Moreover, the objectives and principles of the TRIPS Agreement address the wider public interest agenda and are not

(11) TRIPS Agreement (entered into force 1 January 1995) art 7.

(12) PK Yu, 'The Objectives and Principles of the TRIPS Agreement' (2013) < <http://scholarship.law.tamu.edu/cgi/viewcontent.cgi?article=1456&context=facscholar> > accessed 2 January 2016.

(13) *ibid*.

(14) TRIPS Agreement (entered into force 1 January 1995) art 8.1.

(15) TRIPS Agreement (entered into force 1 January 1995) art 8.2.

(16) World Intellectual Property Organization (WIPO), 'Implication of the TRIPS Agreement on Treaties Administered by WIPO' [2012] ND(ND) WIPO Publication No. 464 E 1-83.

just peripheral objectives and principles⁽¹⁷⁾.

1.1.2 The UNCTAD's Transfer of Technology Code:

It defines technology as the 'systematic knowledge for the manufacture of a product, for the application of a process or for the rendering of a service'⁽¹⁸⁾. When analysis this definition, it is understood that this type of definition excludes from its scope some important transactions that may include transfer of technology such as mere sale or lease of goods⁽¹⁹⁾.

1.1.3 The Organization for Economic Co-Operation and Development (OECD): OECD defines technology⁽²⁰⁾ as 'the systematic knowledge for the manufacture of a product, for the application of a process or for the rendering of a service, including any integrally associated managerial and marketing techniques'⁽²¹⁾.

We have to highlight that technology includes not only technical knowledge, know-how, organizational capacity, or methods that are essential to improve the existing processes or products but also it shall include entrepreneurial expertise and professional know-how⁽²²⁾.

1.1.4 The World Intellectual Property Organization (WIPO):

It defines ITT as "The process by which a technology, expertise, know-how or facilities developed by one individual, enterprise or organisation is transferred to another individual, enterprise or organisation. Effective technology transfer results in commercialization of a new product or service or in the improvement of an existing product or process"⁽²³⁾. In practice, what constitutes technology, as per its dynamic nature, can vary based on the culture and the level of development.

It is important to provide a definition that can be in line with the TRIPS objectives

(17) Alison Slade, 'Articles 7 and 8 of the TRIPS Agreement: A Force for Convergence within the International IP System' (2011) *The Journal of World Intellectual Property* Vol. 14, No. 6 413–440.

(18) *ibid.*

(19) *ibid.*

(20) The Organisation for European Economic Cooperation (OEEC) was established in 1948 to run the US-financed Marshall Plan for the reconstruction of a continent ravaged by war. Canada and the US joined OEEC members in signing the new OECD Convention on 14 December 1960. The Organisation for Economic Co-operation and Development (OECD) was officially born on 30 September 1961; see: OECD, 'History' (OECD, n.d) <<http://www.oecd.org/about/history/>> accessed 14 February 2017.

(21) MD Haug, 'The International Transfer of Technology: Lessons that East Europe can learn from the failed Third World Experience' (1992) *Harvard Journal of Law & Technology* 209.

(22) UNCTAD, 'UNCTAD Series on Issues in International Investment Agreements' (2001).

(23) WIPO, 'Overview of Contractual Agreements for the Transfer of Technology' (2013) <http://www.wipo.int/export/sites/www/sme/en/documents/pdf/technology_transfer.pdf> accessed 23 February 2017.

and achieve the real purpose of any transfer of technology from foreign investor to a developing country. Therefore, we can propose this definition⁽²⁴⁾:

A transfer of the technology as a total system from the IP owner in a developed country (transferor) to a secondary user or recipient in a developing country (transferee) in a way that enables the transferee to absorb the technology and use all IP and patents rights related to such technology independently for the purpose of achieving the TRIPS objectives.

In fact, there is confusion between ITT and technology diffusion. The definition set out here stands on three main issues as follows:

- a) the transfer shall be dealt with as a total system, so the content of the technology is important.
- b) the two main parties shall make this transfer: the developed and the developing country.
- c) “The objective of such a transfer is to build absorbing capacity through enabling the transferee to use all IP and patent rights, including the right to reuse, resell, and reproduce the same transferred technology in the future independently by the developing country”⁽²⁵⁾.

In contrast, technology diffusion provides general knowledge about the new technologies and its application in new market. Nevertheless, it does not transfer the technology to the transferee⁽²⁶⁾.

Part 2- FDI as a Mechanism of Promoting International Transfer of Technology (ITT)

2.1 Foreign Direct Investment (FDI):

Nowadays most of the developing countries set out its strategies and policies that encourage the promoting of FDI. Such promotion used to take the form of reducing restrictions and bans on foreign investment⁽²⁷⁾. Comparing this to

(24) Shaikhah Alhelali, *The International Transfer of Technology under the TRIPS Agreement- Thesis submitted to the University of Nottingham for the degree of Doctor of Philosophy at the School of Law*, 2017.

(25) Shaikhah Alhelali, *The International Transfer of Technology under the TRIPS Agreement- Thesis submitted to the University of Nottingham for the degree of Doctor of Philosophy at the School of Law*, 2017.

(26) Ibid.

(27) UNCTAD, *The Role of International Investment Agreements in Attracting Foreign Direct Investment to Developing Countries*, (2009: New York and Geneva) p.p 1:10 available online at: https://unctad.org/system/files/official-document/diaeia20095_en.pdf accessed 16 Sep 2020

the position before mid of 1980s there were a number of restrictive laws and regulations, in addition to controlling policies that limit FDI in developing countries⁽²⁸⁾.

Attracting FDI is a target that cannot be achieved without effective real contributions from both parties: investor and a developing country. Generally speaking, FDI is considered “an integral part of an open and effective international economic system and a major catalyst to development”⁽²⁹⁾. Taking into consideration that such target cannot be achieved if developing country had not that established a good and attractive legal and commercial framework for FDI. As this is essential in order to promote the high quality FDI to any developing country.

On the other hand, the foreign investor or developed country can contribute to facilitate developing countries to “access to international markets and technology, and ensure policy coherence for development more generally; use overseas development assistance (ODA) to leverage public/private investment projects”⁽³⁰⁾.

No one denies the importance of FDIs to developing countries to achieve economic development and welfare. Over the past two decades, the world noticed that both FDI and international trade have grown significantly⁽³¹⁾.

In fact, the United Nations has not international list or convention for developing countries. Nevertheless, it has list for LDCs, moreover it identifies developing regions and developed regions or areas⁽³²⁾. The WTO agreement identifies three groups of countries: developed, developing and least developed countries (LDCs). Nevertheless, the WTO has not defined these three groups.

As it is well known that the WTO doesn't provide specific lists for classifying countries according to their economic level. WTO members self-define themselves as either developed, developing or LDC, but any other member

(28) Ibid.

(29) OCED, *Foreign Direct Investment for Development- Maximising benefits, Minimising costs*, (2002: Paris) pp. 1:14

(30) OCED, *Foreign Direct Investment for Development- Maximising benefits, Minimising costs*, (Paris, 2002) pp. 1-14.

(31) World Economic Forum, *Foreign Direct Investment as a Key Driver for Trade, Growth and Prosperity: The Case for a Multilateral Agreement on Investment*, (2013: Swizerland) Available online at: https://www3.weforum.org/docs/GAC13/WEF_GAC_GlobalTradeFDI_FDIKeyDriver_Report_2013.pdf, accessed in 20 Sep 2020.

(32) UN Statistic Division, «Composition of Macro Geographical (Continental) Regions, Geographical Sub-regions, and Selected Economic and Other Groupings» (UN Statistic Division, n.d) <http://unstats.un.org/unsd/methods/m49/m49regin.htm#developed>, accessed 25 December 2016.

can challenge this definition⁽³³⁾. Kuwait declared itself developing countries under the WTO⁽³⁴⁾.

2.2 FDI and the international transfer of technology (ITT):

FDI is a traditional method used for promoting ITT to developing countries. In fact, it is the most favored one from the viewpoint of developed countries⁽³⁵⁾.

The importance of FDI, as a type of commercial dealing, has grown dramatically as a major form of international capital transfer over the past decade⁽³⁶⁾. In addition, it has become a major catalyst for development and an integral part of an open and effective international economic system⁽³⁷⁾.

On the other hand, developing countries look at FDI as an essential method for adopting new technologies in their local markets. Through the direct involvement of foreign partners, there are ample opportunities to transfer these new technologies directly to new markets⁽³⁸⁾. FDI, as a mechanism for transferring technology, can improve the host country's economy. In fact, it is considered to be an important source of new technology for the developing world. There some real-world examples that show how FDI has been successful; China is one of the countries that have 'established certain technological capabilities with the help of FDI'⁽³⁹⁾.

FDI facilitates ITT, but sometimes it focuses more on technology diffusion and not on ITT itself; thus, we need to look closely at the content of the technology transferred. In addition, FDI might come with a high cost with regard to the

(33) WTO, <Development: Definition. Who are the Developing Countries in the WTO?> (WTO: Development, n.d) https://www.wto.org/english/tratop_e/devel_e/d1who_e.htm, accessed 28 January 2017.

(34) WTO, <6 Ways the WTO can Help Countries Develop> (WTO: Help Countries Develop, 26 September 2016) https://www.wto.org/english/thewto_e/whatis_e/10thi_e/10thi06_e.htm, accessed 28 January 2017.

(35) MD Haug, 'The International Transfer of Technology: Lessons that East Europe Can Learn from the Failed Third World Experience' (1992) *Harvard Journal of Law & Technology* 209. See also: KE Maskus, 'Encouraging International Technology Transfer: UNCTAD-ICTSD Project on IPRs and Sustainable Development. USA: ICTSD and UNCTAD' (2004) < <https://www.iprsonline.org/resources/docs/Maskus%20-%20Encouraging%20International%20ToT-%20Blue%207.pdf> > accessed 11 January 2017.

(36) KA Froot, *Introduction to "Foreign Direct Investment"* Foreign Direct Investment (Vols 0-226-26621-4, University of Chicago Press 1993).

(37) OECD, 'Foreign Direct Investment for Development: Maximising Benefits and Minimising Costs' (2002) < <https://www.oecd.org/investment/investmentfordevelopment/1959815.pdf> >, accessed 15 December 2016.

(38) SY Tong, 'Foreign Direct Investment, Technology Transfer and Firm Performance' (Hong Kong, 2011) < http://hiebs2.hku.hk/public/working_papers/pdf/wp1023.pdf >, accessed 19 December 2016.

(39) UNCTAD, <Foreign Direct Investment, the Transfer and Diffusion of Technology, and Sustainable Development> [8 December 2010] General (ND) Trade and Development Board, UNCTAD <http://unctad.org/en/docs/ciem2d2_en.pdf> accessed 3 November 2016.

financial capabilities of developing and least developed countries. Further, there may be a lack of positive linkages between the partners in the FDI and the local communities⁽⁴⁰⁾.

Despite the benefits of FDI as a mechanism for ITT, most developing countries are not able to attract FDI flows for several reasons. Attracting FDI flows requires certain attractive strategies and policies for foreign investments in the host country⁽⁴¹⁾.

In addition, the role of the developed countries is crucial to ITT through FDI. Therefore, there have been measures, incentives and efforts by developed countries to improve the quality and quantity of FDI for developing and least developed countries⁽⁴²⁾.

Choosing the most appropriate technology to be transfer to the host developing country is one of the important steps in achieving a successful ITT to developing countries. This depends on a number of factors like:

- a) the expertise of developing country in this field,
- b) the nature of the technology required by the developing country,
- c) the size of the technological gap between the developed and developing countries,
- d) the capacity and the infrastructure of developing country,
- e) the quantity of technical information available in developing country,... etc⁽⁴³⁾.

ITT occurs through different types of legal relationships. As mentioned previously, the type is chosen based on different types of factors. Foreign Direct Investment is a channel for promoting the ITT in developing countries. ITT might be transferred through FDI in two different methods. This can take the form of either horizontal transfer or vertical transfer⁽⁴⁴⁾. The horizontal

(40) OCED, 'Foreign Direct Investment for Development: Maximising Benefits and Minimising Costs' (2002) < <https://www.oecd.org/investment/investmentfordevelopment/1959815.pdf> >, accessed 15 December 2016.

(41) Louise Groenbech, 'Technology Transfer through Foreign Direct Investment to Developing Countries –The Role of the Home Country Measures' [2001] (ND) ECLoS <<https://www.eolss.net/Sample-Chapters/C15/E1-31-03-01.pdf>> accessed 3 November 2016.

(42) *ibid.*

(43) Shaikhah Alhelali, *The International Transfer of Technology under the TRIPS Agreement- Thesis submitted to the University of Nottingham for the degree of Doctor of Philosophy at the School of Law*, 2017.

(44) Amy Jocelyn Glass and Kamal Saggi, *The Role of Foreign Direct Investment in International Technology Transfer*, 2008.

transfer occurs when FDI transfers the entire technology required to produce goods or equipment. On the other hand, the vertical transfer occurs in different stages of the production process across countries and the transfer is related to each stage⁽⁴⁵⁾.

2.3 forms of FDI:

There are many different types of FDIs but in for the objective of this research paper, the types of FDIs that is closely used as a tool of ITT will be addressed in order.

2.3.1 Franchising of Goods and Services Agreements

A franchise or distributorship agreement is a business arrangement whereby the reputation, technical information and expertise of one party is combined with the investment of another party for the purpose of selling goods or rendering services directly to the consumer⁽⁴⁶⁾.

According to some scholars, franchising is a variation of licensing, and in some ways is an improvement on mere licensing, because it is accompanied by an on-going relationship between the franchiser and the franchisee. A pure licensing arrangement includes a one-off sale of IP rights by the licensor to the licensee and the subsequent partial loss of control by the former of the quality of the goods produced by the latter under the license⁽⁴⁷⁾.

The concept or the scope of a franchising agreement is based on a trademark or service mark or a trade name and a special design of the premises. Usually, the license of such a mark or name by its owner is combined with the supply of know-how of the technical information, technical services, technical assistance or management services concerning production, marketing, maintenance and administration⁽⁴⁸⁾.

Such an agreement for distribution may involve some of the following drawbacks⁽⁴⁹⁾: government rules and regulations in the host country,

(45) Amy Jocelyn Glass and Kamal Saggi, *The Role of Foreign Direct Investment in International Technology Transfer*, 2008.

(46) () *ibid*.

(47) A. Shamsavari, O Adikibi and Y Taha, 'Technology and Technology Transfer: Some Basic Issues' (UK: Kingston University) < <http://eprints.kingston.ac.uk/6629/1/Shamsavari-A-6629.pdf> > accessed 1 January 2017.

(48) WIPO, 'Overview of Contractual Agreements for the Transfer of Technology' (2013) < http://www.wipo.int/export/sites/www/sme/en/documents/pdf/technology_transfer.pdf >, accessed 23 February 2017.

(49) A Shamsavari, O Adikibi and Y Taha, 'Technology and Technology Transfer: Some Basic Issues' (UK: Kingston University) < <http://eprints.kingston.ac.uk/6629/1/Shamsavari-A-6629.pdf> >, accessed 1 January 2017.

some difficulties in finding suitable franchisees, the lack of host country investment, control of the franchisees and the adaption of a franchise to local needs and trademark obstacles.

2.3.2 Joint Venture (JV):

A Joint Venture is a long-term partnership relationship in which mutual interests are exchanged between the partners involving the pooling of assets and joint management, and profit and risk sharing; it usually occurs between foreign partners and local contractors in the host country⁽⁵⁰⁾.

It includes a package of capital, assets, technology, know-how, technical expertise, patents, incorporated in the operation of the JV project⁽⁵¹⁾. That's why a JV is recognized as a vehicle to promote the international transfer of technology to developing countries as a host of such JV projects⁽⁵²⁾.

JV is called informal partnership which is built on partnership and cooperation between partners. It is a legal and commercial relationship that can be considered as a mechanism for ITT in developing country. Taking into consideration that ITT shall be well-identified in the JV agreement's terms and conditions such as the scope of work, IP provisions, the level of technical expertise required, training and technical assistance and support. All such terms and conditions shall set out an obligation of the international foreign investor to comply with and achieve in the developing country⁽⁵³⁾.

Hence, through this legal, technical and commercial relationship, which used to be a long period relation, a JV can be considered as mechanism that can lead to more independence in technological development for the host developing country as per the requirement of the WTO, the trade related aspect of intellectual property Agreement (so called the TRIPS Agreement).

(50) MD Haug, 'The International Transfer of Technology: Lessons that East Europe Can Learn from the Failed Third World Experience' (1992) *Harvard Journal of Law & Technology* 209.

(51) Philip J Wilson, 'The Legal Structures Governing Technology Transfers and Joint Ventures with the People's Republic of China' (1985) 3(1) *Berkeley Journal of International Law* <http://scholarship.law.berkeley.edu/cgi/viewcontent.cgi?article=1026&context=bjil>, accessed 4 November 2016.

(52) Richard Lihua and David Greenwood, 'Technology Transfer in International Joint Venture Projects in China' < [2000] ND(ND) University of Northumbria http://www.arcom.ac.uk/-docs/proceedings/ar2000-365-373_Lihua_and_Greenwood.pdf, accessed 4 November 2016.

(53) MD Haug, 'The International Transfer of Technology: Lessons that East Europe Can Learn from the Failed Third World Experience' (1992) *Harvard Journal of Law & Technology* 209.

2.3.3 Turn-key packages:

The supplier in the turn-key packages incorporates ITT within a package of services and supplies to be provided to the host developing country. Such services and supplies include tools, equipment, machinery, buildings, know-how, IP license, technical expertise ...etc. under what is so called a turn-key agreements to developing countries. The contents of services and equipment in the turn-key package agreements signed with representatives of host developing countries⁽⁵⁴⁾.

Turn-key packages have two options: either a transfer of new technologies within the entire services and equipment contract to the developing country or a mere sales-service agreement as a turn-key package not including the transfer of new technologies to the developing countries. While the second option may include some technologies related to the operation of the equipment⁽⁵⁵⁾.

2.3.4 Technology license agreement:

It can be considered as “a frequently used means of exploitation of IP, including in the process of commercialization of research results generated in universities and publicly funded research institutions”⁽⁵⁶⁾.

The technology license agreement is a method for the exchange of IP between two parties: the IP owner (licensor) and the recipient party (licensee)⁽⁵⁷⁾. There are different types of technology license contracts or agreements. Such licenses agreements may include only the technology required or it may include technology in addition to other types of IP that are essential to reproduce, make, use, market, and sell products based on such of technology. Those IP might be for example for new software product, it might include patent, copyright, trademark and trade secret⁽⁵⁸⁾.

(54) MD Haug, ‘The International Transfer of Technology: Lessons that East Europe Can Learn from the Failed Third World Experience’ (1992) *Harvard Journal of Law & Technology* 209.

(55) MD Haug, ‘The International Transfer of Technology: Lessons that East Europe Can Learn from the Failed Third World Experience’ (1992) *Harvard Journal of Law & Technology* 209.

(56) WIPO, ‘Successful Technology licensing’ (2015) Available at: https://www.wipo.int/edocs/pubdocs/en/licensing/903/wipo_pub_903.pdf, Accessed 7 Oct 2020.

(57) WIPO, ‘Successful Technology Licensing’ (WIPO 2015) <http://www.wipo.int/edocs/pubdocs/en/licensing/903/wipo_pub_903.pdf> accessed 3 November 2016.

(58) WIPO, ‘Successful Technology licensing’ (2015) Available at: https://www.wipo.int/edocs/pubdocs/en/licensing/903/wipo_pub_903.pdf, Accessed 7 Oct 2020.

Therefore, it is a key method that gives opportunity for developing countries to explore elements of IPs that required as assets for this new investment or business⁽⁵⁹⁾. The technology license agreement is the purest type for ITT. Since IP covers a wide range of items that can be subject to licensing, such as patents, copyrights, formulae, technology, know-how, trade secrets, industrial designs, trademarks, etc⁽⁶⁰⁾. The technology license agreement promotes limited transfer of some of the technology's contents, such as the know-how, patented technologies, or industrial designs, etc⁽⁶¹⁾.

In other words, a technology license agreement may include all types of IP elements that can allow developing countries to “create and market a product that complies with a technical standard or specification (e.g., a group of enterprises has agreed on a technical standard to ensure interoperability of devices and owners of IP essential to practice the standard pool their IP rights and license to anyone who wishes to use the standard on reasonable and nondiscriminatory terms)”⁽⁶²⁾.

A technology license agreement grants a person or an entity an authorization to use the patent⁽⁶³⁾. As per the IP laws such a grant is considered a waiver of some of the IP holder's rights. As a result, such waiver usually is limited by geographic area, time, or level of production⁽⁶⁴⁾. The IP owner waives its legal right to prevent any unpermitted or unauthorized production, use or sale of a product or service that violates a patent. The IP gave such waiver in return for a lump-sum payment. The lump sum payment is determined based on the technology's market value⁽⁶⁵⁾.

(59) WIPO, <Successful Technology Licensing> (WIPO 2015) http://www.wipo.int/edocs/pubdocs/en/licensing/903/wipo_pub_903.pdf, accessed 3 November 2016.

(60) WIPO, <Successful Technology Licensing> (WIPO 2015) http://www.wipo.int/edocs/pubdocs/en/licensing/903/wipo_pub_903.pdf, accessed 3 November 2016.

(61) Philip J Wilson, <The Legal Structures Governing Technology Transfers and Joint Ventures with the People's Republic of China> (1985) 3(1) Berkeley Journal of International Law <http://scholarship.law.berkeley.edu/cgi/viewcontent.cgi?article=1026&context=bjil>, accessed 4 November 2016.

(62) WIPO, 'Successful Technology licensing' (2015) Available at: https://www.wipo.int/edocs/pubdocs/en/licensing/903/wipo_pub_903.pdf, Accessed 7 Oct 2020.

(63) WIPO, 'Technology Transfer in Countries in Transition: Policy and Recommendations. Division for certain countries in Europe and Asia' (2012) < http://www.wipo.int/export/sites/www/dcea/en/pdf/Technology_Transfer_in_Countries_in_Transition_FINAL-21.08.2012.pdf>, accessed 1 February 2017.

(64) Philip J Wilson, <The Legal Structures Governing Technology Transfers and Joint Ventures with the People's Republic of China> (1985) 3(1) Berkeley Journal of International Law <<http://scholarship.law.berkeley.edu/cgi/viewcontent.cgi?article=1026&context=bjil>> accessed 4 November 2016.

(65) Philip J Wilson, <The Legal Structures Governing Technology Transfers and Joint Ventures with the People's Republic of China> (1985) 3(1) Berkeley Journal of International Law <http://scholarship.law.berkeley.edu/cgi/viewcontent.cgi?article=1026&context=bjil>, accessed 4 November 2016.

Licenses typically involve the purchase of production or distribution rights protected by certain IP rights and the technical information and know-how required for an effective exercise of those rights⁽⁶⁶⁾. Under the technology license agreement, permission may be granted for the purpose of using a patent, technology and trademarks, for example⁽⁶⁷⁾.

According to that, it might be divided into the following types based on the objective of the permission: Patent licenses agreement: whereby patents are usually licensed for the particular technology used in the manufacturing process⁽⁶⁸⁾; or Know-how licenses agreement: whereby a supplier demonstrates or delivers plans for a particular technology⁽⁶⁹⁾. And lastly, the related copy right, industrial design, software agreements ... etc.

The technology license agreement is actually appropriate for small companies in high-technology sectors. Since a small company does not have the financial resources to export or to encourage inward FDI⁽⁷⁰⁾. In addition, in a high-technology field, the chances are that the new technology can be upgraded, leaving the company in an uncompetitive position. Therefore, it will assist them to recoup the high costs of research and development (R&D) at a low cost⁽⁷¹⁾.

In fact, there some concerns related to IP licenses. In order to use this method for ITT, the status of the use or resale of the technology after the expiry of the license must be addressed⁽⁷²⁾. In addition, to meet the objectives of ITT, the licensee must have control over the quality of the product, which includes the IP items⁽⁷³⁾.

(66) KE Maskus, 'Encouraging International Technology Transfer: UNCTAD-ICTSD Project on IPRs and Sustainable Development. USA: ICTSD and UNCTAD' (2004) < <https://www.iprsonline.org/resources/docs/Maskus%20-%20Encouraging%20International%20ToT-%20Blue%207.pdf> >, accessed 11 January 2017.

(67) MD Haug, 'The International Transfer of Technology: Lessons that East Europe Can Learn from the Failed Third World Experience' (1992) *Harvard Journal of Law & Technology* 209.

(68) *ibid.*

(69) *ibid.*

(70) A Shamsavari, O Adikibi and Y Taha, 'Technology and Technology Transfer: Some Basic Issues' (UK: Kingston University) < <http://eprints.kingston.ac.uk/6629/1/Shamsavari-A-6629.pdf> >, accessed 11 January 2017.

(71) A Shamsavari, O Adikibi and Y Taha, 'Technology and Technology Transfer: Some Basic Issues' (UK: Kingston University) < <http://eprints.kingston.ac.uk/6629/1/Shamsavari-A-6629.pdf> >, accessed 11 January 2017.

(72) *ibid.*

(73) *ibid.*

If those concerns are taken into consideration, ITT pursuant to this method is very attractive to host countries, because it does not require capital investment by the licensor⁽⁷⁴⁾. Thus, this type of transfer will result in the avoidance of trade barriers imposed on the sale of plants and equipment, FDI or joint ventures. License agreements also may be used locally, within the firm or other firms, or internationally.

Conclusion and Recommendations:

As previously mentioned, the foreign investor looks for a country that effectively protects the IP rights and prevent intellectual infringements, illegal copying and violations to trade marks, patents and copy rights laws. This is in accordance with the requirements of the minimum standards of protection required by the WTO, in particular the TRIPS Agreement. Globalisation and the openness of international trade have played a role in this regard. The TRIPS Agreement clearly reflects the globalisation of IP by linking the protection of IP to trade. The TRIPS Agreement recognizes only rights that are trade-related; customary IP rights were not a dominant issue during the TRIPS negotiations⁽⁷⁵⁾.

In fact, developing countries face challenges in implementing the TRIPS Agreement, especially when complying with its minimum standards of IP protection⁽⁷⁶⁾. The TRIPS Agreement has not set out a legal obligation for countries to comply with an any particular standard of IP protection⁽⁷⁷⁾.

That's why it is important to have at least a basis for a relationship between developing effective standards for IP protection in a country and the promotion of ITT to that country. In this regard, does the IP protection contribute toward opening channels and opportunities for openness, development, and economic growth?

So, we suggest that this has to be clearly understood and discussed and agreed upon with foreign investor before signing the FDI. The role of IP protection in

(74) Philip J Wilson, 'The Legal Structures Governing Technology Transfers and Joint Ventures with the People's Republic of China' (1985) 3(1) *Berkeley Journal of International Law* <http://scholarship.law.berkeley.edu/cgi/viewcontent.cgi?article=1026&context=bjil>, accessed 4 November 2016.

(75) JJ Simons, 'Cooperation and Coercion: The Protection of Intellectual Property in Developing Countries' (1999) <http://epublications.bond.edu.au/cgi/viewcontent.cgi?article=1159&context=blr>, accessed 15 March 2014.

(76) Daniel J Gervais, 'Intellectual Property, Trade & Development: The State of Play' [2005] 74(2) *Fordham Law Review* 505-535

(77) JJ Simons, 'Cooperation and Coercion: The Protection of Intellectual Property in Developing Countries' (1999) <http://epublications.bond.edu.au/cgi/viewcontent.cgi?article=1159&context=blr>, accessed 15 March 2014.

encouraging ITT has to be evaluated in order to know exactly what is required from developing country.

This is necessary because knowledge is generally non-exclusive in nature, and it is not possible to prevent others from copying new inventions or technologies, even without the authorization of its creator or inventor. In simple words, nothing in law prevents others from creativity. Such incentive of creating increases whenever an invention is in market, and such inventions has a value. So, such invention is more likely among others to be copied or imitated, reducing the potential profits of the original creator⁽⁷⁸⁾.

Hence, the TRIPS Agreement incorporated ITT provisions and required all the signatory member nations to establish a minimum level or standard of protection for IP rights. The importance of the relationship between TOT and the protection of IP rights was explicitly recognized for the first time under the TRIPS Agreement. Although the TRIPS Agreement added a great deal to international aspects of both IP and TOT, the role of IP in encouraging TOT is still controversial. And as long as TRIPS is one of the annexed agreements to WTO Agreement therefore, it is linked to trade and economic growth.

So, Kuwait as a developing country is required to provide stricter IP protection in order to encourage ITT through FDIs. This is the approach of the developed countries, because such protection creates incentives for international investment and trade in the developing countries⁽⁷⁹⁾. The developed countries' argument about providing a stricter IP protection is based also by the idea that the marriage between trade and IP processes under the TRIPS Agreement has been and will continue to be very beneficial to both trade and IP protection, in addition to benefiting developed and developing countries as well by promoting cross-border flows of technology from the developed to the developing countries⁽⁸⁰⁾.

Moreover, the enforceability of IP protection in developing countries creates a sufficient incentive for transferring of technology to developing country⁽⁸¹⁾.

(78) R Falvey and others, *The Role of Intellectual Property Rights in Technology Transfer and Economic Growth: Theory and Evidence* (UNIDO 2006). http://www.unido.org/fileadmin/user_media/Publications/Pub_free/Role_of_intellectual_property_rights_in_technology_transfer_and_economic_growth.pdf, accessed 1 November 2016.

(79) EH Smith, 'Worldwide Copy Right Protection Under the TRIPS Agreement' in *International Intellectual Property Law & Policy* (Vol 3, Juris Publishing 1998) 54.

(80) Hanns ullrich, Reto M Hilty, Matthias Lamping, and Josef Drexl, *TRIPS plus 20: From Trade Rules to Market Principles* (2016) 344.

(81) CM Correa, 'Can the TRIPS Agreement Foster Technology Transfer to Developing Countries?' in KE Maskus and JH Reichman (eds), *International Public Goods and Transfer of Technology: Under a Globalized Intellectual Property Regime* (Cambridge 2005) 227.

Also, the effect of strong IP protection in terms of access to technology should also be taken into consideration.

In contrast, developing countries has to improve the IP protection in a way that does not limit or hinder the transfer of technology. AS a stronger IP protection may lead to limited access to technology, although encouraging ITT requires access to the technology.

Therefore, developing countries may face challenges related to establishing and maintaining effective access to this information and devising mechanisms for deploying it effectively within an economy⁽⁸²⁾.

(82) UNCTAD, 'Compendium of International Arrangements on Transfer of Technology: Selected Instruments: Relevant Provisions in Selected International Arrangements Pertaining to Transfer of Technology' (2001) < <http://unctad.org/en/docs/psiteipcm5.en.pdf> > accessed 29 November 2017.

Bibliography:

- A Shamsavari, O Adikibi and Y Taha, 'Technology and Technology Transfer: Some Basic Issues' (UK: Kingston University) < <http://eprints.kingston.ac.uk/6629/1/Shamsavari-A-6629.pdf> >, accessed 1 Sep 2020.
- Alison Slade, 'Articles 7 and 8 of the TRIPS Agreement: A Force for Convergence within the International IP System' (2011) *The Journal of World Intellectual Property* Vol. 14, No. 6.
- Amy Jocelyn Glass and Kamal Saggi, *The Role of Foreign Direct Investment in International Technology Transfer*, 2008.
- CM Correa, 'Can the TRIPS Agreement Foster Technology Transfer to Developing Countries?' in KE Maskus and JH Reichman (eds), *International Public Goods and Transfer of Technology: Under a Globalized Intellectual Property Regime* (Cambridge 2005).
- Daniel J Gervais, 'Intellectual Property, Trade & Development: The State of Play' [2005] 74(2) *Fordham Law Review*.
- EH Smith, 'Worldwide Copy Right Protection Under the TRIPS Agreement' in *International Intellectual Property Law & Policy* (Vol 3, Juris Publishing 1998).
- Hanns ullrich, Reto M Hilty, Matthias Lamping, and Josef Drexl, *TRIPS plus 20: From Trade Rules to Market Principles* (2016).
- ICC, *ICC International Technology Transfer Contract* (ICC Publication No 674 2009).
- JJ Simons, 'Cooperation and Coercion: The Protection of Intellectual Property in Developing Countries' (1999) <http://epublications.bond.edu.au/cgi/viewcontent.cgi?article=1159&context=blr>, accessed 15 Sep 2020.
- KA Froot, 'Introduction to "Foreign Direct Investment" Foreign Direct Investment (Vols 0-226-26621-4, University of Chicago Press 1993).
- KE Maskus, 'Encouraging International Technology Transfer: UNCTAD-ICTSD Project on IPRs and Sustainable Development. USA: ICTSD and UNCTAD' (2004) < <https://www.iprsonline.org/resources/docs/Maskus%20-%20Encouraging%20International%20ToT-%20Blue%207.pdf>>, accessed 11 Sep 2020.

- Louise Groenbech, 'Technology Transfer through Foreign Direct Investment to Developing Countries –The Role of the Home Country Measures' [2001] (ND) ECLOS <https://www.eolss.net/Sample-Chapters/C15/E1-31-03-01.pdf>, accessed 3 Sep 2020.
 - MD Haug, 'The International Transfer of Technology: Lessons that East Europe can learn from the failed Third World Experience' (1992) *Harvard Journal of Law & Technology*.
 - OCED, 'Foreign Direct Investment for Development: Maximising Benefits and Minimising Costs' (2002) < <https://www.oecd.org/investment/investmentfordevelopment/1959815.pdf> >, accessed 15 Sep 2020.
 - OECD, 'History' (OECD, n.d) <http://www.oecd.org/about/history/>, accessed 14 Sep 2020.
 - Philip J Wilson, 'The Legal Structures Governing Technology Transfers and Joint Ventures with the People's Republic of China' (1985) 3(1) *Berkeley Journal of International Law* <http://scholarship.law.berkeley.edu/cgi/viewcontent.cgi?article=1026&context=bjil>, accessed 4 Sep 2020.
 - PK Yu, 'The Objectives and Principles of the TRIPS Agreement' (2013) <http://scholarship.law.tamu.edu/cgi/viewcontent.cgi?article=1456&context=facscholar> , accessed 2 Sep 2020.
 - R Falvey and others, *The Role of Intellectual Property Rights in Technology Transfer and Economic Growth: Theory and Evidence* (UNIDO 2006). http://www.unido.org/fileadmin/user_media/Publications/Pub_free/Role_of_intellectual_property_rights_in_technology_transfer_and_economic_growth.pdf, accessed 1 Sep 2020.
 - Richard Lihua and David Greenwood, 'Technology Transfer in International Joint Venture Projects in China ' [2000] ND(ND) *University of Northumbria* http://www.arcom.ac.uk/-docs/proceedings/ar2000-365-373_Lihua_and_Greenwood.pdf, accessed 4 Sep 2020.
 - Shaikhah Alhelali, *The International Transfer of Technology under the TRIPS Agreement- Thesis submitted to the University of Nottingham for the degree of Doctor of Philosophy at the School of Law*, 2017.
- Steven D Anderman and John Kallaughner, *Technology Transfer and the New EU Competition rules: Intellectual Property Licensing after Modernisation* (Oxford UP 2006).

- Suerie Moon, 'Meaningful Technology Transfer to the LDCs: A Proposal for a Monitoring Mechanism for TRIPS Article 66.2: ICTSD Programme on Innovation, Technology and Intellectual Property. ICTSD' (2011) <http://ictsd.org/downloads/2011/05/technology-transfer-to-the-ldcs.pdf>, accessed 11 Sep 2020.
- SY Tong, 'Foreign Direct Investment, Technology Transfer and Firm Performance' (Hong Kong, 2011) < http://hiebs2.hku.hk/public/working_papers/pdf/wp1023.pdf>, accessed 19 Sep 2020.
- TRIPS Council, *Special Discussion on Intellectual Property and Access to Medicines*, IP/C/M/31 (July 10, 2001) <https://docs.wto.org/dol2fe/Pages/FE_Search/FE_S_S009-DP.aspx?language=E&CatalogueIdList=90911&CurrentCatalogueIdIndex=0&FullTextSearch=>>, accessed 15 Sep 2020.
- UN Statistic Division, 'Composition of Macro Geographical (Continental) Regions, Geographical Sub-regions, and Selected Economic and Other Groupings' (UN Statistic Division, n.d) <http://unstats.un.org/unsd/methods/m49/m49regin.htm#developed>, accessed 25 Sep 2020.
- UNCTAD, 'Foreign Direct Investment, the Transfer and Diffusion of Technology, and Sustainable Development' [8 December 2010] General (ND) Trade and Development Board, UNCTAD http://unctad.org/en/docs/ciiem2d2_en.pdf, accessed 3 Sep 2020.
- UNCTAD, 'Transfer of Technology' [2001] n.d UNCTAD Series on Issues in International Investment Agreements <http://unctad.org/en/docs/psiteiitd28.en.pdf>, accessed 9 September 2020.
- UNCTAD, 'Compendium of International Arrangements on Transfer of Technology: Selected Instruments: Relevant Provisions in Selected International Arrangements Pertaining to Transfer of Technology' (2001) < <http://unctad.org/en/docs/psiteipcm5.en.pdf> > accessed 29 Sep 2020.
- UNCTAD, 'UNCTAD Series on Issues in International Investment Agreements' (2001).
- UNCTAD, *The Role of International Investment Agreements in Attracting Foreign Direct Investment to Developing Countries*, (2009: New York and Geneva) p.p 1:10 available online at: https://unctad.org/system/files/official-document/diaeia20095_en.pdf, accessed 16 Sep 2020

- WIPO, 'What is Intellectual Property?' (WIPO-Administered Treaties, n.d.)http://www.wipo.int/edocs/pubdocs/en/intproperty/450/wipo_pub_450.pdf, accessed 12 Sep 2020.
- WIPO, 'Successful Technology licensing' (2015) Available at: https://www.wipo.int/edocs/pubdocs/en/licensing/903/wipo_pub_903.pdf, Accessed 7 Oct 2020.
- WIPO, 'Overview of Contractual Agreements for the Transfer of Technology' (2013) < http://www.wipo.int/export/sites/www/sme/en/documents/pdf/technology_transfer.pdf >, accessed 23 Sep 2020.
- WIPO, 'Technology Transfer in Countries in Transition: Policy and Recommendations. Division for certain countries in Europe and Asia' (2012) < http://www.wipo.int/export/sites/www/dcea/en/pdf/Technology_Transfer_in_Countries_in_Transition_FINAL-21.08.2012.pdf>, accessed 1 Sep 2020.
- World Economic Forum, *Foreign Direct Investment as a Key Driver for Trade, Growth and Prosperity: The Case for a Multilateral Agreement on Investment*, (2013: Switzerland) Available online at: https://www3.weforum.org/docs/GAC13/WEF_GAC_GlobalTradeFDI_FDIKeyDriver_Report_2013.pdf, accessed in 20 Sep 2020.
- World Intellectual Property Organization (WIPO), 'Implication of the TRIPS Agreement on Treaties Administered by WIPO' [2012] ND(ND) WIPO Publication No. 464.
- WTO, '6 Ways the WTO can Help Countries Develop' (WTO: Help Countries Develop, 26 September 2016) https://www.wto.org/english/thewto_e/whatis_e/10thi_e/10thi06_e.htm, accessed 28 Sep 2020.
- WTO, 'Development: Definition. Who are the Developing Countries in the WTO?' (WTO: Development, n.d) https://www.wto.org/english/tratop_e/devel_e/d1who_e.htm, accessed 28 Sep 2020.

Table of Contents

Subject	Page
Abstract	35
Introduction	36
Part 1- The Legal Concept of International Transfer of Technology (ITT) to Developing Countries	37
1.1.1 The TRIPS Agreement	38
1.1.2 The UNCTAD's Transfer of Technology Code	40
1.1.3 The Organization for Economic Co-Operation and Development (OECD)	40
1.1.4 The World Intellectual Property Organization (WIPO)	40
Part 2- FDI as a Mechanism of Promoting International Transfer of Technology (ITT)	41
2.1 Foreign Direct Investment (FDI)	41
2.2 FDI and the international transfer of technology (ITT)	43
2.3 The forms of FDI	45
2.3.1 Franchising of Goods and Services Agreements	45
2.3.2 Joint Venture (JV)	46
2.3.3 Turn-key packages	47
2.3.4 Technology license agreement	47
Conclusion and Recommendations	50
Bibliography	53

