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PROPOSED CHANGES TO THE UN MODEL TAX CONVENTION DEALING WITH THE CYBER-BASED SERVICES

Yansheng ZHU, Professor of law, Xiamen University School of Law, China[1]

1. Introduction

Currently electronic commerce is under dramatic development, more tangibles or intangible products and services are traded globally on the Internet. This century witnesses the human beings are entering into the digital economy. With the development of the digital information technology, many types of services are actually supplied in the cyberspace (hereafter called "cyber-based services" or "CBS"). The cross border trade in cyber-based services brings challenges to international tax rules dealing with services.

Existing international tax rules dealing with services are largely represented by the relevant provisions of the UN Model and the OECD Model, which are deeply rooted in taxation principles developed in the traditional economy which physical presence of the supplier of services in the territory of the consumer countries is necessary for service-supplying in consumer countries. Such rules have apparently lagged behind the rapid development of trade in services in current digital economy.

To update the provisions dealing with services in the UN Model, the Subcommittee on Services was established by the UN Committee of Experts on International Cooperation in

[1] Of professor of law, School of Law, Xiamen University, China. I am contacted with the email address of yszhuamoy@xmu.edu.cn . The Chinese draft of this paper is written for the conference on "The Challenges and Alternatives: International Taxation of the Cross Border Services in the Digital Economy" held by the Xiamen University School of Law on December 12, 2013, and revised for the conference on "Special Issues on the BEPS" held by the China State Taxation Administration on April 15 to 17, 2014 in Wuxi, China. I would like to thank my colleague Prof. Liao Yixin for his valuable comments on an earlier Chinese draft, and my colleague Prof. Qiu Dongmei for her valuable comments on the English draft.

Tax Matters with a mandate to address the taxation treatment of services in general in a broad way including related aspects and issues. Despite the ample and intensive reports and discussions on the taxation of cross border trade in cyber-based services, it does not seem that the final answer has been proposed thus far.

This paper reviews the definition of the services as used in the international sphere and attempts to define the cyber-based services. And then it analyzes the shortages of the provisions of the UN Model and its Commentary dealing with services when they are in response to challenges from the development of the cyber-based services in the digital economy. Finally the paper proposes possible treaty rules for taxation of income derived from the cyber-based services.

2. Definition of cyber-based services

2.1 Definition of services

It is evident that there is no definition of the term "service" in the UN or OECD Model. According to the definition in the *Oxford English Dictionary or the Black's Law Dictionary*, the term "service" means "the act or action of doing something or work", which indicates that the service involves the activities of human beings.

For the purpose of the national economic statistics, the result of a production activity includes goods and services in the System of National Accounts 2008 (SNA 2008). The SNA 2008 defines services as "***the result of a production activity that changes the conditions of the consuming units, or facilitates the exchange of products or financial assets."*** [2]There are two types of services, i.e., change-effecting services and margin services respectively. In the SNA 2008, ***Change-effecting services are outputs produced to order and typically consist of changes in the conditions of the consuming units realized by the activities of producers at the demand of the consumers.*** [3] ***Margin services result when one institutional unit facilitates the change of ownership of goods, knowledge-capturing products, some services or financial assets between two other institutional units.*** [4] Margin services and change-effecting services have common features which are that ***"they are not separate entities over which ownership rights can be established, cannot be traded separately from their production, and by the time their production is completed they must have been provided to the consumers."***[5] Therefore, according to the SNA 2008, services, different from goods, are invisible, untouchable, non-savable, and synchronous in the process of production, provision and consumption of them.

In the SNA 2008, ***knowledge-capturing products*** are specially mentioned as a result of a production activity, which ***"concerns the provision, storage, communication and dissemination of information, advice and entertainment in such a way that the consuming unit can access the knowledge repeatedly."*** [6] According to this interpretation, the key component factors in knowledge-capturing products are all types of information, which may be combined with physical objects (such as paper or CD disc) and services or exist in the

2 The System of National Accounts 2008, para.6.17.
3 Ibid.
4 Ibid, para.6.21.
5 Ibid.
6 Ibid, para.6.22.

electronic digital format. However, the SNA 2008 does not clearly classify knowledge-capturing products into goods or services. [7]

The term "service" is also used in the GATS of the WTO. However, the GATS does not directly define the term "service" although this term is normally considered as the cornerstone of the GATS. There are four modes of supply of services in the GATS, i.e., cross-border supply, consumption aboard, commercial presence and presence of natural person, which ***"are essentially defined on the basis of the origin of the service supplier and consumer, and the degree and type of territorial presence which they have at the moment the service is delivered."*** [8] Such modes of supply ensure that the GATS may apply only to the supply of services with international elements. [9]

With the development of electronic commerce, these four modes of supply have exposed their noticeable shortcomings resulted from the territorial factors used as a main standard for classifying the mode of supply of services in the GATS. A "Progress Report" adopted by the Council for Trade in Services on 19 July 1999 concerning the "Work Programme on Electronic Commerce" already recognized that "there was particular difficulty" in making a distinction between supply under modes 1 and 2 ("cross-border supply" and "consumption abroad," respectively). In *the United States – Measures Affecting the Cross-Border Supply of Gambling and Betting Services Case* in 2004, this "particular difficulty" was mentioned by the report of the Panel.[10]

Therefore, it seems to be questionable to apply the definition of the term "service" in the GATS to the international tax regime. Instead, goods, services and knowledge mentioned in the SNA 2008 appear to have stronger relevance to the definition and classification of services in the international tax regime. It seems to the author that all services, whether change-effecting services or margin services, could be mainly classified, on the basis of the combination with the goods (physical objects) and knowledge (information), into two types: one is services combined with physical objects, the other is services combined with knowledge (information).

Further, in the economic life physical objects and knowledge (information) may sometimes be as inventory for sale, and sometimes be as capital assets for being productive tools. Therefore, for services combined with physical objects and services combined with knowledge (information), there may be different modes of supply. Services may be supplied along with the delivery of the inventory (including physical objects and knowledge). For example, when buying foods in a supermarket the supply of retail services of foods and the transfer of the ownership of foods from the seller to the buyer is combined together and completed at same time. Services may also be separately and independently performed to consumers by the supplier with his/her physical capital assets (physical objects) or intangible capital assets (knowledge such as technology, information, or computer software, etc.). For example, for a taxi driver, his/her own or rented taxi is his/her capital assets for the supply of transportation services, passengers only enjoy transportation services supplied by the driver

[7] Ibid.

[8] Scheduling of Initial Commitments in Trade in Service: Explanatory Note, 3 September 1993, MTN. GNS/W/164, para.18.

[9] Definition in the Draft General Agreement of Trade in Services: Note by the Secretariat, 15 October 1991, MTN. GNS/W/139, para. 9.

[10] Report of the Panel, United State- Measures affecting the Cross-Border Supply of Gambling and Betting Services, WT/DS285/R, 10 November 2004, para.3.29.

without any rights involving his/her taxi.

2.2 Definition of cyber-based services

In the digital economy, this century witnesses the fast increase of trade in services combined with information along with the development of computer network and information technology. Among all services combined with information, “cyber-based services” could be used to refer to those produced, delivered, and consumed in the computer network through the computer software.

Because the cyber-based service is wholly conducted and completed in the computer network i.e. the cyberspace, relying on the computer software, equipment access to the network and digitalized information as its media, it is virtual in nature. When supplying the cyber-based services to consumers, the supplier need not have any form of physical presence in the countries of consumers. In other words, the physical presence of the supplier in the consumer countries is not a necessary factor in the cross border trade in cyber-based services.

There are 5 typical types of cyber-based services as follows:

a) Online real-time teaching services;

b) Online advertisement services;

c) Remote equipment-controlling services;

d) Online gambling services;

e) Online database services.

In each type of these cyber-based services, the function performed by the computer software in the process of service-supplying is different. From a) to e), the function performed by the computer software is getting more and more complicated, from digitalization, storage, communication, dissemination and reappearance of information, to more automated and intelligentized function, such as the interaction between consumers and software, between software and equipment owned by consumers and among consumers with a virtual platform created by the computer software. The supplier’s labor is gradually reduced to design and make many kinds of computer software and to maintain the operation of them in the process of services-supplying. Ultimately, services received by consumers are actually performed by the computer software, which fall under the purely “mechanical services”.

In the online database services, services are wholly performed by automated and intelligentized data-analyzing software, such as trouble-shooting databases or other software with the similar function. When this data-analyzing software works, just like the physical equipment designed for processing certain kinds of physical products, it receives information as raw materials from the consumer and creates information the consumer needs, providing with the information-interacting function. By analogy, we can regard this data-analyzing software as the “information-processing equipment”. Moreover, it has been found that this data-analyzing software may simultaneously perform double reversed functions. That means, on the one hand, based on the user’s instruction, the software provides relevant final

information products that the user needs, whereas, on the other hand, the software collects, storages and analyzes, through the behind platform and for other purposes, the user's personal data which is left voluntarily or compulsorily by the users during their using the data-analyzing software. Generally, these users' personal data is collected by the data-analyzing software without any payment, and the users are thus called by some commentators as the "free labor". [11]

3. Assessment of the response of the UN Model to the electronic commerce

3.1 Overview of the existing provisions of the UN Model dealing with services

The current international tax regime has been established under this structure: with respect to income derived from international trade and investment, the resident country exercises personal taxation whereas the source country exercises territorial taxation. Based on such prerequisite, tax treaty rules classify income into different types and share tax right between the residence and source country for each type of income. Essentially the scope of territorial taxation by the source country is restricted by the tax treaty rules. Therefore, if there may still be double taxation resulted from the overlap of tax right of both countries, the residence country is responsible for giving taxpayer tax credit or exemption for eliminating double taxation. The design of the existing provisions of the UN and OECD Model follows this basic structure.

The existing provisions of the UN Model dealing with services, as indicated by Mr. Brain Arnold, adopt different underlying principles for different types of services, and have fundamental inconsistencies in the tax treatment to income derived from various types of services. [12] The same approach also exists in the OECD Model, even in all existing tax treaties. This phenomenon perhaps represents the current international consensus in the tax treatment to income derived from various types of services. As the treaty negotiation is based on the voluntary basis, different underlying principles for different types of services might be desirable for tax treaty partners, through which the goal of fairly sharing international tax interests between tax treaty partners may be possibly realized. Therefore, fundamental inconsistencies in the tax treatment to income derived from various types of services will continue in the future.

3.2 The response of the UN Model to the electronic commerce

With the development of digital information and network technology, electronic commerce, especially trade in cyber-based services, challenges the current international tax regime, including the UN and OECD Model. Firstly, different from traditional which shall be conducted wholly or partially on the physical basis, electronic commerce many be conducted and completed wholly or partially in the cyberspace virtually and automatically. That means, it is not necessary for the taxpayer to have any form of physical presence in the source country for carrying on its business, especially trade in cyber-based services. Therefore, existing international tax rules which restrict territorial taxation of the source country with

[11] Pierre Collin, Nicolas Colin, Task Force on Taxation of the Digital Economy, Report to the Minister for the Economy and Finance, the Minister for Industrial Recovery, the Minister Delegate for the Budget and the Minister Delegate for Small and Medium-Sized Enterprises, Innovation and the Digital Economy, Jan. 2013. This report was asked by and has been submitted to the French Government.

[12] Brain Arnold, Note on the Taxation of Services under the United Nations Model Tax Convention, UN E/C.18/2010/CRP.7, 11 October, 2010, at 11-12.

territorial factors appear to be unreasonable. Secondly, as mentioned above, the classification of ***knowledge-capturing products*** is still unclear currently in the SNA 2008. In the traditional economy, most knowledge-capturing products are combined with physical objects such as a paper or a CD disc and so on, which could be dealt with just like physical goods. However, in the digital economy knowledge-capturing products may be digitalized and dealt with in the cyberspace. This fundamental change results in the problem as to how to classify the income from transactions involved in the digitalized knowledge-capturing products under tax treaty, including income from the trade in cyber-based services. Thirdly, under current international tax regime the permanent establishment is determined by all kinds of physical factors such as fixed place of business, dependent agent, or physically staying in the source country. All these physical factors would not be met for an enterprise that carries on its business with the help of the digital information technology or in the cyberspace, including the trade in cyber-based services. Therefore, the concept of permanent establishment in current international tax rules as a legal form may hardly be line with the economic substance that an enterprise actually carries on its electronic commerce in the source country in the digital economy.

In response to the above-mentioned challenges from the electronic commerce, there has been an ongoing discussion on the tax treatment to income from the electronic commerce since the 1990's. The proposed changes, varying from the fundamental one to the slight amendments, to current international tax regime were published.[13] The TAG appointed by the Committee on the Fiscal Affairs of the OECD, with its own understanding that ***"there does not seem to be actual evidence that the communications efficiencies of the internet have caused any significant decrease to the tax revenues of capital importing countries"***, made analysis in its final report on *"Are the Current Treaty Rules for Taxing Business Profits Appropriate for E-Commerce?"*. It came to the conclusion that the development of the electronic commerce until the time when its report was submitted had not justified a dramatic departure from the current international tax rules. However, the TAG recognized that fundamental changes should be undertaken if a particular alternative could be clearly and broadly agreed.[14] This implies that tax treaty rules should be changed or amended if all treaty partners would clearly agree to adopt particular rules.

In practice, no government in the world imposed new taxes on the electronic commerce until now, even though many governments are focusing on how to ensure their own tax regime to be compatible with the development of electronic commerce. However, at the international level, the Commentary of the OECD Model has made several important changes in response to the electronic commerce. Two of them are worth noting here. First, the Commentary

[13] For detailed discussion on the proposed changes , see Luc Hinnekens, Looking for an Appropriate Jurisdictional Framework for Source-State Taxation of International Electronic Commerce in the Twenty-first Century, Intertax, Vol.26, Issue 6-7; Reuven S. Avi-Yonah, International Taxation of Electronic Commerce, 52 Tax Law Rev. 507, 1997; John Sweet, Formulating International Tax Laws in the Age of Electronic Commerce: The Possible Ascendancy of Residence-Based Taxation in an Era of Eroding Traditional Income Tax Principles, 146 U. Pa. L. Rev. 1949, 1998; Arthur J. Cockfield, Balancing National Interests in the Taxation of Electronic Commerce Business Profits, 74 Tul. L. Rev. 133, 1999; Richard L. Doernberg et al., Electronic Commerce and Multijurisdictional Taxation, Kluwer Law International, 2001; IFA, Taxation of income derived from electronic commerce, Volume 86a., 2001; Jinyan Li, International Taxation in the Age of Electronic Commerce: A Comparative Study, Canadian Tax Foundation, 2003; Arthur J. Cockfield, The Rise of the OECD as Informal 'World Tax Organization' through National Responses to E-Commerce Tax Challenges, 8 Yale J. L. & Tech. 136, 2006; Rifat Azam, Global Taxation of Cross-Border E-Commerce Income, 31 Va. Tax Rev. 639, 2012.

[14] OECD, Are the Current Treaty Rules for Taxing Business Profits Appropriate for E-Commerce? Final Report by the Technical Advisory Group(TAG) on Monitoring the Application of Existing Treaty Norms for Taxing Business Profits, 2005, para. 351,352.

currently confines royalties to the payment involving the commercial exploitation of the digitalized information in the electronic commerce, and treats the payment involving the transmission of the digitalized information as business profits, according to the rationale of the difference between the underlying copyright in the program and software which incorporates a copy of copyrighted program. With same underlying rationale on the characterization of the software payment, the Commentary indicates that the income derived from cross border transactions involving cyber-based services will be characterized as business profits. Second, the Commentary indicates that a computer sever itself, not a website, may constitute a permanent establishment if it performs integral aspects of a cross-border transaction, is owned or leased by the non-resident enterprise and is fixed in a location for a sufficient period of time.

In 2011, the relevant paragraphs of the Commentary of the OECD Model mentioned above are reproduced by the Commentary of Article 12 and Article 5 of the UN Model, as a reaction to the development of electronic commerce. However, as observed by many commentators, the changes made by the Commentary of the OECD Model, followed by the Commentary of the UN Model, did not substantially solve the challenges, and actually reflected a very limited and weak political compromise. From the technical point of view, the approach that two Models take has not given sufficient consideration of the following three factors in the digital economy: (1) the fact that there is no any necessary forms of physical presence for a taxpayer who carries on its business, including trade in cyber-based services, in the source country, (2) what can be digitalized are not physical objects but information hosted in the physical objects, and (3) the fact that there is a difference between services involving human behavior and services that are purely mechanical.

4. Proposed provisions with respect to taxation of income from cross border trade in cyber-based services

4.1 The breakthrough in the revision of existing provisions of the UN Model dealing with services

Generally speaking, the key issue solved by the modern international tax regime represented by the UN and OECD Model is the elimination of double taxation arising from the international trade and investment, in order to promote the development of the international trade and investment. However, preventing the tax base erosion and fairly sharing of the international tax interests arising from the international trade and investment between countries involved are also important factors when countries involved make their international tax policies. [15] In fact, the overall balance between the tax interests and other social and economic interests arising from international trade and investment will be considered when a country concludes a tax treaty with another country, and the provisions of the tax treaty reflect the result of the comprehensive balance to some extent. Nevertheless, the comprehensive balance mentioned here are dynamic, which will be adjusted in line with the change of contents and modes of the international transactions. When the adjustment of the comprehensive balance needs to be made, the tax treaty concluded before may be respectively amended or renegotiated. [16] To provide a model for the tax treaties concluded by

[15] A good example in this aspect is an ongoing movement of preventing tax base erosion and profit shifting under the joint auspices of the G20 and the OECD started in June, 2012. See the OECD Report on Addressing Base Erosion and Profit Shifting in 2013 and the OECD Report on Action Plan on Base Erosion and Profit Shifting in 2013.

[16] Each year witnesses the emergence of a number of newly-negotiated tax treaties in place of old tax treaties between

the developing and developed countries, the provisions of the UN Model have been designed with factors which reflect the general modes and characteristics of international trade and investment between developing and developed countries. This Model takes into account the comprehensive balance between international tax interests enjoyed by countries involved and other social and economic interests arising from international trade and investment between them. [17]

Base on the balance mentioned above, it seems that the revision of the Commentary of the UN Model in 2011 has not effectively solved the predicament that the source taxation of source countries would be significantly restricted if these countries adopt the existing provisions of the UN Model dealing with services and apply them in electronic commerce. With the expansion of the cross border trade in cyber-based services, the prospective result of the restriction of the source taxation is that the tax interests of source countries would be rapidly reduced and the fair share of the international tax interests arising from cross border electronic commerce between residence countries and source countries could not be effectively achieved.

Methodologically, in 2011, in order to keep up with the development of digital economy, the UN Committee of Experts on International Cooperation in Tax Matters applied interpretation-changing method, i.e., making the revision of the Commentary of the UN Model, rather than changing wordings of relevant provisions of the UN Model. It seems to the author that, interpretation-changing method has its advantages that could keep the provisions stable with an expansion of the scope of possible meaning of wordings used in the provisions interpreted to maximum extent. However, the interpretation method has its own limitation. It does not work when the possible meaning of wordings used by a tax treaty cannot cover the new facts developed in the real life.

Under the digital economy, interpretation method has not been enough to dealing with the challenges from the electronic commerce because new factors in the digital economy have emerged and not been effectively covered by the wordings of the existing provisions of the UN Model. A notable feature which distinguishes cyber-based services from traditional services is that any form of physical presence of the supplier of cyber-based services in the territory of the consumer countries is not required. The possible meaning of wordings used by the existing provisions of the UN Model dealing with services, which is restricted to the physical factors in physical space, has no possibility of covering the virtual factors included in the cyber-based services performed in the cyberspace created by the current computer science and information technology. Therefore, if the existing provisions of the UN Model would be applied to tax income derived from the cross border trade in cyber-based services, the consumer countries would not enjoy their fair share of the international tax interests arising from the cross border trade in cyber-based services.

Based on the above analysis, there is no possibility to come up with an effective way to realize the fair share of international tax interests arising from the trade in cyber-based services between the supplier countries and consumer countries under the interpretation method employed to the existing provisions of the UN Model in the digital economy. For

contracting state partners

[17] UN, Manual for Negotiation of Bilateral Tax Treaties between Developed and Developing Countries, ST/ESA/PAD/SER.E/37, 2003, at 57.

rebalance of international tax interests sharing between the supplier countries and consumer countries, the improper unilateral restriction of tax jurisdiction suffered by the source countries should be eliminated, and the relevant revision of the existing provisions of the UN Model dealing with services should be revised according to the characteristic of virtualization in cyber-based services. In other words, the revision will be focused on how to design the reasonable conditions under which source countries may effectively enjoy tax jurisdiction to the cross border trade in cyber-based services, not being improperly restricted by the requirements of the physical presence of supplier of cyber-based services in the source countries in the existing provisions of the UN Model dealing with services.

4.2 Proposed changes to the provisions of the UN Model dealing with services

The following proposed changes to the provisions of the UN Model dealing with services are based on the characteristics of the cyber-based services, existing international taxation experiences of some countries and the existing principles embedded in the existing provisions of the UN Model dealing with services. Such proposed changes have an aim to eliminate the restriction on the source taxation of the source countries resulted from the requirements of the physical presence of supplier of services in the source countries.

4.2.1 Adding a separate provision dealing with fees for cyber-based technical services

Currently some countries have concluded tax treaties with a separate provision dealing with fees for technical services, which treat to “fees for technical services” in the same way as royalties. Under such a provision, if fees for technical services arise in a contracting state and are paid to a resident of the other contracting state, both contracting states may tax such fees. However, when the contracting state in which fees for technical services arise taxes such fees according to its laws, tax so charged shall not exceed a certain fixed rate of the gross amount of fees if the recipient is the beneficial owner thereof, unless such fees are effectively connected with a permanent establishment or a fixed base set by the beneficial owner of the fees for technical services in the contracting state in which fees for technical services arise. In such exceptional cases the provision dealing with business profits or independent services shall apply. The term “fees for technical services” as used in such a provision means any consideration for the provision of any managerial, technical or consultancy services by a resident of a contracting state in the other contracting state, including the provision by such resident itself or other personnel employed or engaged for such purpose.

Such provisions in some tax treaties dealing with fees for technical services indicate that withholding tax of fees for technical services with a limited tax rate by the source countries are desirable and acceptable for both of the resident countries and source countries, and imply that taxation of income derived from technical services on a net basis in source countries is not immutable.

It should be noted that the definition of the term “fees for technical services” used in the existing provision in some tax treaties dealing with fees for technical services includes the factors that the supplier of services of a contracting state performs its services itself or through other personnel employed or engaged for such purpose ***in the territory of other contracting state***. Such factors reflect the objective fact that when a supplier of services of a state provides its services to consumers located in the other states in traditional economy, it has to having ***some forms of physical presence*** in the territory of the other state due to the

limitation of technology. However, in the digital economy, as mentioned above, the development of network and information digitalization technology has made any form of physical presence unnecessary for the supplier of the cyber-based services in the territory of the consumer countries. Therefore, taking into account the factors of the development of the technology of information, and the factors reflecting the fact of the supply of cyber-based services to consumers located in a contracting state as a substitute for the factors of physical presence in the above-mentioned definition of the term "fees for technical services", the existing separate provision in some treaties dealing with fees for technical services could be used to deal with fees for cyber-based technical services.

In the proposed separate provision dealing with fees for cyber-based technical services, the term "fees for cyber-based technical services" may be defined as ***"any consideration for the provision of any managerial, technical or consultancy services by a resident of a contracting state through the network to consumers in the other contracting state, including the provision by such a resident itself or other personnel employed or engaged for such a purpose."***

In fact, the proposed separate provision dealing with fees for cyber-based technical services has been supported in practice not only by the above-mentioned experiences in some tax treaties dealing with fees for technical services, but also by Article 16 of the UN Model dealing with director's fees and remuneration of top-level managerial officials and Article 16 of the OECD Model dealing with director's fees. Article 16 of both Models recognize that when a resident of a contracting state as a director or a top-level managerial official of a company situated in the other state provides his/her managerial services to that company, his/her income derived from his/her such services may be taxed in that other state, wherever he/she provides his/her such services. Article 16 of both Models implies that the factors of physical presence of the supplier of services are not precondition for source countries to enjoy source taxation of the director's fees and remuneration of top-level managerial officials.

4.2.2 Expanding the application of the Article 12 of the UN Model to the consideration for the use of or the right to use industrial, commercial or scientific online databases

Unlike the existing OECD Model, the UN Model remains the position that the consideration for the use of or the right to use industrial, commercial or scientific equipment (hereinafter "rents for physical equipment") fall under the definition of the royalties in the Article 12. In practice, many existing tax treaties, not only between developing and developed countries but also between developed countries, follow the Article 12 of the UN Model. In 1992, the OECD Committee on Fiscal Affairs deleted the rents for physical equipment from the royalties defined in the Article 12 of the OECD Model, basing on several non-tax reasons. However, even though such non-tax reasons are often declared to be main reasons for such deletion, 4 aspects of the tax consideration mentioned in the report on The Taxation of Income Derived from the Leasing of Industrial, Commercial or Scientific Equipment by the OECD Committee on Fiscal Affairs in 1992 actually had overwhelming effects on the deletion. [18] Therefore, it seems to be easily understood why many OECD member countries, such as Canada, Chile, Czech, Hungary, South Korea, Poland, Greece, Italy, Mexico, New

[18] See OECD Committee on Fiscal Affairs, Model Tax Convention on Income and on Capital, Vol. II, The Taxation of Income Derived from the Leasing of Industrial, Commercial or Scientific Equipment, April 2000, R (2)-7, para.18-20.

Zealand, Portugal, Spain, Turkey and Slovak, made observations or reservations on such deletion. Taking into account so many OECD members did not agree with the deletion, it seems to be the international consensus that the rents for physical equipment may be covered in the definition of the royalties.

Compared with the physical equipment, industrial, commercial and scientific online database is a brand new type of property created by new technology, which has the common features with the physical equipment in function and value-creation capability, and could be regarded as a kind of "virtual" equipment for its users. It is true that there is a fundamental difference in nature between the industrial, commercial and scientific online database and the physical equipment, i.e., the former is virtual and may only be used in the cyberspace, and the latter is physical and may be used in the physical space. Nevertheless, it seems that such difference in nature resulted from the development of technology should not sufficiently justify the different tax treatments applied to the payments for the use of or the right to use industrial, commercial and scientific online database and to the rents for the physical equipment.

Based on the above-analysis, it seems to be reasonable that the payments for the use of or the right to use industrial, commercial and scientific online database may be included in the definition of the term "royalties" as used in the Article 12 of the UN Model in the digital economy. For such purpose, the language of the paragraph 3 of the Article 12 of the UN Model could be changed as follows:

"The term 'royalties' as used in this Article means payments of any kind received as a consideration for the use of, or the right to use, any copyright of literary, artistic or scientific work including cinematograph films, or films or tapes used for radio or television broadcasting, any patent, trademark, design or model, plan, secret formula or process, or for the use of, or the right to use, industrial, commercial or scientific equipment <u>or online database</u>, or for information concerning industrial, commercial or scientific experience."

4.2.3 Adding a separate provision dealing with all types of cyber-based services

It should be noted that the proposed provisions in above 4.2.1 and 4.2.2 may just deal with certain types of cyber-based services, but not all types of cyber-based services. For example, the proposed provision dealing with cyber-based technical services may not deal with the online gambling services, online advertisement services and remote equipment-controlling services. On the other hand, the proposed provision dealing with online database services may not deal with the online advertisement services, remote equipment-controlling services and online real-time teaching services. The limitation of the application scope of the proposed provisions in 4.2.1 and 4.2.2 indicates that tax treatment to other types of cyber-based services in tax treaty needs to be determined properly. In this regard, the common characteristics in all types of cyber-based services call for one provision to provide uniform tax treatment to all types of cyber-based services by expanding the scope of the application of proposed provisions in 4.2.1 and 4.2.2 to all cyber-based services. Moreover, for taxpayers, uniform tax treatment to all cyber-based services may ensure them to have equal tax treatment.

Actually, in comparison with uniform tax treatment to business profits derived from all kinds of business carried on by an enterprise, tax treatment to income derived from different types of services are diverse and complicated, and are dealt with by the different provisions in the

UN or OECD Model based on the respective characteristics of different types of services. Such arrangement for the taxation of services in the UN and OECD Model implies that the principles of the taxation of services in tax treaties are potentially open, and what principles are applied will be based on the fact that the principle adopted by tax treaties may to maximum extent ensure the fair share of international tax interests arising from a specific type of service between both contracting states.

For a proposed provision dealing with all cyber-based services, the language of which could be drafted as follows:

"Article xxx

Fees for Cyber-Based Services

1. ***Fees for cyber-based services arising in a Contracting State and beneficially owned by a resident of the other Contracting State shall be taxable only in that other State.***

2. ***However, such fees for cyber-based services may also be taxed in the Contracting State in which they arise and according to the laws of that State, but if the beneficial owner of the fees for cyber-based services is a resident of the other Contracting State, the tax so charged shall not exceed ___ per cent (the percentage is to be established through bilateral negotiations) of the gross amount of the fees for cyber-based services. The competent authorities of the Contracting States shall by mutual agreement settle the mode of application of this limitation.***

3. ***The term 'fees for cyber-based services' as used in this article means payments of any kind received as a consideration for the provision of any cyber-based services by a resident of a contracting state to consumers in the other contracting state, including the provision by such a resident itself or other personnel employed or engaged for such a purpose.***

4. ***Provisions of paragraphs 1 and 2 shall not apply if the beneficial owner of the fees for cyber-based services, being a resident of a Contracting State, carries on business in the other Contracting State in which the fees for cyber-based services arise, through a permanent establishment situated therein, or performs in that other State independent personal services from a fixed base situated therein, and the right or property in respect of which the fees for cyber-based services are paid is effectively connected with (a) such permanent establishment or fixed base, or with (b) business activities referred to in (c) of paragraph 1 of article 7. In such cases the provisions of article 7 or article 14, as the case may be, shall apply.***

5. ***Where by reason of a special relationship between the payer and the beneficial owner or between both of them and some other person, the amount of the fees for cyber-based services, exceeds the amount which would have been agreed upon by the payer and the beneficial owner in the absence of such relationship, the provisions of this article shall apply only to the last-mentioned amount. In***

such case, the excess part of the payments shall remain taxable according to the laws of each Contracting State, due regard being had to the other provisions of this Convention."

4.2.4 Regarding the website through which an enterprise carries on its business as a virtual permanent establishment

It has been widely discussed that the existing PE concept which was created in the traditional economy and defined with all physical factors is no longer fit to the digital economy. However, substantially, the PE is just a legal form, the purpose of which is to indicate the economic substance as follows: an enterprise of a contracting state has its economic presence in the other contracting state to such extent that the other contracting state's right to tax on the income derived from its economic presence by an enterprise of a contracting state should not be limited. This rationale of the PE concept remains the same whether an enterprise carries on its business in the traditional economy or digital economy. Therefore, the PE concept should not be restricted to its existing physical component factors developed in the traditional economy, but should evolve with the development of the mode of the economy. In this regard, the concept of the virtual permanent establishment (the virtual PE) or the digital permanent establishment (the digital PE) has been proposed for many years, with an intention to indicate the economic presence of an enterprise of a contracting state in the other contracting state in the digital economy. [19] In the concept of the virtual PE, by analogy, the website through which the business of an enterprise is wholly or partly carried on may be regarded as a business place or an agent of the enterprise of a contracting state doing business in the other contracting state.

At present time, there are at least three issues involved in the concept of the virtual PE which still need to be further discussed. Firstly, whether the website should be fixed, if so, how to determine a website is fixed. Secondly, whether the activities performed through the website should be limited to non-auxiliary and non-preparatory activities, if so, how to determine what activities are auxiliary and preparatory in the digital economy. Thirdly, whether the taxation of the income derived from a virtual PE on net basis should be adopted, if so, how to determine the attribution of profits to a virtual PE.

It should be noted that, when dealing with tax treatment to the income derived from the digital economy, the rationale underlying the virtual PE is different from the rationale underlying what are mentioned in above 4.2.1, 4.2.2 and 4.2.3. To specify, the virtual PE focuses on the factors that may determine what extent of the economic presence a taxpayer of a state has in the other state, i.e., factors involved in the business operation structure of the taxpayer. Conversely, approaches mentioned in 4.2.1, 4.2.2 and 4.2.3 focus on the characteristics and types of the business activities that the taxpayer carries on. For this reason, the virtual PE may be applied in all electronic commerce transactions, not being limited to the cyber-based services which are specially dealt with in 4.2.1, 4.2.2 and 4.2.3.

[19] There are many articles and materials regarding the virtual PE, such as, Luc Hinnekens, Looking for an Appropriate Jurisdictional Framework for Source-State Taxation of International Electronic Commerce in the Twenty-first Century, Intertax, vol. 26, Issue 6-7,1998, p.197;
Arvid A. Skaar, Erosion of the Concept of Permanent Establishment: Electronic Commerce, Intertax, vol.28, Issue 5, 2000; OECD, Are the Current Treaty Rules for Taxing Business Profits Appropriate for E-Commerce? Final Report by the Technical Advisory Group (TAG) on Monitoring the Application of Existing Treaty Norms for Taxing Business Profits, 2005.

Therefore, the proposed provisions dealing with the virtual PE and the proposed provisions dealing with fees for the cyber-based services are alternative, but the proposed provisions dealing with the virtual PE may be introduced in connection with the proposed provisions mentioned in 4.2.1 and 4.2.2. In other words, the residual cyber-based services which may not be dealt with in the proposed provisions mentioned in 4.2.1 and 4.2.2 could be dealt with by the proposed provisions dealing with the virtual PE.

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