

THE IMPACT OF DOUBLE TAX TREATIES ON INWARD FDI IN ASEAN COUNTRIES

Yue Dong, SMU-TA Centre of Excellence in Taxation, Singapore

ABSTRACT

This study aims to assess the impact of double taxation treaties (DTTs) on FDI inflows in 10 ASEAN countries from 1989 to 2016. There are two objectives of double taxation treaties. The first one is to alleviate the problem of global double taxation, which has a stimulating effect on FDI. The second objective is the sharing of information between governments, which can prevent tax evasion and thus discourage FDI. The findings suggest that new DTTs tend to have a positive but insignificant impact on the FDI inflows into Southeast Asia. However, the impact of older DTTs on FDI is significantly negative, suggesting that the increasing number of DTTs signed by ASEAN countries over time does not lead to more FDI inflows into the region. Overall, the results show that tax treaties have little or even negative effect on FDI inflows into the ASEAN region, which is consistent with most prior findings that DTTs' impact on FDI into low-income countries is not significant. However, the negative association between DTT and FDI is unlikely to be due to the information-sharing function of tax treaties based on an examination of the exchange of information (EOI) provisions contained in the 430 DTTs signed by ASEAN countries. The author proposes that the negative impact of DTTs on FDI inflows in ASEAN could be driven by factors associated with the 'age' of some existing DTTs. For example, certain provisions in some older treaties may have become outdated or irrelevant, thus hindering investment flows into the region.

Keywords: ASEAN, South-East Asia, double tax treaties, foreign direct investment

Introduction

Collectively, the Association of South East Asian Nations (ASEAN)¹ is the second fastest growing economy in Asia after China, expanding by 300% since 2001, and exceeding the global growth average for the past ten years (ASEAN Investment Report 2017). The ASEAN is strategically situated between China and India, and its network of free trade agreements covers more than 50% of the world's population (Allurentis, 2017).² Strong macroeconomic fundamentals and positive investor sentiment towards the establishment of the ASEAN Economic Community (AEC) in 2015 have attracted many multinationals to expand their presence in the region. Foreign Direct Investment (FDI)³ has played an important role in the economic development of ASEAN countries, and the member states use a variety of tax policies (e.g. tax holidays and concessions) in an attempt to encourage investment. Alongside the unilateral tax incentives, the ASEAN economies have also signed an extensive number of double tax treaties (DTT) over the past few decades.

DTTs play a critical role in cross-border transactions. Currently, there are more than 3000 double taxation treaties (DTT)⁴ signed between jurisdictions across the globe. By 1 January 2018, a total of 430 comprehensive DTTs signed by ASEAN member states have entered into force. Traditionally, DTTs are concluded between countries with substantial trade or other economic relations. There are two important objectives of double taxation treaties. The first one is to combat the obstacles of double taxation, which has a stimulating effect on FDI. The second objective is the sharing of information between governments, which can counteract tax evasion and thus discourage FDI. Empirically, the impact of DTTs on FDI is still an open question. In light of the conflicting predictions in prior research, this paper contributes to the literature of international tax and finance by present some empirical evidence on the effect of DTTs on FDI in the context of ASEAN. The empirical analysis and conclusions drawn from the paper could also be useful to policymakers in the region.

The rest of the paper is structured as follows. Section 2 presents an overview of trends and characteristics of FDI in ASEAN, followed by some discussions of tax incentives and competition among the member countries. Next, in Section 3, the paper provides a detailed introduction of DTT, including its functions, benefits and costs. In addition, areas such as DTTs' implications for developing countries and alternatives to DTTs are also discussed in Section 3. Section 4 then introduces and compares the main differences between the OECD and UN Model Convention. Section 5 discusses other treaty-related issues, including anti-abuse provisions, and treaty shopping. Section 6 covers the trends and development of DTTs in ASEAN, followed by a preliminary examination of the ASEAN bilateral tax treaty network. A comparison of the terms of the treaties between the intra-ASEAN member states and those between ASEAN and non-ASEAN countries is presented as well. Section 7 of the paper reviews the academic literature on the impact of DTTs on FDI, and data and research

¹ The Association of Southeast Asian Nations (ASEAN) was formed in 1967 with the signing of the Bangkok Declaration by the five original member countries - Indonesia, Malaysia, The Philippines, Singapore, and Thailand.

Brunei joined in 1984; Vietnam in 1995; Laos and Myanmar/Burma in 1997; Cambodia in 1999.

² Allurentis Limited and ASEAN (2017), *Investing in ASEAN 2017*. Surry, United Kingdom: Allurentis Limited.

³ The IMF and OECD define direct "foreign investment" as cross-border investment made by a resident entity in one economy (the "direct investor" or "multinational enterprise") with the objective of establishing a lasting interest in an enterprise resident in an economy other than that of the direct investor (the "foreign affiliate"). FDI is typically measured in either inflows or stocks. "FDI inflows" refer to the capital provided by a foreign investor to a foreign affiliate (equity, loans, reinvestment earnings), while "FDI stocks" are the total value of foreign-owned assets at a given time.

⁴ Also known as Double Taxation Avoidance Agreements (DTAs or DTAAs).

methodology are laid out in Section 8. Section 9 presents the empirical results and statistical analysis, followed by discussions of the findings. Section 10 concludes.

FDI in ASEAN

Overview

In the past few decades, FDI has been spurred by the global liberalization of the FDI regulatory framework as well as technological advancement. Most countries have opened themselves to foreign investment, improved the operational conditions for foreign affiliates, and strengthened standards of trade protection and tax treatment.

FDI is particularly critical for developing and emerging markets by providing capital that may otherwise not be available in a developing economy, and therefore plays an essential part in capital-intensive sectors of the economy. While FDI enables developing countries to build up their infrastructure which is an important basis for their economic development, the effectiveness of FDI inflows may depend on the general business environment in the developing country and the measures taken to maximize the effect of the investment inflow, for example the regulatory framework.

FDI Trends and Characteristics in ASEAN

FDI inflows have expanded substantially globally. The value of the global inward FDI stock was estimated to be USD 1,430 billion in 2017 (UNCTAD, 2018). The developed countries attract the lion's share of world investment capital (USD 712 billion), with Asia being the most attractive region among emerging markets (USD 476 billion). The estimated FDI flows to developing Asia was about 2% up from 2016. According to the report by UNCTAD (2018), "developing Asia regained its position as the largest FDI recipient region". In the same report, it also says that "FDI inflows to South-East Asia rose by about 11 per cent to \$134 billion, propelled by an increase in investment in most ASEAN countries and a strong rebound in Indonesia."⁵

Figure 1 below depicts the overall FDI inflows in the ASEAN region, measured in USD. The value of inward FDI has significantly increased between 1989 and 2016. This upward trend was only briefly interrupted in the year 2002, and in response to the global economic crisis in 2008 and 2009, as well as recently in 2016. Next, Figure 2 gives an impression of how FDI inflows are distributed across the 10 ASEAN territories as of 2017. Singapore attracts almost half of all FDI in the region. Thailand, Malaysia and Indonesia collectively account for approximately 35% of the FDI inflows in ASEAN.

Competition for FDI in ASEAN

Background

The ASEAN was established in 1967 with one of its central objectives being the acceleration of economic growth in the region. The member countries have been actively encouraging FDI, which can bring capital, technology, skills, employment and market access. However, according to Mitsuhiro Furusawa, the deputy managing director of International Monetary Fund (IMF), "competition among Southeast Asian countries to attract foreign investment through tax exemptions and incentives has proven 'damaging' to their national revenues" (Maulia, 2017). "Sluggish global growth and this investment battle waged by ASEAN

members have amplified corporate tax competition, cross-border tax avoidance and illegal tax evasion in the region”, added Mr. Furusawa (Maulia, 2017).

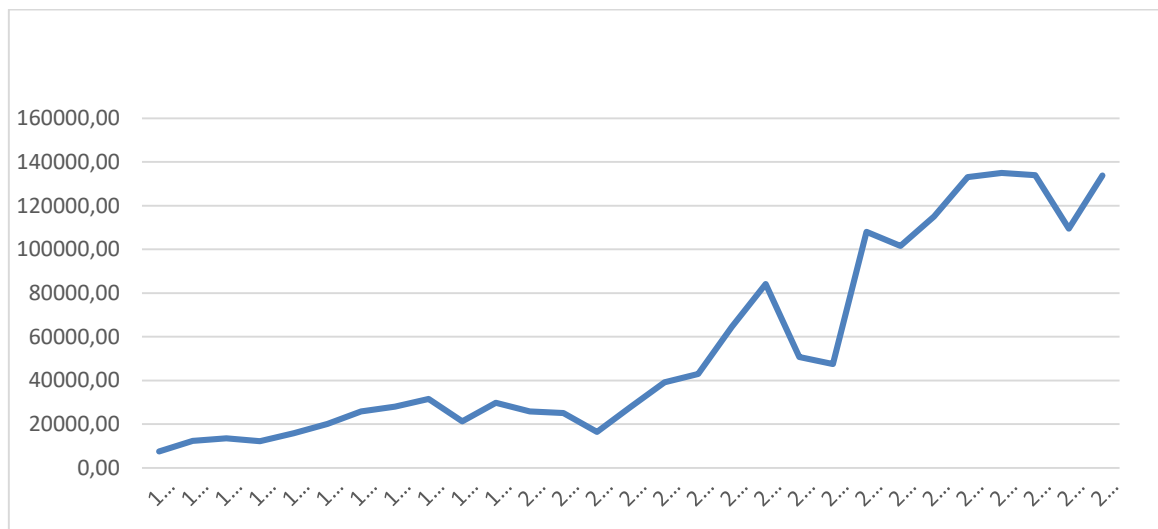


Figure 1. FDI Inflow in ASEAN Region in USD millions

Note. The data used in Figure 1 is obtained from the World Bank. Retrieved from <http://databank.worldbank.org/data/source/world-development-indicators>.

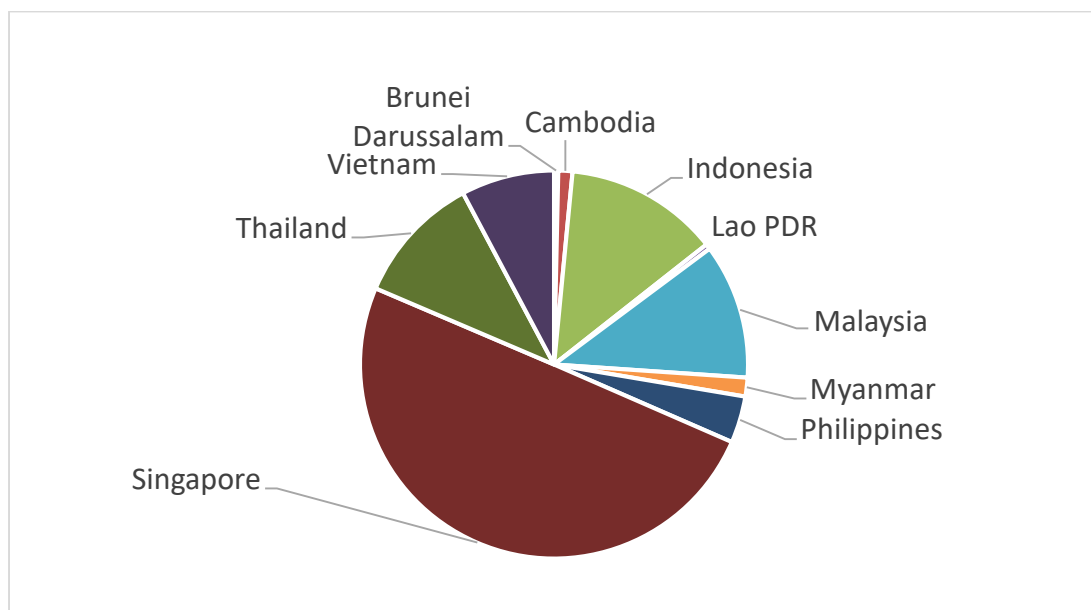


Figure 2. Structure of FDI flows to the ASEAN region

Note. The data used in Figure 2 is obtained from the World Bank. Retrieved from <http://databank.worldbank.org/data/source/world-development-indicators>.

Virtually all countries value FDI as a means to advance their economic development. FDI is generally recognized as a powerful engine for economic growth in Southeast Asia, particularly for countries like Singapore, which is largely dependent on FDI for its economic development due to the shortage of natural resources. Neighboring countries such as Indonesia, Malaysia, Philippines and Thailand have also put more reliance on FDI. Therefore, not surprisingly, these

countries compete with each other for FDI. Bilateral Investment Treaties (BIT) and DTTs are a central part of this process.

The ASEAN member countries have varied colonial backgrounds which partly influences, though does not wholly determine, their current tax systems. The varying levels of development among the member states obviously give rise to different opportunities for each country. In addition, countries at different stage of development face different needs and constraints, which play an important role in fiscal policy designs. As a result, fiscal policies in the countries differ in order to deal with each country's specific requirements, and taxation policies are a critical instrument for the governments to pursue their fiscal goals. For example, Singapore and Malaysia's tax reforms tend to reduce their tax revenue by providing generous investment incentives and lowering tax rates. In contrast, Indonesia, the Philippines and Thailand's tax reforms are generally aimed at widening their tax base. Some researchers have raised concerns that the lack of common tax purposes could impede tax harmonization in ASEAN.⁶

Tax Incentives to Attract FDI

Tax incentives can be defined as any incentive that reduces the corporate or other tax liabilities of companies to stimulate investment in particular economic sectors. Examples of tax incentives include low corporate income tax rates, tax holidays, loss carry-forwards and rules that permit the accelerated depreciation of fixed assets.⁷ Currently, ASEAN members offer corporate rates ranging from 17 percent in Singapore to 30 percent in the Philippines.

Almost all ASEAN member states have come up with a wide range of tax incentives to attract FDI and boost economic growth (Rajan, 2003). In fact, competition among countries in ASEAN to attract foreign investment by providing tax incentives had started even more than a decade ago. Back in 1996, in the competition to attract capital investment from the General Motors, the Philippines offered corporate income tax exemption for 8 years and Thailand offered similar exemption, with an additional 15 million dollars grant for training facilities. In 2001, to appeal investment from Canon, Vietnam provided corporate income tax exemption for 10 years, but the Philippines competed with Vietnam by changing its regulation and offering a tax holiday for up to 12 years. Recently, in 2014, in order to entice Samsung's investment, Indonesia offered the exemption of corporate income tax for 10 years while Vietnam offered 15 years. A study by Asher and Rajan (2001) indicates that the Southeast Asian tax incentive competition took place mostly to follow the tax incentives provided by the leading country in the region – Singapore. This stems from the belief that, in the region, Singapore is regarded as the most successful territory to attract FDI.⁸

In recent years, ASEAN member countries have continued to improve their tax competitiveness by providing more targeted tax policies such as long term tax holidays, specific (e.g. Research and Development) tax incentives, the establishment of FDI promotion agencies, programs to reduce the tax compliance and administrative burden, and the conclusion of international tax treaties. However, a lack of tax coordination and harmonization raises the concern that these tax incentives could result in continued ASEAN tax competition. Generally speaking,

⁶ R. G. Manasan, A review of fiscal policy reforms in the ASEAN countries in the 1980s, Philippine Institute for Development Studies, Working Paper No. 90-12 (May 1990), pp. 18-19

⁷ UNCTAD, *Tax Incentives and Foreign Direct Investment: A Global Survey*, ASIT Advisory Studies No. 16, p. 11 (UN 2000).

⁸ An example is that in September 1999, the Philippines' government introduced a 12-year tax holiday for projects that will produce raw materials for the electronics industry. This policy was proposed to match the incentives provided by Singapore (Easson, 2001, 269)

cooperation in tax matters between countries is hampered by a fundamental conflict arising from their needs to attract common entities for capital investment. To facilitate the goal of economic integration, ASEAN countries have been urged to allow cross-border income and capital flows to be as free as possible within the region in order to foster the development of a regional economic community. However, while many researchers and practitioners agree that tax policies in the member states should be more harmonized to benefit all countries, how this can be done in practice remains a challenge.

Tax Competition in ASEAN

As stated by Tohari and Retnawati (2010), the ASEAN would like to increase its economic potential and competitiveness collectively by attracting foreign investment as a regional group. At an individual country level, however, each jurisdiction with its own interest is certainly encouraged to offer incentives to encourage domestic capital inflows. These dual interests inevitably conflict with one another.

Empirically, Tohari and Retnawati (2010) conclude that there is a lack of evidence of the presence of tax competition in the region except with regard to Singapore and Malaysia. With no evidence of a convergence in statutory tax rates by ASEAN member states is obtained, the authors argue that tax competition in ASEAN may not encompass all of the countries. In such a case, tax policy competition is only present at an individual-country level, and arises in response to international tax competition. However, as the authors point out, this could stimulate the other ASEAN countries to adopt similar policies, and consequently, tax competition turns out to be unavoidable and potentially result in harmful tax competition.

Double Tax Treaties

What are DTTs?

Double tax treaties (DTTs) are entered between jurisdictions to mitigate the possibility of double taxation of foreign entities. The Fiscal Committee of Organization for Economic Co-operation and Development (OECD) in the Model Double Taxation Convention on Income and Capital (1977) defines double taxation as “the imposition of comparable taxes in two or more states on the same tax payer in respect of the same subject matter and for identical periods”. Double taxation problem arises when two or more countries intend to tax the same income. The issue stems from two basic rules that enable the country of residence as well as the country where the source of income exists to impose tax, namely, (i) the source rule and (ii) the residence rule. The source rule holds that income is to be taxed in the country in which it originates irrespective of whether the income accrues to a resident or a non-resident, whereas the residence rule stipulates that the rights to tax should rest with the country in which the taxpayer resides. If both rules apply simultaneously to a business entity, the combined income tax expenses of the business would become prohibitive, which deters the process of globalization.

DTTs are negotiated under public international law, and governed by the principles laid down under the Vienna Convention on the Law of Treaties (emanating from Article 26). Many developed countries, such as Singapore, frequently renegotiate their existing treaties to reflect ever-changing developments in the global economy.

Functions and Benefits of DTTs

Key Functions of DTTs

DTTs provide a legal framework for cooperation between tax authorities to tackle offshore non-compliance, profit shifting and base erosion. They also set the legal basis for

administrative assistance among tax authorities DTTs also allocate taxation rights to the residence and source country depending on the type of income. This allocation is achieved through rules for division of revenue laid down in the DTT between two contracting states.

DTTs also fulfill some other important coordination functions. First, they ensure that contracting states adopt standardized definitions for factors that determine taxing rights and taxable events, such as the definition of a permanent establishment. Second, most treaties also specify a Mutual Agreement Procedure (MAP) which is invoked when interpretation of treaty provisions is disputed. Third, the exchange of information (EOI) on either a routine basis or in response to a special request is provided for in most treaties to assist countries in combating tax evasion. It allows tax authorities to cross-check information, which may be requested, spontaneous (such as that arising from company audit processes) or automatic (bank information).

Benefits of DTTs

From jurisdictions' perspectives, DTTs are legally binding instruments that provide legal certainty for their resident companies, and could thus promote global business expansion and boost economy. In addition, it is often claimed that the exchange of tax information between the tax authorities of the signatory countries can help prevent tax avoidance and evasion. Also, DTTs often provide a framework for on-going dialogue among national tax authorities.

From multinational companies' perspectives, businesses are generally concerned both with the size of their tax burden and with compliance costs in meeting their tax obligations. Studies such as *Paying Taxes 2013* of the World Bank/IFC show that the most difficult places to pay taxes are mostly small developing countries lacking the resources for adequate tax administration. DTTs will help MNEs by providing them more certainty as to the tax treatment of their transactions and by setting out clear administrative procedures such as the availability of the MAP.

Costs of DTTs

First of all, negotiating and ratifying a DTT tie up administrative resources. A country might have other priorities than negotiating tax treaties or may not have the capacity for extensive negotiations. Treaty negotiations may distract tax authorities from those priorities. Moreover, the application of a tax treaty is intensive in terms of cost and administration.

Second, the potential loss of tax revenue is often the biggest concern from a tax authority's perspective since DTTs. Given the reciprocal nature of FDI flows, tax benefits offered to investors from the contracting partner in one country should, in theory, be compensated by the same tax concessions received by that country's own investors in the other contracting state. However, FDI flows between developing and developed countries are highly asymmetric. As a result, DTTs concluded by developing countries often end up reducing tax revenue in those countries. According to IMF (2014), "very rough calculations suggest that United States (US) tax treaties cost their non-OECD country counterparts perhaps \$1.6 billion in 2010".⁹ More discussions on this issue are provided in Section 3.5.

Third, treaty shopping is another problem that has brought tax treaty negotiations to a halt. Treaty shopping is the term which according to van Weeghel (1998) connotes "a situation in which a person who is not entitled to the benefits of a tax treaty makes use - in the widest meaning of the word - of an individual or legal person in order to obtain those treaty benefits

⁹ IMF (2014), *Spillovers in International Corporate Taxation*, Washington DC: International Monetary Fund.

that are not available directly.” Entities in countries without a tax treaty or with high tax rates are able to route their funds through a country with a DTT specifying low withholding tax rates. If these third countries also have low tax rates on non-resident income, the investing entity can avoid a significant portion of source country taxes. Multinationals tend to use the treaty network among different countries in their tax planning strategies, engaging in ‘treaty shopping’. A study by Van’t Riet and Lejour (2014) finds that treaty shopping has reduced the global average of withholding rates on dividends by 5%.

DTTs in Developing Countries

While DTTs may help developing countries attract more foreign investment, they also tend to reduce the tax revenue of these countries. Most developing countries are net capital importers, and DTTs typically reduce source-based taxation (of host country), thereby shifting tax revenues from the source country to the residence country. Therefore, the reduced tax revenues of developing countries can only pay off if DTTs indeed lead to higher economic growth. Dagan (2000) and Baker (2012) both argue that the revenue-reducing aspect of a DTT makes it not beneficial for developing countries. From this point of view, developing countries should refrain from signing treaties in which they give up taxing rights and thereby revenue unless a long term benefit in terms of additional inward investment is expected.

Another concern for developing countries is that the EOI function may not necessarily ensure a detection of tax evasion and avoidance. On-request information exchange (the most common form) typically fails to detect tax avoidance and evasion because some preliminary evidence often needs to be presented in order to request information from another tax authority. The lack of transparency and complex nature of international tax planning, however, often prevent the collection of evidence.

OECD V.S. UN Model Tax Conventions

When entering into tax treaties, countries commonly base their initial negotiation positions on the OECD or the UN (i.e. United Nations) Model. The OECD Model tends to emphasize residence taxation rights, favoring developed countries, while the UN Model emphasizes source taxation, favoring developing countries. Whereas the OECD Model has been primarily developed in light of the interests of industrialized countries, the drafters of the UN Model were aiming to create an alternative to the OECD Model which can be used by developing countries. Choosing between the OECD and the UN Model therefore means choosing between less or more taxing rights for the source state.

While basically following the structure and the wording of the OECD Model, the UN Model differs from the OECD Model in several ways. The most important deviations can be found in the articles concerning business income and the definition of permanent establishment (PE), the passive income articles and the capital gains articles as well as the article on other income. All these deviations lead to more taxing rights at source.

Exchange of Information

Jurisdictions generally cannot exchange information for tax purposes unless they have a legal basis or mechanism for doing so. The term “exchange of information” has a very broad meaning. It includes “an exchange of documents and an exchange of information unrelated to specific taxpayers and the provision of information by one Contracting State whether or not information is also being provided at that time by the other Contracting State.”¹⁰

¹⁰ Paragraph 5 of the Commentary on Article 26 of the United Nations Model Convention.

According to UN's Committee of Experts on International Cooperation in Tax Matters¹¹, "the present Article embodies the rules under which information may be exchanged to the *widest possible extent*, with a view to laying the proper basis for the implementation of the domestic tax laws of the Contracting States and for the application of specific provisions of the Convention." The text of the Article also makes it clear that the exchange of information is not restricted by Articles 1 (Persons Covered)¹² and Article 2 (Taxes Covered)¹³, so that the information may include particulars about non-residents and may relate to the administration or enforcement of taxes not referred to in Article 2.

The OECD Model Convention's Article 26 on Exchange of Information was altered in 2005, in what purported to be a clarification rather than an extension of the Article. The OECD changes to this Article and revised Commentary have been adopted in the UN Model Convention as well, except for some minor drafting differences. Those changes are deemed to be suitable and potentially helpful for developing countries. A paragraph 5 (in both Models) was added in order to address the problems associated with ownership information and information held by banks, financial institutions, nominees, agents and fiduciaries. This paragraph provides that a Contracting State cannot decline to provide information solely because it is held by such a person or solely because it is ownership information. The most important consequence of this change is that domestic bank secrecy rules can no longer be used as a basis for declining to provide information.

Despite the on-going efforts to improve the efficiency of the article, some developing countries may not be enthusiastic regarding the exchange of information in their treaty negotiations. This is because, many developing countries are under pressure from developed countries to provide information, but developed countries may not be so forthcoming in disclosing information to allow other countries to protect their tax bases.

Anti-abuse Provisions

In the past, countries seldom included anti-abuse provisions into their tax treaties. Instead, they relied on general or specific anti-avoidance rules in their domestic tax laws to tackle treaty abuse. Over the past few years, more countries are introducing explicit provisions aimed at restricting treaty benefits available in the DTTs. This is done either through a Limitation on Benefits (LoB) provision or through a Principal Purpose Test (PPT). Specific anti-abuse provisions, which contain the PPT, is typically attached to the treaty articles for dividend, interest and royalty payments (articles 10, 11, and 12). Treaty benefits are denied if the main purpose or one of the main purposes of the arrangement is to take advantage of the treaty benefit. An example is the Australia-Switzerland DTA which includes specific as well as general purpose based anti-avoidance rules.

¹¹ The Committee of Experts on International Cooperation in Tax Matters is a subsidiary body of the Economic and Social Council and is responsible for keeping under review and update the United Nations Model Double Taxation Convention between Developed and Developing Countries (UN Model) and the Manual for the Negotiation of Bilateral Tax Treaties between Developed and Developing Countries. The Committee provides a framework for dialogue with a view to enhancing and promoting international tax cooperation among national tax authorities. It also assesses how new issues affect this cooperation and makes recommendations on capacity-building and the provision of technical assistance to developing countries and countries with economies in transition.

¹² Article 1 defines the personal scope of application of the treaties, and indicates that the treaty applies to persons who are residents of one or both of the Contracting States.

¹³ Article 2 comprises four paragraphs. The first two paragraphs set out the primary scope and provide a definition of "taxes on income and on capital".

Trends and Development of DTTs in ASEAN

The Development of ASEAN Treaty Network

In general, many researchers and economists agree that taxation could potentially become a facilitator, or an impediment to greater integration and economic growth within ASEAN. The influences not only come from the individual tax regimes, but also the DTTs entered into by the ASEAN member states with each other and with non-ASEAN countries.

Figure 3 illustrates the development of the annual average of new effective DTTs for ASEAN countries. The number of new treaties entering into force has increased exponentially between 1995 and 1999. Over the past decade, there have been around 7 to 14 new DTTs becoming effective each year.

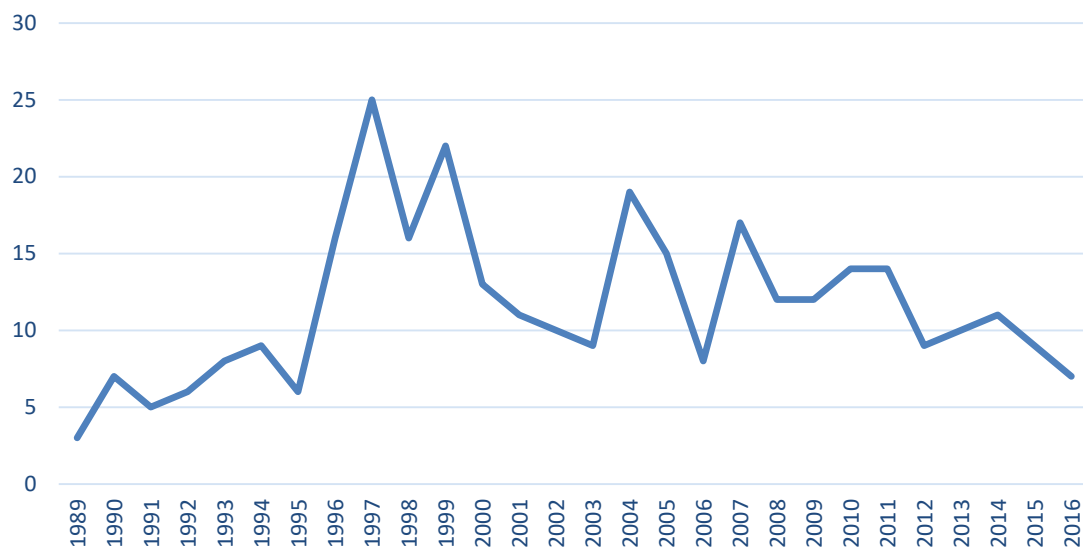


Figure 3. New double tax treaties in force by year

Note. The data used in Figure 3 was hand-collected by the author. Data sources include the ASEAN countries' official websites on double tax treaties.

The Intra-ASEAN Bilateral Tax Treaty Network

The commitment of ASEAN member states to completing an intra-ASEAN network of bilateral tax treaties is often discussed in the context of the establishment of the ASEAN Economic Community (AEC). The AEC has only become effective since December 2015, with its main purpose of promoting the ASEAN integration as a single market and production base. Fundamental to the creation of the AEC is the integration of ASEAN and enhancement of ASEAN's economic competitiveness. The AEC Blueprint offers a roadmap for developing a competition policy, protection of intellectual property rights, and the aim for the completion of a network of bilateral agreements on avoidance of double taxation. Specifically, according to the AEC Blueprint (Item 58), "ASEAN member countries should complete the network of bilateral agreements on avoidance among all member countries by 2010." Despite the 2010 deadline having passed, there remains gaps in the DTT coverage in the region (*see* Table 1).

Table 1. ASEAN Treaty Network and Year Signed

	Brun	Cam	Indo	LPDR	Mal	Myan	Phil	Sing	Thai	Viet
Brun		2018	2002	2011	2010			2006		2009
Cam	2017*							2018	2018	
Indo	2003				1991	2003*	1993	1992	2004	2000
LPDR	2011*		2018		2012	2012		2017	1998	1997
Mal	2011		1987	2012		2009	1985	2007	1983	1995
Myan			2003*	2012	2009			2000	2012	2005
Phil			1983		1985			1977	1983	2004
Sing	2006	2018	1992	2017	2007	2000	1977		2017	1994
Thai		2018	2004	1998	1983	2012	1983	2017		1993
Viet	2009		2000	1997	1995	2005	2004	1994	1993	

* Treaty signed but not yet in force

Note. Table 1 was adapted from Jogarajan (2012), p. 502, Table 11.1. The data used in Table 1 was hand-collected by the author. Data sources include the ASEAN countries' official websites on double tax treaties and the taxnotes database.

As shown in Table 1, the intra-ASEAN bilateral tax treaty network indicates that the ASEAN member countries have made considerable efforts to conclude DTTs with one another. Among the ten member states, Singapore has topped the list of ASEAN countries by becoming the first to establish a treaty network with all the other ASEAN jurisdictions. While Malaysia, Vietnam and Thailand have DTTs with eight ASEAN countries, some other countries lag behind with limited DTT networks within ASEAN. Brunei Darussalam and Lao PDR have bilateral tax treaties with five other ASEAN countries, and Cambodia has only three.

Jogarajan (2012) identifies the limited bilateral tax treaty network within ASEAN to be an impediment to regional economic integration and development. The argument is that the absence of a comprehensive network of DTTs between member states could translate into the absence of many tax treaty benefits, as discussed in Section 3.2.3. Thus, according to Jogarajan (2012), a limited ASEAN bilateral tax treaty network could hinder regional economic integration as it increases tax expenses for businesses; heightens administrative burdens; creates transaction and cost uncertainty; and provides a general disincentive to regional investment and profit repatriation.

Jogarajan (2012) also points out that the 'age' of some of the intra-ASEAN DTTs could pose some significant challenges for the member states. From Table 1, the oldest intra-ASEAN bilateral tax treaty has been in existence for nearly thirty-five years, and several treaties, although concluded, are not yet in force despite the fact that it has been several (or in some cases many) years since they were concluded. In addition, more than half of the intra-ASEAN treaties were concluded more than twenty years ago. All these issues could potentially discourage cross-border investment as some member countries' fiscal and regulatory reforms have overtaken the terms of the prevailing bilateral tax treaty, meaning that some of the treaty terms could have become outdated. For example, the first Singapore-Thailand DTT, which came into force on 1 January 1976, provided a 20% withholding tax rate on dividends. This provision has become obsolete because Singapore does not impose dividend tax on taxpayers, and Thailand's domestic withholding tax rate is only 10%. The two countries therefore negotiated a new agreement, which became effective in 2017.

Older treaties may even force countries to provide unilateral relief to inbound and outbound investors, which could further intensify the tax competition in ASEAN. Countries such as Brunei Darussalam, Malaysia and Singapore have implemented unilateral measures to reduce or eliminate double taxation, including the foreign-source income exemptions.

Another consideration is related to the general downward trend of withholding rates for interest, dividend, and royalties (i.e. lower source country taxation) in DTTs concluded in recent years. Some of the older DTTs with relatively high withholding tax rates could fail to promote regional investment and economic integration. In fact, recognizing that “free flows of trade and capital requires the elimination of withholding taxes”, the AEC Blueprint explicitly calls for “enhancement of the withholding tax structure to promote broadening of the investor base in ASEAN debt issuance”. In addition, the region as a whole may appear to be less attractive to foreign investment because of the additional tax costs and administrative burdens association with intra-ASEAN trade.

DTTs between ASEAN and Non-ASEAN Countries

This section compares the terms of the intra-ASEAN bilateral tax treaties with the terms of bilateral tax treaties between ASEAN member countries and non-ASEAN countries. In particular, the ‘best’ terms (i.e. lowest withholding tax rates) for each member country with another member country and a no-ASEAN country are identified in Table 2 below.

Table 2. ASEAN Member Countries’ Withholding Tax Rates (Best Practice)

State	Lowest Withholding tax rates (ASEAN members)	Lowest withholding tax rates (Non-ASEAN countries)
Brunei Darussalam	Singapore: D-10%, I-5/10%, R-10%	Bahrain: D-5%, I-0%, R-5%
Cambodia	Brunei, Singapore: D-10%, I-10%, R-10%	China: D-10%, I-10%, R-10%
Indonesia	Singapore: D-15/10%, I-10%, R-15%	United Arab Emirates: D-10%, I-5%, R-5%
Lao PDR	Singapore: D-5/8%, I-5%, R-5%	China: D-5%, I-5/10%, R-5/10%
Malaysia	Myanmar/Vietnam: D-10%, I-10%, R-10%	Bahrain: D-0%, I-5%, R-8%
Myanmar	Singapore: D-5/10%, I-8/10%, R-10/15%	United Kingdom: D-0%, I-20%*, R-0%
Philippines	Thailand, Indonesia: D-15/20%, I-0/10/15%, R-15/25%	Germany: D-5/10/15%, I-0/10%, R-10%
Singapore	Lao PDR: D-5/8%, I-5%, R-5%	Georgia/Mauritius: D-0%, I-0%, R-0%
Thailand	Myanmar: D-10%, I-10%, R-5/10/15%	Tajikistan: D-10%, I-0/10%, R-5/10%
Vietnam	Singapore: D-5/7/12.5%, I-0/10%, R-5/15%	Ireland: D-5/10%, I-0/10%, R-5/10/15%

D = Dividend Withholding Tax, I = Interest Withholding Tax, R = Royalty Withholding Tax

Note. Table 1 was adapted from Jogarajan (2012), p. 504 – p. 505, Table 11.2. The data used in Table 2 was hand-collected by the author. Data sources include the ASEAN countries’ official websites on double tax treaties and the taxnotes database.

As shown in Table 2, at a glance, withholding tax rates within the region are mostly higher than the rates offered in DTTs with parties outside the region. This differential treatment may cause income and capital flows between ASEAN states and countries outside ASEAN more advantageous than intra-ASEAN ones. Thus, it seems that the current DTT networks by most member states somewhat discourage trade between ASEAN member states and may limit economic integration in the region. Nevertheless, the relative bargaining power of the member states and their need to attract investment from outside the region certainly need to be taken into consideration.

Key Features of DTTs Signed by ASEAN Countries

The ASEAN member states reflect significantly different income tax treaty experience. Indonesia, Malaysia, Singapore, Thailand and Vietnam all have very extensive income tax treaty networks, with each having more than 60 DTTs currently in force. At other extreme, Cambodia, Myanmar, Brunei Darussalam and Lao PDR have less than 20 DTTs.

The ASEAN countries vary considerably in the design of their treaties and in the way they divide up the tax base between source and resident countries. Also, the sophistication of the international tax rules varies from one country to another. Not all countries have adopted clear anti-abuse or treaty shopping rules, and those that have apply varying levels of strictness or permissiveness. Despite that most treaties signed by ASEAN member countries follow the UN Model, the member states usually remain flexible with respect to the definition of PE. In general, a duration of 6 months is required for a building site, a construction, assembly or installation project or supervisory activities in connection therewith to be recognized as a PE in most treaties. A 3-month or 9-month duration, which is different from that of both the OECD and the UN Model, has been used as well.

In some DTTs, an anti-abuse clause is adopted to deny the application of relevant articles if the rights giving rise to the dividend, interest or royalty were created or assigned mainly for the purpose of taking advantage of the treaty and not for bona fide commercial reasons. Another important provision, contained in Article 26(5) of the OECD Model Tax Convention, states that a Contracting State may not decline to supply information solely because the information is held by a bank, other financial institution, nominee or person acting in an agency or a fiduciary capacity or because it relates to ownership interests in a person.

Table 3 summarizes the level of participation by each ASEAN member state with respect to the use of Article 26(5) and anti-abuse clause in their existing DTTs. Singapore, with the most number of DTTs in the region, has taken considerable efforts to update its existing DTTs. The EOI provision contained in Article 26(5) of the OECD Model tax Convention has been found in 50 of Singapore's treaties. Vietnam has included the provision in 19 of its DTTs, and Brunei Darussalam has the provision in 10 DTTs. The provision is not found in most of the DTTs by other member states. The anti-abuse provision, which is generally added to the articles on investment income, has been adopted in more than half of the Philippine' and more than one third of Singapore's DTTs. Brunei also has included the provision in 6 out of 18 of its DTTs. However, in other member states, the anti-abuse provision is not commonly used.

Table 3. Summary of Level of Participation (on EOI and Anti-abuse Provisions) by Each ASEAN Member States (as of 1 January 2018)

Country	No. of DTTs	EOI -Article 26(5)	Anti-abuse Provision
Brunei Darussalam	18	10	6
Cambodia	2	2	0
Indonesia	65	3	5
Laos	11	4	1
Malaysia	73	7	5
Myanmar	8	1	0
The Philippines	41	2	25
Singapore	84	50	19
Thailand	61	2	3
Vietnam	68	19	2

Note. The data used in Table 3 was hand-collected by the author. Data sources include the ASEAN countries' official websites on double tax treaties and the taxnotes database.

The impact of DTTs on FDI

How do DTTs Affect FDI?

Economists have long been concerned about the effect of taxation on investment flows, and the general conclusion is that firms do respond to a variety of tax policies. There exist two opposing views on the direct impact of DTTs on FDI. On the one hand, the positive effect of DTTs on FDI is generally based on the common expectation that DTTs facilitate the flow of capital and labor by removing tax barriers created by high taxation, double taxation or uncertainty. For example, Buthe and Milner (2009) argue that BITs and DTTs play a vital role in attracting foreign investment by making the country's business and investment environment better. Moreover, the incidence of treaty shopping suggests that DTTs indeed influence the routing of investment flows, as evidenced by the India-Mauritius treaty case. Nevertheless, economists have also stressed that how important a tax treaty is will very much depend on the economic structure in each of the two countries, the relationship between treaty and domestic law, the attitude of the administration and the courts in the application of the treaty.

On the other hand, while DTTs largely address the problem of double taxation, they tend to restrict opportunities for tax evasion by foreign investors, which may even act as a disincentive for FDI. Another rationale advanced by some of the literature is that DTTs limit the tax revenue of host countries, thereby reducing the governmental resources to construct the infrastructure necessary to attract and support FDI in the first place. More broadly, the existence and widespread use of tax havens, the possibility of allocating various cost items across the affiliates of a corporate system and the use of transfer pricing may provide alternatives to DTTs for corporations seeking to minimize their tax burden. Lastly, Davies (2004) cautions that information sharing between governments reduces the ability of multinationals to engage in strategic transfer pricing behavior. Thus, provisions for information sharing may discourage investment, while double-taxation relief stimulates FDI activity, making tax treaties appear ineffective on net.

Empirical Evidence on the DTT-FDI Relationship

A myriad of empirical studies have documented the relationship or (lack of relationship) between tax treaties and FDI, and these studies can be divided into two streams. The first stream includes two-party studies that track changes in bilateral treaty status and shifts in the amount

of FDI on a jurisdiction-by-jurisdiction basis. The second stream begins with the absolute number of treaties of a host or source country and analyze whether a higher treaty count is associated with higher FDI in this source country. The studies that rely on bilateral FDI data generally conclude that tax treaties do not have a positive effect on FDI while the studies based on aggregate FDI data find a positive association between tax treaties and FDI. An important difference between the two groups of studies, apart from the different data sources, is the sample size. The first group of studies has relied on small and non-representative samples, while the second group use large and representative samples.

The following section summarizes the findings of prior studies on the impact of DTTs on FDI flows, with the literature being divided into four groups with findings. Specifically, The studies are sorted according to whether their conclusions indicate that DTTs have a positive effect, no effect, a negative effect or mixed effects on FDI.

A Strong Positive Effect

Neumayer (2007) provides statistical evidence that signing DTTs with US or other highly developed countries can boost FDI inflows to developing countries. He also estimates the effect of OECD DTTs on total inward FDI to developing countries, and concludes that there is a positive effect of DTTs on FDI. However, the positive effect is only for middle-income developing countries and not their low-income counterparts. Azémar, Desbordes, and Mucchielli (2007) study the effect of ‘tax sparing’ clauses, and find evidence that the tax sparing clause influences positively the location of Japanese FDI. More recently, Barthel, Busse and Neumayer (2010) state that policy makers, in order to attract more FDI, are busy in making policies for encouraging technological advancement, providing capital advantages, and improving competition in the host states. Their study considers DTTs to be one of the most essential policy tools, and in which, using 30 source and 105 host countries in the sample, the authors show that DTTs increase FDI inflows in the host countries. All the above studies acknowledge the difficulty in isolating the influence of treaties from other variables such as economic and political environment.

Di Giovanni (2005) examines the impact of various macroeconomic and financial variables on cross-border merger and acquisition activities as a component of FDI over the period from 1990 to 1999. Using a sample of 193 countries, the author finds that a tax treaty is accompanied by increased cross-border acquisition activities. The caveat of the study is that mergers and acquisitions may not result in any net increase in actual FDI, since the activity may constitute nothing more than one foreign investor selling interests in foreign assets to another.

Another related study by Weyzig (2013) uses Dutch micro data of shell companies in 2007 and analyzes tax treaty shopping as a determinant of FDI. By focusing on the diversion of FDI through the Netherlands which is the world’s largest conduit country, the author finds that the share of bilateral FDI that flows through the Netherlands is 6 percentage points higher with a tax treaty route between the home and host country via the Netherlands. More recently, Lejour (2014) finds that lower dividend withholding rates in tax treaties increase the stock of bilateral FDI, but this result is attributed to treaty shopping effects rather than increases in ‘real’ investment.

No Effect

Some empirical research has also reached the conclusion that the signing of a tax treaty has either no effect or a negative effect on FDI, especially in those situations where the countries involved are a developed country on the one hand and a capital importing country on the other

hand. In fact, most empirical studies have generally found that DTTs entered into since the early 1980s have not had a demonstrable impact on investment flows. For example, Davies (2003) examines the impact of treaty re-negotiations over the period from 1966 to 2000 on both inbound and outbound U.S. FDI. During this sample period, 20 treaty renegotiations took place. The overall finding is that the revisions are generally insignificant with negative coefficients, indicating no strong positive effect of treaty renegotiations on FDI.

Blonigen and Davies (2004) investigate the U.S. FDI flows from 1980 to 1999, and find that DTTs concluded by the U.S. during this period had no significant effect on inward and outbound FDI. Focusing on less developed countries, Baker (2014) fails to document a significant impact of DTTs on FDIs. Thus, the author recommends that the strategy makers of least developed countries (LDC) should first investigate the benefits and costs of signing a new treaty, and only sign such treaties if the benefits are expected to outweigh the costs.

Negative Effect

Distinguishing between 67 country pairs with tax treaties and a further 719 pairs without, Egger, Larch, Pfaffermayr, and Winner (2006) analyze the FDI data from OECD source countries two years prior and two years after DTT conclusions from 1985 to 2000. A negative effect of newly implemented DTTs on outward FDI stock from OECD countries is documented in this study. Coupe, Orlova and Skiba (2008) find that bilateral investment treaties (BITs) have a positive impact on FDI while DTTs have an insignificant impact. They present evidence that countries which have signed BITs with OECD countries will receive more FDIs while signing DTTs exerts no effect.

Mixed Effects

An important study by Blonigen and Davis (2005) analyzes the effect of old and new DTTs on FDI using OECD data on bilateral FDI stocks and flows covering 23 developed source countries from 1982 to 1992. They report a positive relationship between the existence of a DTT and higher FDI stocks and flows. In addition, the authors find that when older DTTs concluded many years before the period of their study are distinguished from newer DTTs entered into during their observed time period, the authors find that the newer treaties had no positive effect on FDI activity. The combined effect of both old and new treaties turns out to be significant and positive. Therefore, the authors argue that for a short period of time, a treaty tends to have a negative impact on and will reduce FDI activity; whereas it will exert a positive impact in the long run.

In a similar vein, Ohno (2010) evaluate the effect of DTTs on Japanese FDI in 13 Asian countries from 1981 to 2003. The author shows that while the new treaties have significantly positive impact on FDI, as time passes and these treaties become old or are revised, they lose their significance. Using panel data for US inbound and outbound FDI over the years between 1980 and 1990, Kumas and Millimet (2009) provide evidence that new treaties have a positive impact if the level of FDI in a country is low. However, the new treaty will assert a negative impact if FDI activity is already high in a country. These effects hold mainly in the short term. Blonigen, Oldenski, and Sly (2014) estimate the impact of DTTs on two different types of industries: industries that mainly use inputs traded on an organized exchange, and industries for which this is not the case. By disentangling the opposing effects of DTTs, the authors conclude that there is no effect of DTTs on the investment patterns of those firms. This result is attributed to the negative effect of EOI being offset by the positive effect of lower withholding tax rates. For other firms in the industries that rely more on inputs for which comparable prices are not readily observable, the EOI is regarded as less relevant and the relief

from double taxation prevails. In such cases, DTTs are found to encourage cross-border trade activities.

In conclusion, numerous studies have examined whether and to what extent FDI responds to DTTs, but the findings are mixed. Given the conflicting empirical results, more evidence is needed. This study, using an ASEAN sample, seeks to find out if DTTs have a significant impact on FDI flows into the region.

Table 4. Key variables used in the study

Dependent Variable	Independent Variables	Proxies used	Sources
Foreign Direct Investment (FDI)		FDI inflows	Asean.org (Foreign Direct Investment Statistics)
	Market Size	GDP Population	WDI, World Bank Website
	Development Level	GDP <i>per capita</i> (GPPPC)	WDI, World Bank Website
	Trade Openness	Trade as % of GDP	WDI, World Bank Website
	Double Taxation Treaties	Current Year DTTs Cumulative Year DTTs	UNCTAD / ASEAN website
	Corporate Tax Rate (CTR)	Host country corporate tax rate	World Bank, World Development Indicators

Note: Table 4 was adapted from Shah, M.H., & Qayyum, S. (2015), p. 9, Table 1. Available at SSRN: <https://ssrn.com/abstract=2851545>.

Methodology

Research Methods Used by Prior Studies

The myriad of empirical studies documenting the relationship or (lack of relationship) between tax treaties and FDI can be divided into two streams. The first stream includes two-party studies that track changes in bilateral treaty status and shifts in the amount of FDI on a jurisdiction-by-jurisdiction basis. The second stream begins with the absolute number of treaties of a host or source country and analyze whether a higher treaty count is associated with higher FDI in this source country. The studies that rely on bilateral FDI data generally conclude that tax treaties do not have a positive effect on FDI while the studies based on aggregate FDI data find a positive association between tax treaties and FDI. An important difference between the two groups of studies, apart from the different data sources, is the sample size. The first group of studies has relied on small and non-representative samples, while the second group use large and representative samples.

Sample

The sample of this study consists of 10 ASEAN countries, including Indonesia, Malaysia, the Philippines, Singapore, Thailand, Brunei, Vietnam, Laos, Myanmar and Cambodia. The sample period is from 1989 to 2016.

Data Sources

Following Shah and Qayyum (2015), the key independent variables used in this study include host country market size, development level, and trade openness. The Shah and Qayyum (2015) also include the level of education as a proxy for human capital, however this data is largely missing for the ASEAN sample and therefore excluded from the analysis. The corporate tax rate variable is also added as a control variable. The sources of the key variables used in the study are provided in Table 4.

The key explanatory variable of interest in this study is the Current Year DTTs as well as the Cumulative Year DTTs. Existing studies differ in that some take the year of ratification as the treaty's start period (e.g. Coupe, Orlova and Skiba, 2008). As discussed in Barthel, Busse, and Neumayer (2010), the DTT signature date is usually referred to as the date of conclusion, before which the treaty partners commit themselves to arranging the procedures necessary under their respective domestic laws for the final conclusion of the treaty. However, to enter into force, the treaty must be ratified by the parliaments or heads of state of the contracting states, and a formal exchange of deposit of the instruments of ratification has to take place. The states are bound to honor the terms of the treaty only after the ratification is completed. Therefore, according to Barthel, Busse, and Neumayer (2010), it can be argued that the most important date is when the provisions become effective, which is specified in one of the last articles of the treaty and is typically January 1 of the year following ratification. Since the date of effectiveness is what matters most to foreign investors, the year in which a DTT becomes effective is used in this study.

Regression Model

The following regression model, adapted from Shah and Qayyum (2015), is used to test the effect of DTTs on FDI:

$$\ln FDI_{jt} = \alpha_0 + \beta_1 \ln GDP_{jt} + \beta_2 \ln GDPPC_{jt} + \beta_3 \ln Trade_{jt} + \beta_4 \ln Current\ year\ DTT_{sjt} + \beta_5 \ln Cumulative\ DTT_{sjt} + \beta_6 \ln Corruption_{jt} + \beta_7 CTR_{jt} + \xi_{jt}, \text{ where,}$$

Ln FDI is the natural logarithm of FDI inflows to countries included in the sample in million US dollars for time period (t);

Ln GDP is natural logarithm of gross domestic product in US dollars. It is used as a proxy for market size;

Ln GDPPC is natural logarithm of gross domestic product per capita. It is a proxy for developmental level;

Ln Trade is natural logarithm of trade as a percentage of GDP. This variable is used as a proxy for the openness of the host market.

Ln Current year DTTs is the natural log of the number of double taxation treaties signed in the current year plus one;

Ln Cumulative DTTs is the natural log of aggregate double taxation treaties signed till that year plus one;

By taking the natural log of the variables, it allows an easy interpretation of the estimated coefficients. Also, more importantly, the skewness of the variables could be reduced. The

coefficients of interest are β_4 and β_5 , which correspond to the effect of DTTs on FDI. If one or both of the coefficients are positive and statistically significant, it could suggest that the ASEAN countries are more likely to attract FDI inflows to the region if they can expand the treaty network.

Limitations of the Empirical Analysis

First of all, the number of independent control variables used in the study may be insufficient due to data limitation. For example, an index proxy for corruption is found in some similar studies, however this index is not available for the ASEAN sample for most of the sample years. Also, economic data for some ASEAN jurisdictions is incomplete, especially before Year 2000, which makes it difficult to expand the sample period. Second, the sample size is relatively small and consequently the statistical power may be low. Third, the presence of bilateral investment treaties and tax information exchange agreements (TIEA) is not considered in this study. Prior studies such as Coupe, Irina Orlova, and Skiba's study (2009) show that the correlation between DTT and BIT is statistically significant and Braun. Weichenrieder (2015) also demonstrate that the signature of a bilateral TIEA is associated with lower FDI in tax havens. Despite the issue of potential omitted variables, however, the inclusion of more dummy variables (to proxy for BIT and TIEA) would further reduce the statistical power of the regression models. Lastly, it is impractical to disentangle the investment effect of tax treaties from the information exchange effect given the sample size, research design and data availability issues. Since the two effects lead to conflicting predictions of the DTT-FDI relationship, it might be difficult to draw a conclusion from the empirical results.

Results and Analysis

Descriptive Statistics

Table 5 reports the summary statistics of the independent and dependent variables used in the study. The figures are mostly in line with those presented in prior studies.

Table 5. Summary Statistics

Variables	Proxy Used	Obs	Min	Max	Mean	Median	Std Dev
Foreign Direct Investment	Ln FDI	259	1.39	11.21	7.23	7.50	2.00
Market Size	Ln GDP	265	20.39	27.56	24.49	25.00	1.71
	Ln Population	280	12.44	19.38	16.80	17.38	1.81
Development Level	Ln GDP per Capita	265	4.58	10.94	7.71	7.55	1.59
Trade Openness	Ln Trade	265	0.16	6.09	4.49	4.61	1.08
Double Tax Treaties	Ln Current Year DTTs	280	0	2.56	0.56	0	0.63
	Ln Cumulative DTTs	280	0	4.37	2.47	3.04	1.45
Corporate Tax Rates	Statutory Corporate Tax Rates	280	0.086	0.34	0.24	0.25	0.06

Empirical Results

Five regression models are used to test the DTT-FDI relationship, as reported in Table 6. model 1 shows the results according to the baseline model proposed in Section 8.3. One of the biggest

challenges in the empirical literature on tax treaties and FDI is the possible endogeneity of these treaties. Bilateral tax treaties could possibly stimulate FDI, but these treaties are also important facilitators for FDI flows. In order to mitigate this concern, selected explanatory variables are replaced by their lagged values in model 2 and model 3. Specifically, only the two key DTT variables are lagged by one year in model 2, while all independent variables are lagged by one year in model 3. In model 4, the sample for Cambodia is excluded as the no DTT was signed for most of the sample periods. Excluding the Cambodian sample may increase the statistical power of the results. In model 5, both Singapore and Cambodia is excluded. By focusing only on the developing countries with a fair number of DTTs, the sample would be more representative of the e ASEAN sample. The p-values reported in parentheses are based on two-tailed tests for all coefficients. ***, **, * denotes significance at 0.01, 0.05, and 0.10 level respectively.

Table 6 also presents the results for 5 regression models estimated through fixed effects panel estimation method. Panel regressions with fixed effects take care of omitted variables affecting the probability of a tax treaty and the FDI stock. By using the fixed effects estimation, countries with which treaties are in place already before the sample period starts (i.e. before) do not affect the estimation results.

Table 6. The Impact of DTTs on FDIs in ASEAN

	(1)	(2)Lag two DTT variables	(3)Lag All variables	(4)Exclude Cambodia	(5) Exclude Cambodia and Singapore
Variable	$LnFDI_t$	$LnFDI_t$	$LnFDI_t$	$LnFDI_t$	$LnFDI_t$
$LnGDP_t$	33.54252 (0.467)	55.5661 (0.238)	-34.2627 (0.443)	59.98688 (0.200)	57.68449 (0.268)
$LnPOP_t$	-33.23738 (0.471)	-52.641 (0.246)	35.20145 (0.424)	-58.859 (0.208)	-57.7031 (0.268)
$LnGDPPC_t$	-32.0773 (0.487)	-52.0907 (0.251)	35.69626 (0.430)	-58.6598 (0.210)	-56.14853 (0.281)
$LnTrade_{t-1}$	0.0927558 (0.389)	0.126222 (0.211)	0.087413 (0.430)	0.15498 (0.095)	0.12286 (0.266)
$LnCurDTT_t$	0.1551683** (0.047)	0.073891** (0.020)	0.05102 (0.287)	0.648754 (0.236)	0.0358802 (0.361)
$LnAccDTT_t$	0.031159 (0.401)	-0.25128** (0.015)	-0.18296* (0.065)	-0.2025816** (0.048)	-19.05264* (0.071)
$LnCTR_{t-1}$	2.338509 (0.109)	1.4277781 (0.303)	3.43155 (0.021)	0.9818869 (0.541)	2.533223 (0.169)
Intercept	-10.15336 (0.295)	-19.8729 (0.037)	-20.1418 (0.035)	-22.42854 (0.000)	-4.555198 (0.725)
Observations	247	240	238	216	189

In model 1 (column 1), no lagged independent variable is included, most of the control variables (i.e. market size, development level, trade openness) are not statistically significant. Only the corporate tax rate is marginally significant and positive, however this is against the common prediction that higher corporate tax rates discourage investment. The coefficient on

Current DTT variable is significantly positive, suggesting that the latest tax treaties signed are positively related to the inflow of FDI in ASEAN countries. The coefficient on Cumulative DTT variable is statistically insignificant in model 1, indicating that the old DTTs do not have an impact on FDI inflows.

Column 2 and 3 present the empirical results using lagged variables. In column 2, only Current DTT and Cumulative DTT variables are lagged by one year, and all other independent variables are not lagged. Similar to the results shown in column 1, most of the control variables, including corporate tax rates, are still not statistically significant. While the coefficient on Current DTT variable remains significantly positive, now the coefficient on Cumulative DTT variable becomes negative and significant at 5% level. This negative coefficient suggests that old DTTs are associated with a decrease FDI inflows in ASEAN. Similar findings are observed in model 3 where all independent variables are lagged by one year. As shown in column 3, the coefficient on Cumulative DTT is significantly negative at 10% level. However, the coefficient on Current DTT becomes insignificant. Taken together, results from the model 2 and 3 indicate that old DTTs have a negative impact on FDI in ASEAN.

In model 4 and 5, the sample excludes Cambodia and/or Singapore. By removing the “outliers” in terms of the number of cumulative DTTs, a better model fit is expected. The findings are fairly similar in the two models as most independent variables are insignificant except for the Cumulative DTT variable. The coefficients on Cumulative DTT remain significantly negative at 5% or 10% level, leading to the same interpretation that old DTTs reduce FDI inflows. Furthermore, the coefficient on Cumulative DTT is significantly greater (19.05) in model 5 as compared to the that reported (-0.203) in model 4. The big difference in the magnitude of the coefficient seems to suggest that the negative impact of DTTs on FDI inflows is more salient in those developing countries in ASEAN (excluding Cambodia), given that the Singapore sample is removed in model 5.

Discussions

Overall, although no conclusion can be drawn with regard the impact of new DTTs on FDI, most of the findings indicate that old DTTs signed by ASEAN countries may no longer facilitate FDI inflows and economic growth. One may argue that the exchange of information function of DTT, which tackles tax avoidance and thus impedes capital flows, could be the reason behind. However, based on the examination of the current treaty provisions (as reported in Section 5), there is no indication that the relevant EOI terms contained in many of the member states’ DTTs have been amended according to the latest updates in treaty models. Therefore, it is questionable that the information-sharing function of the EOI clause would having a dominating impact on FDI flows. In addition, one counter argument is that the dominating effect of EOI may not be attributable to the treaties, but could be driven by the Multilateral Convention on Mutual Administrative Assistance in Tax Matters (‘the Convention’). However, since only 5 ASEAN members are signatories to the Convention, and majority of them signed only in recent years, it is difficult to conclude that the immediate effect of the Convention is strong enough to drive the results (for the entire sample period).

Another more justifiable explanation for the negative impact of old DTTs on FDI could be the fact that many of the treaties might have become outdated or irrelevant given the various factors discussed in Section 4.2. For example, unfavorable withholding tax rates concluded in old treaties may drive capital flows into other places with better treaty terms. Thus, while the ASEAN countries continue to expand their treaty networks, perhaps another priority is to review the treaty terms in existing treaties and renegotiate certain provisions with treaty

partners. This, however, will be a lengthy and complex process as many of the existing treaties may require renegotiations.

In light of the concerns mentioned above, some researchers and practitioners have raised the possibility of a multilateral tax treaty where each country does not have to make separate bilateral agreements between ASEAN countries. As suggested by Jogarajan (2012), “a multilateral tax treaty removes the administrative burden of having to negotiate and conclude separate bilateral tax treaties with other member countries and also establishes ASEAN as an investment destination of choice for non-ASEAN companies as there is certainty and consistency of tax treatment in the region.” Not only would a multilateral tax treaty eliminate the inconsistencies in each DTT, but then often tedious and complex separate treaty negotiation processes can also be avoided. It would also strengthen the bargaining position of the member states. Despite the advantages of a multilateral tax treaty, the researcher also recognizes the difficulty of concluding such a treaty given the great disparity in tax systems and economic conditions between the member states. Within ASEAN, Malaysia and Singapore operate a territorial tax systems for individuals and companies, while Brunei use a territorial tax system for companies only, and Thailand uses a territorial system for individuals only. The other ASEAN members adopt a system of worldwide taxation whereby residents of the countries are taxed on their worldwide income. As Berlianto (2009) points out, it is a challenge for a region with varying tax structures to progress with any harmonization efforts without first resolving the diversity of tax systems.

Besides an ASEAN multilateral tax treaty based on the OECD or UN Model, some have also recommended a potential ASEAN model tax convention. The ASEAN tax treaty model, as suggested by Michael Kobetsky (2013), “would foster the development of tax treaties between ASEAN countries and would reduce the time and cost of negotiating treaties.” However, a major challenge is that the model treaty language has to be consistent with the other models. Variances from the OECD or UN models will likely increase uncertainty for taxpayers.

Conclusion

Companies from emerging markets (mostly in Asia) are increasingly becoming important players in the world FDI market. The surge of FDI flows has also been accompanied by a surge of double tax treaties, which deal with issues arising out of the allocation of the revenues generated by investments between host and home countries. DTTs are entered by jurisdictions mainly to provide reciprocal concessions to mitigate double taxation and to assign taxation rights. This paper is aimed at contributing to the on-going debate on the role that tax treaties play in facilitating FDI inflows, with a focus on the ASEAN region.

International trade has made it necessary for jurisdictions to expand their treaty network. Among the 10 ASEAN member states, some are strongly interconnected by tax treaties, while some others have very few treaties. These jurisdictions are also distinct in terms of their tax treaty coverage, and each DTT varies in its approach and generosity (e.g. the strictness of EOI and anti-abuse provisions). An examination of the DTTs signed by ASEAN countries further demonstrates that the member states vary considerably in the design of their treaties, in the way they divide up the tax base between source and resident countries, and also in the level of efforts to keep pace with the latest development in the OECD and UN Model Tax Conventions. The empirical results in this study indicate that new DTTs seem to have moderate or insignificant positive impact on ASEAN countries' FDI inflows, but older DTTs signed by ASEAN countries are strongly associated with declining FDI inflows. Overall, it appears that tax treaties have little or even negative impact on FDI inflows into the ASEAN region, which is consistent

with most prior findings that DTTs' impact on FDI into low-income countries is not significant (e.g. Sauvart & Sachs, 2009).

Given that old DTTs tend to be ineffective in facilitating FDI in ASEAN, one possible explanation is related to the age of some treaties. Unfavorable withholding tax rates as well as outdated clauses are some key issues to be examined and addressed. ASEAN countries are encouraged to review those older treaties and renegotiate certain terms with treaty partners. Furthermore, to promote integration and collaboration in ASEAN, countries could take steps towards more harmonization of their national taxation policies, which include adopting international standards of classification and interpretations. For example, the jurisdictions could consider a standardization of the interpretation of PE rules in their treaties in order to remove any uncertainties. In the long run, establishing a multilateral tax treaty within ASEAN would further facilitate tax cooperation and economic integration, but achieving consensus between the member states will certainly be a challenging process.

References

- Aldaba, R. M. (2008). FDI investment incentive system and FDI inflows: The Philippine experience. *Research Paper Series RPS 2007-03*, Philippine Institute for Development Studies.
- Allurentis Limited and ASEAN (2017), *Investing in ASEAN 2017*. Surry, United Kingdom: Allurentis Limited.
- ASEAN Secretariat (2016), ASEAN Investment Report 2016: Foreign Direct Investment and MSME Linkages.
- ASEAN Secretariat (2017), ASEAN Investment Report 2017: Foreign Direct Investment and Economic Zones in ASEAN.
- Asher, M. G., & Rajan, R. S. (2001). Globalization and tax systems: Implications for developing countries with particular reference to Southeast Asia. *ASEAN Economic Bulletin*, 18(1), 119-139.
- Asian Development Bank. (2006). The Mekong region: Foreign direct investment. ADB Institute
- Azémar C., Desbordes, R., Mucchielli J., (2007), Do tax sparing agreements contribute to the attraction of FDI in developing countries? *International Tax and Public Finance* 14(5): 543–562.
- Baker, P. L. (2014). An analysis of double taxation treaties and their effect on foreign direct investment. *International Journal of the Economics of Business*, 21(3), 341-377.
- Barthel, F., Busse, M., & Neumayer, E. (2010). The impact of double taxation treaties on foreign direct investment: evidence from large dyadic panel data. *Contemporary Economic Policy*, 28(3), 366-377.
- Bergsman, J. (1999, May). Advice on taxation and tax incentives for foreign direct investment. In *FIAS Seminars on FDI Issues: Knowledge Gains. Washington, DC May* (Vol. 27).
- Berlianto, A. (2009). *Tax competition and harmonization in Southeast Asia: a thesis presented in partial fulfilment of the requirements for the degree of Master in Public Policy at Massey University, Albany, New Zealand* (Doctoral dissertation, Massey University).
- Blomström, M., Kokko, A., & Mucchielli, J. L. (2003). The economics of foreign direct investment incentives. In *Foreign direct investment in the real and financial sector of industrial countries* (pp. 37-60). Springer, Berlin, Heidelberg.
- Blonigen, B. & Davies, R. B. (2005). *Do bilateral tax treaties promote foreign direct investment?* In E. Kwan Choy and James Harrigan (eds.), *Handbook of International Trade: Economic and Legal Analysis of Laws and Institutions*. Blackwell.

- Blonigen, B. A., & Davies, R. B. (2004). The effects of bilateral tax treaties on US FDI activity. *International Tax and Public Finance*, 11(5), 601-622.
- Blonigen, B. A., Oldenski, L., & Sly, N. (2014). The differential effects of bilateral tax treaties. *American Economic Journal: Economic Policy*, 6(2), 1-18.
- Boadway, R. W., Chua, D., & Flatters, F. (1995). *Investment incentives and the corporate tax system in Malaysia* chapter 8 in Anwar Shah (ed.). Fiscal Incentives for Investment and Innovation. Washington DC: The World Bank and Oxford University Press.
- Braun, J., & Weichenrieder, A. (2015). Does Exchange of Information between Tax Authorities Influence Multinationals' Use of Tax Havens? Goethe University Frankfurt, *SAFE Working Paper No. 89*.
- Büthe, T., & Milner, H. V. (2009). Bilateral investment treaties and foreign direct investment: A political analysis. *The effect of treaties on foreign direct investment: Bilateral investment treaties, double taxation treaties, and investment flows*, 171-225
- Coupé, T., Orlova, I., & Skiba, A. (2009). *The effect of tax and investment treaties on bilateral FDI flows to transition economies*. En K. P. Sauvart, y L. E. Sachs (Eds.), The effect of treaties on foreign direct investment: Bilateral investment treaties, double taxation treaties, and investment flows. Oxford University Press.
- Dagan, T. (2000). The Tax Treaties Myth. *Journal of International Law and Politics*, 32(939).
- Dagan, T. (2002). *The Costs of International Tax Cooperation*. In E. Benvenisti, G. Nolte and D. Barak-Erez (eds.), Globalization and the Welfare State. Berlin, Heidelberg and New York, Springer: 49-77.
- Davies, R. B. (2003). Tax treaties, renegotiations, and foreign direct investment. *Economic Analysis and Policy*, 33(2), 251-273.
- Davies, R. B. (2004). Tax treaties and foreign direct investment: Potential versus performance. *International Tax and Public Finance*, 11(6), 775-802.
- Di Giovanni, J. (2005). What drives capital flows? The case of cross-border M&A activity and financial deepening. *Journal of international Economics*, 65(1), 127-149.
- Egger, P., Larch, M., Pfaffermayr, M., & Winner, H. (2006). The impact of endogenous tax treaties on foreign direct investment: theory and evidence. *Canadian Journal of Economics/Revue canadienne d'économie*, 39(3), 901-931.
- Farrow, I., & Jogarajan, S. (2006). ASEAN tax regimes and the integration of the priority sectors: Issues and options. *KPMG Australia*.
- Fletcher, K. (2002, August). Tax Incentives in Cambodia, Lao PDR, and Vietnam. In *IMF Conference on Foreign Direct Investment: Opportunities and Challenges for Cambodia, Laos PDR and Vietnam*. Hanoi. August (Vol. 16). Retried May 1, 2018, from <https://www.imf.org/external/pubs/ft/seminar/2002/fdi/eng/pdf/fletcher.pdf>
- Freeman, N. J. (2002, July). Foreign direct investment in Cambodia, Laos and Vietnam: A regional overview. In *Conference on Foreign Direct Investment: Opportunities and Challenges for Cambodia, Laos and Vietnam*. 16-17th August 2002, Hanoi. Retrieved May 1, 2018, from <https://www.imf.org/external/pubs/ft/seminar/2002/fdi/eng/pdf/freema.pdf>.
- Hines, J.R. (1998), Tax Sparing and Direct Investment in Developing Countries', NBER Working Paper Series, No. 6728.
- IMF (2014) Spillovers in International Corporate Taxation, Washington DC: International Monetary Fund.
- IMF. (2006). Cambodia: Selected issues and statistical appendix. IMF Country Report No. 06/265.
- IMF. (2008). *Philippines: Selected issues*. IMF Country Report No. 08/120.

- Jogarajan, S. (2011). A Multilateral Tax Treaty for ASEAN—Lessons from the Andean, Caribbean, Nordic and South Asian Nations. *Asian Journal of Comparative Law*, 6, 1-23.
- Jogarajan, S. (2012). Bilateral tax treaties and ASEAN economic integration: Current position and future prospects. *Taxation in ASEAN and China: Local institutions, regionalism, global systems and economic development*. Routledge.
- Kobetsky, M. (2013) Issues related to international taxation in tax administration. Regional ITC workshop Taxation in ASEAN: Identifying experience and lessons learned in six countries 3-5 July 2013, Bangkok. Retrieved from https://www.taxcompact.net/documents/seminar-bangkok/2013-07-05_itc_Regional-Workshop_Bangkok.pdf.
- Kumas, A. and Millimet, D. (2009). *It's All in the Timing: Assessing the Impact of Bilateral Tax Treaties on U.S. FDI Activity*, in K. Sauvnt and L. Sachs (eds), *The Effect of Treaties on Foreign Direct Investment*, New York: Oxford University Press.
- Lejour, A. (2014). The foreign investment effects of tax treaties. *CPB Netherlands Bureau for Economic Analysis Discussion Paper*, 265.
- Manasan, R. G. (1990). A Review of Fiscal Policy Reforms in the ASEAN Countries in the 1980s. Philippine Institute for Development Studies, Working Paper No. 90-12 (may 1990), 18-19.
- Maulia, E. (2017, July 14). IMF: ASEAN incentives risk 'race to the bottom' on tax revenue. *Nikkei Asian Review*. Available from <https://asia.nikkei.com/Economy/IMF-ASEAN-incentives-risk-race-to-the-bottom-on-tax-revenue>.
- McLure, C. (2006). Transfer pricing and tax havens: Mending the LDC revenue net. *The Challenges of Tax Reform in the Global Economy*. Berlin: Springer-Verlag.
- Neumayer, E. (2007). Do double taxation treaties increase foreign direct investment to developing countries?. *The Journal of Development Studies*, 43(8), 1501-1519.
- OECD. June 2007. Tax Incentives for Investment – A Global Perspective: Experiences in MENA and non-MENA Countries. *MENA-OECD Investment Programme*. Draft 1, p. 4.
- Ohno, T. (2010). Empirical analysis of international tax treaties and foreign direct investment. *Public Policy Review*, 6(2), 287-312.
- Organization for Economic Co-operation and Development (OECD). 1977. Model Convention for the Avoidance of Double Taxation with Respect to Taxes on Income and Capital.
- Rajan, R.S. (2003). *Economic globalization and Asia: Essays on finance, trade and taxation*. Singapore: World Scientific Pub.
- Rixen, T., & Schwarz, P. (September 2014). Bargaining over the avoidance of double taxation: Evidence from German tax treaties. Available at SSRN: <https://ssrn.com/abstract=2502529> or <http://dx.doi.org/10.2139/ssrn.2502529>.
- Sachs, L. E. & Sauvnt, K.P. (2009). *BITs, DTTS, and FDI Flows: An Overview*. In Karl P. Sauvnt and Lisa E. Sachs, editors, *The Effects of Treaties on Foreign Direct Investment. Bilateral Investment Treaties, Double Taxation Treaties, and Investment Flows*. Oxford, UK: Oxford University Press.
- Sauvnt, K. P., & Sachs, L. E. (2009). *The effect of treaties on foreign direct investment: Bilateral investment treaties, double taxation treaties, and investment flows chapter 23 - Do Double Taxation Treaties Increase Foreign Direct Investment to Developing Countries?* Oxford University Press.
- Shah, M. H., & Qayyum, S. (2015). Impact of Double Taxation Treaties on Inward FDI in Latin American and Caribbean Developing Countries. *Business & Economic Review*, 7(1), 1-18.

- Steichen, A. (2002). *Tax Competition in Europe or the taming of leviathan. General Report at the EATLP Seminar in Lausanne*. Retrieved May 1, 2018, from <http://www.eatlp.org/uploads/Members/Steichenreport.pdf>.
- Thuronyi, V. (2000). International Tax Cooperation and a Multilateral Treaty. *Brook. J. Int'l L.*, 26, 1641-1681.
- Tohari, A. & Retnawati, A. (2010). Is There International Tax Competition in ASEAN? *Bulletin for International Taxation*, 64(1), 51-60 International Board of Fiscal Documentation – IBFD, Amsterdam.
- UNCTAD. (2000). Tax Incentives and Foreign Direct Investment: A Global Survey. *ASIT Advisory Studies No. 16*.
- UNCTAD. (2017). World Investment Report: Investment and the Digital Economy. *United Nations*.
- UNCTAD. (2018). World Investment Report: Investment and New Industrial Policies. *United Nations*.
- Van de Poel, J. (2016). *In search of a new balance: The impact of Belgian tax treaties on developing countries*. Available at: <http://www.eurodad.org/files/pdf/56ceae983f5d3.pdf>.
- Van Weeghel, S. (1998). *The improper use of tax treaties: with particular reference to the Netherlands and the United States*. Kluwer Law Intl.
- Vann, R. J. (1991). A model tax treaty for the Asian-Pacific Region? *45 Bulletin of International Fiscal Documentation* 151, 157-60.
- Van't Riet, M., & Lejour, A. (2014). *Ranking the stars: Network analysis of bilateral tax treaties* (No. 290). CPB Netherlands Bureau for Economic Policy Analysis.
- Van't Riet, M., & Lejour, A. (2014). *Ranking the stars: Network analysis of bilateral tax treaties* (No. 290). CPB Netherlands Bureau for Economic Policy Analysis, Discussion Paper 290.
- Wells, L.T. & Allen, N. (2001). Tax Holidays to Attract Foreign Direct Investment: Lessons from Two Experiments in: L.T. Wells, N.J. Allen, J. Morisset and N. Prinia, "Using Tax Incentives to Compete for Foreign Investment—Are they Worth the Costs?" *Foreign Investment Advisory Service, Occasional Paper / Foreign Investment Advisory Services*, 15, 1-68. Washington, DC: World Bank.
- Weyzig, F. (2013). Tax treaty shopping: structural determinants of Foreign Direct Investment routed through the Netherlands. *International Tax and Public Finance*, 20(6), 910-937.
- Weyzig, F. (2013). Tax treaty shopping: structural determinants of Foreign Direct Investment routed through the Netherlands. *International Tax and Public Finance*, 20(6), 910-937.
- Whalley, J. (2001). *Puzzles over international taxation of cross border flows of capital income*. National Bureau of Economic Research Working Paper 8662. Cambridge.
- Wilson, J. D., & Wildasin, D. E. (2004). Capital tax competition: bane or boon. *Journal of public economics*, 88(6), 1065-1091.
- Winner, H. (2005). Has tax competition emerged in OECD countries? Evidence from panel data. *International Tax and Public Finance*, 12(5), 667-687
- World Bank, PwC, and IFC (World Bank, PriceWaterhouseCoopers, and International Finance Corporation). (2013). *Paying Taxes 2013: The Global Picture*. Available at <http://documents.worldbank.org/curated/en/749401468321850315/pdf/806480WP0Payin0Box0379812B00PUBLIC0.pdf>.