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Taxing Electronic Commerce Cross-Border Transaction: Discussing the Alternative Models for Indonesia

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Abstract. The advancement of technology and e-commerce has created a new problem in taxation policy. Most countries, including Indonesia, face the tendency of tax avoidance practices as e-commerce practices can bypass states' territorial boundaries. In Indonesia, the government has only constructed a regulation to control internal e-commerce practices through Over-the-Top (OTT) regulation draft, without paying attention to the possibility of cross-border transaction tax avoidance practices. This paper focuses on the discussion of alternate models in facing cross-border e-commerce transaction, namely Base Erosion Approach, Virtual Permanent Establishment Approach, and Refundable Withholding Approach. By highlighting the models, this paper discusses advantages and challenges of each approach and how Indonesia could use the alternate models.

Keywords: *tax, tax avoidance, e-commerce, Base Erosion Approach, Virtual Permanent Establishment Approach, Refundable Withholding Approach*

1. Introduction

The rapid development of Information Technology, such as the Internet and computers, has revolutionized our world in embracing global digital commerce. The OECD (Organization for Economic Co-Operation and Development [OECD], 2015, pp. 51–64), for example, mentioned that technological advancement has managed to change the landscape of businesses, which now operate in two dimensions, i.e., brick and mortar and digital. In retail, consumers are saving their time by ordering online because of this technology. In logistics and transportation, technology helps to increase the tracking accuracy of goods. In the health industry, technology allows conducting health diagnoses without visiting a hospital. Thus, the advancement of technology has successfully made new models of doing businesses.

The United States (US) is the current market leader in e-commerce industry with Amazon.com as its main digital company. However, China rapidly pursues the US to dominate market share, where the digital company Alibaba.com has been established as a primary challenger in the digital economy global market. Sara Hsu (2016), in Forbes, mentioned that China's national online transaction has surpassed the US and is predicted to have 20 percent growth in 2020.

In 2015, the E-Commerce Foundation mentioned that 1.4 billion out of 7.3 billion people in the world have performed at least one e-commerce transaction. The average value of transactions exceeded 1582 USD/per e-shopper. In the same year, it was recorded that global transaction reached 2272.7 billion USD, growing by 19.9 percent from 2014.

Indonesia, although it is not yet in the top 10 largest B2C e-commerce transactions countries, has the potential to be the next big thing in Asia's e-commerce industry. Indonesia has a robust consumers' market share and currently enjoys the development of local e-commerce market players. Consumers can now easily find goods and services on Google or visit an e-commerce marketplace website without. Again, this accessibility would never be achieved without the development of technological information such as the Internet. According to We are Social and Hootsuite (We are social & Hootsuite, 2017), Indonesia's Internet users reached 132.7 million people in January 2017, with 123.3 million mobile Internet users. Approximately 50 percent of Indonesia's population has equipped themselves with Internet access, and 47 percent of people actively use mobile Internet. On average, 77 percent of them use the Internet every day.

Internet and e-commerce have indeed developed quickly in Indonesia, and the government now needs to face the taxation problem for this type of transactions. Western countries, which first enjoyed Internet advancement, have done many studies regarding e-commerce taxation in the last ten years. The US, for example, established

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Electronic Commerce Tax Study Group in 1995. This shows that the US has been paying much attention to how to impose e-commerce tax policy since the beginning of the Internet. Most developing countries, as the US, apply a comprehensive tax system to the income tax of all transaction within its jurisdiction (Downer, 2016). In Indonesia, the effort to enforce e-commerce tax policy can be seen from the recent draft of ministerial regulation on over-the-top (OTT) content providers. Briefly, the regulation draft tries to cover following elements:

1. OTT definition
2. Tax compliance
3. Permanent Establishment
4. Data localization
5. National Payment Gateways (see Kementerian Komunikasi dan Informatika Republik Indonesia, 2016)

Regarding e-commerce taxation, the regulations draft states that the fundamental principle of e-commerce taxation is its permanent establishment. By using a permanent establishment model, it is understood that the government wants to simplify the tax collection process. However, the problem lies on the dimension of the cross-border transaction, where the digital company can bypass states' territorial boundaries. This problem means that there is a high tendency of tax avoidance practices to occur in e-commerce transactions.

1.1. Research Problem

As mentioned above, e-commerce has created a new problem of the cross-border transaction as it embraces ambiguity for the government to construct tax policy. In Indonesia, although the government has started the initiative to build an e-commerce taxing system on OTT regulation, none of the draft discusses the importance of addressing cross-border transaction. Thus, this problem will give the government, especially the Tax Authority (DJP), more work in the future. The Tax Authority needs to address at least three issues regarding the cross-border transaction.

First, DJP must understand the tax planning strategy which used by e-commerce companies who conduct cross-border e-commerce transaction. For instance, some OTT companies that run cross-border e-commerce transaction prefer to distribute their revenue share to their subsidiaries and register most of their online transaction revenue in tax haven countries. Second, DJP should review whether the tax avoidance practices are in line with the intention of good business purpose and labeled as acceptable tax avoidance or the practices are intentionally done without paying attention to business or tax ethics. Third, the government and DJP have to review the anti-tax avoidance regulation to overcome the loopholes in the anti-tax avoidance rules.

Based on this situation, the central question is: How can Indonesia construct the best approach to deal with cross-border e-commerce taxation and tax avoidance problem? There is no single answer to that question. This paper presents three approaches that might be suitable to face the cross-border e-commerce taxing problems, including tax avoidance tendency.

The second section discusses the thematic analysis method used in this paper. The third section examines the key concepts that need to be clarified before discussing the three approaches to face the issue of cross-border e-commerce taxation. The final section discusses the three approaches and their key strengths and challenges.

2. Literature Review

As previously mentioned, this paper explains the alternative approaches to tackle the taxation problem of e-commerce cross-border transaction. To do this, the theoretical thematic analysis helps examine and compare conceptual approaches. According to Braun and Clarke (2006, pp. 83–84), the analysis in thematic method can be operationalized in two ways: in an inductive way or a deductive way. Theoretical thematic analysis is often categorized as the deductive way due to its interest in deducing from theoretical concepts new insights. This type of research pays attention to detailing the analysis based on the theoretical concepts chosen in the research. Thus, the method provides a poorer data description overall.

To operationalize this method, this paper initially discusses and clarifies the existing concepts such as digital economy and e-commerce and the international taxation framework. Afterwards, the paper discusses the current theoretical frameworks that are commonly used to theorize e-commerce and its challenges in taxing cross-border e-commerce transaction. Then, the paper finally discusses the alternative approaches to navigate the problems.

The digital economy is marked by the advancement of computers and the Internet. The first digital transformation refers to the evolution of the personal computer, where tech giants such as Microsoft and Apple dominated the world consumption in the 1980s. Then, the personal computer changed most the landscape of

businesses. For example, the entertainment industry has changed its physical mediator several times, from CD, DVD, and Mp3 player to the gaming console. The second transformation occurs with the development of the Internet. Technology, in this phase, allows a significant data transfer rapidly and across great distances. Once again, the Internet has changed the business landscape and activated disruption in many economic sectors (Holroyd & Coates, 2015, p. 2).

In a broader theme, the personal computer and Internet can be categorized as Information and Communication Technology (ICT). According to Cohen, Salomon, and Nijkamp (2002, p. 35), ICT has several characteristics:

1. Dynamic technological transformation with a high level of penetration and adoption
2. Reduces the price of new devices and their features
3. Increases the use of apps that can be utilized by both professionals and individuals
4. A connected market network, where private parties can navigate businesses in a loosely regulated market
5. Provides a place to produce goods and services which are profoundly influenced by human resource expertise

Cohen et al. (2002, p. 7) introduced the concept of e-economy. Economy refers to the economic transformation influenced by ICT. This transformation is not only happening at the macro level but further consists of the complete change in the structural level and economic relation order. E-commerce is a part of the e-economy, or digital economy, transformation.

Electronic commerce (e-commerce) is a trade process which uses the Internet as a primary medium (Doernberg, Hinnekens, Hellerstein, & Li, 2001, p. 34; Van Der Bruggen, 2015; Verwey, 2007). In 2002, the OECD introduced two definitions of e-commerce. The first definition explains the general concept of e-commerce and the second definition explains the particularity of e-commerce. These are the definitions:

> "An electronic transaction is the sale or purchase of goods or services, whether between businesses, households, individuals, governments, and other public or private organizations, conducted over **computer-mediated networks**. The goods and services are ordered over those networks, but the payment and the ultimate delivery of the good or service may be conducted on or off-line." (OECD, 2002, p. 89)

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From the definitions, the OECD differentiates the two meanings by addressing transaction element. In the former description, e-commerce occurs by using electronic transaction or computer-mediated network. The latter definition mentions e-commerce as an Internet-based transaction. However, the two definitions still stress the importance of ICT in developing e-commerce transaction.

Furthermore, the cross-border transaction, both traditional and e-commerce, has become more accessible to all stakeholders. This development also implores tax authority to construct cross-border tax policy drafts that can be implemented across countries. This regulation also aims to limit taxes that would slow down trade investments practices, among which is the effort to avoid double taxation.

International taxation can be defined as a set of regulations of countries' cross-border transactions (Holmes, 2007, p. 2). Rohatgi (2006, p. 1) argued international taxation is a set of rules that can be applied to the countries bilaterally or multilaterally to support the framework of their respective local tax policies. According to Rohatgi (2006, p. 1) and Gunadi (2007, p. 8), there are four aims in drafting provision of international tax:

1. An equal gain in the cross-border transaction: To receive a similar benefit, a country can secure its domestic taxation base by drafting strong tax regulations and avoid making an agreement that can eliminate or limit taxation rights over the generated revenue collected by the country.
2. Empower domestic economy: International tax treaties should not weaken domestic economic competitiveness. Conversely, international tax treaties must empower investment, trade and other economic activities in both domestic and cross-border transactions.
3. Increase the taxation fairness: Fairness is essential to assure the law. International tax treaties should not give burden to business players.

4. Insure the principles of justness and neutrality in capital export and capital import: Neutrality, in capital export and capital import, is essential to increase domestic prosperity.

The international taxation scope can be categorized into two perspectives:

1. Taxing inbound income: Taxing the domestic tax subject which generates revenue based on the other countries' source.
2. Taxing outbound income: Taxing the foreign tax subject which generates revenue based on the domestic sources.

According to Holmes (2007, p. 19), there are two fundamental aspects in determining the taxation rights of a country:

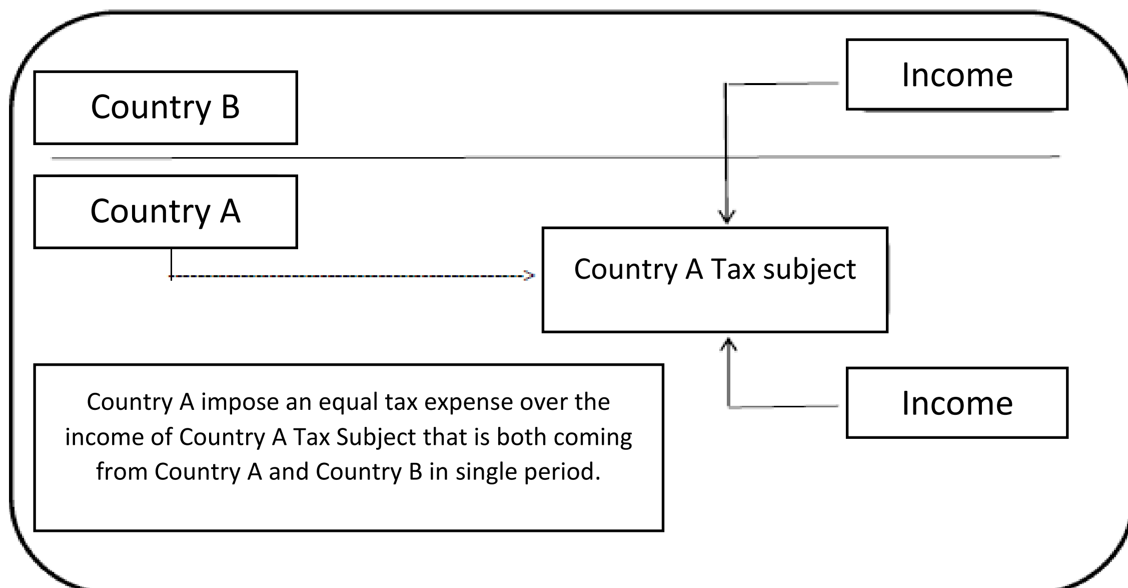
1. Residence Principle: A country's right to taxing its subject (institutions or individual) based on personal attachments, such as residency, domicile, citizenship, place of establishment, and worldwide income.
2. Source principle: A country's right to taxing its subject (institutions or individual) based on personal economic attachment as the taxable income arises within its jurisdiction.

The source-based taxation principle, established in the 1920s by a study group to harmonize the international tax system, was endorsed by League of Nations (Lihat, Bruins, 1923). The primary purpose of the harmonization was to avoid double taxation in cross-border transactions. To achieve that aims, the study group drafted four consideration factors as a basis of international tax harmonization:

1. The origin of wealth and source of income (origin/source)
2. Legal jurisdiction of its wealth and income (site)
3. Acknowledgment over wealth and income rights (enforcement of the rights)
4. Domicile of the entity who owns the wealth and income (residence)

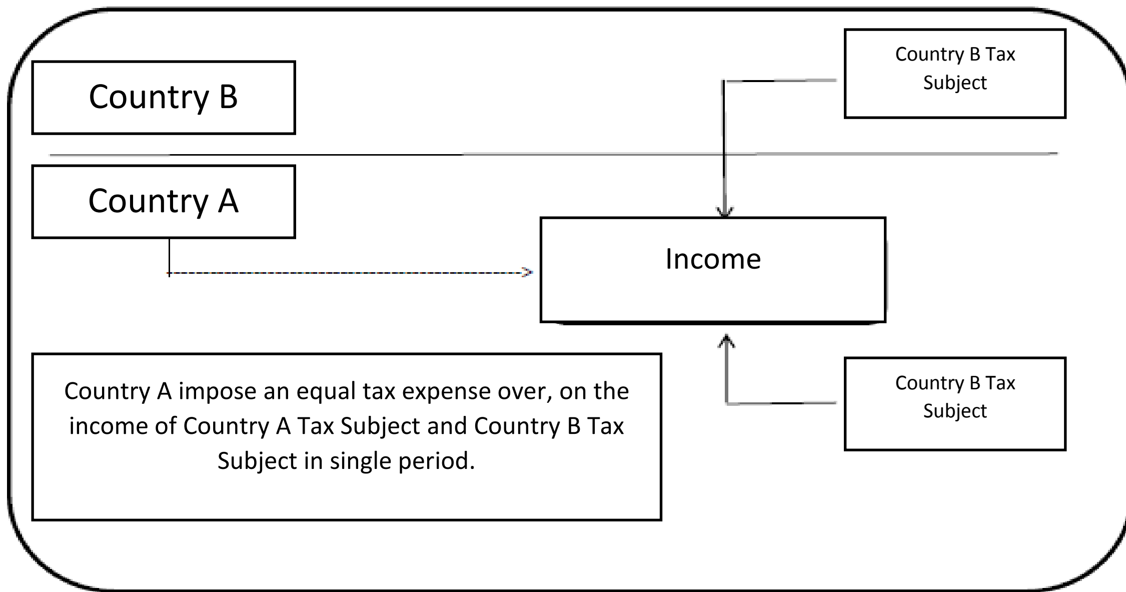
The study group concluded that only the source and residence were worth being recognized as fundamental principles of modern international tax system, which has survived to this day. However, the use of both principles stimulates a controversy that is commonly called the dilemma of the taxation order, i.e., whether the right to withdraw the tax is given first to the country of business of the permanent establishment (residence-based taxation), or the country where the transaction takes place (source-based transaction). To overcome the dilemma, the League of Nations in 1993 proposed each country to solve the problem based on bilateral or multilateral agreements. Darussalam and Septriadi (2017, pp. 3–4) explained that there are two types of neutrality in international tax treaties: capital export neutrality and capital import neutrality.

Figure 1: Capital Export Neutrality



Source:(Darussalam, John Hutagaol, & Septriadi, 2010, p. 8)

Figure 2: Capital Import Neutrality



Source:(Darussalam et al., 2010, p. 9)

Capital export neutrality (Figure 1) means the tax expenses will remain the same regardless of where investment takes place, i.e., either domestic level or global level. Most developed countries adopt this type of policy. Then, the capital import neutrality (Figure 2) means the same tax expenses will be charged over the income in a country without differentiating the country's income receiver. This type of neutrality gives the same taxation rights as domestic tax payers to permanent establishments, which can be materialized as a company's branch or a service activity that passes the time-test of applicable regulations. Most developing countries choose this type of policy.

The Existing E-Commerce Taxation Concept and its Challenges

Double Taxation

Double taxation occurs when more than one country imposes taxation rights on a transnational transaction. According to Darussalam (2010, p. 4), juridically there are two means of taxation:

1. Domicile country imposes tax toward tax subject from the income that the source country received.
2. Source country imposes tax toward income from domicile country's tax subject that came from its own country.

According to domestic taxation system, taxation rights claim can be seen from two aspects:

1. The *personal connecting factor* evokes a taxation rights claim toward income that came either from internal territory of a country or externally (worldwide income or what is known as *universality principle*).
2. The *objective connecting factor* evokes a taxation rights claim that is limited only on revenue from a particular country (limited tax liability or what is known as *territoriality principle*) (Darussalam & Septriadi, 2017, p. 5).

In this implementation, conflict often arises when considering taxation rights claim. According to Surahmat (2000, p. 21), there are three conflicts in imposing international double taxation:

1. Conflict between domicile principle and source principle

This conflict occurs when there is a transnational transaction that involves two countries that adopt domicile principle and source principle, respectively. All income received from the whole globe will be imposed tax by countries that adhere to the domicile principle (*worldwide income principle*), whereas a country with source principle will impose tax only on income that originated from its country.

2. Conflict based on differences in the definition of “resident”

This type of conflict occurs because of differences in understanding of “resident,” where taxpayer, either individual or corporation, may be considered as a resident of two countries. This situation allows the possibility that a taxpayer will be tax twice. This conflict emerges especially in a country that considers citizenship principle as secondary criteria in determining whether someone is its resident. This conflict usually occurs on individual taxpayers and is known by the term *dual residence*.

3. Differences in definition of “source of income”

When two or more countries that are transacting treat one type of income as an income stream from their own territory, there is a chance conflict will happen related to the income source. This happens when there are differences in interpretation of source of income, resulting in both countries imposing tax on the income

The Concept of Permanent Establishment

Pinto (Pinto, 2003, p. 72) states that Permanent Establishment (PE) can be understood in two ways: (1) physical PE concept; and (2) PE agent concept. There are exceptions to the two concepts if the business status being run by the PE is included in the support or preparation activity stage.

In the physical PE concept, there are three PE conditions that can be considered as physical PE. The first is the physical presence of the place in the form of building or machinery. It would not matter if the place were bought or rented by the business. As long as the place is being utilized for business activities, then it can be considered as PE (OECD, 2003, pp. 8–9; Pinto, 2003, p. 72). The PE mentioned in the first point includes:

1. Place of management;
2. Branch;
3. Office;
4. Factory;
5. Workshop; and
6. Mine, oil and gas well, quarry site, or natural resource extraction site (OECD, 2003).

The second is a permanent business place in accordance with time and place aspect. This means that the PE must be situated in a clear geographical area (Doernberg & Hinnekens, 1999). Such clarity does not mean that the PE must be situated at the place permanently. The OECD adds that, for a business to run and possess a PE, there must be a connection between business place and business location. In this case, PE is temporal in accordance with its attachment to the business entity (Pinto, 2003, p. 73). The third is that business activity must be run in a registered PE. Therefore, there is a human intervention dimension toward the PE. Sometimes machine intervention (such as automatic vending machine or other automation) applies to PE, but under the condition that the business entity moves beyond the scope of the machine (Pinto, 2003, pp. 73–74).

The PE agent concept is imposed to the representative of the business entity. To establish a PE, a business entity does not have to establish its own representative office; it can appoint an individual or an entity as an agent that represent its interests (Darussalam & Ngantung, 2017, pp. 131–132; OECD, 2003, pp. 8–9; Pinto, 2003, p. 74).

According to Pinto (2003, p. 75), exceptions in the OECD model concept can be a main problem in the tax system of e-commerce. In the e-commerce scheme, transaction activity such as advertising and digital product sales can be included in the category as PE. Therefore, a further formulation on PE e-commerce transaction is needed.

E-commerce PE formulation has become important because many corporations take advantage of this gap. Concepts related to e-commerce PE can be divided into two types:

1. Concept of server as PE.

According to Vink (1998, p. 67), “A permanent establishment does not exist if the enterprises merely set up the equipment, which is then leased to other companies. A permanent establishment may exist, however, if the enterprises not only set up the machines, but also operates and maintains them for its own account.’” This

explains that machine operation and maintenance may also cause PE. In line with this concept, several experts also conclude that servers can be categorized as PE if the server is a physical facility that is being utilized for sales transaction.

2. Concept of Virtual PE.

Hinneckens, as quoted by Bohórquez (2016, p. 94), stated that: "The taxing nexus for electronic commerce should be 'the continuous commercially significant conduit of business activity', rather than fixed place of business. The virtual PE approach applies to the jurisdictional criterion for source-based taxation of profits.'" This theory explains that what is essential in e-commerce activity lies in the continuity of commercial activities rather than the presence of a fixed business place. This approach can be applied on a country that adopts the source principle.

From the two concepts above, the OECD has included the virtual PE concept into the BEPS recommendations that added the criteria for the formation of PE through the significant digital presence. These criteria are only intended for companies involved in fully dematerialized digital activities. Such activity must also be conducted in a significant manner (Darussalam & Ngantung, 2017, p. 144).

The OECD, as quoted by Darussalam and Ngantung (2017, p. 144), mentioned several examples of activities included in the fully dematerialized digital activities category:

1. The main company activities are fully or partially dependent on delivery of digital product or services.
2. The activities within the corporate chain do not involve physical entity or activity other than presence, utilization, or maintenance of servers and websites or other IT devices and also collection, processing, and commercialization of relevant location data.
3. The contract closure activity is exclusively conducted from long-range via telephone or Internet.
4. The payment activity can only be done via credit card or other electronic payment methods that utilize online form or platform that is linked or integrated with websites.
5. The website is the only way to get into business relations with the company. There is no physical business office that runs the main corporate activities other than the office located at the parent company or in the country where the company conducts different business activities.
6. All or most of the business's profit is generated from delivery of digital products or services.
7. The legal or physical presence of the seller is ignored by customers or it does not affect customers' preference.
8. Utilizing the digital products or services does not require physical presence or involvement of the physical product other than computers, mobile applications, or other IT devices.

Furthermore, the OECD, as quoted by Darussalam and Ngantung (2017, pp. 144–145), mentioned several examples of the conditions of digital presence that are considered significant:

1. Most of the contracts for digital products or service procurements are signed by the company and its customers remotely.
2. Digital products or services of the company are used or consumed significantly in a certain country.
3. There are many payments from clients of a certain country to the company with respect to the contract's obligations over digital products or service procurements.

Branches of the company provide supporting functions, such as marketing and consultation, which are targeted toward clients in a certain country and those who are closely related to primary company business.

Avoidance of Tax and Permanent Establishment Principles

As explained above, the development of e-commerce has become a challenge for tax authorities and tax principles that are based on PE principles. In the traditional cross-border trade situation, Company A from Country A will establish a branch, which is a PE in Country B, to conduct business transaction with consumers

at that location (in its variation, a branch from Company A can be substituted with an individual or company that acts as an agent with legal authority to conduct legitimate business transactions for Company A). With the presence of such PE, tax authorities in Country B are authorized to collect taxes on income from Company A from its business transactions in Country B.

However, the advancement of information and telecommunication technology, especially Internet technology, has given the possibility for Company A to conduct transactions with consumers in Country B virtually without having to be physically present in the jurisdiction of Country B. This virtual presence can be done by two steps. The first step is by utilizing Company A's website whose server is located in Country A. With such virtual presence, Company A does not have to establish a PE in Country B and it can avoid taxes in Country B in a legal manner (tax avoidance). To handle this, Country B may issue a regulation that requires Company A to build a server in Country B, which is what is happening in the negotiations between the Government of Republic Indonesia with Google and Facebook during the last five years.

Although the virtual presence of Company A in Country B through websites can be overcome with regulation or face-to-face negotiation between government of Country B with Company A to ensure the physical presence of Company A in Country B in the form of website server existence in Company A, there are two weaknesses in this solution model. First, the direct negotiations with related companies are *lex specialis*, and in terms of administrative cost this way is not efficient to be implemented.

Second, several non-resident companies are still practicing tax avoidance using the service of third parties, i.e., Internet Service Provider (ISP) companies. ISPs rent digital data center services to website owners so the website can be accessed by other parties through Internet networks. As a company that provides digital data center services for Company A, ISP surely possess legal business relation. However, the legality of such business transaction is not necessarily considered a basis to determine the ISP as an agent with PE status for Company A. This can be clarified by doing analysis toward PE's status over servers belonging to ISP.

3. Discussion and Results

As explained above, the vast development of e-commerce over the last 15 years has been a challenge for theories and practices of international taxation that are based on PE principles, where non-resident companies may conduct business transactions without having a physical presence in the jurisdiction of the country where the business transactions take place. This allows non-resident companies to practice tax avoidance from the country where the business transactions conducted.

To cope with this problem, the existing PE principles need an adjustment so that they can accommodate the rapid technological development of the Internet. Pinto (2003) suggested three approaches to update the PE principles:

a) Base erosion approach;

b) Virtual PE approach; and

c) Refundable withholding approach.

3.1. Base Erosion Approach

Base erosion approach, or what is known as single rate withholding approach, was first initiated by Richard Doernberg. With this approach, Doernberg tried to accommodate the anxieties of countries that imported the e-commerce transaction model, such as India and Indonesia, without having to abandon PE principles that already form the international taxation. In addition to accommodating these anxieties, Doernberg tried to minimalize the effect of double taxation caused by the implementation of the source-based taxation system (see Doernberg & Hinnekens, 1999).

In this approach, the country where a business transaction take place is authorized to collect single rate withholding tax for all income gained from transactions that are potentially within the tax basis of the country. To prevent double taxation, Doernberg suggested that the single rate taxes imposed can be credited or deducted from the income tax amount that has been paid to the origin country of the non-resident company. However, the

implementation of this approach is not easy because it requires an agreement and cooperation between source and residence countries, especially related to the single rate that is imposed and the base erosion criterion.

3.2. Virtual Permanent Establishment Approach

Unlike base erosion approach that tries to maintain the integrity of PE principles by imposing single rate withholding tax in regard with agreement between source and residence countries, virtual permanent establishment approach, as initiated by Luc Hinnekens, copes with challenges in taxation in e-commerce context by redefining the PE principles. According to Hinnekens, the PE principles that currently exist heavily rely on the permanent physical presence concept in the source country (fixed place of business). This of course contradicts the existing reality of technology development, in which individual and company presence may exist virtually. To overcome this challenge, Hinnekens suggested relaxation of the PE principles into virtual permanent establishment (Hinnekens, 1998, pp. 192–200).

This kind of approach has two main elements. The first is relaxation of the PE principles by erasing fixed place of business requirement to accommodate virtual characteristic of e-commerce. The second is creating clear limitations between core business activities and ancillary business activities. Based on these two elements, the source country will collect taxes from core business activities owned by companies with virtual PE status (Hinnekens, 1998, pp. 192–200).

Although virtual PE approach may seem radical, according to Arvid A. Skaar, this approach is much better than the more radical approaches because they try to erase the PE principles in order to enforce the source-based taxation system (see Skaar, 1991). An example is the benefit theory by Klaus Vogel. This theory states that the source country may collect taxes from a non-resident company regardless of whether the company has already established PE in the country, because the company not only benefits from the market base but also uses state-owned public facilities directly or indirectly (Pinto, 2003; Vogel, 1988, pp. 393–402).

3.3. Refundable Withholding Approach

Refundable withholding approach is a global approach because it requires multilateral agreement and cooperation. In this approach, source countries are authorized to collect withholding tax over each business transaction obtained from e-commerce activities.

Different from the base erosion approach proposed by Professor Doernberg, the tariff rate charged in this approach is determined through multilateral agreement, thus the rate that is charged will be retroactive (uniform) in the whole world. In addition, the tax that is imposed is refundable if the total value of gross sales taxable is below the *de minimis* threshold (see Chapter 8, Pinto, 2003).

3.4. Advantages and Challenges of Each Approach

The rapid development of e-commerce is a challenge for the current international taxation system. To overcome this, experts in the field of international taxation have proposed three approaches: base erosion, virtual PE, and refundable withholding. However, each approach has its own superiorities and challenges (see Table 1). For example, refundable withholding offers a global standard to address e-commerce challenge nowadays, but this approach needs multilateral agreement and coordination through international organizations in order to be implemented properly. In a narrower context—the Indonesian national fiscal sovereignty context—this approach is not ideal.

In terms of challenges, base erosion and virtual PE approach still require international agreement and cooperation, either in a bilateral or multilateral limited scale, such as between ASEAN or European Union countries. However, there are clear differences between these approaches from superiority side. Compared to the base erosion approach, the virtual permanent establishment approach gives a solution that is more continuous and fundamental by utilizing flexibility from the PE principles itself. As explained by Cockfield, Hellerstein, Millar, and Waerzeggers (2013), the main strength of the international taxation system lies in the flexibility of the PE system application that adapts to technology and era development.

Table 1: Comparison of Permanent Establishment Principles in Traditional Cross-Border Trade and Digital Trade Situation (Pinto, 2003).

	Base Erosion	***Virtual Permanent Establishment***	***Refundable Withholding***
Advantages	National government may set tariffs in accordance with the country's need	Maintain the integrity of international taxation system in effect by redefining PE principle	The same e-commerce taxation standards between countries
Disadvantages	Implementation requires cooperation between trading partner countries	Requires an inter-state agreement to define the form of virtual permanent establishment and types of taxable activity	Requires multilateral agreement and coordination through international organizations

4. Conclusion

The rapid advancement of e-commerce transaction causes many tax avoidance practices. This can happen because the global taxation system has not yet faced this challenge. Indonesia and countries that are bound to tax treaties still apply the PE concept as regulated in the tax treaties. Therefore, DJP must take swift action to overcome this problem so that potential tax revenues that arise from transactions can be increased.

There are several alternative solutions:

1. Redefine the concept of PE in the tax treaty. This can be done if the Government of Republic of Indonesia succeeds in lobbying the treaty partner states. The concept of PE that currently requires physical presence can be expanded to include virtual presence. PE may also arise when a foreign company has gained much profit from transactions in Indonesia.
2. Issue special regulation related to trans-border e-commerce transaction. If lobbying with treaty partner countries is difficult, then the DJP could issue regulation that is *lex specialis*, which specifically governs trans-border e-commerce transaction.

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