



DOES THE USE OF VIRTUAL PRIVATE NETWORK (VPN) AFFECT THE COLLECTION OF VALUE ADDED TAX (VAT)?

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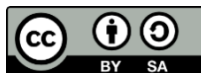
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ARTICLE INFO

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Submitted:
23 – Februari – 2022
Revised:
09 – Maret – 2022
Accepted:
25 – Maret – 2022



ABSTRACT

The increase in electronic trading transactions, both through market places and trade transactions with goods and services originating from abroad, poses its own challenges in tax collection. Trading through the Electronic System (PMSE) on intangible taxable goods and taxable services originating from outside the customs area and utilized within the customs area has been regulated by the government. However, the administration of VAT collection carried out is still conventional by providing collection obligations to overseas entrepreneurs who have exceeded significant trade limits in Indonesia. With the use of Virtual Private Network (VPN) facilities, it is as if the consumer of goods or services in Indonesia is someone who resides or consumes his goods in another country. By means of a simulation, this research shows that with this VPN the potential for digital VAT receipts from Indonesia will be lost and/or the VAT receipts will appear as if they were receipts from other countries' digital taxes.

Keywords: tax administration, tax revenue, e-commerce

INTRODUCTION

The digital economy has become a big part of the economic growth of both developed and developing countries. The global digital economy was valued at US\$11.5 trillion in 2016 or 15.5 percent of the global Gross Domestic Product (GDP) figure (Huawei & Economics, 2017). (Huawei & Economics, 2017) predicted GDP global will increase to US\$23 trillion or 24.3 percent of global GDP by 2025. Currently, Indonesia is also one of the countries that has a digital economy as one of the biggest aspects that contribute to the country's economic growth. Indonesia is one of the countries with the largest digital economy in Southeast Asia with a total of US\$40 billion in 2019 (Google and Temasek, 2019). This figure is also predicted to increase to US\$130 billion by

2025. Regarding the development of the digital economy, Indonesia is currently one of the countries that implements 3 taxation of digital business transactions with the enactment of digital taxes per 2020. Currently there are more than 30 countries. who implement digital taxes in their laws and regulations (Bunn et al., 2020). These countries include Singapore, Japan, Canada, China, and New Zealand. However, collecting taxes on digital business activities is not an easy thing to do. In the digital economy, companies can generate profits made from electronic transactions in destination countries and shift these profits to the jurisdiction where they are resident. While this may be considered unfair in destination countries, this is a legitimate practice based on the existing international tax framework, also known as Base Erosion and Profit Shifting (BEPS) (Rebecca, 2021).

The imposition of taxes on digital transactions between countries also poses new challenges for tax authorities around the world, especially in collecting tax revenues that occur on cross-country economic transactions (thejakartapost.com "Tackling the challenges of digital tax and BEPS in Indonesia" accessed on 20 December 2020). In international tax regulations such as the Double Taxation Avoidance Agreement (P3B), a source country may be able to tax the profits of a foreign business entity only if the entity has a significant physical presence or conducts its business through a permanent establishment in that country. The imposition of a similar tax obligation was adopted by Indonesia in imposing its digital tax. The digital tax takes effect with the issuance of Government Regulation in Lieu of Law Number 1 of 2020, (2020) is further stipulated by Law Number 2 of 2020, (2020). In Articles 4, 6 and 7 of the law, it is stipulated that a digital business entity or Provider Trading through the Electronic System (PPMSE) that has passed certain limits or thresholds, will be appointed and authorized to collect taxes in the form of Digital Value Added Tax (VAT Digital) for the utilization of Intangible Taxable Goods and/or Taxable Services from outside the Customs Area in Within the Customs Area through Trading Through the Electronic System (PMSE). This is a development of the general way of imposing tax obligations on digital content users as stipulated in the (Minister of Finance Regulation, 2010). If an entity or person does not make their own deposit and report on the imposed BKP/JKP, then the fail-safe method by the Directorate General of Taxes can be implemented by deducting the amount of 8 input taxes that can be deducted in a VAT Periodic Return. However, this fail-safe method does not apply if the services or goods used are for consumption purposes only and not for business purposes. The potential for tax revenue on VAT is also reduced, if each tax subject who uses BKP/JKP must carry out their respective tax obligations on consumption that has been carried out. When viewed from the "destination principle" applied by the Indonesian PPN regulations in Law Number 8 of 1983 (1983) as has been updated by Law Number 42 of 2009 (2009), the imposition of VAT is also imposed on consumption carried out in the Indonesian customs area, especially imposed on end consumers or direct users of the goods or services. In general, the imposition of taxes on conventional trade transactions is relatively easier to be burdened by VAT than transactions that occur digitally.

The use of intangible assets and invisible digital access also makes the ideal point of VAT imposition a little gray area. Ministry of Finance Number 48 /PMK.03/2020 (2020) which regulates the procedure for the imposition of digital VAT also looks at the internet protocol address contained on a computer in detecting the consumption of digital goods or services that occur in the Indonesian customs area. However, with the use of Virtual Private Network (VPN) facilities, a user of digital goods or services can send encrypted data to the pages or webs they access. As explained by the

namecheap.com page Namecheap (2020), VPNs work by moving your internet connection network through the VPN server you are on rather than through the server of your internet service provider. In other words, the data sent is data that comes from your VPN and not from your computer. With the use of the VPN, a person who accesses a page or website from a PPMSE entity that has been designated to collect digital VAT can use the VPN to avoid the existing tax payment obligations. The use of the VPN can also make it seem as if the consumer of goods or services in Indonesia is someone who resides or consumes his goods in another country. This can result in the loss of potential Indonesian digital VAT receipts and/or channeling the VAT receipts as if they were receipts from other countries' digital taxes. This study aims to analyze whether the use of VPN has an effect on VAT collecting or not.

Some studies related to the effect of using a VPN are usually about the effect of using a VPN on site access (Limkar & Patel, 2010); (Andini et al., 2020); (Sharma & Kaur, 2020); (Nagy & Wali, 2020). However, the use VPN could be caused by higher tax. Higher taxes could also have an impact on the local Internet value chain via VPNs. For instance, a VPN could be used to bypass the requirement to pay local social media taxes (Stork & Esselaar, 2019).

METHODS

This research used descriptive qualitative method. Data collection was carried out through interviews with the Directorate General of Taxes Regulations who are in charge of PMSE taxation regulations. In addition, a simulation is also carried out if a Taxable Goods and Services is carried out through an online transaction mechanism with and without a virtual private network.

The interview was conducted in May 2021. Simulation of the purchase of Taxable Goods was also carried out in the period from April to May 2021. This simulation was conducted to prove that there was a difference in the price paid by consumers with and without a virtual private network.

RESULTS

VAT adheres to the destination principle. In general, the information used as a factor in determining the area where the consumer of an e-commerce entrepreneur is located has been applied to Article 5 paragraph (1) (Ministry of Finance Number 48 /PMK.03/2020, 2020), referring to OECD regulations. A consumer can be indicated as having "consumed" and has an obligation to pay consumption tax in accordance with the provisions stipulated by a country if:

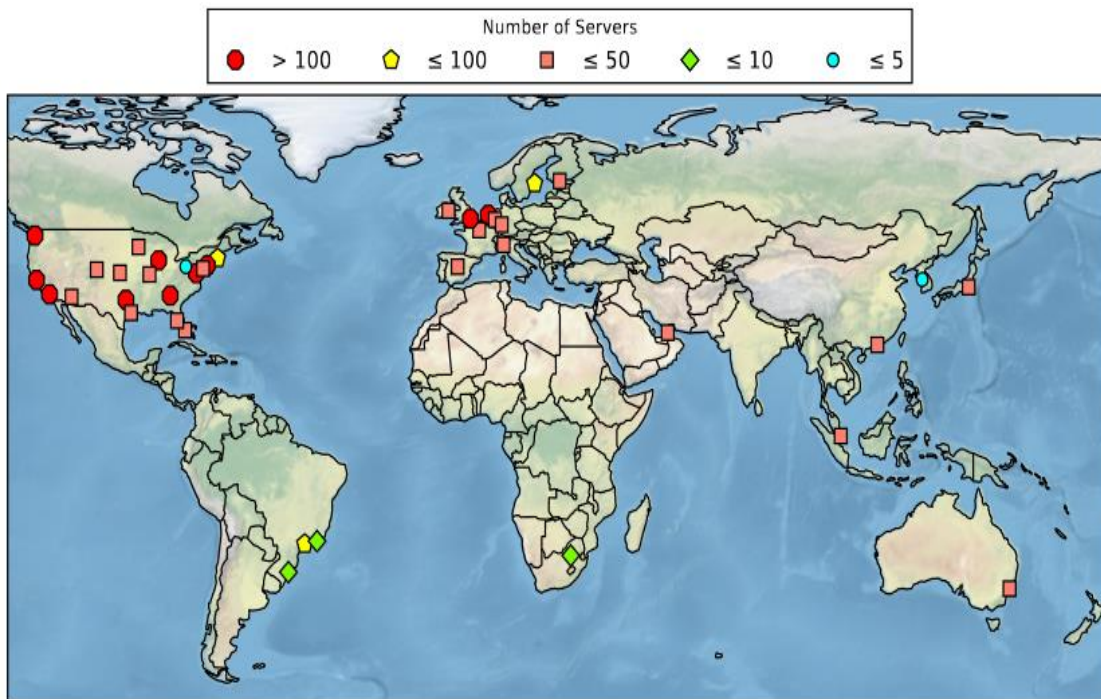
1. There is use of a specific IP (Internet Protocol Address) registered address from a country and can display the language used when accessing web pages or when the transaction results are printed in the language of origin of the country when accessing the business page of the E-commerce entrepreneur;
2. There is information related to the payment system listed when making payments or completing business processes, such as bank details or related financial institutions used in making payments for the buyer's transactions; and

3. Information collected from consumers when registering on a web page or commercial computer program of the e-commerce entrepreneur can provide reliable evidence in determining where the consumer lives and where the digital goods and/or services will be consumed.

The combination of data and information that has been collected during the business process or the ordering process on the web page or commercial computer program of the PMSE business actor must also be able to be processed in a system with their algorithm in determining the origin of the region or the whereabouts of the buyer and collecting VAT/GST in accordance with the rules that apply to digital consumption in the country of origin. Therefore, the mix of data and information that occurs when making a transaction or placing an order on the PMSE business actor's web page also allows for double information that can provide valid evidence that consumption is payable for consumption tax in two different countries. For example, a buyer from the United States who resides temporarily in Indonesia and uses an IP address registered in Indonesia in conducting transactions related to digital goods and/or services may be indicated to have two different existences. When he makes a purchase by accessing the web page of a provider of digital e-commerce goods and/or services, he will be detected systemically as a buyer from Indonesia who will consume goods and/or services in Indonesia. However, the buyer from the United States may make payments for the goods and/or digital transactions using a financial institution that is registered and has information regarding the buyer as a person domiciled in the United States. Furthermore, the buyer may enter information regarding himself in the account on the web using the personal information he has in the United States due to the possibility that the digital goods and/or services will be consumed at a later time in origin country.

PMSE digital VAT collection on digital goods and/or services will only be accommodated by a system owned by a PMSE or e-commerce business actor if the country that stipulates the law on the digital consumption tax has further informed the related e-commerce business actor. that their company will be registered and registered as an active VAT collector on any consumption or sale that occurs to buyers in their country. Therefore, e-commerce business actors who have an obligation to collect VAT/GST on sales or consumption in one country may not have an obligation to collect VAT on transactions in other countries. In connection with that, special laws or regulations governing the imposition of consumption taxes related to digital goods and/or services in foreign countries also have certain different thresholds or limits in determining how many sales occur in a country and/or the number of accessors in that country. This is used as a consideration in determining whether the economic existence of the e-commerce entrepreneur is significant enough to be given the obligation to collect digital VAT. Thus, companies that are already registered and have obligations as active VAT/GST collectors for the occurrence of digital sales or consumption in a country may not have the same tax collection obligations in other countries because they have not been appointed or have no significant economic presence in that country because has not passed the predetermined threshold or limit.

Based on the results of an interview with a Senior Trade Sector Potential Analyst at the Directorate of Tax Potential, Compliance and Revenue (PKP, DGT Ministry of Finance), the special law that regulates the consumption of digital goods and/or services in Indonesia is still a soft policy by relying on a post-audit validation mechanism in conducting examination of the amount of VAT they report against the actual access figures in the territory of a country. With no need for a physical presence in operating



(a) CDN servers operated by Netflix at IXPs.

Figure 2. Servers operated by Netflix International B.V.

Source: Open Connect Everywhere: A Glimpse at the Internet Ecosystem through the Lens of the Netflix CDN by Queen Mary University of London

Based on the Figure 1 and 2, PMSE Business Actors such as Netflix International BV and Amazon.com Services LLC have servers or Permanent Establishments (BUT) that operate from outside the jurisdiction of Indonesia so that the DGT as the Indonesian tax authority does not have the authority to conduct entity checks or request data. forcibly to entities operating from abroad. In the figure, it can also be concluded that some servers owned by E-commerce entities such as Amazon Services and Netflix are operated through countries that have low tax obligations or Tax Haven countries such as the Netherlands and Singapore. The strategic placement of their servers also minimizes the intervention of further tax authorities from various countries that take advantage of their business. In this regard, DGT can only request data related to an E-commerce entity in a country if that country already has cooperation with Indonesia to exchange data or EOI. Therefore, the data and information provided by a PMSE business actor in the quarterly and annual reports have so far been "considered true and correct" by the DGT until a third data is found that can prove otherwise.

Avoidance of PMSE digital VAT collection obligations does not only occur from the side of a business actor or PPMSE who offers goods and/or services in Indonesia. However, deviations can also occur from the side of a consumer who takes advantage of the business processes of an E-commerce entity in order to avoid systems or algorithms in collecting VAT that should be imposed on a consumption. As explained earlier, one of the main indications used in determining the collection of VAT in accordance with the laws of a country must be indicated by the existence of information that proves that the consumption is carried out in a certain "region".

Indicators of determining the "area" of consumption of digital goods and/or services applied by the business processes of an E-commerce entity are also strongly influenced by the Internet Protocol (IP) address or internet protocol address used by a consumer in accessing web pages or computer programs. In short, an IP address can be defined as a combination of number-based codes owned by a computer device and used as an identity for the device when connected or exchanging data with servers or other devices via the internet or local networks (Tech Terms, 2016). The combination of numbers used in the IP address variations of IPV4 and IPV6 is also arranged specifically so that there is no combination of numbers that can be used by two different devices.

The IP address assigned to a computer device by an internet provider or Internet Service Provider (ISP) when someone accesses the internet network has also been specifically registered to determine the area of existence from which the person accessing a web page or computer program is located. The IP address obtained when connecting a network connection to the internet via a router or cable is also changing so that if someone accesses the internet network through two routers or different locations, chances are they will have different IPs as well.

Information related to the IP address is also the first and most significant indicator of its impact on the business processes of a PMSE business actor in determining where the goods and/or services they trade will be consumed. As previously discussed, PMSE business actors registered to collect PMSE digital VAT in Indonesia generally do not have servers or data storage locations located in Indonesia. However, PMSE business actors will provide a web page with settings in Indonesian (common language such as English) when someone with an Indonesian IP address is detected accessing their web or program.

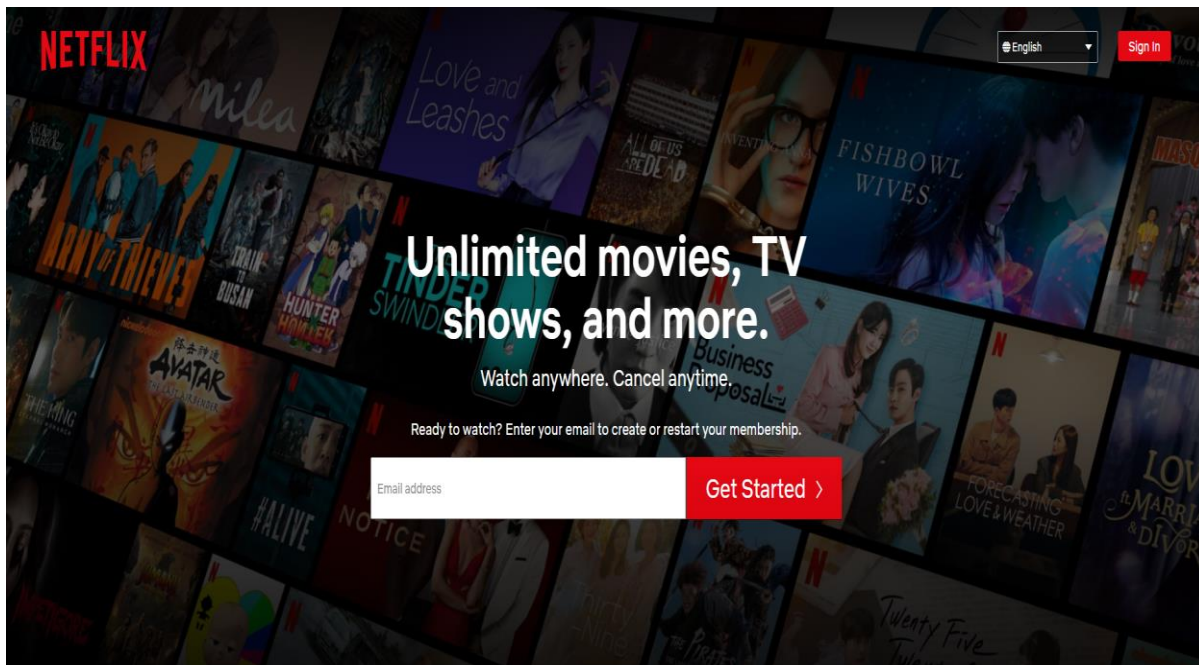


Figure 3. Netflix.com main page accessed using an Indonesian IP address

Source: Netflix.com main page

When someone accesses the web page of a PMSE business actor with an IP address detected in Indonesia, the algorithms and systems owned on the PMSE business actor's web page will display content in the form of goods and/or services available to consumers in Indonesia. In this context, a web page that detects a consumer with an IP address from Indonesia will also display prices and terms and conditions applied.

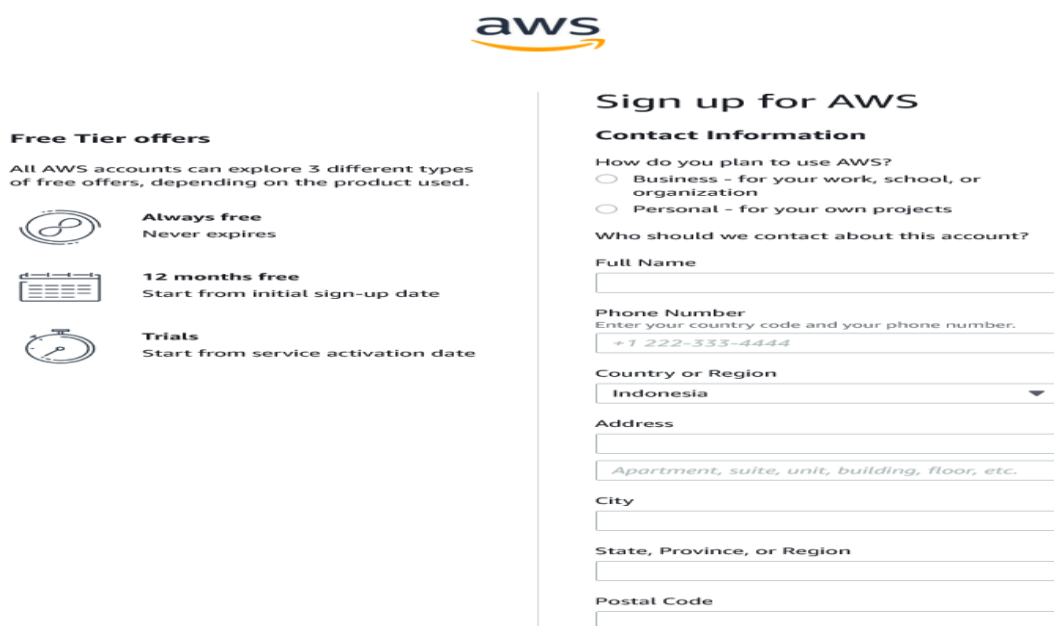


Figure 4. Amazon Web Services registration form accessed using an Indonesian IP address

Source: aws.amazon.com

As shown in the figure 4, the IP address indicator detected when accessing the PPMSE entity web page will generally affect other indicators in continuing existing

business processes. In the picture, someone who accesses a web page of a PPMSE entity will generally register first to register as a permanent user of their service. Registration on the web page will generally adjust the specific language settings according to the region where the viewer is located. Therefore, a consumer will only successfully register if he understands the language and has the correct information to enter in the various registration fields.

The IP address used by a consumer in accessing a web page or computer program of the PPMSE entity does not always match the region in which they are located. VPN (Virtual Private Network) is one of the most common ways used by a consumer to trick a system of e-commerce entities into determining the origin of the region where they are accessing the web page or program. In short, VPN refers to equipment or technology used to transfer data or information in an area through a "tunnel" before the data is received by the intended data recipient at a certain place (Symanovich, 2021). VPN works by encrypting data received from an internet network and distributing the data "privately" so that the data received by a system that wants to be accessed will appear as if it came from the area where the VPN server is located.

The use of a VPN is one of the easiest ways that can be used to deviate from PMSE digital VAT tax obligations from the side of a consumer. As discussed earlier, one of the most important aspects that must be implemented in a collection system for a PPMSE entity is that they must be able to diversify data and information in determining where the "area" of goods and/or services sold will be consumed. By using a VPN, the IP address indicator listed when accessing a web page or computer program of a PPMSE entity will change to the IP address assigned from the place where the VPN server is located. Therefore, consumers who access a web or program using a VPN will be given a web page display with language settings and an offer of goods and/or services intended for consumers from that country.

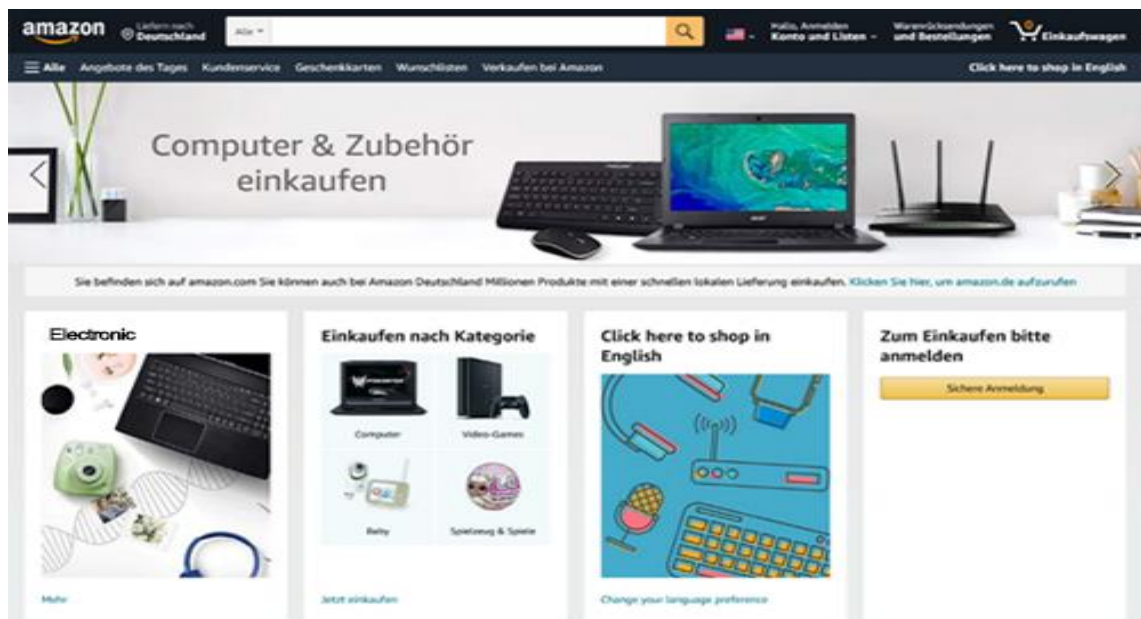


Figure 5. Amazon.com pages accessed using German IP address and German Language Settings

Source: amazon.com

The business process system of an e-commerce entity that detects the presence of an IP address with the VPN will continue the business process flow by assuming that the goods and/or services to be sold will be solely consumed further in the country of the VPN IP address. Therefore, aspects related to digital VAT collection such as VAT/GST imposition rates, companies registered to collect taxes in a country, and exceptions to certain tax objects that will be subject to VAT also refer to the applicable legal regulations in the country where the VPN IP address is located. .

A consumer generally transacts or consumes digital goods and/or services using a false identity and/or VPN due to the intent to gain 3 things as follows:

1. Access content that is not available in their home country;
2. Take advantage of lower VAT rates or certain tax exemptions in a country; and/or
3. Take advantage of the lower price difference due to the advantages of certain currency conversions.

In using a VPN to carry out the consumption of digital goods and/or services provided by the PPMSE entity, consumers have the flexibility to choose a location that can provide them with more benefits for the availability of a given content in an area. By using the VPN when consuming goods and/or services, consumers can open access to content that was not initially available or was not allowed to be accessed in their actual area of existence. The following is a comparison image detailing the Netflix.com content available between Indonesia and the United States.

Country	No. of TV Shows	No. of Movies	% of US TV Library (by title count)	% of US Movie Library (by title count)
United States	1157	4593	100%	100%

Figure 6. Netflix.com content available to users from the United States

Source: securethoughts.com

Indonesia	170	431	14.69%	9.38%
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Figure 7. Netflix.com content available to users from Indonesia

Source: securethoughts.com

Utilization of content available in a country by using a VPN makes the place where VAT/GST is owed to a country that is not in accordance with where the consumption will actually be carried out. In essence, the content available at the IP address should be subject to VAT/GST in accordance with the place where it will be consumed. By using a VPN, people who are in Indonesia can take advantage of content that is abroad by making it look as if they are in the region without having to collect VAT that should be owed in that region. This also applies to foreigners who want to take advantage of content that should be consumed for the territory of Indonesia.

The occurrence of avoidance (deviation) of digital VAT collection on the occurrence of a consumption of goods and/or services also occurs significantly to the 2nd and 3rd profit points which are closely related to when the PMSE digital VAT tax begins to be payable. In the business process of a PPMSE entity, the determination of the consumption tax payable of a certain area for the occurrence of a transaction is determined when the total cost of the goods and/or services selected has been determined and the payment is made by the consumer. With the use of a VPN, a consumer can trick the existing system by choosing a country that has a lower VAT rate on an item and/or service or excluding these goods and/or services from their VAT imposition.

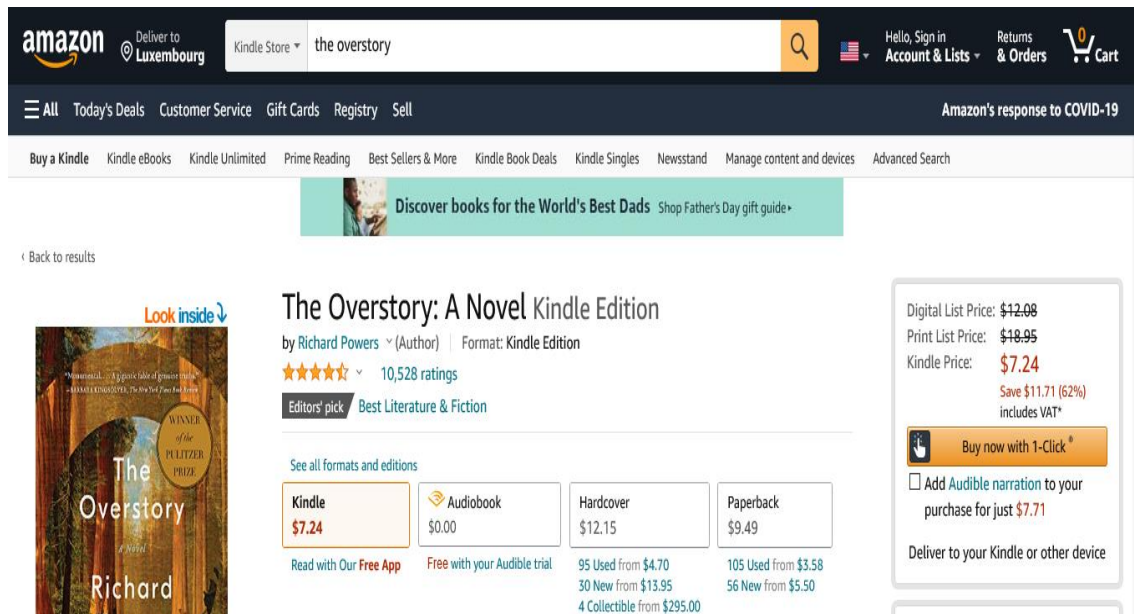


Figure 8. Novels on Amazon.com web accessed with Luxembourg IP address

Source: amazon.com



Figure 9. Novels on the Amazon.com web accessed with an Indonesian IP address

Source: amazon.com

Based on the comparisons that can be made in the two images, we can see that there is a significant price difference of US\$ 1.78 if someone uses a VPN to make their transactions. The digital goods referred to in the two images have been collected for VAT for each country by the seller, namely Amazon Services LLC, which itself has also been registered as a digital VAT collector in Indonesia. However, the difference in the total price charged may vary because Indonesia charges a standard 10% tariff for story books such as novels while Luxembourg only charges a 3% tariff for the same goods.

Avoidance of digital VAT collection by using a VPN in the business process flow of a PPMSE entity can also be seen in how a consumer takes advantage of the price that should apply to a consumer in a certain area. By using a VPN, a consumer can choose an area with a favorable exchange rate for the goods sold and take advantage of the price difference in carrying out their consumption. The VAT collected by the business process algorithm will also be inconsistent with reality because the consumer will be detected as someone who is in the territory of the country of origin of the VPN so that the existing VAT receipts will also be deposited to the country of origin of the VPN.



Figure 10. Video games on the Steam.com web accessed with an Indonesian IP address

Source: Steam



Figure 11. Video games on the Steam.com web accessed with an Argentine IP address

Source: Steam

Based on the comparison that can be drawn in the previous image, the use of a VPN in conducting transactions on the Steam.com web operated by Valve Corporation can make a consumer benefit from the total price charged for a transaction due to the difference in currency exchange between the countries where the server is located. The VPN resides with where the real consumer is. In the picture it is explained that, a consumer can earn a profit of Rp. 520,000 if he uses an Argentina VPN in making transactions for similar goods. The price attached by the Valve Corporation entity is also "Tax Inclusive" or the total price includes all types of taxes related to the sale. Although Argentina applies a VAT rate on digital goods and/or services which is higher than Indonesia, which is 21%, the gains that can be obtained from the exchange rate difference are even greater and can cover the higher taxation because in Argentina similar goods are only sold at a price of around IDR 76,600 (based on the exchange rate as of 15 May 2021) while in Indonesia the same item can be sold for IDR 600,000.

The avoidance of the PMSE digital VAT collection also has an impact on Indonesian tax revenues that should be collected by a PPMSE entity. When a transaction is completed and the goods or services are ready to be consumed by a consumer, the system implemented by the e-commerce entity will record the VAT/GST that has been collected based on where the consumer comes from. Therefore, VAT that has been collected by an e-commerce entity and will be deposited or reported in the future to a country will become the right of that country unless there is sufficient evidence to say otherwise.

Based on information obtained from interviews with Ms. Fiona Simorangkir as Implementer at the Directorate of Tax Regulations I and Mr. Andri Budiman as Senior Analyst at the Directorate of Tax Potential, Compliance and Revenue, one of the fail-safe or fail-safe methods has the highest chance of What is done by the DGT in validating the occurrence of transaction figures and VAT collected by a PPMSE entity is to cooperate by requesting information from payment gateways such as MasterCard and Visa in matching the figures reported by a PPMSE entity with statistical tools owned by the PKP Directorate in assess whether the number is within the reasonable range.

Another fail-safe method applied by DGT is to look at the background of the transaction. If a consumer consumes his BKPTB and/or JKP for resale or for B2B purposes, the consumer will generally take advantage of the existing electronic invoice from the purchase to be used as evidence of input tax in his SPT reporting. It is the evidence in the form of an electronic invoice that will be re-validated by the DGT for the correctness of the transaction later by being compared with the transaction data in a year reported by the PPMSE entity in their annual report.

For the implementation of digital transactions that are purely for the purpose of being consumed by a final consumer or on the B2C method, the two sources stated that the DGT and the Ministry of Communication and Information have not been able to carry out one-on-one monitoring of the flow of data and information on the occurrence of access or transactions to a PPMSE entity. So far, the DGT can only rely on the PPMSE entity to have an adequate system in collecting digital VAT obligations which should be the right of Indonesian state revenues. Until the end of this discussion written on May 15, 2021, Indonesia does not yet have regulations that specify in detail the regulation regarding the protection of a person's personal data. In connection with that, if there is a deviation from tax obligations that occurs solely on the part of the consumer who is in Indonesia, the law used by the DGT in binding a consumer is to return to conventional tax law by providing criminal threats and fines contained in the tax provisions and procedures. Therefore, in essence, a company cannot be held responsible for mistakes or deceptions made by a consumer on their business platform.

CONCLUSION

Through a simulation of the use of a virtual private network, this research shows that the price paid by consumers is lower than it should be. The use of a VPN affects digital trade VAT through the PMSE system. The use of VPN in consuming web pages or other business platforms, a PPMSE entity can trick the existing system by changing one of the collection indicators, namely the IP address by making it appear as if a consumer is in the territory of another country where the VPN server is located. By

using a VPN, a consumer generally wants to get more advantages in carrying out business processes on the PPMSE entity platform, such as accessing content that is not available in their home country, choosing a country that has a lower VAT rate, and/or taking advantage of the existing exchange rate in a particular country. countries by making themselves appear as consumers who are in the country of the VPN server. The potential state revenue from the VAT transaction will be lost or the potential revenue will move to another country. This needs to be anticipated by the Directorate General of Taxes as the administrator of VAT collection. The supervision and fail-safe methods prepared by the DGT for the occurrence of digital transactions are still focused on the PPMSE entity side by re-validating with third data on the information they provide when making monthly deposits and reporting quarterly and annual tax returns. For the consumer side, DGT applies the fail-safe method by re-matching the tax credit of a consumer in Indonesia on the commercial invoice evidence issued with transaction data in a year reported by a PPMSE entity. However, the DGT has not been able to carry out one-on-one supervision of transactions with VPNs if the transactions that occur are carried out by end consumers for B2C purposes.

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