

# Electronic Permanent Establishment: An Option For International Taxation On Profits Of Cross Border Business Transactions In The Context Of Digital Economy

Mohammad Abdul-Jalil Hamdan, Ph.D  
International Law, Xiamen University, China.

## ABSTRACT

This paper bases on the fact that the desire to tax businesses by the source countries is diminishing in increasing volumes to the developed nations which require more standard economic ties. The policies that have been proposed in this paper are flexible and can be extended into use in the future. Utilizing the software that are used in these digital business transactions for the purpose of source taxation can only be done temporarily for some given period of time. When the Internet platforms have fully matured, then the developing countries will be capable of benefitting from the new mediums and thus grow economically. The extent to which e-commerce and Internet platforms will continue to grow is not yet determinable but there is some reliable estimation that can help in the formulation of tax policies. The role of e-commerce to the global economy is clear and indispensable; hence all the countries understand the importance of having a reliable and stable consensus that would set forth the tax policies bounding to all international transactions. However, the process would not be as easy as perceived since the technological and economic growth amongst nations is not uniform. Hence the policies as discussed earlier have to harmonize all the challenges that are experienced by different countries.

**Key Words:** Electronic Permanent Establishment; International Taxation; Cross Border Business Transactions; Digital Economy.

## INTRODUCTION

This era has been characterized by economy digitalization, which is thus perceived as the cornerstone for economic growth, innovation and also as the long awaited societal revolution. However, it has emerged as the greatest challenge to the imposition of international taxes on the cross-border businesses. The efforts by OECD MTC to fully address the problem have been extensive as illustrated in the previous chapters especially by Action One in the organization's final report in the BEPS project. However, it is still evident that the problem still spats newer threats periodically to the growth of economies and the emancipation of the tax policies. Hence the question remains; have the international tax authorities accepted the challenge?<sup>1</sup>

The chapter will look at the suitable reform proposals that are currently in discussion or have been championed for in the past. However, the chapter will look more into the OECD MTC views on this issue of subjecting the profits realized by the cross-border businesses by basing at the idea of having electronic PE in the digitalized economy. The chapter endeavors to fully

---

<sup>1</sup> OECD, Addressing the Tax Challenges of the Digital Economy" report, released on September 16th, 2014 in the context of the action plan to address the Base Erosion and Profit Shifting ("beeps").  
<http://www.oecd.org/ctp/addressing-the-tax-challenges-of-the-digital-economy-action-1-2015-final-report-9789264241046-en.htm>

utilize the recent literatures on the same in order to generate a synthesized report on the matter.

As the subjection of profits to tax in regard to the idea of value creation is observed as up to the minute paradigm in the context of the cross-border taxation, the paper observes the fact that a sound comprehension of the digital economy and the equivalent proposals advocating for taxation reform are still premature. It can be assumed that the OECD MTC has systematically failed to utilize the existing opportunities to clarify the paradigm taxation and explain the digital economic models<sup>2</sup>. As the main pressure that is being handled by this paper is the issues surrounding the taxation of the business profits in the context of the digitalized economy; the paper will draw case studies and some of the best researches so far on the economics so as to derive the concept of using electronic PE in the evaluation of the taxation process<sup>3</sup>. The chapter will come into conclusion of the subject in discussion by proposing a reliable framework that would be in line with profit taxation in ecommerce.

### **UNDERSTANDING THE DIGITAL ECONOMY**

The digitalization of the economy remains the most significant development after the industrial revolution and some scholars consider it as an important driver for innovation. Conversely, the digital platform has been characterized by a lot of challenges in terms of domestic and international taxation. Therefore, most of the scholars claim that the fully benefits of embracing the digital economy has not yet been fully utilized. In some cases, the traditional taxation systems are still employed in the governance of the new transactional activities and this is what has led to the observed breakdowns in the system. The failures by the traditional taxation policies are obvious since it is merely impossible to keep the pace of the global business transformations<sup>4</sup>.

In respect to the digital commerce models that are observed, the greatest challenges have resulted from the periodical decrease in the necessity to have a physical presence where the sellers and the buyers would meet. In addition, the digital platform has been characterized by the demand by business to adopt highly mobile intangibles and also the chain of the business chains has also been very much integrated and sophisticated. The developments that are being discussed herein are not completely new but have for the past one-decade triggered immense academic and also political discussions. These discussions have tried to establish the manner in which the international policies on taxation can establish stable and reasonable structures that would handle the multinational business entities that are sprouting in this 21<sup>st</sup> century<sup>5</sup>. Most of these discussions have ended up in dire calls for a systematic and some comprehensive adjustments in the existing principles.

### **PRACTICAL CASE RELATING TO ELECTRONIC PERMANENT ESTABLISHMENT**

Turkey, being one of the partners of the G20 countries and also OECD MTC members has been observed in the recent years notably in 2016 in embracing the BEPS recommendations. Almost

---

<sup>2</sup> Kovačević, N.Ž. and Gadžo, S., 2016. Proposals for reform of the agency permanent establishment concept: examination of BEPS Action 7. *Economic Integrations, Competition And Cooperation*, p.510.

<sup>3</sup> 251Alexsandra Bal, The Sky's the Limit – Cloud-Based Services in an International Perspective. *ibdf Bulletin for International Taxation*, September 2014.

<sup>4</sup> Gandini, A., 2016. *The reputation economy: Understanding knowledge work in digital society*. Springer

<sup>5</sup> Kim David Lexner, Selected Issues in the u.s.-Dk Tax Treaty: Permanent Establishment in relation to E-Commerce Transactions and the distinction between payment for services and payment for intangible property rights. *corit Discussion Paper N. 7 2010*. Gary D. Sprague, Spanish Court Imposes Tax Nexus by Finding a "Virtual pe". *International Journal*. <http://www.bna.com/spanish-court-imposes-n17179871765>.

half out of the 15 key tools by the organization have been interpreted into law already whilst the rest are waiting enactment. Turkey has also engaged in efforts to simplify and modernize her tax policies in order to embrace the international tax standards by encouraging the employment of technological tools<sup>6</sup>. Other countries have also tried to adopt the Internet and other technological enhancements in the 21<sup>st</sup> century but such countries have experienced downside effects as multinational enterprises have utilized the opportunity to escape source state taxation policies. China is one of the countries that has experienced such terrible experiences was observed in the previous chapters.

Despite the effects that have been observed in the digital economy; Turkey revealed the concept of electronic PE so as to curb tax avoidance by the multinationals. Thus, according to the concept, the profits are subjected to taxation from the location where the economic activities take place and the source from which value is bred. The idea considers the fact that the establishment of the Internet has resulted to the reshaping of the economy globally by giving chance to the multinationals to move towards digital cross-border commerce. This is the case in which the supply of goods and services electronically has detached the physical presence of businesses from the tax authorities. Therefore, most of the multinationals pay very little tax or sometimes escape from tax completely thus causing huge revenue losses for most governments.

The Turkish tax administration system has enacted some anti-avoidance strategies that are in conjunction with the BEPS measures on unethical tax competition and planning. The new economic challenges prompted Turkey to establish the electronic business location and also electronic taxpayer, which aimed at curbing artificial tax dodging. Increasing the possibility of creating many permanent establishments enables this strategy. Hence the draft by the Turkish law of Article 130 on the operations of the internet and other forms of telecommunications such as intranet which are tools for industrial, professional and also commercial activities are perceived to establish an Electronic Permanent Establishment and thus would create room for the attribution of tax profits. The new formula of taxation in the digital environment in Turkey helped set the tax compliance policies for all the multinationals in the country, which generate their income from the ecommerce platform. With the other countries fast embracing the new tax policies on digital commerce taxation, it is expected that the taxation deficiencies will come to an end.

### **ELECTRONIC PERMANENT ESTABLISHMENT AS A MEANS OF ASSIGNING TAXING JURISDICTION**

OECD MTC has relentlessly worked on establishing the implications of the ecommerce on the existing cross-border businesses for almost 20 years. In 1998, some reliable principles on how to establish the international tax rules were set up. The 2015 report by OECD MTC on the appropriateness of the treaty rules in maintaining the electronic commerce market indicated the undying desire by the organization to bring the problems to an ultimate end. In such reports, the body looked at the possibility of establishing some virtual (electronic) permanent establishment, which would act as an alternative nexus in the context of e-commerce<sup>7</sup>.

In regard to the same, the definition of PE needs to be broadened three-wise. Therefore, the extended definition reads that; the virtual fixed business location, which is an equivalent of an electronic business place from which the business carries out its operations, the PE is therefore

---

<sup>6</sup> <http://www.internationaltaxreview.com/Article/3548543/Turkey-introduces-electronic-place-of-business-concept.html>

<sup>7</sup> <http://www.oecd.org/ctp/treaties/35869032.pdf>

configured. This statement implies that the website from the Internet server that is maintained by the business entity qualifies for a permanent establishment which is for that case virtual. Secondly, the businesses' virtual agencies which are in this context equivalent to a dependent electronic agency will in the same cases cover the cases in which the contracts can be concluded habitually using technological means on behalf of the business entity.

Lastly, the 'on-site enterprises' would be in this case get defined afresh to comprise of the 'virtual location'. Therefore a business entity that participates in the provision of phone and computerized inter-actions (on-site services) to its consumers who are in other countries will be perceived to be on-site business entities<sup>8</sup>. Hence, this case would require the business to declare its minimum commercial threshold so that the source state can impose its taxation on the minimum and significant business activities. In this context, a minimum business context would comprise of a minimum operation time in which the business entity in question would regularly carry out its juridical activities. Therefore, the business would observe the underlying restrictions on the extent of its activities such as the exclusion of the auxiliary operations, or in other case occasional and intermittent business activities.

It is therefore evident that the adoption of the above measures would mean the existing policies on taxation would also have to be reviewed in respect to the apportioning of the business profits. Moreover, the approach will require the re-interpretation of the 'arm's length' principles to facilitate the introduction of the virtual ideas that includes the employment of virtual assumptions on risks and also virtual business sets.

OECD also suggested that it would be very essential to take such measures by suggesting the following notion that; ecommerce and other related commercial activity models that are as a result of the emerging technologies would not justify their course of escaping from the existing taxation rules. However, the OECD does not have evidence that the internet technologies are entirely the causes for the experienced fluctuations in the amount of revenues collected in the recent past (OECD MTC on 2015 report). In the discussion by the same report suggested the adoption of some Virtual Permanent Establishment so as to solve the current economic stalemate but however it failed to mention a specific word that would fit the scenario.

The following are some notable cases on the same;

### **The Spanish Case**

In 2012, the Economic Administrative Tribunal in Spain was engaged in a ruling on whether the operation of a Dell Company (DLP) with its residence located in Ireland resulted to a permanent establishment or not<sup>9</sup>. The sophisticated business operations of the Dell Company in Spain included the sale of its goods by using its subsidiary entities or in other words missionary's business agents in Spain to only some specific clients. In addition, the company would reach to other clients using its webpage (ecommerce). The issue was complex since the company had only one worker at its subsidiary in Spain with the tasks of editing the webpage, which had its servers being hosted from another country. Therefore, the tax administration in Spain based on virtual PE of the company in the country from the permanent establishment theory. Therefore, the tax administration used the arguments that; the webpage does not in the case above configure to a PE in regard to the commentaries in paragraph 42.2 of the OECD MC.

---

<sup>8</sup> Arthur J Oakfield, "Reforming the Permanent Establishment Principle through a Quantitative Economic Presence Test" 38 *Can. Bus L.J.* 2003

[http://people.ucalgary.ca/~law/tutorials/L541/L541\\_Business\\_Tax\\_Course\\_Materials\\_W05.pdf](http://people.ucalgary.ca/~law/tutorials/L541/L541_Business_Tax_Course_Materials_W05.pdf)

<sup>9</sup> <https://www.ey.com/gl/en/services/tax/international-tax/alert--spanish-high-court-determines-existence-of-a-permanent-establishment-in-spain-under--fixed-place-of-business--and--dependent-agent--clauses>

The fact remains that as long as the company had one of its subsidiary workers in Spain in charge of controlling the webpage implies that the entity has some form of physical presence in the country.

The tribunal stated that; despite the fact the presence of some PE in any country is determined by the presence of some server being hosted in the country in question, the subsidiary and the company both share the market in Spain and thus the server is partly identifiable in Spain. In addition, the Spanish outlet was perceived to be owner of the company's extension in the country and thus when observed from the transfer pricing statistics, it can be established that most of the transactions by the company are carried by the use of the website's platform. Lastly, the tribunal held its ruling that the profits generated by the company are all time attributable partly or wholly to the PE in Spain and thus would be subject to taxation only to the proceeds realized from the sale of its products in the Spanish market.

The approach used by the Spanish tribunal implied that all the income that is generated from the market in question would thereafter traceable to a given permanent establishment. Hence, the assumption that all the allocable costs that are incurred by the above principle are perceived as expenses those are deductible to a given PE. Clearly, this approach falls out with the OECD measures on conceptualizing PE as being a distinct and separate entity from the main business. The OECD references the profits from the transactions that are observed between the main office and the respective permanent establishment.

However, the ruling set the pace for the discussion of the concept of the businesses' virtual or electronic permanent establishment. In addition, the case represents a crucial precedent since the Spain is currently an OECD member and has been very reluctant to put the above idea into action and also get to establish the concept of PE. It is worth noting that the above case was subject to being appealed in the Spanish court and thus its definitive application is still pending.

### **The Indian Case**

It is notable the Indian judicial system has greatly improved in its conceptualization of the issue on Virtual or electronic permanent establishment. The judicial system in the country has gone to extensive efforts to redefine their policies on the concept of PE in order to accommodate the electronic business transactions. In illustrating the same, the Indian Supreme Court made some reference to the permanent establishment of software but did not fully define and specify the idea<sup>10</sup>.

In another illustration; the Verizon Communications Limited from Singapore in its case by the Madras Court in making a ruling on whether the payments that they were made to the Singapore Company from India included to the income royalty meaning that its presence physically had grown insignificant in respect to the virtual environment. The court however ruled out that in order to establish that any company had some virtual presence in India; the authorities should evaluate on the company' presence of some rights, the company's obligations to its consumers and the presence of some equipment's and machineries in the country.

---

<sup>10</sup> Mukesh Butani and Parul Jain, Permanent Establishment Concept – An Indian Perspective (2014). ibdf, AsiaPacific Bulletin. [https://www.business.unsw.edu.au/About-Site/Schools-Site/Taxation-Business-Law-Site/AttaNews/2012-ATTA-NEWS\\_full%20year.pdf](https://www.business.unsw.edu.au/About-Site/Schools-Site/Taxation-Business-Law-Site/AttaNews/2012-ATTA-NEWS_full%20year.pdf)

The Indian tribunal established that a permanent establishment would only be configured in India if and only if there is some link between the company and the subsidiary through the provision of connectivity, configuration and equipment's by the main office constantly over a given period of time. Secondly, when there is some fixed location in which part of the activities are undertaken such as the storage of the equipment, such as the computers<sup>11</sup>. In addition, a PE is present when the business entities' operating dependent agent is financially and also functionally dependent to the business office. Lastly, the tribunal ruled that no profits would be attributed if the transactions involved are based on the arms' length principle<sup>12</sup>.

In regard to the PE configuration in India, a website is perceived to make up a permanent establishment in some cases, which are in contrary to the OECD position in respect to the same. The presence of Yahoo and also Google Search engines as long as the website servers did not have any business link or some permanent establishment presence in India<sup>13</sup>. This is because the search engine in question that has some presence in the country through a website is not capable of establishing a fixed location. However, the otherwise is possible if and only if the web servers in question are found in some jurisdictions that are relevant and the above remains the basic rule.

### **The Colombian Case**

The markets in Colombia were opened up to the foreign investors in almost the two past decades and for this reason the policies on ecommerce are not sufficient to contain the digital platform as expected. In addition, the country itself is relatively young in terms of the international tax treaties. It is worth noting that the country signed its first tax treaty to curb the issue of double taxation in the Andean Pact. The pact, which has been lately updated in 2004, was a strategy to empower the economic ties between Peru, the former Venezuela, Ecuador and Bolivia in regard to the industrialization projects and also the protectionist policies. Therefore, the treaty majorly focuses on the principle regarding the source and not to enable the disposition of permanent establishment.

Colombia signed the first treaty related to the OECD MTC in 2008 with Spain and provided disposition for the permanent establishments in the country. By 2012, Colombia had only entered into tax treaties with only seven countries, namely Korea, Switzerland, Chile, Spain, India, Canada and Mexico. The concept of permanent establishment was adopted in the country in the year 2012. The disposition of the concept was however enacted the following year, as a result of the recommendations by OECD and its commentaries. The existing legislation in Colombia does not set the boundaries for the concept of PE in the context of ecommerce resulting from the transactions by a Colombian who is a resident and the treaties that subject the individual to tax.

The most similar case in regard to permanent establishment in Colombia was observed in 2013 when the country's tax authorities made a ruling on the PE configuration in respect to Swiss Company that was involved in the provision of English courses by using the Internet. The platform was however situated in Brazil. Therefore, in this case the tax authorities in Colombia established that PE was present for the Swiss company following the provisions by the treaties established in Switzerland.

---

<sup>11</sup> (Butani & Jain in *ibdf AsiaPacific Bulletin*, 2014, 251).

<sup>12</sup> *Economy*, 74 *Tax Notes International*, pp. 1089-1090 (2014). <sup>12</sup> OECD, *Addressing the Tax Challenges of the Digital Economy: Action 1: 2014 Deliverable*, pp. 51-98 (OECD/

<sup>13</sup> (Butani & Jain in *ibdf Asia-Pacific Bulletin*, 2014, 251)

However, a close scrutiny into the case reveals that the authorities based their ruling on the fact that the company in question had a dependent agent in the country. Hence, some may argue that the authorities did not put into consideration whether the provision of the services by the company would result to a PE or not. This is because the authorities directed all their focus on the presence of some subsidiary of the Swiss company in Colombia that had the power to conclude and also negotiate the company's contracts. In regard to the ecommerce transactions carried out by non-resident individuals such as data access and hosting, the Colombian government therefore established that the income generated from the corresponding activities are not subject to tax since they are sourced from the country<sup>14</sup>. In addition, the tax authorities established that all forms of ecommerce that are carried out by individuals who are not residents in Colombia are not subject to being levied.

In contrast, the rulings 74171 held in 2005 and that of 37529 that was held in 2002 stated that any proceeds that relate to any property license that is transferred or granted via internet platform in form of music or even software is liable to tax.

The discussed precedents above indicate clearly that the respective tax authorities in Colombia have not directed their focus on the base erosion. In particular, the authorities have not observed taxation absences that would have resulted from the ecommerce transactions. The Colombian authorities require the taxpayers to report any cases of ecommerce activities. Hence Colombia needs to take part in BEPS plan discussions so as to identify the loopholes that exist in its taxation systems and the legislative weaknesses that act as drawbacks to the full realization of the Colombian revenue targets.

In a nutshell, it can be noted that information technologies have led to the integration and the globalization of enterprises, and thus the multinational business entities continue to shift their operational bases to the low cost areas that have minimum risks and are characterized by developing markets. The above scenario has been stimulated by the ecommerce tax ambiguities that have been observed in most tax havens. In addition, there has been a lot of dilution of the crucial aspects that were established by the international community by these tax havens so as to accommodate the domestic tax policies on the digital platform in which the physical establishment of a business is not necessary.

The virtual theory in regard to permanent establishment got proposed by the Heinekens in order to accommodate the issue of physical presence by businesses, which would serve as a nexus for the businesses<sup>15</sup>. The virtual PE was expected to enable continuous business operation in the source state. However, the idea was met by strong criticism, as it required the advocators to redefine the PE that was in existence and the apportioning of the business profits. In addition, the critics argued that obligations that were going to be set forth by the idea of virtual PE would be very difficult for the multinationals to cope with. The 2005 OECD report on the appropriateness of the tax treaties in the taxation of business entities on its observation of the proposed concepts declared that such changes were not necessary. Nonetheless, OECD acknowledged the need to address the challenges that plagued the digital economy but failed to look into the proposed theory of virtual or electronic PE in the 2014 report<sup>16</sup>.

---

<sup>14</sup> Revista de Derecho Fiscal n.º 8 • enero-junio de 2016 • pp. 89-102

<sup>15</sup> Luc Hinneken, Looking for an Appropriate Jurisdictional Framework for Source-State Taxation of International Electronic Commerce in the Twenty-first Century (1998) Intertax 192.

<sup>16</sup> Addressing the Tax Challenges of the Digital Economy" report, released on September 16th, 2014 in the context of the action plan to address the Base Erosion and Profit Shifting ("beeps"). <https://www.oecd->

Therefore, this is a clear indication that the process of re-conceptualizing will become a reality when the countries importing and exporting capital will agree on the most appropriate and reliable method to subject ecommerce transactions to tax. Moreover, the respective countries will have to suggest on the best methods to enforce the taxation policies, considering the equity and neutrality taxation principles. This principle imply that the countries should stop worrying about their respective multinational industries in order impose taxes on the capitals fairly<sup>17</sup>.

However, in some countries such as the discussed case on Colombia, the work on establishing such measures is yet to begin. This is because the country itself has not yet become an OECD member. Notwithstanding, the tax authorities in Colombia are active participators the action plans by BEPS and thus its legislation body is still under modifications<sup>18</sup>. However, any emergence of dynamic policies which might require the authorities to reduce the levels of tax evasion in order to establish a suitable environment for the investors might be a great challenge to such tax regimes. This is because the concept of permanent establishment has not been sufficiently developed so as to fully satisfy the growing needs such states. As a result, their opinions on the taxation are limited to the treaties and commentaries by OECD.

### **OECD VIEW ON THE CHALLENGES FACING THE DIGITAL ECONOMY**

In the midst of the desire to adopt the electronic permanent establishment in the apportioning of profits in the digital economy, there are some observed hindrances that have been identified<sup>19</sup>. There is a need to define the current technological characteristics and existing business models in respect to the concept of permanent establishment<sup>20</sup>. The OECD was initially required to investigate the features of the digitalized economy and establish a clear overview of the experienced challenges instead of enacting a direct policy on taxation. The task force by the organization also looked at the technological establishments and the features of the digital platform as in the action of the 2015 report<sup>21</sup>.

The development of the ICT has been regarded by the OECD as the key driver on the digitalization of the modern businesses<sup>22</sup>. The mentioned development refers to the diffusion of the software and hardware business components through the aid of the computers to easily

---

<https://www.oecd-ilibrary.org/docserver/9789264241046en.pdf?expires=1542467971&id=id&accname=guest&checksum=69A50E1ED487FE786440BF5576D5DF59>

<sup>17</sup> Addressing the Tax Challenges of the Digital Economy” report, released on September 16th, 2014 in the context of the action plan to address the Base Erosion and Profit Shifting (“beps”). <https://www.oecd-ilibrary.org/docserver/9789264241046en.pdf?expires=1542467971&id=id&accname=guest&checksum=69A50E1ED487FE786440BF5576D5DF59>

<sup>18</sup> Addressing the Tax Challenges of the Digital Economy” report, released on September 16th, 2014 in the context of the action plan to address the Base Erosion and Profit Shifting (“beps”). <https://www.oecd-ilibrary.org/docserver/9789264241046en.pdf?expires=1542467971&id=id&accname=guest&checksum=69A50E1ED487FE786440BF5576D5DF59>.

<sup>19</sup> <https://www.oecd-ilibrary.org/docserver/9789264241046en.pdf?expires=1542467971&id=id&accname=guest&checksum=69A50E1ED487FE786440BF5576D5DF59>

<sup>20</sup> Brauner, supra n. 6, at 17; Englisch, supra n. 9, at 281; S.S. Johnston, What’s Next for the OECD and the Digital Economy, 74 *Tax Notes International*, pp. 1089-1090 (2014).

<sup>21</sup> OECD, Addressing the Tax Challenges of the Digital Economy: Action 1: 2014 Deliverable, pp. 51-98 (OECD/ G20 2014) [hereinafter Action 1 Deliverable]; OECD, supra n. 2, at 35-84

<sup>22</sup> Van der Wee, M., Verbrugge, S., Sadowski, B., Driesse, M. and Pickavet, M., 2015. Identifying and quantifying the indirect benefits of broadband networks for e-government and e-business: A bottom-up approach. *Telecommunications Policy*, 39(3), pp.176-191.

access the internet services<sup>23</sup>. In addition, the business models have adopted software form and are as a result characterized by the dependency on the implementations that are carried out on-demand basis and approaches that are open-source in nature<sup>24</sup>. OECD has also observed that the major participators in the digital economy dependent on the various means to create apply and realize their revenue with Internet content. Lastly, cloud computing has been identified by the OECD as being the greatest outcome from the development of ICT.

There is however a non-exhaustive number of expected developments in the future from the ICT world and thus the magnitude of the influence the changes might bring into the business models are incalculable. This possible assumption is derived from the observance of the ways in which the technological advancements in the ICT world interact. In summary, there is a clear depiction of the Internet concepts such as advanced robots, collaborative productions, 3D printing, virtual currencies and anonymous access to government's databases and enhanced security of personal data<sup>25</sup>.

In regard to the OECD report, the new ICT features that are observed currently require some key reshaping of the taxation structures<sup>26</sup>. The business models that are influenced by these ICT do not have any established definitions beyond their statistics and thus the tax authorities find it hard to analyze their transactions. In addition, their connectivity degree depicted by these businesses illustrates their levels of mobility of their unprecedented functions, consumers, intangibles and operators. Due to this factor, the businesses can therefore be operated with less or no personnel involvement by automation of its processes. Their powerful DTBS tools and computing ability is utilized in the generation of reports and also analyzing of data that is sometimes provided by the platform operators. Hence, from the above observations, it can be noted that the technologies have established themselves as the drivers of the electronic business world<sup>27</sup>.

Hence, investing in electronic PE as the solution to these problems appears to be most pivotal undertaking in order to establish a sustainable digital environment. The electronic PE as expected would help also solve the problem of the existing widened user bases resulting from the effects of oligopolistic and also monopolistic market structures in the economy that have caused multisided platforms and network effects.

Some of the recognized challenges facing taxation are as follows:

### **BEPS**

The definition of the new models and the digital economy is still superficial so that it only mentions the means of revenue generation and experiences by the users of these technologies. In addition, there is detailed and comprehensive discussion by the OECD in respect to the

---

<sup>23</sup> OECD, supra n. 2, at 37 While the relevance of hardware is still undisputable as the backbone of communication networks, digital business models generate profits more from the operation of computing devices and software applications than from the sale of hardware.

<sup>24</sup> Van der Wee, M., Verbrugge, S., Sadowski, B., Driesse, M. and Pickavet, M., 2015. Identifying and quantifying the indirect benefits of broadband networks for e-government and e-business: A bottom-up approach. *Telecommunications Policy*, 39(3), pp.176-191

<sup>25</sup> Haarhaus, T., Geiger, J.M. and Liening, A., 2018. The Influence of Digitalization on Emergent Processes of Entrepreneurial Ecosystems-a Complexity Science Perspective.

<sup>26</sup> Schiborr, L.A., 2016. *How to emerge as a digital platform leader?: Envelopment and business model innovation at eBay and Amazon (2006-2011)* (Bachelor's thesis, University of Twente).

<sup>27</sup> Van der Wee, M., Verbrugge, S., Sadowski, B., Driesse, M. and Pickavet, M., 2015. Identifying and quantifying the indirect benefits of broadband networks for e-government and e-business: A bottom-up approach. *Telecommunications Policy*, 39(3), pp.176-191

action plan by BEPS opportunities. However, this discussion by OECD fails to elucidate on the usage of business assets, the functioning of the business personnel and the implications of the tax systems on the digital economy; such as the shift towards the intangibles and increase in business mobility. In addition the plan does not elaborate on the companies' legal structures that are influenced by tax considerations<sup>28</sup>. The considerations by BEPS exacerbate the specifics illustrated in the digital economy and thus the tax strategies might appear to resemble the traditional ones<sup>29</sup>.

The OECD has so far pinpointed some BEPS opportunities that are of great importance to the digital economy. The first area that has been identified is the reduction or complete elimination of the taxes in the digital market as result businesses shunning the presence of some physical location. For business entities that participate in online cross-border activities, there is a minimal requirement for some physical establishment and thus when the respective country fails to assume its taxing obligations; the revenues that would have been derived from the same are lost. Most of the domestic laws do not define the scope of ecommerce taxation. The income in the context of the taxable business presence can be minimized by the process of allocating the most minimal amount of functional assets, risks and functions in the available state market. However, this is problematic due to the fact that the assets and functions are deemed to be tax oriented<sup>30</sup>.

The above concept however applies to the BEPS opportunity in regard to the minimization of the liable taxes in the case in which the business intangibles are transferred to the tax regimes that are low. The above is the second opportunity. The other opportunities by BEPS include the exclusion of the liable taxes and repudiating of the withholding taxes by the holding companies and use of contractual payments<sup>31</sup>

### **Broader Challenges**

The OECD had initially established that the migration from the existing taxation rules was not any necessary, today the organization establishes that the issues surrounding source tax have not been handled as required<sup>32</sup>. This statement is evidently proven by the current state of ICT in the world that has significantly enlarged the scale of cross border businesses<sup>33</sup>. OECD has therefore categorized the taxation challenges into the application of date in the process of value attribution; the taxation nexus and the features exhibited by the digital products<sup>34</sup>.

### **REQUIREMENTS FOR THE EXISTENCE OF AN ELECTRONIC PERMANENT ESTABLISHMENT**

The traditional taxation rules that relied on the physical existence of a business are still evident in the OECD policies on international taxation. However, the physical presence is growing

---

<sup>28</sup> Gregg, M., 2016. In Search of a Compass. Base Erosion, Profit Shifting and New Dilemmas in International Taxation. *Economic Journal*, 119(537), pp.764-795.

<sup>29</sup> Schneider, F., 2018. *Size, Causes and Consequences of the Underground Economy: an international perspective*. Routledge.

<sup>30</sup> Olbert, M. and Spengel, C., 2017. International taxation in the digital economy: challenge accepted. *World tax journal*, 9(1), pp.3-46.

<sup>31</sup> Baker, S.R., Bloom, N. and Davis, S.J., 2016. Measuring economic policy uncertainty. *The Quarterly Journal of Economics*, 131(4), pp.1593-1636.

<sup>32</sup> Baker, S.R., Bloom, N. and Davis, S.J., 2016. Measuring economic policy uncertainty. *The Quarterly Journal of Economics*, 131(4), pp.1593-1636.

<sup>33</sup> Lennard, M., 2018. Act of creation: the OECD/G20 test of "Value Creation" as a basis for taxing rights and its relevance to developing countries. *Transnational Corporations*, 25(3), p.55.

<sup>34</sup> Olbert, M. and Spengel, C., 2017. International taxation in the digital economy: challenge accepted. *World tax journal*, 9(1), pp.3-46.

insignificant as most firms establish their economic activities on some virtual establishments. Therefore, this need to have a clear and distinct definition of a business's taxable presence prompted the European Union to make some legislative proposals that were meant to introduce some nexus policies on which the taxation of a business entity could be based up on. The main question however remained on how to establish such economic presence for business in this digital era.

The ECOFIN had recently proposed on the assumption of the elements in the BEPS actions that had been mentioned by the OECD that include some digital factors, revenue and user based elements. Moreover, it was decided that the policymakers needed to make inquiries of some permanence degree of any business by taking into account the relationship between the business and the consumers it serves for some 'x' period of time, for the location to be recognized as the electronic PE of the entity. There have also some proposals for the respective bodies to put into consideration the digital factors that are necessary for any virtual location to be fully recognized as the permanent establishment for the business. In this taxation framework, the proposal by the European Union concerning the deemed PE or in other words a permanent establishment that is digital in form such as marketing online location, electronic application, a search engine, storage room or a database that takes an electronic form. The location might be offering some advertising services from a given search engine or a given website.

The policy makers thus ought to take into consideration the factors that influence the revenue that is realized as a result of selling the business's commodities to the resident citizens of a given country. In this case, the idea of electronic or virtual PE will be determined by the remote transactions that are involved on the threshold of revenue generation. In addition, the policymakers would have to employ more attention to issue of tax neutrality in which familiar treatment should be experienced in the tax rules and the policy choices on tax. This aspect would greatly help in the process of creating comparisons. In addition, the policymakers should also include some provisions on anti-abuse in order to safeguard the nexus based on revenue. For an example, in instances where there are some artificial fragmentations in regard to the sales undertaken remotely between customers originating from a common country but of different enterprise affiliation.

There are also some proposals to the tax policymakers to consider also the factors that attribute to the individual users. The following would include the number of registrations in the digital platform such as a website in a given period of time say a year or month. Moreover, it can include the number or volume of the contracts that get concluded from a given digital platform and also the volume of the online content that is acquired in respect to the involved taxpayers. The content that is derived from these digital platforms helps the authorities to acquire some personal data and also the content that is created by the respective users such as the search histories and the reviews on the products that are handled in the platform.

### **New Rules That May Aid In Profit Attribution And Transfer Pricing**

It is always necessary to establish the elements that create value and the attributions to the taxable profits in regard to the jurisdictions before any process to determine the economic presence of any business<sup>35</sup>. The pricing rules on transfers by the international authorities as specified in the actions 8 to 10 by BEPS recommendations apply the concept of looking at the functions that are undertaken in the given virtual location; the risks that are assumed by the

---

<sup>35</sup> Lyal, R., 2015. Transfer pricing rules and state aid. *Fordham Int'l LJ*, 38, p.1017.

respective business and the assets that are used while considering the arm's length principle to allocate the taxable profits by the business. In addition, the recommendations by BEPS seem to put more emphasis on the availability of the location from a considerable number of people undertake the duties of the business' office<sup>36</sup>. The existing rules do not consider the functions carried out in the business location, the risks assumed by the business and the assets used to allocate the respective profits to the state country involved.

Therefore, this requires the tax authorities to revisit the pricing rules on carrying out transfers in order to apportion the respective taxes in respect to the economic presence of any business entity. However, the periodical allocation policies developed by different bodies such as the European Union et cetera, remains unpredictable as the economic times are fast changing and the business models taking on newer features. This fact is supported by the virtue that different authorities interpret different economic changes differently. However, the formulations are necessary for any economy to keep on running smoothly. China at her own capacity has incorporated measures to tackle new technologies that influence the performance of the economy and also diversifying her portfolios to different continents; such as Africa. Most importantly, for the concept of electronic PE to be effected more successfully, there is a need for the implementation of new rules that will encompass the issue surrounding; being associated either partly or wholly to the affairs of the business generally creates the location from which value. The above statements refer to the destination principle.

The above measures are expected to add to the concept of permanent establishment the modern nexus on the significant economic business presence and also would help the tax authorities in identifying the revenue transactions that are carried out remotely. However, there are a number of challenges that come along. The first challenge lies in the task to establish whether a given digital platform; say a domain name is local or not. In addition, there are likelihoods that the taxpayers will experience new administrative burdens. The third challenge that is always experienced is the difficulty for different countries of different bodies joining to implement new tax treaties. For example; countries from Asia might find it hard to enter into common tax treaties with those belonging to the European Union. Lastly, this process would call for the review of the existing international policies on profit allocation.

### **Technical Issues In Electronic PE**

There are a couple of issues that have to be considered in the implementation of an electronic PE. The issues are comprised of but not limited to<sup>37</sup>:

The first factor that needs to be considered is the digital factors. For an example; one may be tempted to inquire of how certain digital platforms are allocated to a given jurisdiction. Observing many digital platforms reveals that most of them have the domain identity ending with 'com'. These domains are however used at the local and international level. However, there are some of the addresses that are used to identify the locality of the platform. For an example; Denmark uses domains that end with '.dk' whereas Netherlands use domain that have their domains ending with '.nl'. Therefore, such websites have a local recognition. Hence, it can be deemed that every given website has some nexus within a country. However, some users from other countries will also visit these websites and thus more complexes in these digital platforms.

---

<sup>36</sup> <https://www.oecd.org/tax/transfer-pricing/additional-guidance-attribution-of-profits-to-permanent-establishments-BEPS-action-7.pdf>

<sup>37</sup> Chaffey, A.M., 2014. Permanent establishment dilemma in the digital economy (Doctoral dissertation, University of Johannesburg)

The second issue arises in the process of value allocation. Hence the principle is left out between several factors based on the business location. There are several ways that are used in the process of allocating values. For example; some use sales as the base of allocation in regard to the data that is also used by the company taking part in digital platform business. Some of the data that can be used in the value allocation include some search histories and also product reviews in its website. Therefore, the main challenge remains in the valuation of the data itself. For example; how can one determine the difference between the value of some raw data and aggregated data?

One of the methods that can alternatively be used in this valuation process is the fractional apportionment. This method uses the variables and factors that are applicable from case to case or sometimes using the pre-determined method. However, the formula has not found favor before the OECD members but it has been observed that the CCCTB apply the method; and thus it cannot be omitted in the proposals for valuation in electronic PE. Moreover, it is one of the most vital formulas that can form a significant part of the suggested solutions to having better definitions for a Permanent Establishment<sup>38</sup>.

Another challenge that is being experienced is the establishment of whether a business organization can have more than one permanent establishment. In this concern; most analysts inquire if it can be functional for a business to have both an electronic permanent establishment and also a physical one. Also, most parties are interested in discussing whether the preparatory/auxiliary services should be deleted as the OECD MTC establishes them in paragraph 4 of Article 5. It has been established by many critics of the concept of PE that it can be pretty challenging to ring fence the boundaries of digital platform in some reasonable way. In addition, it is claimed that it can be extremely difficult for the digital economies to establish the boundaries pertaining policies on the allocation of principles. The above concerns are critical since when the changes are enacted; some may claim that the same changes also be made to the physical PEs.

However, most champions for the concept believe that it is possible to come up with some reliable measures to allocate business profits would be proposed in order to cover all aspects of the business. For example, the profit-split formula, which is characterized by an upfront allocation technique, is representation of good methods that can be formulated by the market jurisdiction. In addition, such methods have been proved effective in the current market situation surrounding transfer pricing. Some portion of the profits can be shared to the jurisdictions operating in the market location according to deemed-profit technique. This simply refers to a place where the authorities can identify a significant business presence.

Another challenge that is expected to arise is the implementation process of the electronic PE establishment. Therefore, there are some directives that are supposed to be adopted during the implementation of the reforms so as to ease the transition. These directives would call for some reforms in the domestic polices and the current international tax treaties. However, it remains unclear of how the reforms would work if some countries refuse to join the treaties on the same. This challenge is brought by the fact that the digital platform takes the form of a small market place that accommodates all the parties involved. Therefore, it implies that the interactions of users and buyers from all parts of the world would be very common in such an environment.

---

<sup>38</sup> Chaffey, A.M., 2014. *Permanent Establishment dilemma in the digital economy* (Doctoral dissertation, University of Johannesburg)

The greatest deterrent to most performance of most treaties and economic unions has been the factor of political support and influences. Therefore, this requires full and committed participation in the OECD discussions in order to establish rules and policies that would satisfy all economic regions. The commissions involved would have to evaluate all the options regarding the inclusion of some temporary measures. For an instance; having equalization levy that would be base on the revenues that would be realized by the digital activities, example; 'tax bits'. However, some factors such as significant business presence and policies on transfer pricing are likely to gain a lot of political support.

The last factor that can be brought to the attention of the tax authorities would be the issue on the expertise of the policymakers. Any economic change that influences more than half of the world population would require maximum attention. Therefore, the process of establishing policies and rules that would govern the digital activities would require highly competent personnel, representing all regions and having knowledge in various disciplines that influence commercial activities.

### **Perspectives On The Digital Economy**

The digital economy still gathers different opinions and perspectives by different individuals of the world and so is the concept of subject the associated activities to tax<sup>39</sup>. In addition, the concept of Electronic PE is also likely to attract varying interpretations by different lawmakers, analysts and even activists. Angela Anherints in 2016 once confirmed the world we are seeing is entirely different and so are the perspectives. Being the vice president of the renowned Apple, inc., she established that the earlier generation grew up in a more natural and physical world as compared to the post-millenniums who are being nurtured in the digital world where the language of communication is social<sup>40</sup>.

The current budgets especially in 2017 and 2018 were occasionally characterized by some of the digital vocabularies such as crypto currencies, block chain, big data, digital economy, 3D printing, artificial intelligence et cetera. This are the first times in history in which the budgets are becoming more flexible to accommodate such issues. Therefore, this generates the significances of the digital platform to the modern economies. Despite the challenges such as farm distress, economic development and fiscal problems; that has been facing most economies like India; the states cannot afford to ignore such economic factors<sup>41</sup>. However, some of the adoptions in such countries have been politically driven in order to achieve some balance between the countries' fiscal prudence and individual populism of the respective politicians.

The following are some of the perspectives by the BEPS in integrating the digital economy and the concerns arising on the status of permanent establishment by the year 2019:

The BEPS stresses on the reformulations on the domestic policies that would accommodate a much decrease PE dependency by the business agents to curb the problem of artificial tax avoidance. The definitions that are being forwarded included a more clarified definition of the

---

<sup>39</sup> Srivastava, D.K., 2018. Taxation of E-Commerce: Problems and Possible Solutions. In *Contemporary Issues in International Law* (pp. 447-457). Springer, Singapore

<sup>40</sup> Bobkov, V., Kvachev, V. and Novikova, I., 2018. the Digital Economy. *Developing Skills in a Changing World of Work: Concepts, Measurement and Data Applied in Regional and Local Labour Market Monitoring Across Europe*, p.385.

<sup>41</sup> Sieber, S. and Seager, P.H., 2017. The Digital Economy: It's Not the Technology, It's the Business Model, Stupid!. In *Managing Media Businesses* (pp. 135-157). Palgrave Macmillan, Cham.

roles and duties of any business agent that would include making the respective agent a core principal in the commercial conclusion of the enterprise contracts. Most of the countries such as India have indicated some positivity towards the same by signing multilateral instruments that are at par with their domestic policies on the same.

Other countries that have been observed to accept the same include Japan, Netherlands and also France by adopting the revised threshold instead. However, some of the members that have not favored the revised one include Australia, Ireland, Singapore, the US, Italy and the United Kingdom<sup>42</sup>.

The concept of virtual permanent establishment also faces varying opinions and perspectives. However, most tax authorities agree that the definition of the current PE must be amended in order to include the concept of a business having some significant presence for the purpose of taxation. This has been supported by the comments by the commentaries by the OECD. Therefore, most countries support the idea that significant economic enterprise presence should be determined using the observable interactions of the business in questions and commercial engagement via technological means. Moreover, the suggestions also include the evaluation of automated tools in carrying out business activities. Therefore, the proposed definitions have included the following into economic presence of any business concept;

- All the economic transactions that are undertaken by the business including the dealership in goods and services; also some business properties by any business non-resident agent. The transactions may include but not limited to the provision of some services such as downloading of intangible commodities such as software and also data beyond a given revenue threshold.
- Any continuous and organized soliciting of the enterprise' operations with some specified group of digital users using online means. However, there are no clear specifications on the number of users any business entity can interact with for the business location to be established as being a significant economic establishment.

However, most commentaries by different business entities suggest the consideration of any business activity that meets the above criteria being viewed as having a significant economic establishment; in spite of whether the business would have any physical presence in the respective country or not. Therefore, it is clearly observable that most perspectives by tax authorities are pivoted towards a significant shift from the existing taxation policies<sup>43</sup>. The current rules recognize a significant economic establishment from the presence of a physical presence of the business in the country, in regard to permanent establishment. The explanatory memorandum specifies on the issue of subjecting new businesses. Therefore, this statement means that the memorandum also incorporates the digitized business models, and thus the brick and mortar models are also enacted. Hence, companies are also supposed to evaluate their models and see if they are in line with new PE definitions.

Another perspective that is being advocate for before any changes in the definitions of the existing PE state that; the relevant policymakers should carry out some deep consultations with the respective stakeholders. In addition, it's worth noting that the existing tax treaties would not be significantly affected by the new concepts on economic presence. However, the rules are meant to enable the respective governments to incorporate the new nexus into the policies that clarify the definition of an economic presence by a business. Therefore, the

---

<sup>42</sup> Barefoot, K., Curtis, D., Jolliff, W., Nicholson, J.R. and Omohundro, R., 2018. Defining and Measuring the Digital Economy. *US Department of Commerce Bureau of Economic Analysis, Washington, DC*, 15.

<sup>43</sup> OECD. Publishing, 2017. *OECD Digital Economy Outlook 2017*. OECD Publishing.

concept will only take effect after the respective countries have held necessary negotiations on the issue of double tax. The explanatory memorandum also expounds in this. Lastly, it will be interesting to observe whether the states that have signed the multilateral instrument will agree to enter into treaties with the ones that have not<sup>44</sup>.

There are increasing concerns by countries that the existing policies are not sufficient enough in subjecting the respective nexus to tax. These have been caused by the issue of digital presence of a business in a given state. The European Union has stressed on the importance of having some backup to support the taxation of a nexus in regard to the digital models. The United Kingdom draft on the same also recommends on the take into consideration the degree of participation, or in terms of the value the business conduct creates, this helps in establishing the amount of taxable of income for the digital enterprise operating from a given state. The revised version of the draft by OECD was meant to formalize electronic/virtual permanent establishment before the year 2019. This area remains the main concern by many countries globally and there is a need to have some multinational agreement in order to implement this. It is expected that the countries that are putting into place the unilateral measures will keep on multiplying and thus resulting again to the issue of double taxation.

In addition, the definition of a permanent establishment is always lacking when profit attribution is not included. The existing guidance on profit attribution by the OECD MC is not sufficient enough and thus their application is limited when it comes to the digital forum. Therefore, this has resulted to massive discussions and hence the OECD has responded by striving to make consensus on DAPE threshold lowering possible. It is predicted that more formulations on this platform would result to more challenges on achieving international consensus on the profit attribution<sup>45</sup>.

Also, it is highly likely that if the issue of profit attribution won't be attended to early enough; then countries will embrace a unilateral approach in profit attribution and the consequences would be far-reaching. Most countries are still trying to evaluate on the best approach to undertake in profit attribution as a result of the changes discussed above.

The issue of electronic permanent establishment is already considered as litigious. However, the issue would become more litigious if the definition of permanent establishment in the context of the digital economy is not handled earlier enough. Their needs to be a policy on profit allocation before any measures on altering the definition of the current PE status. This issue then calls for the respective governments to establish some clarifications that would be applied in PE addressing.

It is worth establishing that most Chinese businesses incur scary losses when they first venture into online operations before they acquire some significant market share. Therefore, this is a factor that needs to be observed by the Chinese policymakers first. Hence, looking at the cases above; the allegiance of some permanent establishment to the basis of a business having some economic and significant presence would result to more losses to these new firms. Thus at a

---

<sup>44</sup> OECD. Publishing, 2017. *OECD Digital Economy Outlook 2017*. OECD Publishing.

<sup>45</sup> Sieber, S. and Seager, P.H., 2017. The Digital Economy: It's Not the Technology, It's the Business Model, Stupid!. In *Managing Media Businesses* (pp. 135-157). Palgrave Macmillan, Cham

personal level, I would also explicitly propose on loss attribution to a given permanent establishment too<sup>46</sup>.

An American journalist once admitted in news broadcast that; the technological advancements are expected to make living more flexible and enabling individual to carry out their tasks efficiently. However, it seems as if the complexities that come along demand more than the world can afford to provide. Remote controls, mysterious Internet features and some machinery with length manuals sum up these inventions. Due to the fact that what is traded depends with the peoples' ways of living, businesses have also transformed so as to accommodate how human beings communicate and live amongst each other. However, the taxation of these transforming activities is still a significant challenge. However, it is expected that polices on tax that are being formulated by the governments and the international community's would not be as complex as the numerous button television remote controls.

However, the perspectives on permanent establishment and the digital economy cannot be exhausted as the issue will keep on taking on new shapes with time.

### **IMPLEMENTING OF IPV6 AS A MEANS TO IDENTIFY AN ELECTRONIC PERMANENT ESTABLISHMENT FROM ADMINISTRATION VIEW**

#### **Basic Features Of IPv6**

IPv6 has emerged as a powerful tool and a successful enhancement of the initial IPv4. The standard features that make the network demands foreseeable have promoted these enhancements.

The following are some of the features that make IPv6 as a favorable tool for identifying the businesses' electronic PE by the tax authorities;

The IPv6 have been characterized by a bigger address space than the initial Internet protocol. The former protocols have 128 bits as compared to the 32 bits by the latter and thus having more advantages, which include flexibility and the ability to also include some prefixes. Moreover, it is observed that it is easier for the Internet users to multi-home to various Internet Service Provider (ISP). Also the Internet protocol has auto-configuration features that are composing of some link addresses for the plug and play purpose and also to enable end-to-end communication conveniently. The Internet protocol has some modification and renumbering mechanisms that are simplified for the user to operate<sup>47</sup>.

Another advantage that makes the IPv6 more preferable to the IPv4 is the inclusion of a simplified header in its characteristics. This features that define the supremacy of the IPv6 to IPv4 include some enhanced routing capability and also improved rate-forwarding performance; there are also no need for the users of the internet protocol to process their checksums; the extension mechanisms for their headers have been experienced to more efficient, and the internet protocol has some the ability to carry out some per-flow data processing whereby the user does not need to keep on inspecting the traffic flows.

Most importantly, the Internet protocol has some security features that are not easy to breach and more mobility as compared to initial protocol. The above features comply with the Internet Provider Security standards. The mobility of the IP makes it possible for the users to maneuver

---

<sup>46</sup> Bobkov, V., Kvachev, V. and Novikova, I., 2018. the Digital Economy. *Developing Skills in a Changing World of Work: Concepts, Measurement and Data Applied in Regional and Local Labour Market Monitoring Across Europe*, p.385.

<sup>47</sup> [https://www.theseus.fi/bitstream/handle/10024/40098/Nguyen\\_Phu.pdf](https://www.theseus.fi/bitstream/handle/10024/40098/Nguyen_Phu.pdf)

from one network to another using their portable gadgets. This feature was not available in IPv4 and this makes IPv6 more preferable for the concept of electronic PE. In addition, the mobility feature is inbuilt for the IPv6 and this implies that it can be used any time need arises. Further, both Internet protocols have the Internet Provider Security environment; however the requirement for the same in IPv6 is mandatory as compared to IPv4. This security feature makes it secure for user globally and thus worth for international distribution and for deployment in companies.

It is interesting to discover how IPv6 has been modeled to enable a swift transition from IPv4 and this feature makes it deployable by the taxation authorities. It worth noting that the Internet protocol had numerous transitional approaches and thus, the users can easily maneuver where need arises. Lastly, it is worth noting that the communications between the hosts and the servers is highly possible with a good choice for the electronic PE. Therefore, it will be easier to trace the digital transactions.

### **Deploying Ipv6 In The Concept Of Electronic PE**

The Internet was conceived in the early 1970s as an exclusive and comprehensive mode of communication and has since then grown to encompass important sectors of the economy. As illustrated in the previous years, the Internet has become a vast and highly sprightly arena for establishing and carrying out business transactions contributed to its capability to support e-commerce.

The key feature in this Internet thing is the transmission of data through the Internet protocols by a process referred to as 'packet switching'. Hence this makes an IP address the only requirement for the business computers and other applicable devices such as mobile phones to exchange information via the platform. The IP have however experienced newer technologies that have refashioned the operations of its environment today<sup>48</sup>.

The latest technologies have made it possible for mobile users to also access its services from their place of work just as the same functions that were executable using a laptop or desktop. Hence, office business duties have partly been displaced by the technology and in some businesses wholly shifted to a visual base. The newly manufactured devices that are now flooding the modern market have been incorporated with the latest mobile and wireless advancements in technology. The new features enable the user to connect to different internet mediums and this as in turn resulted in convergences that were not possible in the past.

### ***The Wireless Technologies***

The new version of Internet Protocol (IP) is meant to supplant the IPv4s that have been on existence for a while. The protocol has the ability to form a wide and a bigger address pool<sup>49</sup>. The protocol has been observed to have a lot of advantages over the initial Internet protocols and thus its preference for incorporation into the concept of EPE is not in doubt.

The IPv6 has the capacity to accommodate unlimited virtual addresses for devices and this means that, any device used by a business can potentially possess its IP address from any place of office. Therefore, the tax authorities can effectively trace the permanent establishment of a

---

<sup>48</sup> <https://www.oreilly.com/library/view/ipv6-essentials-3rd/9781449335229/ch01.html>

<sup>49</sup> Li, X., Li, D., Wan, J., Vasilakos, A.V., Lai, C.F. and Wang, S., 2017. A review of industrial wireless networks in the context of industry 4.0 *Wireless networks*, 23(1), pp.23-41

Also see <https://www.efxkits.us/different-types-of-wireless-communication-technologies/>

business using their respective customized addresses. The authorities can also route the databases of the IP addresses to moving terminals using some extension of mobile IP, which is a macro-mobility Internet protocol. Some of the features that can support administration by the government authorities include auto-configuration of the respective networks. The mobile gadgets are incorporated with General Packet Radio Service (GPRS) and thus any individuals undertaking their business via a phone can access their Internet platforms directly. This implies that most businesses would shift their operations to include operations using the cellular phones<sup>50</sup>.

Most of the businesses that deal with video streaming, online gaming and audios have gained more market as their consumers can easily access the platforms due to fast connectivity features. The platforms have also enhanced their data transmission speeds and access to information from the emails has become easy. Most of the business organizations have connected to Wi-Fi connections for their staff to efficiently carry out their online duties without interruptions. China and Japan are one of the countries that have experienced a predominant usage of cellular phones in business transactions that it was for the use of laptops and office desktops due to the enabling of IP. It is expected that the number of mobile users in business transactions is due to increases rapidly and thus the functional duties of physical offices is diminishing.

The search engine business entities admitted in the beginning of this decade that most Internet searches and functions were starting to embrace the cellular phones. Hence the explosive growth in the next few years will not be a surprise.

### ***E-Commerce And Mobile Technology***

The Internet has been hugely exploited by the commercial activities and the world is yet to experience a boom when mobile phones become fully functional to undertake office duties<sup>51</sup>. The IPv6 promising developments have indicated that the levels of service in the Internet are in constant improvement to encompass the key areas of business administration. More advantageous to the concept of electronic PE; the traffic flows in the respect sites are labeled and their real time of active service for the purpose of handling.

The idea of ecommerce using mobile phones can be traced back in 2006-2007 during the launch of dotMobi. Therefore, the world welcomed the domain names into wireless connectivity using mobile phones. Businesses have experienced some quality service from high-level domains in which services enabled in their websites are provided. Companies that have ventured into the technology include Microsoft, Samsung et cetera.

The mobile environment enables ecommerce by signing the device for mobi domain, which in turn grants the operations such credibility for the site being used. Therefore, the site can be easily certified that it follows the dotMobi operational standards for businesses, and thus, the mobile site can freely be used in different devices. The above standards act as approval stamps for the respective sites.

There are two unique ways that have identified by tax and business experts for businesses that wish to assume mobile nature for the distribution and sale of their products;

---

<sup>50</sup> [https://books.google.co.ke/books/about/Taxation\\_IPs.html?id=s7bNpafYzcc&redir\\_esc=y](https://books.google.co.ke/books/about/Taxation_IPs.html?id=s7bNpafYzcc&redir_esc=y)

<sup>51</sup> Rowles, D., 2017. Mobile marketing: how mobile technology is revolutionizing marketing, communications and advertising. Kogan Page Publishers.

- The first route that a business can develop in order to embrace mobile business nature is the creation of some mobile applications and applets that would enable their consumers to access their products from the digital platform. Such applications deal with a range of products from weather predictions to product delivery services such as WeatherBug and Jumia Group respectively. Therefore, the main requirement for their users is to install the application software in their mobile devices and then sign up for their services. The applications specify the cost of the goods and services provided by the business entity. The eBay Mobile application is another type of these applications, which helps the buyers to search for some commodities online and make purchases through the online forum. Such applications provide a list of some specified goods and services alongside their prices set by the website hosts.
- The second method that is highly recommended for the businesses which wish to operate on the online forum is by setting up some mobile websites that can be directly accessed by the mobile and computer users. However, there are some limitations to the graphic capabilities of different devices used, the screen sizes and also the contents of the web. Therefore, these websites have to be customized to suit the needs of different internet users. In addition, these websites have to be established in a manner in which any desired information can be accessed using little effort in typing the search or selections.

Therefore, the business tools that have been established recently present possible opportunities for setting and establishing an electronic means for establishing a significant business presence. Hence, electronic PE establishment can be devised in accordance to these websites so as to be able to determine value creation by various businesses. The OECD needs to also establish necessary guidelines that would guide the operation of these websites and applications for the purpose of taxation. In the case in which OECD sets the conditions for applications that help users and businesses to establish some digital platforms such as Mobisitegalore.com will enable enhance transparency in tax remittance. Such applications (mobisitegalore.com) have lessened the efforts for website creation by making it possible to establish an online site by just few mouse clicks. The above process requires no technical knowledge and thus all capacities can establish their sites.

In a state in which mobile website creation is just an inch from the click by a thumb has resulted to flooding of these internet sites and thus need to enforce on compliance to the rules and guidelines by the international bodies. The WWW Consortium (W3.org) is an example of an international body that has been mandated with role to ensure enforcement of universal Internet standards. Therefore, the international tax enforcers need to include their regulations with such bodies so that compliance to the taxation policies becomes a tradition. However, with the implementation of the IPv6 platform; the enacting of tax policies into the online activities would become more realistic. The W3C directors have embarked in the process of reforming the content of websites and enhancing the access procedures for the Internet users and the web managers at large.

### ***Website Hosting Strategies And The Payment Methods***

In the case of website hosting, it is possible to have the sites stored in respective servers similarly as the conventional business websites<sup>52</sup>. There are cases in which some websites share a common server and thus the service providers enable the businesses to establish sub-domains that direct the users to the created folders. In such instances, the sub-domains would

---

<sup>52</sup> [http://www.register.com/policy/websitehosting\\_agreement.rcmx](http://www.register.com/policy/websitehosting_agreement.rcmx)

direct the users to the respective business folders that contain the web pages for the business entities distinct from the other<sup>53</sup>.

The manner in which the consumers make payments for the products provided by these online businesses take similar dimensions by both mobile applications and the computers. Hence the tax authorities can access the modes of payments for a business entity and the tax liability established. There are some features of the payments methods by these Internet platforms that can be utilized by the tax authorities in order to enforce tax compliance.

One of these features is that the payment methods that were traditionally used by the business entities are just enhanced but operate in just a similar manner. For example, the PayPal payment organization has just been introducing safer and secure transaction procedures with altering its operation methods. PayPal in particular allows the consumers and providers of a given product to send and receive payments of the same using their mobile or computer applications and applets using some secure personal identification number to authenticate the transactions.

Moreover, the above notions imply that the permanent establishments for the business would be more determinable by the tax authorities.

### CONCLUSION

This paper concluded that the policies that would regulate the taxation of these Internet platforms directly influence the growth and development of the e-commerce activities. In addition, the development of countries in the world is limited to the state of the global economy. In the case in which unjust tax policies are enacted, the world economy would experience stifling of the revenue that is generated from ecommerce environment. This situation would be a big blow to the world since it is estimated that a bigger portion of the aggregate state revenue are directly or indirectly attributed to ecommerce activities; with the volumes expected to double in the coming years.

Policies that would enable a few 'able' states to collect revenue would result to huge leakages and as the other unfortunate will be living in the shadows of huge revenue rewards. A comprehensive policy plan such as the proposed electronic PE would ensure that there is equity in the distribution of tax benefits by the source and the resident states.

Electronic permanent establishment is deemed to support uniform global wealth and would considerably reduce the existing gaps between the various countries termed as 'haves' and 'have-nots'. There is a possible partnership by countries in carrying out their economic roles and thus the host countries for these websites would benefit in the long run.

Moreover, electronic permanent establishment expected solutions are likely to promote global social and economic development. Enabling the source countries taxation, is one of the objectives of the electronic PE and this would result to substantial economic developments in these countries. Such moves would enable countries such as China to foster strong economic relations since it has considerable number of Internet forums in the world.

---

<sup>53</sup> Hayes, J., Sharma, P. and Collins, S., Mastercard International Inc, 2018. *Providing payment credentials securely for telephone order transactions*. U.S. Patent Application 15/348,176.

However, the models that are suggested here arguably differ with the traditional taxation models due to obvious differences in the mode of business operations. Allowing the business software and applications to be recognized, as permanent establishments would result a healthier ecommerce platform, for instance, the less fortunate countries will gain more from the revenue generation.

### References:

- Alexsandra Bal, The Sky's the Limit – Cloud-Based Services in an International Perspective. *ibdf Bulletin for International Taxation*, September 2014.
- Arthur J Oakfield, "Reforming the Permanent Establishment Principle through a Quantitative Economic Presence Test" 38 *Can. Bus L.J.* 2003  
[http://people.ucalgary.ca/~law/tutorials/L541/L541\\_Business\\_Tax\\_Course\\_Materials\\_W05.pdf](http://people.ucalgary.ca/~law/tutorials/L541/L541_Business_Tax_Course_Materials_W05.pdf)
- Baker, S.R., Bloom, N. and Davis, S.J., 2016. Measuring economic policy uncertainty. *The Quarterly Journal of Economics*, 131(4), pp.1593-1636.
- Barefoot, K., Curtis, D., Jolliff, W., Nicholson, J.R. and Omohundro, R., 2018. Defining and Measuring the Digital Economy. US Department of Commerce Bureau of Economic Analysis, Washington, DC, 15.
- Bobkov, V., Kvachev, V. and Novikova, I., 2018. the Digital Economy. Developing Skills in a Changing World of Work: Concepts, Measurement and Data Applied in Regional and Local Labour Market Monitoring Across Europe, p.385.
- Brauner, supra n. 6, at 17; Englisch, supra n. 9, at 281; S.S. Johnston, What's Next for the OECD and the Digital Economy, 74 *Tax Notes International*, pp. 1089-1090 (2014).
- Butani & Jain in *ibdf AsiaPacific Bulletin*, 2014, 251.
- Chaffey, A.M., 2014. Permanent establishment dilemma in the digital economy (Doctoral dissertation, University of Johannesburg)
- Gandini, A., 2016. *The reputation economy: Understanding knowledge work in digital society*. Springer
- Greggi, M., 2016. In Search of a Compass. Base Erosion, Profit Shifting and New Dilemmas in International Taxation. *Economic Journal*, 119(537), pp.764-795.
- Haarhaus, T., Geiger, J.M. and Liening, A., 2018. The Influence of Digitalization on Emergent Processes of Entrepreneurial Ecosystems-a Complexity Science Perspective.
- Hayes, J., Sharma, P. and Collins, S., Mastercard International Inc, 2018. Providing payment credentials securely for telephone order transactions. U.S. Patent Application 15/348,176.
- Kim David Lexner, Selected Issues in the u.s.-Dk Tax Treaty: Permanent Establishment in relation to E-Commerce Transactions and the distinction between payment for services and payment for intangible property rights. *corit Discussion Paper N. 7 2010*. Gary D. Sprague, Spanish Court Imposes Tax Nexus by Finding a "Virtual pe". *International Journal*. <http://www.bna.com/spanish-court-imposes-n17179871765>.
- Kovačević, N.Ž. and Gadžo, S., 2016. Proposals for reform of the agency permanent establishment concept: examination of BEPS Action 7. *Economic Integrations, Competition And Cooperation*, p.510.
- Lennard, M., 2018. Act of creation: the OECD/G20 test of "Value Creation" as a basis for taxing rights and its relevance to developing countries. *Transnational Corporations*, 25(3), p.55.
- Li, X., Li, D., Wan, J., Vasilakos, A.V., Lai, C.F. and Wang, S., 2017. A review of industrial wireless networks in the context of industry 4.0 *Wireless networks*, 23(1), pp.23-41
- Luc Hinneckens, Looking for an Appropriate Jurisdictional Framework for Source-State Taxation of International Electronic Commerce in the Twenty-first Century (1998) *Intertax* 192.
- Lyal, R., 2015. Transfer pricing rules and state aid. *Fordham Int'l LJ*, 38, p.1017.
- Mukesh Butani and Parul Jain, Permanent Establishment Concept – An Indian Perspective (2014). *ibdf, AsiaPacific Bulletin*. [https://www.business.unsw.edu.au/About-Site/Schools-Site/Taxation-Business-Law-Site/AttaNews/2012-ATTA-NEWS\\_full%20year.pdf](https://www.business.unsw.edu.au/About-Site/Schools-Site/Taxation-Business-Law-Site/AttaNews/2012-ATTA-NEWS_full%20year.pdf)
- Olbert, M. and Spengel, C., 2017. International taxation in the digital economy: challenge accepted. *World tax journal*, 9(1), pp.3-46.
- Revista de Derecho Fiscal* n.º 8 • enero-junio de 2016 • pp. 89-102

Rowles, D., 2017. *Mobile marketing: how mobile technology is revolutionizing marketing, communications and advertising*. Kogan Page Publishers.

Schiborr, L.A., 2016. *How to emerge as a digital platform leader?: Envelopment and business model innovation at eBay and Amazon (2006-2011)* (Bachelor's thesis, University of Twente).

Schneider, F., 2018. *Size, Causes and Consequences of the Underground Economy: an international perspective*. Routledge.

Sieber, S. and Seager, P.H., 2017. *The Digital Economy: It's Not the Technology, It's the Business Model, Stupid!*. In *Managing Media Businesses* (pp. 135-157). Palgrave Macmillan, Cham.

Srivastava, D.K., 2018. *Taxation of E-Commerce: Problems and Possible Solutions*. In *Contemporary Issues in International Law* (pp. 447-457). Springer, Singapore

Van der Wee, M., Verbrugge, S., Sadowski, B., Driesse, M. and Pickavet, M., 2015. *Identifying and quantifying the indirect benefits of broadband networks for e-government and e-business: A bottom-up approach*. *Telecommunications Policy*, 39(3), pp.176-191.

### **OECD Publications:**

OECD, *Addressing the Tax Challenges of the Digital Economy: Action 1: 2014 Deliverable*, pp. 51-98 (OECD/ G20 2014) [hereinafter Action 1 Deliverable]; OECD, *supra n. 2*, at 35-84

OECD, *Addressing the Tax Challenges of the Digital Economy*" report, released on September 16th, 2014 in the context of the action plan to address the Base Erosion and Profit Shifting ("beps"). <https://www.oecd-ilibrary.org/docserver/9789264241046en.pdf?expires=1542467971&id=id&accname=guest&checksum=69A50E1ED487FE786440BF5576D5DF59>

OECD, *Addressing the Tax Challenges of the Digital Economy*" report, released on September 16th, 2014 in the context of the action plan to address the Base Erosion and Profit Shifting ("beps"). <http://www.oecd.org/ctp/addressing-the-tax-challenges-of-the-digital-economy-action-1-2015-final-report-9789264241046-en.htm>

OECD, *Economy*, 74 *Tax Notes International*, pp. 1089-1090 (2014). 12. OECD, *Addressing the Tax Challenges of the Digital Economy: Action 1: 2014 Deliverable*, pp. 51-98

OECD, *supra n. 2*, at 37 While the relevance of hardware is still undisputable as the backbone of communication networks, digital business models generate profits more from the operation of computing devices and software applications than from the sale of hardware.

OECD. Publishing, 2017. *OECD Digital Economy Outlook 2017*.

### **Web Page:**

<http://www.internationaltaxreview.com/Article/3548543/Turkey-introduces-electronic-place-of-business-concept.html>

<http://www.oecd.org/ctp/treaties/35869032.pdf>

[http://www.register.com/policy/websitehosting\\_agreement.rcmx](http://www.register.com/policy/websitehosting_agreement.rcmx)

[https://books.google.co.ke/books/about/Taxation\\_IPs.html?id=s7bNpafYzcc&redir\\_esc=y](https://books.google.co.ke/books/about/Taxation_IPs.html?id=s7bNpafYzcc&redir_esc=y)

<https://www.efxkits.us/different-types-of-wireless-communication-technologies/>

<https://www.ey.com/gl/en/services/tax/international-tax/alert--spanish-high-court-determines-existence-of-a-permanent-establishment-in-spain-under--fixed-place-of-business--and--dependent-agent--clauses>

<https://www.oecd.org/tax/transfer-pricing/additional-guidance-attribution-of-profits-to-permanent-establishments-BEPS-action-7.pdf>

<https://www.oecd.org/tax/transfer-pricing/additional-guidance-attribution-of-profits-to-permanent-establishments-BEPS-action-7.pdf>

<https://www.oecd-ilibrary.org/docserver/9789264241046-en.pdf?expires=1542467971&id=id&accname=guest&checksum=69A50E1ED487FE786440BF5576D5DF59>

<https://www.oreilly.com/library/view/ipv6-essentials-3rd/9781449335229/ch01.html>

[https://www.theseus.fi/bitstream/handle/10024/40098/Nguyen\\_Phu.pdf](https://www.theseus.fi/bitstream/handle/10024/40098/Nguyen_Phu.pdf)