

## UNIVERSIDADE ESTADUAL DE CAMPINAS FACULDADE DE CIÊNCIAS APLICADAS



PEDRO HENRIQUE ALVES DE OLIVEIRA

# DISENTANGLING CROSS-BORDER E-COMMERCE (CBEC) OVER TAXATION: WHAT IS COMING UP?



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# DISENTANGLING CROSS-BORDER E-COMMERCE (CBEC) OVER TAXATION: WHAT IS COMING UP?

Trabalho de Conclusão de Curso apresentado como requisito parcial para a obtenção do título de Bacharel em Administração à Faculdade de Ciências Aplicadas da Universidade Estadual de Campinas.

Orientador: Prof. Cristiano Morini

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#### **BANCA EXAMINADORA**

Prof. Cristiano Morini – Presidente Faculdade de Ciências Aplicadas (FCA/UNICAMP)

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#### **ABSTRACT**

Even though it has been playing a big role in cross-border trade flows, industry digitalization, and job opportunities, e-commerce has various dilemmas over definition, classification, and taxation. With the increase of internet access, the trillionaire market calls for a policy review to get a consensus worldwide. Cross-border e-commerce taxation is a challenging subject for policymakers, governments, enterprises, and the WTO. The World Trade Organization (WTO) moratorium applied until these days doesn't fit the reality, meaning new customs duty models are required. That also comes face to face with multinationals that make their way to tax evasion easier, hence condemning multilateral trade competitiveness among industrialized and emerging countries. Based on the difficulties seen in an extensive way, this article seeks to understand the tangled of ongoing legislation towards taxation and discuss alternative ways for CBEC range policies in place based first on Brazilian reality then global examples. The method comprises a systematic literature review that was conducted combined with an exploratory analysis. So, standing on WTO regulation, the originality lies in detailing the gaps over e-commerce customs duties and research questions to deal with it. Results show inquiries that may pave the way for future agendas and priorities as social and theoretical contributions.

**Keywords:** cross-border e-commerce, WTO regulation, e-commerce taxation, digital business.

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#### LISTA DE ABREVIATURAS E SIGLAS

B2B Business to BusinessB2C Business to Customer

BEPS Base Erosion Profit Shifting
CBEC Cross-Border E-commerce

**COFINS** Contribuição para Financiamento da Seguridade Social

**CPF** Cadastro de Pessoa Física

**CSLL** Contribuição Social sobre o Lucro Líquido

**EU** European Union

GATS General Agreement on Trade in Services
GATT General Agreement on Tariffs and Trade

GDP Gross Domestic ProductGST Goods and Services Tax

ICMS Imposto Sobre Circulação de Mercadorias e Prestação de

Serviços

IRPJ Imposto de Renda Pessoa Jurídica

**ISS** Imposto sobre Serviço

ITA Information Technology Agreement

**OECD** Organization for Economic Cooperation and Development

PIS Programa de Integração Social

SDG Sustainable Development Goals

SME Small and Medium Enterprises

**UNCTAD** United Nations Conference on Trade and Development

**US** United States

VAT Value-added Tax

WEF World Economic ForumWTO World Trade Organization

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#### 1 INTRODUCTION

Cross-border e-commerce (CBEC) is a sensitive topic that has been discussed in the World Trade Organization (WTO) since the last years of the 1990s. The first action that took place over the subject was the Ministerial Declaration on Global Electronic Commerce that defined e-commerce, in 1998. The WTO E-Commerce Work Programme is nowadays the main platform in the WTO to facilitate negotiations on e-commerce trade.

Multilateral WTO rules, such as the General Agreement on Trade in Services (GATS), the General Agreement on Tariffs and Trade (GATT), or even the Information Technology Agreement (ITA), are still far from regulating digital goods and services. They can be partially used, but in general, the possibilities to regulate e-commerce through them are limited (BIRYUKOVA et al., 2019).

The matter also pays attention to the dubious categorization (UNCTAD, 2017) amid digital products, besides the lack of privacy protection of cross-border information flows (KENDE; SEN, 2019), being a major issue for WTO jurisprudence over the last two decades. In the digital trade context, the challenge is "at once more acute and less bounded" (JANOW; MAVROIDIS, 2019, p.4), given that it is complex to limit the scope of electronic transmissions in industry 4.0 (UNCTAD, 2019i). The United States, for instance, want to categorize e-commerce products under GATT and replace the term "electronic transmissions" as "products that are transmitted electronically", while the European Union desires to categorize them under GATS since electronic transmissions are equivalent to services with no need of physical support for trading.

Now, WTO countries have periodically renewed a two-year moratorium addressing e-commerce related goods and services at each Ministerial Conference since 1998 (WORLD TRADE ORGANIZATION, 2021), meaning that after more than twenty years of WTO discussions, the comprehension of the scope and definition of the digital portfolio continues to be insufficient, and the requests that were nurtured in the last decades remain the same on customs duties (ISMAIL, 2020).

Digital data volume is growing at a rate of 40% per year and will increase 50 times by 2020 (WORLD ECONOMIC FORUM, 2016), and for that reason, UNCTAD (2019i) considers that the effects of the moratorium will be mainly seen in developing nations that, in addition to the loss of tariff revenue, may depend on imported software from the developed countries without customs duties. The COVID-19 pandemic acts as a catalyst effect of growth.

As a result, big tech companies – such as Amazon, Apple, YouTube, Netflix, and Facebook – are looking for means to obtain new permission to profit in global markets, while ensuring that new rules allow them to not pay taxes to the markets in which they are profiting (JAMES, 2019). This oligopolist practice enables them to take advantage of traditional industries and national enterprises, which can compromise the competition, as multilateral rules for

overcoming the barriers of e-commerce also remain undefined, and developing economies may lose policy space to establish their digital capabilities as well as their intelligence and technology sectors (UNCTAD, 2019i). So, an accurate institutional approach straightens new proposals, but that also means governments should review their internal capacities before creating anything as they may currently present an outdated directive on an adequate customs exercise.

Based on the difficulties seen in an extensive way, this article seeks to understand the tangled of ongoing legislation towards taxation and propose alternative ways for CBEC range policies in place based first on Brazilian reality then global examples. So, standing on WTO regulation, we look forward to detailing the gaps over digital trade customs duties and recommending options to remodel such a complex framework.

In Section 2, we describe the method in which the systematic literature review was held and what platforms and keywords were used to support the exploration. Then, in Section 3, the literature is analyzed as we bring the pros and cons of CBEC interests. This section flies over definitions, latest acts, and global and Brazilian market characteristics and struggles. Next, Section 4 shares the outcomes from the previous debates, including results and recommendations concerning possible replacements amid tariff provisions. Questions for future research are also put forward formed on the authors' visions. Finally, Section 5 summarizes the findings while reviewing the articles and highlights the future agenda ahead of digital transformations.

#### 2 METHOD

A systematic literature review was conducted, primarily selecting multiple papers on the Scopus platform, as well Web of Science as a supplementary source. Table 1 shares the filters employed in the present research.

Table 1: the research path taken

Sources	Searching	Other restrictions	
Scopus (Elsevier)	Keywords: "Cross-Border E-commerce", "CBEC & WTO Regulation", "CBEC, E-Commerce Taxation & Digital Business", "CBEC, Taxation & Regulation", and "Digital Business, and Online Business"	if applied, filtered by the following subject areas:     Business, Management, Accounting, Economics, Econometrics, and Finance.	
Web of Science	Keywords: "Cross-Border E-commerce", "CBEC & WTO Regulation, "CBEC & E-Commerce Regulation", and "CBEC, Digital Business & Online Business"	following subject areas: Business, Economics,	

Source: The authors

In general, 53 articles were found in Scopus, as this number does not include duplicated or non-related papers. Looking for conclusions over these digitalization changes, the platform was the main basis of this study, whereas when it comes to the Web of Science, 13 articles were analyzed and used as a support to Scopus' database, thus totaling 66 articles.

Additionally, relevant data from the World Trade Organization (WTO), the United Nations Conference on Trade and Development (UNCTAD), World Bank, World Economic Forum (WEF), besides other agencies and institutions' visions were applied to strengthen the report view. We opted for the time limitation for articles from 2015 on was mainly because marginal papers were found before 2015 over taxation.

Through that, it could be done systematic research where 21 papers were reviewed to focus on the main problematic aspects of the theme, therefore, preparing the following steps to define pertinent outputs over cross-border e-commerce taxation. The other 45 papers did not have a specific focus on tax evasion but assisted with the main findings in the study. Then, we conduct an exploratory analysis.

By all those steps, the analysis could motivate questions over cross-border e-commerce, specifically in respect to its regulation and further proposals and, since the theme happens to be in its very beginning, such outcomes encourage and prepare future investigation based on the inferences here made.

#### 3 LITERATURE REVIEW

#### 3.1 SCENARIO & DEFINITIONS

With a vast activity on global markets, e-commerce is conceptually nothing new (LIN; WHINSTON; FAN, 2015), as its phenomenon – responsible for the most rapidly developing field in the worldwide economy (DING; HUO; CAMPOS, 2017) – already significantly affects business and society. The flourishing market has attracted 40% of internet customers – more than 1 billion people (HUANG, 2017). Additionally, e-commerce can also lower costs for companies and customers (SIMCHI-LEVI; WU, 2018), especially when it evolves cross-border retailing, as for that the cross-border e-commerce concept is employed.

Upon the global consequences of digitalization shocks, such as the decrease in delivery and waiting times, it is clever to consider that e-commerce has also delivered customers a great variety and not just purchases in nearby jurisdictions (WORLD TRADE ORGANIZATION, 2018), empowering consumer welfare heightening and export competitiveness (ABAC et al., 2015). That is uniquely possible due to some small and medium enterprises (SMEs) that have reached global coverage through the internet (TAVENGERWEI, 2018).

Additionally, the drivers of cross-border e-commerce are directly related to the quality of an economy's internal e-commerce operating environment (ABAC et al., 2015), suggesting that its development may generate better labor performance along with breakthrough processes

and improved sustainable advancement. It is important to point out that such benefits are yet not seen worldwide (UNCTAD, 2017), following the inability to develop a coherent set of rules and guidelines on e-commerce and digital trade policy.

It is worth mentioning that the largest e-commerce market is found in the United States, as China reports for almost one-half of 1.3 billion global online shoppers (UNCTAD, 2019i). The American giants such as Google, Facebook, and Amazon own a huge market size (LIN; WHINSTON; FAN, 2015) about search propaganda, social media data flows, and electronic books market participation (BIRYUKOVA et al., 2019), so being the owners of a platform economy (STALLKAMP; SCHOTTER, 2021).

To keep the beneficial market configuration, such companies work deliberately to grow over profits and no taxes with a maturing large market share gained after substantial investments. As a symptom of an institutional void, it can deteriorate the performance of an organization that intends to explore their digital business overseas, as well put a country's competitiveness in a bad position. That strongly reinforces the role of innovation incitement as a foreign market entry model (MAIS; AMAL, 2011) when a powerful and complete institutional structure collaborates to CBEC success.

Even though e-commerce still faces some weaknesses, it has become a smart option for enterprises, as once part of the digital economy (AZMI; PHUOC, 2020), recessions do not drop financial results as much as it happens with "offline" organizations (ARGILÉS-BOSCH et al., 2020). The pandemic started in early 2020 and the preliminary recovery this year may have been more favorable for those inserted on CBEC, as the demand for online shopping and digital services over B2B and B2C has largely increased following social distancing measures in addition to strict lockdowns that imposed limits on physical purchasing (WORLD TRADE ORGANIZATION, 2020).

With rising participation being seen worldwide, the following section looks to acknowledge the CBEC construction, including examples of the United States, China, and Europe's framework.

#### 3.2 GENERAL REGULATION, CLASSIFICATION & TAXATION

Referring to its ways of regulation, the World Trade Organization (WTO), considered as the biggest global multilateral system (PAPIS-ALMANSA, 2019), applies the 1998 Declaration of Electronic Commerce which has decided on a moratorium being renewed every other year. On the other hand, HUANG (2017), TU; SHANGGUAN (2018), BIRYUKOVA (2019), and AZMI & PHUOC (2020) argue that such transactions, the majority theoretically being subject to income taxation are not fully contemplated in the WTO framework, even when it comes to its moves at the Ministerial Conference and in working groups.

The CBEC changing portfolio is one of the answers for such a WTO dilemma on account of the uncertainty behind its categorization as goods or services (AZMI; PHUOC, 2020). Such disparities contribute to the continuity of tax losses on the missing adequate customs classification (LI; LI, 2019). Still, CHEN; SMEKAL (2009) states that WTO may be the fitting agency to respond on e-trade taxation touching on intangible products for instance.

The agency that answers for the most trade facilitation is, therefore, believed to mobilize insufficient resources towards e-commerce (AZMI; PHUOC, 2020). With that in mind, cross-border e-commerce taxation, being one of the biggest problems of this movement, is a challenging subject for policymakers, governments, enterprises, and the WTO, since it has research proving tax evasion over global fiscal regimes. Even though the internet has made CBEC possible, it can also be a tax haven (BACACHE BEAUVALLET, 2018) for those avoiding their sales to be legally provisioned through electronic data omission before importation (EUROPEAN COMMISSION, 2018).

Because of that, different tax jurisdictions currently explore the difficulties and losses made by companies that manage profit shifting (ARGILÉS-BOSCH et al., 2020). Those actions look for a fair cross-border taxation setting by reducing earnings in gray areas (ZHAO, 2017), and making data flow and risk assessment sharing (EUROPEAN COMMISSION, 2018) possible; since e-commerce preferences by enterprises happen mostly due to its benefits over duty evasion if compared to physical stores (AGRAWAL; FOX, 2017).

Partially due to some recent elections around the globe which have brought protectionism back, governments are actively working over the obstacles opposing free business (TU; SHANGGUAN, 2018). For that, some of them are developing their ways throughout CBEC taxation, like by using the information technology, which promises to substitute the invoice manual fulfilling and guarantee a better tax issuing over the digital business (CHU et. al, 2014) by implementing, for instance, the Blockchain into their transactions.

Its technology, which makes use of cryptography through a decentralized technology (HU; HUANHAO, 2020), brings more reliability and fewer duplicities (WORLD ECONOMIC FORUM, 2018), as the negotiation record will be fully covered concerning who the dealers and clients are and which type of goods or services are being arranged. Amazon, for example, already employs such a point-to-point technique within its service platforms. These advancements, mainly seen in the physical documentation discharge, indicate 20% cheaper contracts while assuring "traceability" and "interoperability" in multi-sided markets (UNCTAD, 2019ii, p.26).

As reported by the EUROPEAN COMMISSION (2020), the European Union counts with a value-added tax (VAT) system, being modified from July 1st, 2021, by a Directive based on the Member State destination principle of taxation, looking for weakening frauds and strengthening EU enterprises. The United States, for example, generally implements a different one among states, as tax collection comes directly from the buyers or the cross-state

vendors (AGRAWAL; FOX, 2017). The main discussion in U.S. e-commerce is the compliance costs that happen to be incompletely protected under the origin taxation.

China, as another big player in the area, and with a forceful intention of leading global e-commerce rules (HUANG, 2017), addresses a VAT, consumption tax, and tariffs policy (TU; SHANGGUAN, 2018). China expresses an almost 18% gain over the United States in terms of total e-commerce market shares (TOO et al., 2020).

Those operations amid CBEC tax evasion highlight that defying its scope in the years to come certainly will be a hard task for policymakers to do since such hybrid products – being both good and service at the same time (BIRYUKOVA et al., 2019) – are unable to be addressed under GATT or GATS because of their complexity and shifts. For now, the European Union, for instance, classifies these products under GATS, while the United States under GATT.

Despite alternative efforts, the physical presence has a traditional influence on allocating tariff jurisdictions (WARD; SIPIOR; VOLONINO, 2016) – especially due to its taxing neutrality (BACACHE BEAUVALLET, 2018) over the many difficulties in the field, some of them explored by ARGILÉS-BOSCH et al. (2020):

Many problems have to be considered, including the country in which the company has its headquarters, the physical servers that host its web domain and online presence, where the effective management operates, where the office processed the order, and where the product(s) or service(s) are delivered. (ARGILÉS-BOSCH et al., 2020, p. 3).

That strongly emphasizes the significance of inspecting the destination taxation that mainly defends the protection of local retailers' revenue (AGRAWAL; FOX, 2017), while on the other hand, companies with a big financial structure may expand their operations to compete with those already based locally in terms of governmental subsidies. That also means pure geographical information on purchases can be dubious, succeeded by a "fiscal sovereignty" (KOBRIN, 2001, p. 693) on e-trade products.

Consequently, by not achieving unity, WTO may condemn even the SMEs, that are the ones that mostly suffer from giant players in the tax evasion field, thanks to the dominated, oligopolistic digital market (BIRYUKOVA et al., 2019) that persists over agency members' disagreements on CBEC configuration. Despite such faults, e-commerce still has an undeniable impact on cost-saving especially over domestic SMEs' global trade scales as local presence isn't essential (AZMI; PHUOC, 2020).

Because of institutional voids and market imperfections (TU; SHANGGUAN, 2018), digitized product practices are not quite following WTO nondiscrimination principles, mainly in emerging economies that may benefit from global trade entrance, but yet struggle with an imperfect and asymmetric framework (TU; SHANGGUAN, 2018).

It also shows how robust laws and methods along with a fragile institutional approach don't quite follow digital business tendencies, and above all deteriorate a country's achievements to set a healthy position within CBEC. It is realized that failures on the basic framework may condemn countries to the end line of e-commerce, revealing that some of them could not take advantage of the trends of such a turning point seen on a global scale. As expressed by OLBERT; SPENGEL (2017), the development of CBEC on international trade requests a more courageous exploration on levy reactivity amid present principles and consensus, which is reasonable in times of multisided markets and digital economy.

KREOS et al. (2019) share a different vision of the increase of tariffs ahead of administrative costs, as it could bring together unemployment, high inequalities and depreciate the cambial exchange rate. That means that by substituting the Moratorium, hence the taxation system, countries are likely to deal with more fixed expenses that may come back to customers. While some countries advocate for a new establishment for online transactions, the possibility of the current moratorium configuration surpassing the potential revenue loss is also an option (MAKIYAMA & NARAYANAN, 2019).

Furthermore, not renewing the Moratorium every two years after WTO member's consensus and setting a lasting zero customs duties potentially implies a future increase of developing countries electronic transmissions products imports (UNCTAD, 2019i), with no substantial changes on the already zero-tariff developed countries imports and, by the contrary, it would perpetuate the dependence of emerging economies on industrialized nations exports. Nowadays, customs authorities depend on the declaration of invoices by enterprises, meaning a "real-time supervision" (CHU et al., 2014, p.244) may go in the opposite direction from what the current framework permits.

Most of these CBEC distresses have been discussed around the OECD's initiative Base Erosion Profit Shifting (BEPS), which mainly focuses on advocating digital affairs and duty evasion through data access (CLAVEY et. al, 2019). There are nowadays 140 countries dedicated to the BEPS fifteen signals on the tax avoidance of USD 240 billion yearly (OECD, 2021), as all value created within an economic presence becomes a potential object for fiscal indication.

Since 2015, BEPS has been a "prominent platform" (KENNEDY, 2019, p.2) towards digital business and its related exigencies (GERINGER, 2020), to line up revenue collection with local transactions. The ascending Inclusive Framework under the years following the collapse of global markets in 2009 just confirmed the necessity of updating the international direct tax system, with special attention to the role of SMEs in it.

Looking for a detailed interpretation of CBEC local presence, the following sections describe Brazilian's current position, specifically when considering its e-commerce law setting the duty as well carried on local enterprise operations and alternative proposals to be set globally based on national tools.

#### 3.3 BRAZILIAN OVERVIEW, REGULATION & TAXATION

In respect of the Brazilian scenario, a cross-border e-commerce shopper survey shows that China and the United States are responsible for % and % of total customer purchases (IPC, 2019). Import duties are one of the main contradictions in Latin America's biggest e-commerce market (J.P. MORGAN, 2019) when it comes to cross-border retailing.

That means Brazilian operations could have had a better performance following WTO consensus over CBEC flows, hence the falling tax erosion cases that punish competitiveness and local government revenue collection. It is reasonable to assume that this is a reality of many other nations – with an incompatible legal structure to modern business models (EUROPEAN COMMISSION, 2018) – on account of the insufficiency of information shared with custom agencies.

For domestic and cross-border e-commerce taxation, for instance, the Imposto Sobre Circulação de Mercadorias e Prestação de Serviços (ICMS), which is a local state tax applied to e-commerce goods, is distributed equally between the sales origin and the consumer destination (SEBRAE, 2016). The Simples Nacional, a category for just small and medium enterprises (SMEs) marketspace, can also be employed and a single tax is paid based on the annual revenue average (SEBRAE, 2016), which equals a maximum of BRL 4.8 million (MAGALU MARKETPLACE, 2021).

Mercado Livre, B2W, Americanas, Casas Bahia, Amazon, and Magazine Luiza are some of the common leaders of the US\$ 23.8 billion local market value (J.P. MORGAN, 2019) within the multi-sided market. Such companies that entirely modified "both the demand and the supply sides of traditional value chains" (PANAMOND et al., 2020, p.434), are taxed based on their type of selling and the ICMS is paid for the destination state. Due to their large operations, their taxation is based on the profits earned. For companies with annual revenue between BRL 4.8 million and BRL 78 million, the gross profit is used, whereas, for enterprises with more than BRL 78 million (over USD 14,5 million), the net profit is measured (MAGALU MARKETPLACE, 2021). All of them mentioned as common leaders fit the net profit taxation.

For e-commerce retailing, a supply chain is necessary and for that, the Imposto sobre Serviço (ISS) is applied over the mediation between Brazilian vendors and customers due to the service chain. It is also important to point out that some labor taxes also hand on marketspace, such as Contribuição para Financiamento da Seguridade Social (Cofins), Programa de Integração Social (PIS), along with some other duties on the enterprise earnings, which are the Imposto de Renda Pessoa Jurídica (IRPJ) and the Contribuição Social sobre o Lucro Líquido (CSLL) (MAGALU MARKETPLACE, 2021).

#### 4 DISCUSSIONS & RESULTS

Even though there is evidence of revenue loss on e-commerce customs within emerging countries, specialists such as CARPENTER; PARSON (2016) and KEND; SEN (2019) doubt if they are ready for a plural agreement following the missing related information from a problematic framework. The Brazilian reality is more complicated than the average, in the light of the huge taxes already applied on different products and services, representing 31% of real earnings (WORLD BANK, 2019), the highest in South America. So, with no full status knowledge about its scale, the understanding of the impacts of CBEC also represents innumerable difficulties for policymakers with the present lack of commonly accepted principles, as the duty load may vary from one country to another.

Still, regarding Brazilian e-commerce, even big firms face issues over taxation, as the national compound and rigid system forces large-scale operations to be held by the very sellers due to high fees being seen when publishing their products on those digital platforms. If income duties strengthen, even more, most e-commerce giants see no other option, but to tighten the final price, displacing the demand for such services.

The bureaucracy is also acute (WORLD TRADE ORGANIZATION, 2017) when it comes to negotiations with digital platforms, in which multinationals' local operations may not fit within their complexity and large supply chain, as e-commerce enterprises still face difficulties in receiving such demands. That is one of the foremost symptoms to explain how WTO or other alternative proposals may delay its implementation while several packages – such as the Base Erosion and Profit Shifting (BEPS) – do not consider tangible conditions.

By selling a product online, Brazilian companies are supposed to have several costs, for example, concerning contractual partnership commission, storage, revenue collection, and access to market intelligence techniques to display their goods. Because of that, additional expenses - an increase of e-commerce taxation - happen to be a push to put away investors and customers, which is why a global consensus must consider these edges, or at least put a deeper focus on big corporations' transactions, whereas SMEs could lose more severely on the new operational models.

With an unprecedented amount of data flows being seen worldwide, as a partial result of no financial compensation on entering in such online platforms – such as Instagram, Facebook, Twitter, or LinkedIn –, valuable input information is also served by users to platforms (OECD, 2018), being one of CBEC branches ahead of the new motions, being no exception for Brazil. In doing so, the same data, with the help of cookies and other website searching tools, can be manipulated to promote advertisements, thus generating revenue with no solid restrictions as with blockchain:

By recording when a transaction occurs, the details of the transactions (e.g., transfers of the ownership of assets), and assuring that the relevant business

rules have been met without the necessity of a centralized verification authority, blockchain offers some useful applications for tax authorities. For example, a secure method for the registration and authentication of taxpayers, or the recording of transactions (e.g., land title registers) (OECD, 2018, p. 206).

Contrary views, otherwise, protest that further barriers also on data flow may inflict on the increase of costs within the digital sector, as other indirect stakeholders can also be impacted without a critical look on trade policies to balance data transactions and restrictions. Therefore, MELTZER (2013) underlines that the ramifications of CBEC data flows on international trade demand more energizing and transforming proposals of principals and consensus, given the era of digitalization and its potential data value creation for digital business models.

With such challenges also fronting data interactions, MELTZER (2019) also suggests some alternatives, including the controlling of data transferring outside borders, border transfers copying in the domestic territory, and consent requisite on data flow overseas, to indirectly track those operations thus collecting more revenue from them. These measures may particularly support economies with short data regulation protection, while that trend is also observed in European Union jurisdictions since early 2018; but economies or businesses with low physical and online structure (TAVENGERWEI, 2018) may face a lasting period of transition followed by investments if available.

#### 4.1 PROPOSALS

Boosting the implementation of the Base Erosion and Profit Shifting (BEPS) fifteen actions is a way enterprises can use to adapt their businesses in the ever-mutating environment of digital business, with positive impacts on national economic growth in the long run, as their Inclusive Framework (OECD, 2018) treats contradictions of digitalization and base erosion (CLAVEY et. al, 2019).

However, it is argued that the BEPS' intentions offer some cracks relating to the influence of profit shifting by giant enterprises on emerging governments, seeing that such a package still permits the base erosion and profit shifting, therefore lacking a more severe provision. Yet, as also claimed by CLAVEY et al. (2019), BEPS has allowed more facilitated but not complete access to the information of operations and transactions held in both ends of global value chains, thus the origin and destination.

For countries with limited technical skills or companies with limited staff (TAVENGERWEI, 2018), BEPS has also brought troubles by the time it added complexity into the international tax rules, delaying, even more, the digital democratization. Without appropriate policy standards, the tax base erosion tends to persist following the expansion of e-commerce globally (MWENCHA, 2019), given the 600 billion dollars taken away from developing and developed countries (JAMES, 2019).

Because of those restrictions, even the Sustainable Development Goals (SDGs) by 2030 set by the United Nations are impacted because of the inability of mobilizing funds (JAMES, 2019), some of them through taxation. Consequently, e-commerce also has the role of supporting the national agenda, however, the practice of tax evasion shading the law reduces the available funds to the government for accounting for it.

Another tool that can be mixed with BEPS to improve CBEC activities is the de minimis, which "refers to the maximum customs value of goods below which goods can be processed through customs, duty-free, and also with minimal formal clearance procedures" (TAVENGERWEI, 2018, p. 360).

Practically, it is associated with customs categorization, being a procedure and cost-saving during customs steps, hugely appreciated by small enterprises as a threshold for trade facilitation (LATIPOV; MCDANIEL; SCHROPP, 2018). Customers may also escalate their satisfaction with no great change above their buying behaviors (OECD; WTO, 2017), thanks to service level gains in distribution time, while innovation and quality are also very well received among them.

Table 2 adapted from LATIPOV; MCDANIEL; SCHROPP (2018), "The de minimis threshold in international trade: The costs of being too low" summarizes the de minimis.

Table 2: The de minimis threshold in international trade

		Customer side		Enterprise side
	•	Parcels above 20 Canadian dollars	•	Parcels above 20 Canadian dollars
		and below the new de minimis		and below the new de minimis partially
		dismiss import duties payments;		dismiss import duty and administrative
iits	•	Parcels above 20 Canadian dollars		costs;
Benefits		and below the new de minimis	•	Parcels above 20 Canadian dollars
ă		dismiss brokerage fee payments;		and below the new de minimis partially
	•	Parcels above 20 Canadian dollars		dismiss brokerage fee costs.
		and below the new de minimis		
		dismiss import assessment policies;		
		dismiss import assessment policies;		

Source: LATIPOV; MCDANIEL; SCHROPP (2018)

In this way, LATIPOV; MCDANIEL; SCHROPP (2018) set three scenarios for offline and online transactions within Canada's perspective: scenario 1 is increasing the de minimis from 20 to 80 Canadian dollars, scenario 2 is increasing the de minimis from 20 to 100 Canadian dollars, and scenario 3 is increasing the de minimis from 20 to 200 Canadian dollars. In terms of revenue collection and net earning by government, customers, and businesses, the results show that option 3 is the most beneficial for stakeholders, as small enterprises tend to opt for higher de minimis considering the low costs and fewer trade barriers linked into it.

The de minimis comes to replace small shipments which accompany various costs and amplified picking ups, as moderate asset loadings entail proper charge compared to the traditional expedition (OECD; WTO, 2017). The idea of setting a minimum quantity permits better assistance on the cross-border carriage and watching, not to mention the risk and gray area confrontation, being one of the greatest achievements for WTO and its country members if executed at a future time. Also, it is also possible that packages under the de minimis threshold may have their carriage pending following tax liquidation (WCO, 2021), guaranteeing better revenue collection and data centralization.

The following sections look forward to selecting some of the best alternatives upon the missing unity on CBEC tax collection, as well as raising questions that must be put on the table during the negotiations and reforms being held by all the stakeholders involved. It may contribute to this unclosed global discussion.

#### 4.2 BRAZIL'S SOCIAL SECURITY NUMBER & "NOTA FISCAL PAULISTA"

When Brazilians go to a store, they are used to register their social security number (or CPF, an acronym for the Portuguese language which is a number used by local authorities to check who tax contributors are. Moreover, in the São Paulo state, the Nota Fiscal Paulista program is applied, being an option for customers who intend to receive part of their money paid back by using their CPF in the purchases. Considered a case of success (MEIRELLES; MORAES, 2013), by registering their CPFs, customers prevent tax evasion from the side of the sellers, running from their fiscal obligations.

CBEC policymakers may use such reality to support new law settings throughout the globe, as buyers audit the related taxation (AGRAWAL; FOX, 2017) by participating as a third-party within the transactions which certainly enable more facilitated compliance and trackability if also put in e-commerce regulation sphere, mapping all the supply chain from the online order to the physical delivery. The adherence from the client's side is relatively positive since more and more credit will be available to the rebate. Such measures present several advantages for enterprises, notably for SMEs, including the time-saving in keeping tax documents, besides shortening piracy practices and unfair competition over an informal business (MEIRELLES; MORAES, 2013).

In this case, a destination-based tax can also be amplified following its price neutrality (Beauvallet, 2018). Even the OECD defends this principle, specifically because it shows the location where the value-added tax (VAT) was earned (TOO et al., 2020), but coming after regulatory advancements.

After understanding global and local actuality surrounding the cross-border e-commerce, including WTO and countries' posture over the theme, as well bringing up cases of proposals and alternatives because of tax evasion, the following section briefly lists some important

issues that may sustain further research which certainly impacts the decision making concerning CBEC's future to come.

### 4.3 ISSUES RAISED (IN THE FORMAT OF QUESTIONS)

In this paper, we came up with the following questions to tackle the problem of CBEC tax evasion (Table 3). They represent some of our contributions regards research questions around the challenges encountered inside WTO and economies' negotiations.

Table 3: Questions for future research

Citation	Issue raised
Canada operates a Goods and Services Tax (GST) with federal and provincial rates; value-added tax (VAT) rates vary within the European Union (EU); and India and Brazil levy state-level rates through their tax systems. Even highly centralized tax systems are not immune to the pressures of e-commerce (AGRAWAL; FOX, 2017).	May centralizing taxation laws within the government sphere solve the loss of revenue on CBEC tax evasion?
As a result of court decisions, US states cannot use vendors to enforce destination taxes for cross-state e-commerce transactions when the vendor does not have a physical presence in the buyer's state and states must resort to attempts to collect the tax from buyers (AGRAWAL; FOX, 2017).	What happens to companies with no physical presence in some states but still must follow the destination principle?
Taxable services in most states do not include the faster growing services, such as health care, other professional services, and contractor services. As goods consumption has risen more slowly than non-taxable services, the base has fallen relative to personal income (AGRAWAL; FOX, 2017).	How to track cash transactions, thus the taxes on them, as there is no address telling where the destination rule can be applied?
Cross-border online platforms should allocate enough resources to build effective operational mechanisms to protect sellers against fraudulent buyers, in addition to the ones designed for the protection of buyers (). Since sellers generally deem country of residence as a credible signal of buyers' trustworthiness, cross-border platforms should flag-up for sellers the potential risks associated	Concerning global data flows and privacy, is there any extent being considered when it comes to sharing information related to the consumption of such products by consumers?

with buyers from countries of low national integrity (GU et al, 2017).

Every country has its laws and rules on trade. However, China's regulations on CBEC are generally lax compared to those on traditional international trade. China's policies on CBEC have also evolved over time, especially since 2012, to keep up with the development of the CBEC market (TU; SHANGGUAN, 2018).

Seeing that the profit of global trade is already fragile, does aggressive tax on CBEC may condemn it even more?

Several challenges impede the translation of the new technologies into economic growth in developing countries, particularly in Africa. These include inadequate broadband connectivity and skills in information and communications technology; policy and regulatory issues which represent increasing costs to digital companies, such as onerous legal liability regimes and data privacy rules; limited adoption and use by small businesses of digital technologies, such as e-commerce or online payments; the traditional challenges to cross-border trade, such arcane customs procedures and expensive logistics; and national digital infrastructures and regulations that are incomplete and do not interact optimally with those of other economies (SUOMINEN, 2017).

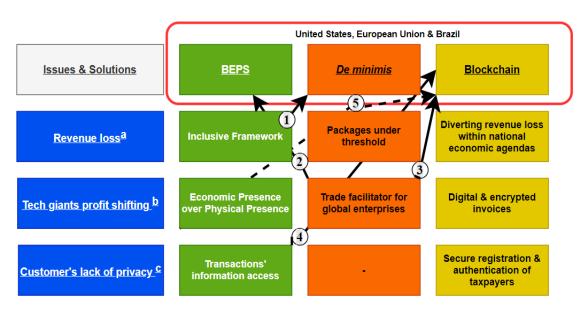
Are emerging countries
prepared for CBEC taxation
changes as they lack
infrastructure and technology
in many ways and still have to
deal with administrative and
compliance costs?

Source: The authors

Such inquiries pave the way for future agendas and priorities among jurisdictions since many fieldworkers can be sponsored by opposed perspectives on CBEC as articulated above. It is coherent to say that CBEC faces a variety of matters, from definitions including future changes on the portfolio and how to map and tax them; to unassociated schemes in the middle of WTO members like unique duties carried. Income erosion seen in rising nations linked to oligopolistic markets are also one of them, and policies on international data flow security, privacy, and compliance. All these trade affairs bring around the necessity of value propositions to solve not just tariff avoidance but put forward new business models in response to nowadays transactions which happen to be poorly enclosed by customs agents due to a denying global infrastructure and constitution.

Table 4, then, summarizes the relation\* between the topic issues within CBEC taxation along with possible alternatives for such gaps.

Table 4: Issues & Solutions



Source: authors mentioned on the topics below.

#### Revenue loss:

<sup>a</sup>BIRYUKOVA (2019), HUANG (2017), LEE-MAKIYAMA et al. (2019), LI; LI (2019), and UNCTAD (2019i)

- In terms of revenue loss, BEPS' Inclusive Framework has been a pioneering element within OECD/G20 discussions around e-commerce taxation as it monitors the implementation of minimum standards. The success of it indicates that the billionaire revenue loss may be on its final days with BEPS broader adoption followed by better tax compliance (OECD, 2018).
- Concerning the de minimis, the revenue loss is also a relevant aspect of its structure, as it is defended by many governments as a zero de minimis target to impulse international trade failure, as vendors may have a higher value-added tax (VAT) for a more severe scenario of de minimis (SAFARI; SALEH; ISMAIL, 2021).
- By putting into use the Blockchain technology, it's expected a margin expansion within
  e-commerce enterprises since full transparency on transactions between origin and
  destination (OECD, 2018) may bring a more honest market competition.

#### Tech giants profit shifting<sup>b</sup>:

<sup>b</sup>AGRAWAL; FOX (2017), BIRYUKOVA et al. (2019), JAMES (2019), OECD (2018), and UNCTAD (2019i)

In terms of revenue loss, BEPS' Inclusive Framework will be able to support a
company's real activity, meaning it will be taxed according to its business definition.
That comes to put an end to revenue loss mainly seen within multisided platforms
where enterprises face lots of product lines (OECD, 2018).

<sup>\*</sup>Fulfilled lines imply a direct relation among potential tools.

<sup>\*</sup>Outlined lines imply an indirect or uncertain relation for future studies.

Concerning the de minimis, it's seen that small packages will be a turning point for the
express delivery industry (JAMES, 2019), as it allows a boost on low-value goods
demand on e-commerce, especially from SMEs that seek their global presence,
breaking the oligopolist practice and gaining market share among giant CBEC
enterprises.

#### Customer's lack of privacy<sup>c</sup>:

<sup>c</sup>CLAVEY et. AI (2019), GU et al (2017), KENDE; SEN (2019), and MELTZER (2019)

- By putting into use the Blockchain technology, companies may face huge benefits within their supply chain, bringing a more centralized database that impacts commercial gains considering current ethical discussions (WEF, 2018).
- The lack of privacy over customers' online activities may be a tax-avoiding opportunity for enterprises that use their data to set patterns within digital purchase behavior, which counts with no financial return as it's used improperly by multisided market big fish (WEF, 2018).
- By putting into use the Blockchain technology, all transactions from origin to destination - will be fully registered in order not just to tax proper revenue, but also to protect all data flow placed within a CBEC purchase. That guarantees a safe environment for internet users as their data is not the object of digital property as in current business models (AARONSON, 2019).

#### **Direct & Indirect Relations (within the Table 4):**

- 1. The Inclusive Framework initiative talks directly to the de minimis threshold, as it recently considered the de minimis profit exclusion for operations in which SMEs present a revenue of less than 10 million euros and a profit of less than 1 million euro (OECD, 2021), causing several compliance cost reductions.
- 2. As the de minimis can improve SMEs' market position, the BEPS package also shares a general concern on their e-commerce performance by suggesting a common taxation ground among them within an external level (OECD, 2018).
- 3. When it comes to SMEs, the blockchain can also contribute to a better environment for electronic business by setting favorable partnerships and reducing several costs in terms of facilitating certification validation (WTO, 2018), with the full impact on import price decreases as well.
- 4. As the BEPS package intends to provide a full status over the CBEC supply chain, the blockchain technology already makes it possible for enterprises that opt by recording their operation, thus generating a transparent international trade through a rapid data flow management (WTO, 2018).
- 5. The more enterprises put in use the blockchain technology, the less physical presence will be considered an only way of CBEC taxation since virtual transactions on multisided

platforms will support fiscal allocation within revenue and profit generated, as well foreign residents and value-added intangibles (CLAVEY et. al, 2019).

#### 5 CONCLUSION

Due to ever-faster technological changes, CBEC is playing an important role in transforming traditional trade and boosting - digital – economies, besides shortening intermediate steps in the supply chains, therefore delivering a much faster value to customers (OECD, 2018). At the same time, "CBEC is not about just putting up goods for sale on a website" (Shangguan, 2018, p.112), meaning applicable issues still hang in the air. That is because specifying "how, where and by whom income is earned" (ARGILÉS-BOSCH et al., 2020, p.3) may be as not simple as in a conventional via – the marketplace industry.

By taxing just traditional traders instead of including online platforms, the regulation in place opens for price differentiation (CARPENTER; PARSONS, 2016) with a charge reduced from rival enterprises. Consequently, new proposals such as BEPS can also put an end to the financial loss of US\$ 10.6 billion a year combined in GDP (LEE-MAKIYAMA et al., 2019) that an extended moratorium can make for emerging economies; just as the de minimis can end nearly three-quarters of non-custom-policy-related trade costs to surrounding CBEC bilateral negotiations (OECD; WTO, 2017).

As a result, effective taxation systems on CBEC may help countries to collect revenue and work on social and environmental programs, while they still protect their economies from financial losses consequent to the "imperfect enforcement capacity" (AGRAWAL; FOX, 2017), p.1) which does not concentrate on the origin or destination choice of levying. Blockchain technology, for instance, as a digitalization strategy, even though it is in its very beginning, can innovate logistic services, being a "collaborative trust-based environment" (UNCTAD, 2019ii, p.26) inside financial provisions.

Lastly, whatever future decision – on setting a temporary or a permanent moratorium on CBEC, multilateral trade agreements must preserve countries' autonomy on regulation (NEERAJ, 2019) to assure an open and honest global electronic commerce.

In this way, our contribution lays on the acknowledgment of CBEC ramifications by governments, policymakers, enterprises, and many other stakeholders ahead of further discussion amid WTO legislation on taxation. The present research shows an analysis of tax evasion, however, few pieces of literature related to solutions for it, as some are very superficial or briefly suggestive. The dynamic environment when it comes to CBEC law implementation follow-up was also difficult, as many were proposals to be validated by legislators on taxation.

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