BADAN PENDIDIKAN DAN PELATIHAN KEUANGAN
KEMENTERIAN KEUANGAN
REPUBLIK INDONESIA

JURNAL BPPK

INNOVATIONS IN INDONESIAN CUSTOMS: A STUDY ON IMPROVING CROSS-BORDER E-COMMERCE ON COMPLIANCE, RISK MANAGEMENT, AND ENFORCEMENT

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ARTICLE INFORMATION

ARTICLE HISTORY
Received
02 September 2024

Accepted to be published
31 December 2024

KEYWORDS:
Cross-Border E-Commerce
Customs Operations
Comparative Case Study
Identity Number

ABSTRACT

Pertumbuhan pesat *E-Commerce* Lintas Batas (*Cross-Border E-Commerce* atau CBEC) menghadirkan tantangan signifikan bagi operasi bea cukai, termasuk di Indonesia. Studi ini mengeksplorasi strategi untuk meningkatkan bea cukai Indonesia dengan memeriksa praktik sukses dari Jepang, Korea Selatan, dan China. Menggunakan metodologi kualitatif dengan pendekatan studi kasus komparatif, penelitian ini mengembangkan rekomendasi praktis berdasarkan praktik bea cukai di negara-negara tersebut. Studi ini mencakup data dari laporan, jurnal akademik, makalah penelitian, artikel online, peraturan bea cukai, dan data deskriptif dari otoritas bea cukai Indonesia. Tantangan utama yang diidentifikasi meliputi undervaluasi dan tarif rendah yang menyebabkan penghindaran pajak, data elektronik yang tidak lengkap dari kurir yang menghambat pemeriksaan dokumen, celah regulasi yang muncul akibat pergeseran ke barang CBEC, dan pemisahan transaksi untuk menghindari peraturan impor. Studi ini menyoroti perlunya sistem pemantauan yang lebih baik, metode identifikasi yang lebih baik, dan analitik data yang canggih. Disarankan untuk menggunakan Nomor Identitas sebagai instrumen pelacakan untuk meningkatkan pemantauan dan kontrol proses pengiriman. Wawasan ini sangat penting bagi pembuat kebijakan dan badan pengawas yang menangani penegakan *e-commerce* dan membuka jalan untuk penelitian lebih lanjut tentang integrasi pendekatan ini dengan teknologi lain, seperti *blockchain*, untuk meningkatkan transparansi dan keterlacakan dalam perdagangan internasional.

The rapid growth of Cross-Border E-Commerce (CBEC) presents significant challenges for customs operations, including in Indonesia. This study explores strategies to improve Indonesian customs by examining successful practices from Japan, South Korea, and China. Using a qualitative methodology with a comparative case study approach, the research develops practical recommendations based on these countries' customs practices. It includes data from reports, academic journals, research papers, online articles, customs regulations, and descriptive data from Indonesian customs authorities.

Key challenges identified include undervaluation and low tariff rates causing tax evasion, incomplete electronic data from couriers hindering document examination, regulatory loopholes exposed by the shift to CBEC goods, and transaction splitting to evade import regulations. The study highlights the need for improved monitoring systems, better identification methods, and advanced data analytics. It suggests using an Identity Number as a tracing instrument to enhance monitoring and control of consignment processes. These insights are vital for policymakers and regulatory bodies overseeing e-commerce enforcement and open avenues for future research into integrating this approach with other technologies, like blockchain, to improve transparency and traceability in international trade.

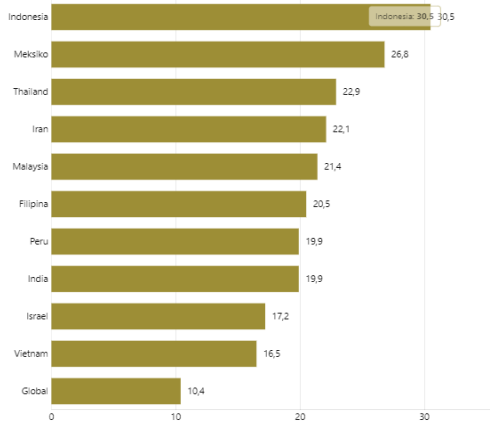
1. INTRODUCTION

Recently, there has been a notable decline in the number of individuals shopping in offline stores declined, while online shopping has experienced a significant increase. Synder (2024) argues that this trend is corroborated by online shopping statistics, which indicate that the increase in digital orders is not a fleeting phenomenon but rather a sustained development. The e-commerce sector, which encompasses more than just retail sales, is undergoing a period of substantial growth. The facilitation of international shipping and the ease of placing online orders have contributed to an increase in the number of consumers purchasing products from overseas. Synder (2024) states that 52% of online consumers purchase from local and international markets. Additionally, the projected value of the global e-commerce store in 2024 is estimated to reach $6.3 trillion, representing an increase from $5.8 trillion in 2023. Projections suggest that by 2027, the market will surpass $7.9 trillion.

The upward trend in e-commerce is also evident in Indonesia. Bank Indonesia, as cited in Kharisma (2024), found that e-commerce transactions in Indonesia reached 453.75 trillion rupiah in 2023, representing a fourfold increase compared to 2019, with the prospects of sustained expansion. This considerable growth in the value of online trade transactions in Indonesia is illustrated in Figure 1.

German e-commerce research institute (ECDB) reported that Indonesia is projected to have the highest e-commerce growth rate in the world in 2024, reaching 30.5%. This projection is nearly three times higher than the global average of 10.4%, as shown in Figure 2 (Katadata, 2024).

Figure 2. Top 10 Countries with the Highest Projected E-Commerce Growth Globally in 2024 (in percent)



Source: databooks.metadata.co.id

Meanwhile, CNN (2021) found a study by the Institute for Development of Economics and Finance (Indef) indicating that 90% of e-commerce transactions in Indonesia involve imports. Furthermore, Indonesian Customs (2023) reported that the volume of consignments has tripled compared to 2018, with 90% of this shipment coming from e-commerce transactions (Figure 3).

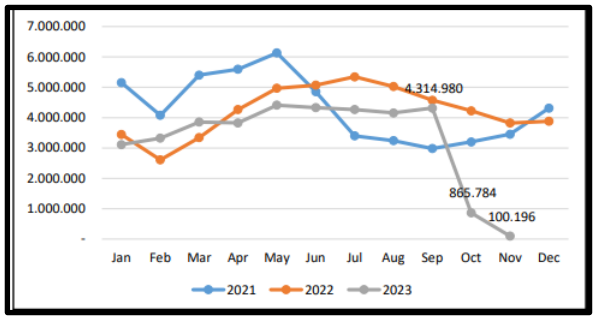
The high volume of imported e-commerce goods is not supported by the situation on the ground, where the number of human resources is insufficient to handle the imports. Furthermore, the lack of differentiation between commercial and non-commercial goods, as well as the use of invalid recipient identities and other related issues, has led the government to issue new regulations regarding consignments, Ministry of Finance Regulation Number 96/2023 (Indonesia Customs, 2023). This regulation by the Ministry of Finance is designed to streamline the business processes associated with the export and import of shipped goods. It requires that e-commerce operators (PPMSE) to form partnerships with Indonesia Customs, with the aim of facilitating data exchange concerning shipped goods. This data exchange is expected to enhance DJBC's capacity to effectively oversee and regulate shipped goods.

However, Rais (2024), in his study, found that this regulation presents significant challenges for the industry, including the necessity to adjust to new administrative and customs systems, integrate e-catalog and e-invoice systems, which requires both technological investment and training, and implement restrictions on the sale of imported goods under USD 100 on digital platforms, which affects sales strategies. Another challenge is the increased cost of imports due to the application of MFN tariffs on certain commodities, impacting pricing and profit margins. The overall complexity of this new policy demands that businesses adapt and innovate to ensure compliance and maintain competitiveness in the international market.

The policy prohibiting imports valued below US$100 aims to protect the country's Micro, Small, and Medium Enterprises (MSMEs) by encouraging the use of domestic products. However, if the required products are not available domestically, the needs of individuals may be adversely affected. Additionally, a significant portion of cross-border e-commerce goods falls below the US$100 threshold. Meanwhile, since the enactment of this restriction, there has been a significant decrease in the number of import documents through shipment goods (Consignment Notes - CN) at the

Soekarno Hatta Customs and Excise Commission as one of the entry gates for e-commerce goods from abroad. Indonesia Customs (2024) shows that there was a decrease in the number of CN in the Soekarno Hatta Customs and Excise Main Service Office by 79.94% in October 2023 compared to the previous month. Figure 4 illustrates that this downward trend continued to the following month, from 865,784 documents in October 2023 to 100,196 documents in November 2023, or a decrease of 88.42%.

Figure 4. The Trend Number of CN in the Soekarno Hatta Customs and Excise Main Service Office



Source: Consignment Note (CN) by KPU BC Soekarno Hatta in November 2023

This phenomenon indicates that the import of e-commerce shipment goods is no longer the responsibility of PPMSE. This is consistent with the absence of PPMSEs partnering with Customs in the operational area of the Soekarno Hatta-Customs and Excise Main Service Office. It seems plausible to suggest that the obligation to partner with Customs does not attract PPMSEs. Cross-border e-commerce is no longer utilizing the PPMSE platform, instead opting for regular consignments where the number of shipments and minimum value of goods are not constrained. In addition, there is no requirement to establish a partnership with Customs for private consignments. These developments require Indonesian Customs to adapt and improve services and supervision of consignments entering Indonesian territory.

Given the current situation regarding consignment and the challenges associated with monitoring and controlling these transactions, this paper aims to evaluate and propose strategies for enhancing the efficiency and effectiveness of customs operations in Indonesia, specifically within the context of Cross-Border E-Commerce (CBEC). The goal is to create a more streamlined and transparent customs framework that improves compliance, minimizes fraud, and aligns with global standards.

The findings of this study offer significant insights for policymakers and regulatory bodies responsible for overseeing consignment transactions, particularly in the context of enforcement of e-commerce activities. By exploring the potential of using an Identity Number as a tracing instrument, this research presents a promising solution for improving the monitoring and control of consignment processes. Furthermore, the study paves the way for future research into the potential integration of this approach with other technological innovations, such as blockchain, to further strengthen the transparency and traceability of international trade transactions.

2. LITERATURE REVIEW

2.1. Definition of E-commerce

Different organizations and regulations define E-commerce in various ways, reflecting its broad scope and complexity. World Trade Organization/WTO (2017) describes e-commerce as a process that includes the electronic production, distribution, marketing, sale, and delivery of goods and services. Korea Customs Service (n.d) defines Cross-Border E-Commerce as all transactions connected digitally through a computer network (e.g., the Internet) resulting in physical goods flows subject to Customs formalities. Ministry of Trade Regulation (2023) in regulation number 31/2023 specifies that Trading Through Electronic Systems, abbreviated as E-Commerce, involves transactions conducted via electronic devices and procedures. Similarly, the Ministry of Finance (2023), in regulation number 96/2023, defines an Electronic Trading System Operator (PPMSE) as a business operator that provides electronic communication facilities used for trading. The regulation further divides PPMSE into two categories:

a. online retail, which is a merchant that conducts trade through an electronic system using a commercial website or application that is created, managed, and/or owned; and
b. marketplace, which is a facility provider in which part or all of the transaction process is in an electronic system in the form of a commercial website or application as a place for merchants to be able to post offers of goods and/or services.

2.2. E-commerce System in Indonesia

The rapid advancement of information technology has encouraged a shift in trade from

conventional transactions to electronic-based (e-commerce).Furthermore, there has been a significant increase in the volume of imported consignments in Indonesia in recent years. This development demands the Indonesia Customs to adapt and improve its services and supervision of shipments of goods entering Indonesia's territories. To encourage the level of tax compliance of economic actors, Indonesia Customs has partnered with marketplace providers. This partnership entails the exchange of e-invoice and e-catalog data, which allows the documents pertaining to consignments to be researched and decided upon automatically by the system. The objectives can be summarized as follows: The implementation of this system will facilitate the expedited clearance of goods, simultaneously ensure the safeguarding of state revenue, and eradicate illicit Customs practices.

Indonesia has taken strategic steps to improve its trade performance and boost economic growth through the issuance of the Minister of Finance Regulation number 96 of 2023. This regulation introduces several important amendments, particularly in alignment with current business practices, including the integration of technology in customs and excise procedures to enhance efficiency and transparency. Among the key aspects are the provisions related to the de minimis threshold for customs duties: a de minimis threshold value of USD 3 is set, with a flat 7.5% duty applied to all goods exceeding the de minimis value but not surpassing USD 1,500. This duty rate does not apply to goods classified under HS codes 3303-3307, 4202, 4901-4904, 61-64, 73, 8711, 8712, and 9101-9102. Additionally, a flat 11% Value-Added Tax (VAT/GST) is imposed on all goods under the threshold value. The regulation also mandates a self-assessment system for customs declaration and tariff or value determination of trade goods, with penalties for non-compliance. Furthermore, the Ministry of Finance regulation number 96 of 2023 requires the Indonesia Customs and PPMSE to collaborate, with PPMSE designated as authorized importers for trade consignments (Minister of Finance, 2023).

2.3. E-commerce System in Japan

Japan, the fourth-largest e-commerce market globally, had a market valued of JPY 192 million in 2020. This significant growth can be attributed to the impact of the global pandemic of 2019/2020, with 24% of businesses engaging in online sales. This is supported by an internet penetration rate of 92% (Viraize & Risako, 2022). This expansion presents considerable opportunities for e-commerce operators, including foreign enterprises. However, Japan Customs (n.d.) notes that the increase in cross-border e-commerce has led to several enforcement challenges, such as a rise in smuggling activities and violations of intellectual property rights. Additionally, tax evasion has become more prevalent, particularly through the declaration of artificially low import values through the use of Free Sale (FS) certificates. This practice undermines effective tax collection and complicates customs regulation.

To address these issues, Japan Customs (n.d) elucidates that in 2023 Japan introduced new regulations concerning e-commerce, which include:

- Addition of Information in Import Declaration Forms: To enhance law enforcement and ensure proper tax collection, Japan Customs has revised import procedures. This revision includes a requirement to include the "address and name of the importer" in the import declaration form.
- Clarification and Additional Requirements: New information must be provided, such as whether the goods are imported through e-commerce platforms (B2C) and the name of the relevant e-commerce platform. Additionally, the place of delivery following import approval must also be specified.
- Designation of Customs Procedure Agents: Japan Customs now has the authority to appoint a Customs Procedure Agent if a non-resident importer fails to select and notify Japan Customs of their chosen agent. With this new regulation, e-commerce sellers from overseas should use the Customs Procedure Agent and become the importers of records by themselves.
- Clarification of Importer Eligibility: Japan Customs has clarified that the importer is the person who imports the goods or who has the right to dispose of the imported goods at the time of declaration. This includes cases such as leasing, consignment sales, processing, or disposal of the goods.

Japan Customs has established a de minimis threshold of JPY 10,000 for each individual shipment. For shipments, the value limit is set at JPY 200,000; should the value exceeds this limit, general import procedures will be applied. From a customs procedure perspective, Japan Customs distinguishes between postal items (Japan Post) and small package cargo (express courier) for shipments up to JPY 200,000. For postal items, customs clearance is handled using an official assessment scheme, while small package cargo uses a self-assessment scheme.

Japan Customs has also implemented a self-assessment and official assessment system for import clearance, including shipments. In the self-assessment system for shipments, the import notification is provided by the postal operator (express courier), who acts as the Customs Broker for the importer/consignee. Additionally, under the self-assessment system for shipments, besides collecting import duties and taxes, Japan Customs imposes an additional duty (5-50%) on importers if under invoicing practices are found. Japan Customs employs a streamlined tariff systems, comprising seven categories, for the collection of import duties on shipments. (Japan Customs, n.d)

2.4. E-commerce System in Korea

The Korea Customs Service (KCS) plays a pivotal role in managing cross-border e-commerce (CBEC) in Korea, particularly in overseeing business-to-consumer (B2C) transactions through customs clearance procedures. The KCS facilitates the granting of tax exemptions on low-value consignments, enforces import policies that emphasize the importance of accurate reporting and risk management, and provide supports to CBEC enterprises through the implementation of simplified export reporting policies. To facilitate comprehensive customs administration, KCS utilizes the UNI-PASS system, which integrates customs procedures with financial service providers to enhance the accuracy of transaction values declared in customs declarations. Furthermore, to ensure the protection of personal data, the KCS issues a Personal Customs Clearance Code (PCCC), a prerequisite for the submission of import declarations (Korea Customs Service, 2023).

In addition, Korea Customs Service (2023) explains that KCS has designed an efficient inspection system based on risk management called Express Cargo Clearance Center, which is operational in Incheon Airport. There are priority criteria on risk management i.e. tax evasion, unfair trade, environmental threat commodity, national security threat commodity, public health threat commodity, illegal foreign currency, and inbound/outbound smuggling. Furthermore, KCS has arranged marketplace platforms e.g., Coupang and 11Street.

Moreover, in the Figure 5, Korea Customs Service (2023) illustrated that there are three types of customs declaration for CBEC goods delivered by Express Cargo i.e.:

1. List clearance
   - A customs declaration with Free on Board (FOB) value ≤ USD 150 (de minimis threshold);
   - Designated for personal use;
   - Other government permission is not needed.
2. Simplified declaration

A customs declaration with USD 150 ≤ Free on Board (FOB) value ≤ USD 2,000

3. General declaration
   - A customs declaration with Free on Board (FOB) value > USD 2,000;
   - Designated for commercial use;
   - Other government permission is required.

Meanwhile, in the context of CBEC shipments, the Universal Postal Union classifies customs declarations into two distinct types. The first type, List Clearance, pertains to goods with a Free on Board (FOB) value ranging from USD 150 to USD 1,000. This category simplifies the customs process for lower-value items. The second type, General Declaration, is designated for shipments with an FOB value exceeding USD 1,000, which necessitate a more comprehensive customs process. These categories help streamline the management of e-commerce goods by setting thresholds that differentiate between simpler and more detailed customs procedures (Korea Customs Service, 2023).

The Korea Customs Service (2023) reported that, as illustrated in Figure 6, the total export value for Korea's cross-border e-commerce (CBEC) was USD 1,741 million, while the total import value reached USD 4,736 million. Specifically, exports amounted to USD 907 million, with express cargo under List Clearance accounting for 30,143,000 cases, which represents the majority of the export volume. In contrast, the imports value was USD 2,551 million, with express cargo under General Declarations making up 64,500,000 cases, highlighting a substantial proportion of the total imports.

2.5. E-commerce System in China

China Cross-Border E-Commerce (CBEC) has witnessed a period of rapid growth in recent years. There are numerous online platforms that facilitate CBEC in China, e.g. Alibaba (Taobao and Tmall), NetEase, JD Worldwide, Douyin Global Shopping, Pinduoduo Global Shopping, Vipshop Global, Amazon Global, and others. In 2022, China was the largest exporting country and the second-largest importing country in the world (Statista, 2024). According to statistics from the General Administration of the Customs of the People's Republic of China (GACC), as cited in Ping (2020), the retail value of CBEC

under Customs' administration in 2018 was RMB 134.7 billion i.e., comprising import value of RMB 56.1 billion and export value of RMB 78.6 billion. This represents a significant increase nearly 50% compared to 2017. Moreover, the Figure 7 shows that in 2019, the total reached RMB 186.2 billion for both values, representing a 38% increase from 2018 (Ping, 2020). Furthermore, Ping (2020) reported that China CBEC reached RMB2.38 trillion in 2023, representing a 15.6% increase from the prior year. This figure encompasses an export amount of RMB1.83 trillion (up 19.6%) and an import value of RMB 548.3 billion (up to 3.9%) (TMO Group Asia, 2024).

The Government of China is encouraged to optimize Cross-Border E-Commerce (CBEC) by issuing technical and supporting regulations. These policies require municipal governments to focus on improving CBEC public service platforms and enhancing their functions, building comprehensive CBEC parks, developing adaptive customs procedures, enhancing foreign exchange services, and innovating the tax collection and administration system. China's main channels for importing goods through CBEC are the bonded import model and the direct purchase import model. The bonded import model (Customs Supervision Code 1210) involves importing goods in bulk that are stored in CBEC bonded warehouses under customs supervision; consumers place orders through CBEC platforms linked to Customs, which handles customs clearance and tax calculations. The direct purchase import model (Customs Supervision Code 9610) involves importing goods in small and medium packages ordered by customers on CBEC platforms; the platforms transmit data to Customs to process customs clearance and pay import duties, VAT, and consumption tax for express courier or postal packages (Li, 2019).

According to Ping (2018), the Ministry of Finance (MoF), the General Administration of Customs of China (GACC), and the State Taxation Administration have jointly issued the Announcement on Matters Pertaining to the Supervision of Cross-Border E-Commerce Retail Imports and Exports (GACC Announcement No. 194 [2018]), which sets forth a number of important stipulations. The maximum value permitted per transaction is RMB 5,000, with an annual value limit of RMB 26,000 per individual. If a single transaction exceeds the value of RMB 5,000 but remains within the annual limit of RMB 26,000, the product can still be imported through CBEC. However, tax must be levied on the total value of the transaction. If the transaction value surpasses the annual limit, the general trade model must be applied. The applicable tax rate is a comprehensive rate of 70%, calculated based on a tariff rate temporarily set at 0%, a Value Added Tax (VAT) of 13%, and a consumption tax rate depending on the category of goods. For single, indivisible goods that exceed the transaction limit, the comprehensive tax rate remains the same. The Positive List includes 1,321 tariff lines of goods allowed for import through CBEC.

Additionally, Poon (2019) highlighted specific provisions pertaining to the importation of goods by customers in China for personal use that are not transacted through CBEC platforms. The maximum permitted value for goods imported from Hong Kong, Macao, and Taiwan is RMB 800 per transaction, while for other countries the permitted value is RMB 1,000 per transaction, with tax rates varying based on the category of goods. The CBEC policies have been implemented in 37 cities across China, including Beijing, Tianjin, Shanghai, Guangzhou, Shenzhen, and many others, such as Tangshan, Hohhot, Shenyang, Dalian, Changchun, Harbin, Nanjing, Suzhou, Wuxi, Hangzhou, Ningbo, Yiwu, Hefei, Fuzhou, Xiamen, Nanchang, Qingdao, Weihai, Zhengzhou, Wuhan, Changsha, Zhuhai, Dongguan, Nanning, Haikou, Chongqing, Chengdu, Guiyang, Kunming, Xi'an, Lanzhou, and Pingtan.

2.6. Big Data Analytics

As Sujitparapitaya et al. (as cited in Nti et al., 2022) noted, big data refers to the collection of large-scale data made possible by recent technological advancements in tools and platforms that facilitate the rapid capture, storage, and analysis of high-velocity data. EMC Education (2015) noted that big data can exist in various formats, including both structured and unstructured types, such as financial records, text documents, multimedia content, and genetic sequences. Meanwhile, Big Data Analytics (BDA) is applying analytics method on the big datasets. Nti et al. (2022) explained that BDA can be described as the process of gathering, organizing, and examining big data to identify and visualize patterns, uncover insights, intelligence, and other valuable information within the data.

Big data analysis has become a critical tool in various industries, particularly in sectors that deal with large volumes of data. By utilizing advanced data analytics, customs administration can monitor cross-border transactions more effectively, detect potential anomalies or fraudulent activities, and ensure compliance with import regulations. For example, big data analytics can help identify trends in product

categories, detect inconsistencies in declared values, and assess import duties accurately, thus streamlining the import process while ensuring revenue collection.

3. RESEARCH METHODOLOGY

This study seeks to assess and recommend strategies for improving the efficiency and effectiveness of customs operations in Indonesia, particularly in CBEC. To achieve this, a qualitative methodology utilizing a comparative case study approach is employed. This approach follows Pahl-Wost's (2015) framework, as cited in Pahl-Wost (2021), which asserts that structured comparisons of case studies facilitate the extraction of theoretical insights from individual cases and the development of general understandings from phenomena with shared characteristics. By analyzing successful practices from Japan, South Korea, and China—countries selected for their relevant and effective customs practices—this study seeks to identify actionable strategies to address issues within Indonesia's CBEC framework.

The data for this research is gathered from various sources, including reports, published journals, academic papers, internet articles, and relevant regulations. Additionally, descriptive data from customs authorities is utilized to provide a comprehensive understanding of current practices and challenges. The combination of sources ensures a comprehensive analysis of customs operations, thereby providing a foundation for the formulation of practical recommendations aimed at improving CBEC compliance and efficiency in Indonesia.

4. RESULTS AND FINDINGS

4.1. Customs Clearance Procedure and Enforcement of CBEC Goods Indonesia

According to the Minister of Finance of the Republic of Indonesia's Regulation Number 96 of 2023, the customs clearance procedure for Cross-Border E-Commerce (CBEC) goods in Indonesia involves several pivotal stages designed to ensure compliance and efficiency. Initially, the delivery service company (PJT) is required to submit necessary documents, including the Universal Postal Union rupture document and the Customs Notification (CN) document. These documents are then subjected to filtering by the Risk Engine (RE), which evaluates the risk associated with each shipment. Shipments that pass the RE filter receive an automated response that includes the determination of customs duties and taxes (SPPBMCP), pending further processes such as X-ray screening and manifest review. However, consignments flagged by the RE filter may either be directed to a red line queue for physical inspection or undergo additional document examination by customs officers (Ministry of Finance, 2023).

In addition, the Ministry of Finance (2023) explained that for consignments requiring physical inspection, customs officers conduct a thorough review. If any suspicions arise or if the goods fall into categories of potential violations, a Proof of Enforcement Letter (SBP) is issued to the PJT. Subsequently, based on the results of document and physical inspections, the customs officers may issue a Confirmation Note (NPD) or a Notification Letter of Prohibited/Restricted Goods Shipment (SPBL-BK). Goods affected by SPBL-BK that do not meet licensing requirements may either be re-exported or placed in Customs Stockpile (TPP) as Non-Controlled Goods (BTD). Customs officers also categorize consignments based on their status, determining whether they involve Indonesian Migrant Workers (PMI) or Non-PMI and whether they are for trade or non-trade purposes. This classification includes assessing the reasonableness of customs value. After completing these procedures, the officers issue a SPPBMCP determination for the consignment. This structured approach ensures that CBEC goods are managed effectively, maintaining compliance with customs regulations and preventing the entry of prohibited or restricted items.

4.2. Fact Finding on Indonesia CBEC Based on Customs Formalities

4.2.1. The Undervaluation in Customs Valuation and Low Tariff Rates on Imported Goods

The Major Servicing Office of Customs and Excise of Type C of Soekarno-Hatta (KPU Soetta) is the busiest customs office in Indonesia in terms of handling CBEC. Figure 8 illustrated that recent data indicates significant changes following the implementation of the Minister of Finance (MOF) Regulation No. 96/2023 in October. First, the total number of CNs submitted per period has decreased significantly by approximately 1,875%. Additionally, while the total number of CNs examined by customs officers has declined by about 50%, the percentage of CNs examined in relation to the total submitted documents has increased from 22% to 35%, up from 2% to 3%.

This suggests that, although fewer CNs are being examined, a larger proportion of the submitted documents are now subject to scrutiny. Moreover, the "hit percentage" of CNs—defined as the proportion of CNs that trigger customs examination—has decreased from 78% to 34% post-implementation of the regulation (Indonesia Customs, 2024).

Moreover, Indonesia Customs (2024) noted that the "hit percentage" is a crucial metric for assessing the effectiveness of customs procedures in correcting the declared value of goods and tariff rates, which is essential for accurate calculation of duties and taxes. Despite the nearly one-year implementation of MOF Regulation No. 96/2023, the low level of compliance with customs valuation and declared tariff rates remains concerning. This low compliance rate raises the possibility of tax evasion, whether intentional or unintentional, which poses challenges to customs enforcement and revenue collection.

Figure 8. CN Statistics in KPU BC Soekarno Hatta 2023 - 2024

Basket PDTT	Periode	Total Dok	Basket	HIT PDTT	DOK Terjaring (%)	HIT PDTT (%)
2023	Jan	3.113.919	76.011	59.449	2,44%	78,21
	Feb	3.326.066	70.737	54.154	2,13%	76,56
	Mar	3.855.906	74.029	52.345	1.92%	70,71
	April	3.826.928	76.920	53.864	2.01%	70,03
	Mei	4.412.562	85.340	63.987	1.93%	74,98
	Juni	4.331.081	97.414	79.292	2.25%	81,40
	Juli	4.266.461	92.710	75.021	2.17%	80,92
	Agust	4.155.622	97.235	77.410	2.34%	79,61
	Sept	4.314.980	107.627	84.066	2.49%	78,11
	Okt	865.784	74.559	55.179	8.61%	74,01
	Nov	100.196	48.158	23.278	48.06%	48,34
	Des	144.280	50.340	21.826	34.89%	43,36
2024	JAN	149.412	50.306	20.407	33,67%	40,57
	FEB	107.172	42.162	16.185	39,34%	38,39
	MAR	158.862	52.828	21.821	33,25%	41,31
	APR	148.390	51.081	28.175	34,42%	55,16
	MEI	225.169	52.124	17.792	23,15%	34,13
	JUNI	215.996	48.453	16.220	22,43%	33,48
	JULI	**227.557**	**49.938**	**17.005**	**21,95%**	**34,05**

Source: Indonesia Customs (2024)

4.2.2. A Low Level of Electronic Data Completeness

The data submitted by courier service companies is transferred from shipper or sender abroad and contains inaccurate details and incomplete supporting documents. These will hinder the document examination process. The customs officers need to issue NPD and wait for a maximum of five days for the necessary corrections. Inaccurate data in the CN was primarily found for personal consignees, yet the customs system did not reject the customs declaration. There must be focus on improving systems and enhancing supervision to strengthen enforcement within Indonesian Customs.

4.2.2. Shifting Import Transactions from Conventional Goods to CBEC Good

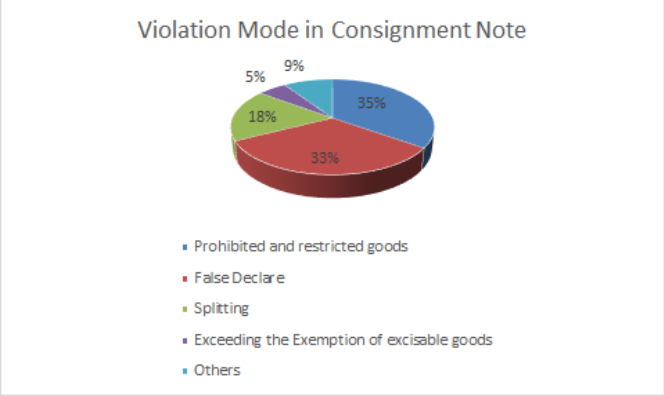
Indonesia Customs (2024) reported that approximately 90% of import declarations shifted from conventional goods to CBEC goods. The current regulations do not specify which types of goods can be imported under the CBEC scheme, creating a loophole that industries exploit to import goods intended for industrial use, rather than for end consumers. Moreover, there is no annual price limit specified for individuals importing goods under the CBEC scheme.

4.2.4. Splitting Transactions

The supervision of consignment goods and e-commerce imports is generally less stringent compared to that of conventional imports. Regulations concerning consignment goods provide private individuals with greater ease and flexibility regarding import provisions. This regulatory flexibility is often exploited by those seeking to circumvent the imposition of high tax rates or the restrictions placed on the importation of prohibited and restricted goods.

In 2023, as shown in Figure 9, the Major Servicing Office of Customs and Excise at Soekarno-Hatta (KPU Soetta) recorded 129 enforcement actions against consignments involving various modes of violation. The most common mode involved prohibited and restricted goods, accounting for 35% of cases, followed by false declarations at 33%. Other modes included splitting shipments to avoid detection (18%), violations related to exceeding exemptions on excisable goods (5%), and other miscellaneous violations (9%) (Indonesia Customs, 2024).

Figure 9. Enforcement CN by KPU BC Soetta in 2023



Source: Indonesia Customs (2024)

Although splitting is not the most prevalent mode of violation, it remains a significant tactic employed in the importation of consignments, particularly to circumvent import regulations on prohibited and restricted goods. The ease with which this tactic can be implemented is largely due to the lack of a requirement to provide a valid identity, such as an Identification Number (NIK), in the consignee's name.

4.3. Follow-Up Actions to Address the Challenges Faced in CBEC for Customs Formalities

To address the challenges, we will benchmark against several countries, as discussed in the previous section. We found that Indonesia and these countries have different approaches to handling CBEC, as shown in the matrix in Figure 10. Based on the literature review on customs practices in Japan, Korea, and China, the following follow-up actions are proposed to address the challenges faced in Cross-Border E-Commerce (CBEC) customs formalities in Indonesia. Moreover, integrating big data analytics is essential to enhance the proposed follow-up actions for addressing CBEC challenges in Indonesia. Lessons can be drawn from how Japan, Korea, and China have used data-driven approaches to strengthen their customs operations, providing valuable insights for Indonesia.

These suggestions incorporate best practices and innovative approaches utilized by the aforementioned countries to streamline customs operations, manage risk, and enhance compliance:

1. Establishing a Monitoring and Evaluation System with Data Analytics
   Integrating big data analytics into the monitoring and evaluation system will allow Indonesia to develop more dynamic and responsive customs operations. By collecting and analyzing large datasets on import and export transactions, customs officials can track patterns, detect irregularities, and adapt to emerging trends in CBEC. For instance, Japan's advanced customs monitoring system uses real-time data processing to detect irregularities in trade volumes, triggering alerts for potential undervaluation or fraud. Indonesia can adopt similar practices, using real-time data to respond more swiftly to suspicious CBEC activities.

2. Using NIK as a Single Identifier Enhanced by Big Data
   Big data can help track and analyze the use of personal NIK or NPWP as a single identifier, much like Korea's use of unique identifiers for trade compliance. By compiling a large dataset of historical transactions, customs can develop importer profiles based on previous behaviors, improving the accuracy of risk assessments. Through machine learning, this data can continuously refine risk profiles and optimize customs checks. By integrating data from Indonesia's Dukcapil, customs can further enhance the precision and speed of the verification process, following the example of China’s centralized identification system.

3. Imposing MFN Rates on E-Commerce or Consignment Goods
   Big data analytics can also support customs in applying MFN rates effectively, identifying patterns in imported goods and their recipients. China, for example, uses big data to scrutinize import data and flag cases where businesses attempt to exploit personal exemptions. Indonesia can adopt similar methods by analyzing data across multiple platforms to identify potential misuse of exemptions and ensure proper tariff applications, thus closing loopholes and improving regulation in the CBEC space.

4. Providing Leeway and Facilities for E-Commerce and Personal Shipments
   Big data analytics can be employed to monitor how e-commerce platforms and traders utilize customs facilities, much like the systems used in Japan and Korea. Tracking shipment frequencies and values allows customs to predict when traders may be abusing exemptions or low-value shipment procedures. Advanced algorithms can flag these transactions for further investigation, ensuring a balance between facilitating trade and enforcing regulations, but with Indonesia adopting a more data-driven oversight approach.

5. Utilizing Data Analytics by Risk Engine
   The risk engine proposed for Indonesian customs could be greatly enhanced through big data integration, mirroring China's approach to predictive risk management. By analyzing transaction histories, buyer and seller behaviors, and global trade trends, customs can predict high-risk transactions before they occur. This

system, like those used in Korea, would allow Indonesian customs to proactively identify current risks and anticipate future challenges in CBEC, with machine learning models continuously refining the risk profiles based on updated data.

5. CONCLUSIONS

Over the past decade, online shopping has seen exponential growth, reshaping international trade dynamics. The rise of CBEC has been especially notable in Asia, where countries like China, Japan, and South Korea have emerged as key players. China, in particular, leads in global CBEC exports, supported by government policies that facilitate smoother customs procedures and promote international trade. These developments highlight the region's progress in CBEC, and Indonesia, while growing, faces unique challenges such as undervaluation, incomplete electronic data, and transaction splitting.

This paper identifies and proposes several solutions to address Indonesia's CBEC challenges, including the establishment of a robust monitoring system, the use of personal identification numbers (NIK) as single transaction identifiers, the imposition of Most Favored Nation (MFN) rates, and the integration of data analytics through a risk engine. Implementing these measures would streamline customs operations, improve regulatory compliance, and enhance revenue collection.

By incorporating big data analytics, Indonesia has the potential to transform its customs processes into a more agile, data-driven system, following the successful examples of Japan, Korea, and China. Big data would not only improve risk management and fraud detection but also ensure fair trade practices and support the continued growth of the e-commerce sector. However, this study is limited by its qualitative scope. Future research should explore the quantitative impact of these solutions through field experiments and further evaluate the practical implementation of data-driven customs operations.

To effectively implement the proposed innovations in cross-border e-commerce (CBEC), the Indonesian government must take strategic steps aligned with the findings and conclusions of this paper. First, it is essential to establish a comprehensive monitoring and evaluation system based on big data analytics. A dedicated task force comprising customs officials, technology experts, and policymakers should be formed to oversee the integration of big data analytics and a risk engine capable of analyzing real-time transaction data. Big data will play a crucial role in detecting suspicious transaction patterns, identifying potential undervaluation, and preventing regulatory evasion in CBEC transactions.

Moreover, integrating the NIK (Population Identification Number) into customs procedures will require close collaboration with Dukcapil to ensure seamless data exchange between customs systems and population databases. Big data can help customs build risk profiles based on transaction histories, improving the accuracy of risk assessments and streamlining the verification process. This system should first be pilot-tested in select regions to gather feedback and make adjustments before a nationwide rollout.

Supporting this effort, IT infrastructure upgrades are essential, along with comprehensive training programs for customs officers to ensure they can effectively operate the new systems. By adopting big data-driven technology and a more dynamic risk management approach, Indonesia can modernize its customs operations, improve regulatory compliance, and foster fair trade in the cross-border e-commerce sector.

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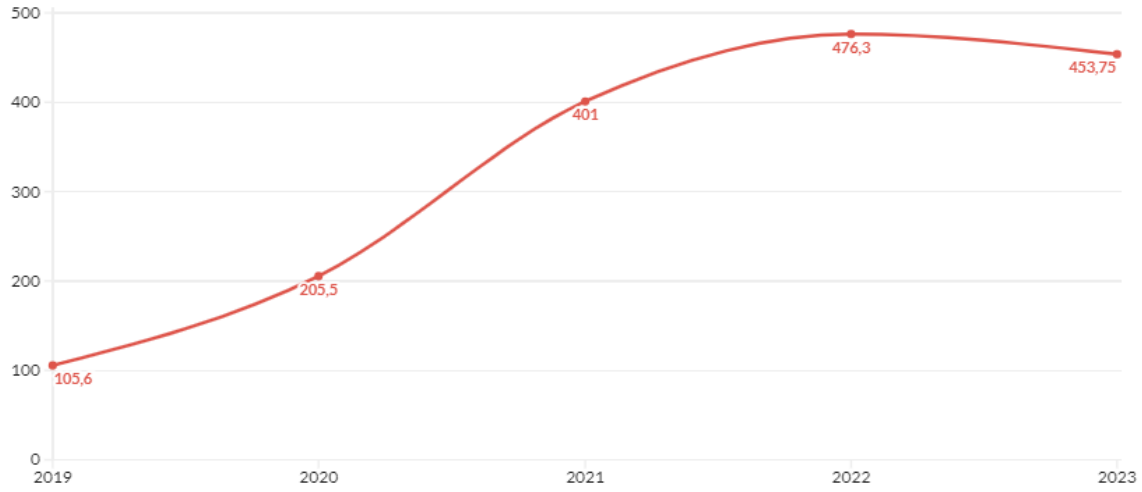
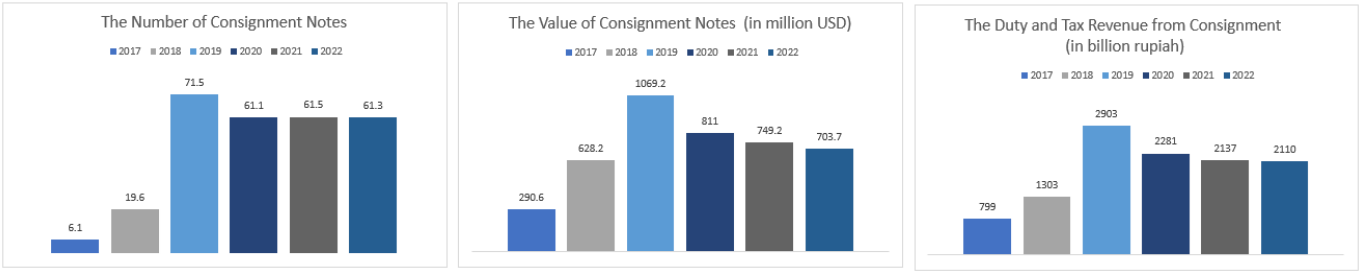
APPENDIX

Figure 1. E-commerce Transaction Value in Indonesia (In Trillion Rupiah)



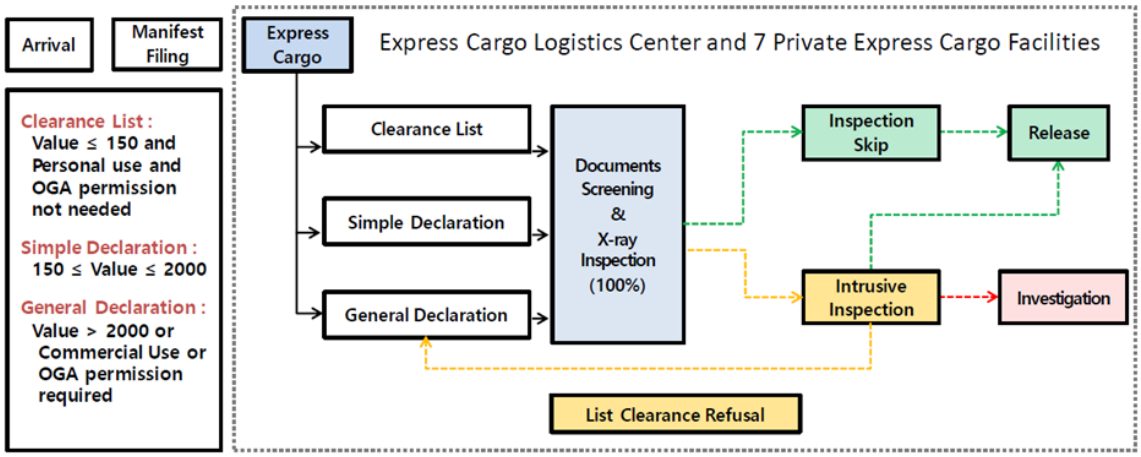
Note: Bank Indonesia as cited in Kharisma (2024)

Figure 3. The Statistic of Consignment



Source: Indonesia Customs (2023)

Figure 5. Process: E-commerce goods delivered by express courier



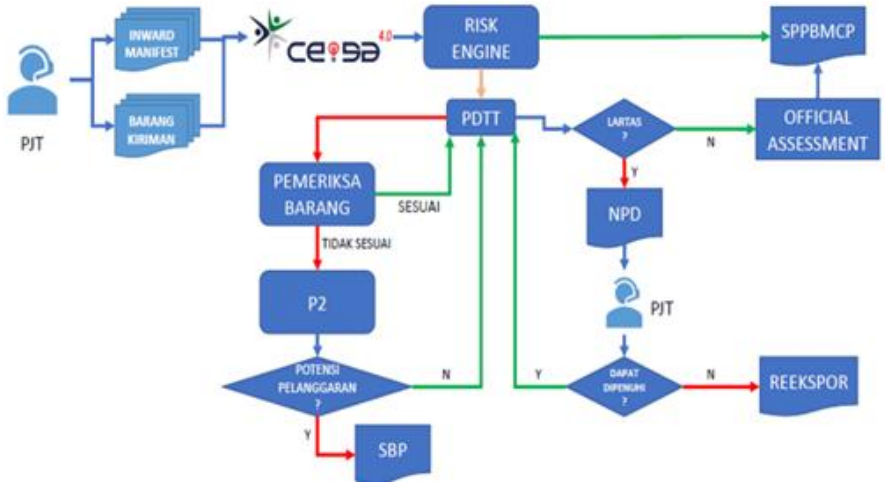
Source: Korea Customs Service (2023)

Figure 6. Korea's export and import value of CBEC in 2022 (in million USD)

As of 2022	Export Customs Declaration				Import Customs Declaration				
	General Declaration	Simplified Declaration	List Clearance		General Declaration			Simplified Declaration (Express Cargo)	List Clearance (Express Cargo)
			Express Cargo	International Postal Item	Express Cargo	General Freight	International Postal Items		
Cases (unit 1,000)	1,219	11,454	30,143	781	31,444	1	4	176	64,500
Value (USD million)	382	404	907	47	2,551	5	6	58	2,116

Source: Korea Customs Service (2023)

Figure 7. Customs Clearance Procedures for CBEC in Indonesia



Source: Ministry of Finance of Republic Indonesia (2023)

Figure 10. Comparison of CBEC Approaches Between Several Countries.Figure

Aspect	Indonesia	Japan	Korea	China
E-commerce Volume	Rapid growth with significant increase in import volumes.	Fourth-largest global market with significant growth attributed to COVID-19.	Significant volume but not the largest globally.	Largest exporter and second-largest importer in the world.
Regulation and Integration	Minister of Finance Regulation No. 96/2023 introduces technological integration for customs procedures.	New regulations in 2023 include detailed import declaration requirements and clarification of importer roles.	Utilizes UNI-PASS system for integrating customs procedures with financial services.	Implements technical and supporting regulations for optimizing CBEC; uses bonded and direct purchase models.
Single Identity Usage	Partners with marketplace providers for e-invoice and e-catalog data exchange, but no explicit single identity system.	No explicit single identity system mentioned; focuses on detailed import declaration and customs procedure agents.	Personal Customs Clearance Code (PCCC) issued for import declarations; does not mention a single identity system.	Extensive use of single identity integration through CBEC platforms; streamlined customs clearance via bonded and direct purchase models.
Customs Clearance Models	Automated clearance with accelerated processes through integrated systems.	De minimis threshold with differentiated procedures for postal items and small package cargo.	Three types of declarations: list clearance, simplified declaration, and general declaration.	Bonded import model and direct purchase import model; data transmission for customs processing.
De Minimis Threshold	USD 3 for customs duty; flat 7.5% duty and 11% VAT for goods exceeding this value.	JPY 10,000 for customs procedures; different rules for postal items and small package cargo.	USD 150 for list clearance; USD 150 to USD 2,000 for simplified declaration; above USD 2,000 for general declaration.	RMB 5,000 per transaction; RMB 26,000 annual limit with comprehensive tax rates applied.
Risk Management and Enforcement	Aims to eliminate illegal customs practices and enhance compliance.	Enforces detailed import procedures to address tax evasion and intellectual property violations.	Risk management criteria for customs clearance with focus on reporting accuracy and tax evasion.	Comprehensive regulations and enhanced public service platforms to support CBEC and address various risks.
Technological Integration	Integration of technology with marketplace providers for data exchange and automatic decision-making.	Revised import procedures with additional information requirements and customs procedure agents.	Integration with financial services through UNI-PASS for accurate transaction values.	Advanced technical and supporting regulations with integrated CBEC platforms for efficient processing.

Source: Author's own