THE DETERMINANT OF CONSIGNMENT GOODS IN CROSS-BORDER E-COMMERCE

Masruri Muchtar♣
Polytechnic of State Finance STAN; Syarif Hidayatullah State Islamic University

Vahri Firmansyah
Directorate General of Customs and Excise, the Republic of Indonesia

Ahmad Rodoni
Syarif Hidayatullah State Islamic University

ABSTRACT

E-commerce has started to dominate imported goods. This situation makes it problematic for domestic industries to compete with foreign products. The Ministry of Finance of the Republic of Indonesia adjusted the de minimis threshold to USD3 from USD75 to anticipate it. The policy is expected to limit imported products and support the sustainability of small and medium enterprises (SMEs). Research related to imports through e-commerce in Indonesia still needs to be completed. This study aims to analyse several variables predicted to affect cross-border e-commerce. This research employs the ordinary least square (OLS) and error correction model (ECM) approach to examine the effect of exchange rates, inflation, income, and discounts on imports from e-commerce. A one-way ANOVA test was used to find the difference in the average imports of the three de minimis groups (USD100, USD75, and USD3). It utilized transaction data obtained from the Lazada e-commerce platform. Lazada was chosen because it is one of the biggest marketplaces in Indonesia. The test result found that discounts significantly affect the short and long-term import value. In addition, lowering de minimis tends to decrease the average import of consignment goods. The result implies that the government should improve regulations to support SMEs as one of the keys to the success of the National Economic Recovery (PEN) from the COVID-19 pandemic.

Keywords: de minimis; e-commerce; error correction model; import; marketplace.

♣ Corresponding author: Polytechnic of State Finance STAN, Address: Jalan Bintaro Utama Sektor V, Bintaro Jaya, Tangerang Selatan, Indonesia; Tel. +62217361653; email: masruri.m@pknstan.ac.id

1. INTRODUCTION

E-commerce has become the new culture of commerce nowadays. There has been a shift in consumer behaviour from offline shopping to online shopping. Using smartphones, consumers can compare the prices of the goods they want and choose the best option. The foremost advantage of e-commerce is that it allows consumers and retailers to interact with each other directly (Scarcella, 2020). At the beginning of 2020, 4.54 billion of the global population had used the Internet at least once, representing a penetration of 59%. Within the group of Internet users, 74% had made an online purchase (We Are Social and Hootsuite, 2021). The online platform is surprisingly dominated by millennials, who contribute 85% of all transactions (Muazam, 2020).

E-commerce transaction value in Indonesia has been increasing yearly, as seen in Figure 1. This increase shows that Indonesians have started to change their shopping behaviour to online shopping. According to Bank Indonesia, the e-commerce transaction value in 2021 reached IDR337 trillion, a 33.2% increase from the previous year (Putri, 2021).

In the early period of the COVID-19 pandemic, transportation and distribution of goods became one of the leading causes of supply chain disturbances and affected product supply (Ivanov, 2020; Linton & Vakil, 2020). However, the restricted mobility caused by the pandemic accelerated digitalization. As such, online shopping platforms grew during the pandemic. The Authority of Financial Services of the Republic of Indonesia (OJK) predicted the growth of e-commerce transactions in Indonesia to be the third biggest, following Turkey and Argentina.

Figure 1: E-commerce Transaction Value in Indonesia (in trillion IDR)

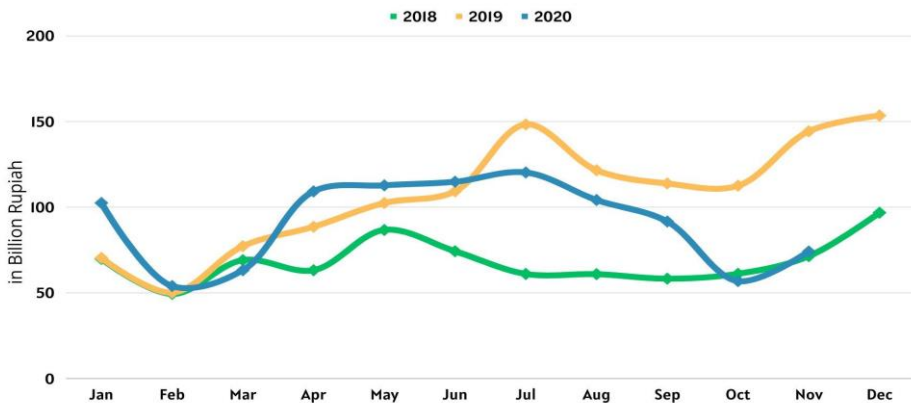*Source*: Adapted from Bank Indonesia (2021).

The presence of online shop platforms might become essential for Small and Medium Enterprises (SMEs) to increase their potential market. On the other hand, it is also an opportunity for foreign enterprises to market their products in Indonesia. It can be observed that e-commerce platforms are starting to be dominated by imported goods in Indonesia (Unggara et al., 2021; Yolandha, 2020). This condition threatens some local industries whose products still need to be able to compete with foreign products. Imported goods in e-commerce mostly enter Indonesia as consignment goods with consignment notes (CN). The increase in the number of CNs is one of the signs of the domination of imported goods in e-commerce. CN in 2019 was 57.92 million, increasing 295.26% or almost triple the previous year (DGCE, 2020).

The Indonesian government recently encouraged society to stop buying foreign products. The Ministry of Finance of the Republic of Indonesia has also lowered the de minimis threshold to normalize the volume of imported consignment goods in e-commerce platforms. Based on the Minister of Finance regulation number 199/PMK.10/2019, the de minimis threshold for imported consignment goods is lowered from USD75 to USD3. Imported goods valued above USD3 are subject to import duty and taxes. Generally, for each imported item, the tariff is about 17.5% (import duty 7.5% and VAT 10%). The de minimis threshold adjustment is also one of the government's efforts to create a level playing field in which businesses are fairly taxed, increasing the nation's income from tax in the e-commerce sector (Scarcella, 2020).

Lazada is one of the online marketplaces which has an international platform. According to a study by the Indonesian E-commerce Association (IdEA), the web traffic of Lazada is one of the biggest among other marketplaces (Mudassir, 2019). All the imported goods in Lazada pass through the Customs and Excise Office of Soekarno Hatta before being distributed throughout Indonesia. Lazada's import value data is the research object of this article. The data is expected to provide an accurate image of the value of imported consignment goods in e-commerce, as seen in Figure 2.

Figure 2: Import Value of Lazada, 2018-2020

Krugman et al. (2018) argue that the inequality of resources between countries is the cause of international trade. The country with a comparative advantage will supply the resource to the countries which need it, causing imports. International trade through e-commerce has a significant impact on the Indonesian economy. Therefore, the government needs to develop effective policies and regulations while considering various factors, including de minimis. A de minimis provides more efficient cross-border clearance than general imports (Holloway & Rae, 2012). It can reduce the charges and accelerate merchandise delivery, benefiting the consumer. The policy of de minimis threshold also may be provided by various countries in many forms and for numerous purposes (Zając et al., 2022).

The exchange rate affects the decision to buy imported goods in e-commerce. A weaker level of the domestic currency tends to make imports more expensive (Nguyen & Do, 2020). The higher the exchange rate or, the weaker the local currency is, the higher the price of the imported goods is, making the customers hesitate to buy. My et al. (2017) also supported this notion, which examines the relationship between short-term and long-term exchange rate fluctuations and the trade balance in Vietnam. They found that the exchange rate has a statistically negative impact on the trade balance. In addition, the fluctuation of the exchange rate has been observed by Iwaisako & Nakata (2017) in Japan's economy and Mao et al. (2019) in the circumstance of China. Estimating the exchange rate's effects on imported goods in e-commerce is remarkable.

National income also affects imports. Import is negatively related to gross domestic product (GDP) growth, and the GDP growth rate is also negatively related to import (Uddin & Khanam, 2017). A developed country would be able to fulfil its needs through imports. Sulaiman et al. (2019) claimed that its GDP affects imports and exports in Egypt. On the contrary, Mishra (2012) argued that there is no relationship between GDP and imports.

Inflation affects the decision to import goods because the higher the price of local goods, the more attractive it is to buy goods from abroad. Inflation is generally caused by increasing needs or market demands. The Turkish economy has been challenged by high inflation for a long time. One of the measures taken by the Turkish monetary authority to reduce the high level of inflation is importing some goods and easing the domestic inflation pressure (Tugcu et al., 2019). There has yet to be any previous study on the effect of these variables on e-commerce imports in Indonesia. COVID-19 has carried about extensive change, particularly the increase in e-commerce worldwide due to the emergence of new shopping and consumption habits (Villa & Monzon, 2021). Discount is generally the moment awaited by the buyers to finalize their transaction. Starting in 2019, Lazada has been offering discounts in a particular period or event, e.g., *Hari Belanja Online Nasional* (Online Shopping), Shop back Shop fest, and Single's day. Dewi & Kusumawati (2018) conducted explanatory research on consumers of Traveloka. The results show that discount significantly affects purchase decision.

The main issue regarding de minimis is the nature of businesses and imports of low-value products because it generates such a challenge, particularly for customs authorities (Scarcella, 2020). Effects of de minimis threshold adjustment on imported consignment goods in Indonesia have been examined. Yusuf (2020) researched the difference in preference to buy imported consignment goods between the de minimis threshold of USD75 and USD3. The results show that the preference for imported goods decreased after implementing PMK 199/PMK.10/2019. In addition, the threshold of USD3 significantly affects the interest in buying imported products in Indonesia (Anggraeni & Lestari, 2021). However, these studies comprised data for all imported

consignment goods. Therefore, it could not explain the increase in imported consignment goods in cross-border e-commerce. It is due to the wide range of consignment goods, from online shopping, sample goods, and personal effects, to gifts from abroad. Muchtar & Romadhoni (2020) also observed consignment goods during the COVID-19 pandemic to determine the appropriate handling strategy. However, it focuses more on the supervision of smuggling attempts of narcotics, psychotropics, and precursors. The results show that the Indonesian customs authority shall apply several alternative strategies, including increasing coordination with related ministries or agencies.

The limitations of previous studies left a gap to be explored in this study, focusing on consignment goods in e-commerce. This study reconstructed the research gap from empirical and methodological aspects. The empirical gap is determined by reviewing previous studies requiring further empirical verification. Evaluation and verification are needed as the research topic was previously unexplored. This study emphasizes consignment goods in e-commerce as complementing the previous studies. A methodological gap is related to the research method used, which differs from previous studies on the same research topic (Müller-Bloch & Kranz, 2014). The research method used in the previous study is paired sample t-test, as it only compared the two periods of de minimis threshold. In contrast, this study used ordinary least square (OLS), error correction model (ECM), and one-way ANOVA test.

The pandemic heavily impacts the national economy. The government needs to develop a suitable policy to mitigate the impact of economic deceleration caused by the pandemic, especially on people's welfare. One of the government initiatives in National Economic Recovery (PEN) is supporting businesses, including SMEs. Other than giving monetary incentives and tax relaxation, there needs to be a safety program so that SME products do not lose to imported products. One of the ways to implement this is to issue regulations concerning the importation of consignment goods. An effective policy implementation might be one of the keys to making the PEN program successful. A deeper understanding of issues concerning imported goods in e-commerce is needed.

The characteristics of imported goods in e-commerce differ from other imported goods in general. One of the differences is that the import value of goods in e-commerce using CN is limited to a maximum of USD1500 in Indonesia. This limitation means that the value of imported consignment goods is far less than that of general, imported goods. Generally, imported consignment goods are only sent in small amounts for personal use. The differences in characteristics mean that research focusing on imported consignment goods in e-commerce might have different results from previous studies focusing on general, imported goods. The pandemic also creates a weird situation that changes shopping behaviour from traditional to online.

This study tries to enrich the literature on imported consignment goods in cross-border e-commerce. The results and analysis are expected to represent the actual condition and are considered by the policymakers when developing the related regulations. The main question is whether the policy to decrease the de minimis threshold effectively decreases the number of imported consignment goods in e-commerce. Successful import regulation might be the key to SME revival, which we know plays a large part in Indonesia's economic growth. Some factors related to imported consignment goods in cross-border e-commerce are exchange rate, inflation, income, discount, and de minimis threshold.

This paper is organized as follows. The study starts with the growing trend of e-commerce transaction value and the emergence of new ways of shopping. It also includes a review of consignment goods literature, including gaps and problems in implementing a particular regulation. Subsequently, it describes the concept of cross-border e-commerce and its related theory. After that, this study describes the research method for data collection and data analysis. The following section presents the findings. Lastly, it concludes with a summary of implications for policymakers and suggestions for future research paths.

2. LITERATURE REVIEW

2.1. *International Trade Theory and E-commerce*

International trade theory helps to understand how resource differences between countries cause trade and how this trade is mutually beneficial. One of the most well-known international trade theories is the Ricardian theory of international trade. The theory states that a country needs to make sure that the local demand for a commodity they have a comparative advantage over another country is met before exporting a particular commodity. Conversely, if the demand is not met, a country should import the commodity from another country with a comparative advantage (Krugman et al., 2018).

Technological developments have made trade open to more than time and place. The Internet is the central infrastructure for facilitating trade. According to Baum (1999), "E-commerce is a dynamic set of technologies, applications, and business processes that link enterprises, consumers, and communities through electronic transactions and exchange of goods, services, and information." Various online shopping platforms connecting international customers and sellers prove that e-commerce thrives. It is the fastest-growing range in the global economy, which shortens the distance between buyers and sellers (Ding et al., 2017). The fast-paced Internet has enormously transported an enormous growth of online shopping users (Okamura, 2006) as well as extended the international commercial market (Hwang et al., 2006; I-Ways, 2003; Muchtar, 2019; Panagariya, 2000; Shewmake & Sapp, 2000).

2.2. *Importation of Consignment Goods*

The Minister of Finance regulates the importation of consignment goods through regulation number 199/PMK.10/2019, effective January 30th, 2020. The de minimis threshold is decreased to USD3 from USD75. This regulation replaces regulation 112/PMK.04/2018, which had a de minimis threshold of USD100. This results in more expensive imported goods as more tax is applied to the price. According to the latest regulation, imported consignment goods have a maximum cost, insurance, and freight (CIF) value of USD1500. This ruling makes consignment goods imports different from general imports. Consignment goods include e-commerce transactions, sample goods, personal effects, and foreign gifts.

2.3. *Exchange Rate*

The exchange rate is one currency's value in exchanging another currency (Nopirin, 1999). In other words, the exchange rate for Indonesia is how much money in Rupiah that another currency

is valued. Factors affecting the exchange rate include fluctuation of import and export commodities, inflation, and return on investment (Sukirno, 2004). By using the Autoregressive Distributed Lag (ARDL) and Error Correction Model (ECM) methods, there is a significant relationship between exchange rate fluctuations and the trade balance (Nguyen & Do, 2020). The trade balance is an important economic factor affecting the competitiveness between countries in international trade. As a result, currency devaluation will add to the trade balance deficit in the short and medium term. It is also found that exchange rate shocks were significant in explaining Japan's export fluctuations in the 1980s, whereas worldwide demand shocks were more likely dominant in the 1990s, particularly in the 2000s (Iwaisako & Nakata, 2017).

2.4.   *Inflation*

Inflation is the overall increase in the price of goods and services (Boediono, 1985). Totonchi (2011) and Nagari & Suharyono (2017) argued that inflation is a tool to describe a country's economy. Inflation causes production costs to increase, increasing the selling price and making the product less competitive in the global market. On the other hand, inflation is also needed at a specific rate as the price increase pushes the producers to increase their production capacity to get higher profits (Mankiw, 2016). Inflation is closely related to the demand for goods and services. Prevailing literature on the relationships between inflation and import has been commonly built around the impression that importing activity causes domestic inflation (Clausen & Kandil, 2009; Gali & Monacelli, 2005; Kara & Nelson, 2003; McCallum & Nelson, 2000). Tugcu et al. (2019) researched to determine the relationship between inflation, imports, and GDP in Turkey for the period 1961-2017 using the cointegration technique. The result is that an increase in imports causes inflation in Turkey. High imports also cause instability in terms of per capita GDP growth.

2.5.   *Per Capita Income*

Per capita income is the average income of a country's population in a specified period. The formula for per capita income is a country's gross domestic product (GDP) divided by its total population. Mankiw (2016) explains that per capita income is the total income generated from producing goods and services. Waluyo (2016) contends that per capita income illustrates national economic activities in a certain period. Sulaiman et al. (2019) use ARDL data analysis to determine the impact of imports and exports on GDP in Egypt. As a result, exports directly correlate with GDP in Egypt, so GDP increases when exports increase. It has been noticed that most countries are growing their economies by enhancing export activities and reducing imports.

2.6.   *Discount*

Cross-border e-commerce is characterized by price dispersion in the same platform (Chen et al., 2020). Discount is a cut in the price of goods and services, usually for a particular reason, such as purchasing a specified amount at a specified period. Kotler & Armstrong (2008) describes a discount as a direct price cut for buying in a specified period. A discount can be described as a price cut for a product for buying in a particular event directly from the seller to the buyer. The discount amount depends on the business's goal and marketing mix. Sellers use numerous promotional offers to lure buyers into e-commerce to make purchases, increase their buying occurrence, and create consumer loyalty (Rocha et al., 2019; Sarkar et al., 2019; Yadav & Rahman, 2018).

2.7. *De Minimis Threshold*

The de minimis threshold is the value threshold for imported goods to be exempt from customs duty and import taxes. It has permissible value restrictions set (Zając et al., 2022). This regulation applies to specified objects: personal, crew, and border crosser belongings and consignment goods up to a specific limit. The regulation of the de minimis threshold may negatively affect tax evasion using under-invoicing and splitting shipment (Holloway & Rae, 2012). Its threshold in a destination country tends to affect the volume of low-value consignments many companies export (Hufbauer et al., 2018). This threshold will likely significantly affect the interest in buying imported products in Indonesia (Anggraeni & Lestari, 2021; Yusuf, 2020). Retailing and wholesaling merchandise create a linkage between retailers and customers. Gong et al. (2019) and Putz Anderson et al. (2020) claim that this sector enormously contributes to the efficient and effective flow of goods due to its scale and employment, significantly affecting the entire economy. Moreover, retail sales and wholesale enterprises, particularly SMEs, tend to be more resilient to economic oscillations and financial uncertainty (Ic et al., 2022).

3. METHODOLOGY

This study uses time series data with the Ordinary Least Square (OLS) model in the long run and the Error Correction Model (ECM) in the short run. ECM is used to identify short-term dynamic relationships between cointegrating variables. The time variation used is the monthly data of each variable. Gujarati (2003) explains that regression analysis is used to study the relationship of one or more independent variables with the dependent variable to estimate the dependent variable's average value based on the independent variables' known value. Parametric statistical analysis using a one-way ANOVA test was also conducted to study the change in imported consignment goods in the 3 phases of de minimis threshold adjustments. One-way ANOVA test tests the relationship between one dependent variable (in metric scale) and one independent variable (in non-metric scale).

Import data of Lazada were taken from the consignment data of the Main Office of Customs and Excise Soekarno Hatta in Customs-Excise Information System and Automation (CEISA) application. Realized import value is cost, insurance, and freight or CIF. The data used are the monthly import total value from 2017-2020. The criteria used in this study in utilizing Lazada are as follows:
   a. Import value within the 3 phases of de minimis threshold adjustments;
   b. The first three months of the e-commerce courier company starting their operation is excluded from the sample;
   c. Data during the pandemic are not separated.
As a result, the sample in this research is 35 data points, i.e., monthly import data from October 2017-August 2020 as the research sample and dependent variable.

3.1.   Operational Definition of Variables

The secondary data in this research were obtained from Bank Indonesia and Statistical Centre Bureau. Data on exchange rates were obtained from the monthly average of Bank Indonesia's middle rate. Similarly, data on the inflation rate were the monthly inflation rate. GDP data were only available in quarter-yearly and yearly periods. Consequently, this study used interpolation to obtain the monthly value. This interpolation was conducted to make the data consistent. Insukindro (1990) adopted the interpolation method, which used an analogy of regression analysis with predictors from the intercept and trend with the best r^2 value. The gradual estimation process is expected to increase prediction accuracy.

The discount variable was divided into months with discount and months without. As such, there is one dummy variable for discount in this model. Lazada offers several discount periods. One of the popular ones is Online Shopping Day. The de minimis variable was divided into three categories: USD100, USD75, and USD3. The variables in this research model can be seen in the Table 1.

Table 1: List of Variables

Variable	Description	Source
IMPORT	Cost, insurance, and freight (CIF) on import	Customs Office (CEISA)
EXCH	The monthly average of Bank Indonesia's middle rate	Bank Indonesia
INFL	The monthly inflation in Indonesia	Statistical Centre Bureau
PCI	The average income of Indonesians	Statistical Centre Bureau
SALE	Months with discount	Official website of Lazada
DM	The value of consignment goods that are exempt from import duty and tax in the context of import	Directorate General of Customs and Excise

Source: processed by authors

3.2. Conceptual Framework

This study included several factors as the objects of research based on previous studies. The conceptual framework can be seen in Figure 3.

Figure 3: Conceptual Framework
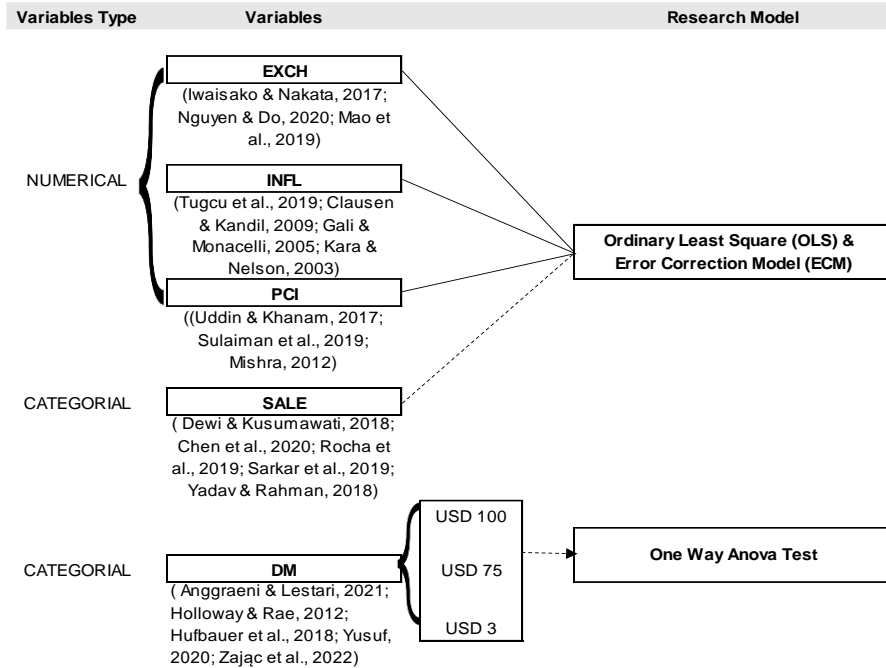
Source: processed by authors

Based on the research design, a model equation can be made using the OLS method to analyse the relationship between the independent and dependent variables in the long run, as follows:

$$\text{LnIMPORT}_t = \beta_0 + \beta_1 \text{LnEXCH}_t + \beta_2 \text{INFL}_t + \beta_3 \text{LnPCI}_t + \beta_4 \text{SALE}_t + \varepsilon_t \qquad (1)$$

While the research model equation in the form of the ECM equation to analyse the relationship between the independent and dependent variables in the short term is as follows:

$$D(\text{LnIMPORT}_t) = \beta_0 + \beta_1 D(\text{LnEXCH}_t) + \beta_2 D(\text{INFL}_t) + \beta_3 D(\text{LnPCI}_t) + \qquad (2)$$
$$\beta_4 D(\text{SALE}_t) + \text{ECT} + \varepsilon_t$$

Description:

LnIMPORT	: Natural logarithm of import;
LnEXCH	: Natural logarithm of a monthly average value of Bank Indonesia middle rate;
INFL	: Monthly inflation rate;
LnPCI	: Natural logarithm of monthly average per capita income;

SALE   : Dummy variable of months offering discounts (included group);

ECT   : Error correction term;

Ln   : Natural logarithm;

β_0 : Constanta;

$\beta_1\dots\beta_4$: Coefficient;

ε : Error

Data modification was conducted so that the resulting regression model estimation is not biased. Import value, exchange rate, and per capita income variables are transformed into natural logarithmic forms (Ln). Inflation was not transformed as the data of this variable are in percentages and might have negative values. As such, the research model is semi-logarithmic.

4. RESULTS AND DISCUSSION

4.1. *Descriptive Statistics*

Table 2 shows the descriptive statistics of all variables used in the regression model. IMPORT variable has a mean of IDR89.383 billion with a standard deviation of IDR29.0497 billion. The minimum and maximum values are IDR49.5 billion and IDR154 billion, respectively. EXCH variable has a mean of IDR14231.79 with a range between IDR13380.36 and IDR15867.43. The mean value of INFL is 2.95%, and the minimum is 1.32%. PCI variable has a mean of IDR4746747.23. The dummy variable DSALE has two categories. A dummy value of 1 (including group) shows months that offer discounts with 6 data points. The de minimis threshold variable has three groups, USD100, USD75, and USD3. There are 11 data import periods using USD100 de minimis, 16 data using USD75, and 8 data using USD3.

Table 2: Descriptive Statistics Analysis

Variables	Min	Max	Mean	Std Deviation
EXCH	13380.36	15867.43	14231.79	541.85
INFL	1.32	3.61	2.95	.53137
PCI	4432022.5	5111579.3	4746747.23	193.400
SALE	0	1	.20	.406
IMPORT	49512872368.12	153554134572.11	8,93832E+14	29042706563.03

Source: processed by authors

4.2. *Stationarity and Cointegration Test*

Stationarity is essential when using time series data. The test was conducted by testing the unit root test on existing variables using the augmented dickey-fuller (ADF) test. The Engle-Granger test carried out the cointegration test. The result is that the independent and dependent variables are stationary at the same level (first difference), and the residual value is stationary at that level. Accordingly, there is cointegration which means there is balance in the long term, and the ECM model is appropriate to use.

Table 3: Unit Root Test

Variables	Augmented Dickey-Fuller	
	Level	First Difference
LnIMPORT	-1.714744	-6.206944**
LnEXCH	-3.139440	-6.108348**
INFL	-0.047935	-4.512199**
LnPCI	-1.783322	-3.471302**
SALE	-3.438908	-7.874008**

Notes: ** represents 5% level of significance

Table 4: ADF Unit Root Test on ECT

		t-statistic	Prob
Augmented Dickey-Fuller test		-3.628191	0.0103**
Test critical value	1% level	-3.639407	
	5 % level	-2.951125	
	10 % level	-2614300	

Notes: ** represents 5% level of significance

4.3.   Classical Assumption Tests

The classical assumption tests carried out were heteroscedasticity, multicollinearity, autocorrelation, and normality test. The heteroscedasticity test was carried out using the Breusch-Pagan-Godfrey. The value of Prob. F of 0.6088 is greater than the significance level, meaning the ECM is free from heteroscedasticity problems.

A multicollinearity test was conducted to check whether there was a linear relationship between the independent variables. This study used the variance inflation factor (VIF). The VIF value for each independent variable is less than 10; therefore, there is no multicollinearity.

The autocorrelation test was performed using the Breusch-Godfrey Serial Correlation LM test. The test results show that the Prob. F of 0.0945 is greater than the significance level, meaning the ECM model is free from autocorrelation problems. The normality test was performed using the Jarque-Berra. The residual probability value is 0.668989, which means it is greater than the significance level; therefore, the data is normally distributed.

Table 5: Results of The Residual Diagnostics

Residual Diagnostics	*Prob.*
Normality Test	0.668989
Breusch-Godfrey Serial Correlation LM Test	0.0945
Heteroscedasticity Test: Breusch-Pagan	0.6088

Source: processed by authors

4.4. Regression Test Results

Table 6 shows the conclusion of the regression results using the OLS method to produce long-term estimates.

Table 6: OLS Test Result

Variable Dependent: LnIMPORT			
Variable	**Coefficient**	**t-Statistic**	**Prob.**
LnEXCH	-0.020701	-0.016470	0.9870
INFL	*-0.218215*	*-2.397881*	*0.2290*
LnPCI	*1.677880*	*1.344375*	*0.1889*
SALE	*0.407211*	*3.122526*	*0.0040*
c	*0.132912*	*0.006522*	*0.9948*
Prob (F-statistic	*0.000753*		

Source: processed by authors

Table 6 can be written as a long-term regression equation as follows:

$$\text{LnIMPORT}_t = 0.13 - 0.02 \text{ LnEXCH}_t - 0.22 \text{ INFL}_t + 1.68 \text{ LnPCI}_t + 0.41 \text{ SALE}_t \tag{3}$$

Furthermore, the ECM method was tested to produce a short-term equation model. In the ECM test results presented in Table 7, the ECT variable shows a probability value of 0.0033, which means it is smaller than the significance level. In addition, the ECT coefficient shows a negative value, so it can be considered that the ECM model is valid and has a balance in the short term.

Table 7: ECM Test Result

Variable Dependent: D(LnIMPORT)			
Variable	**Coefficient**	**t-Statistic**	**Prob.**
D(LnEXCH)	*-1.289868*	*-0.822092*	*0.4180*
D(INFL)	*-0.143004*	*-0.834660*	*0.4110*
D(LnPCI)	*-2.445601*	*-1.247134*	*0.2227*
D(SALE)	*0.404361*	*3.902637*	*0.0005*
ECT (-1)	*-0.576721*	*-3.210413*	*0.0033*
c	*0.016226*	*0.408211*	*0.6862*
R-squared	*0.439124*	*F-statistic*	*4.384389*
Adjusted R-squared	*0.338968*	*Prob(F-statistic)*	*0.004500*

Source: processed by authors

The coefficient values obtained from the regression test are as follows:

$$\text{D(LnIMPORT}_t) = 0.02 - 1.29 \text{ D(LnEXCH}_t) - 0.14 \text{ D(INFL}_t) -2.45 \text{ D(LnPCI}_t) + 0.40 \tag{4}$$
$$\text{D(SALE}_t)-0.58 \text{ ECT}$$

The results show that only SALE has partially significant relationships with the dependent variable with a significance level below α=0.05. The SALE probability value is 0.0040 in the OLS model and 0.0005 in the ECM model. Accordingly, it has a significant effect in the short and long term. Meanwhile, the coefficient of DSALE (0.404) means that the value of imports increases by 40.4 % during discount periods.

4.5. One-way ANOVA Test Results

For the de minimis threshold variable, an additional one-way ANOVA test was conducted to support the analysis and measure the mean differences in import value in 3 phases of de minimis thresholds (USD100, USD75, and USD3). Shapiro Wilk and Levene tests were conducted, and the results show that the data were normal and homogenous, fulfilling the prerequisite for the ANOVA test.

Table 8: Saphiro Wilk and Levene Test

Diagnostics		Prob.
Normality Test: *Shapiro Wilk*	USD 100	.539
	USD 75	.663
	USD 3	.083
Homogeneity Test: Levene Test		.076

Source: processed by authors

The mean difference in imports between the de minimis threshold of USD100 and USD75 is 36.22%. The negative value shows lower imports in the USD100 de minimis threshold. The mean difference in imports between the de minimis threshold of USD100 and USD3 is 24.9%. Similarly, the negative value shows lower imports in the USD100 de minimis threshold. The mean difference in imports between the de minimis threshold of USD75 and USD3 is 11.30%. The positive value shows that the imports are higher in the de minimis threshold of USD75.

Table 9: One-way ANOVA Test

De minimis (i)	De minimis (j)	Mean difference (i-j)	Std. error	Sig.
100	75	-.36224	.10842	006**
100	3	-.24917	.12157	.115
75	3	.11307	.11445	.589

Notes: ** represents 5% level of significance

Based on the hypothesis testing results, the relationships between exchange rate, inflation, income, discount, and de minimis threshold, with imports of consignment goods in cross-border e-commerce are discussed below.

4.6. The Effect of Exchange Rate

The results show that the exchange rate does not significantly affect imports of consignment goods in e-commerce. This finding supports Haile & Pugh (2013), who argued that exchange rates have no significant effect on international trade. However, the result of this study is different from the previous research by My et al. (2017), who claimed that exchange rates significantly affect imports. Imports in online shopping differ from general imports in terms of price and volume.

Based on the Minister of Finance Regulation number199/PMK.10/2019, imports on consignment have a maximum limit of USD1500 in value. It differs from general imports, with higher price

and volume limits; a minuscule exchange rate change has a profound effect. The lower price of imported goods in online shops also makes people ignore the exchange rate. Imported products are usually rare or hard to get from local shops; therefore, buyers must pay attention to the exchange rate. Furthermore, the middle-income population tends to be more consumptive and prioritize prestige.

4.7.   *The Effect of Inflation*

The results show that inflation does not significantly affect imports of consignment goods in e-commerce. This finding is different from Tugcu et al. (2019), but it is in line with Sumantri & Latifah (2020), who claimed that a consumer price index (CPI) has no significant effect on both exports and imports. The increase in market demands or needs generally causes inflation. Accordingly, based on the law of demand, increasing a product's price decreases demand and vice versa (Suparmoko, 2001). Rising prices of domestic goods might cause people to prefer cheaper goods abroad. It causes the consumption of imported goods to increase. However, according to existing data, inflation does not affect the number of imported goods sent from abroad. It can be inferred from the inflation rate, which shows a shallow slope in 2020. In August 2020, Indonesia's inflation rate was as slight as 1.32%. The decline in inflation is predicted due to the falling public consumption during the pandemic. However, at the same time, e-commerce became the uppermost choice for shopping. These phenomena created an anomaly resulting in imports in e-commerce staying at a high level.

4.8.   *The Effect of Per Capita Income*

The results show that per capita income does not significantly affect imports of consignment goods in e-commerce. It was in line with the research conducted by Mishra (2012), which shows no relationship between GDP and imports. In contrast, this finding does not support Sulaiman et al. (2019), who argued that exports directly correlate with GDP. High per capita income causes confidence to increase consumption. In line with this, consumption sourced from goods or services from abroad has also increased. Accordingly, pandemic conditions that are not ideal might affect the research results.

This result is reasonable as the COVID-19 pandemic caused a contraction in national income. Income, which should increase linearly, was disrupted because of economic instability. Per capita income represents the average income of every household. This income is then used for consumption or savings. The pandemic has caused the population to be more cautious in spending as there is no guarantee that this economic turbulence will end. Part of the income is allocated to savings to mitigate unexpected expenses.

4.9.   *The Effect of Discounts*

The results show that discounts significantly and positively affect imports of consignment goods in e-commerce. The regression test results show that the average import value increases significantly during discount periods. Our findings confirm previous research from Dewi &

Kusumawati (2018), Rocha et al. (2019), Sarkar et al. (2019), and Yadav & Rahman (2018), which claims that discounts or any promotional schemes have a significant effect on purchase decisions of online consumers. A coefficient of 0.40 means that the import value increases by 40% during the discount periods. Hence, a discount is an effective marketing strategy to attract consumers. It is promising and profitable for the company in terms of economy and business cycle. On the other hand, the surge in imports during discount periods can threaten the local SMEs. The government needs to mitigate the impact on local businesses.

4.10. The Effect of De Minimis Threshold

The study's results through the one-way ANOVA test showed that only a decrease in de minimis from USD100 to USD75 significantly affected imports. When the de minimis threshold was decreased from USD100 to USD75, the monthly mean import value increased by 36.22%. It is consistent with the results of the ECM regression, where discounts have a positive effect on imported consignments. The import increase occurred during the discount period from 10 October 2018 to 30 January 2020. After that, there was an 11.30% decrease in monthly mean imports after the de minimis threshold was decreased from USD75 to USD3. Although this did not provide significant results, this de minimis decrease significantly reduced the average monthly imports. Previous research supporting this result is Yusuf (2020), who claimed that lowering de minimis tends to decrease the preference for buying imported goods since the enactment of The Minister of Finance regulation number 199/PMK.10/2019.

According to the Ministry of Finance of the Republic of Indonesia (2019), adjusting the de minimis threshold to USD3 for consignment goods is a strategy to accommodate the demands of some local business associations to create a level playing field with fair taxation to protect the local industry. It aligns with Scarcella's (2020) argument that this policy creates a level playing field and protects states' revenue. This new regulation went into effect on 30 January 2020, resulting in a significant decrease in imports in February and March 2020. However, this decrease was inconsistent as in April 2020, when the pandemic impacts started to be felt heavily, the imports increased. It was probably caused by the shift in shopping preference from offline to online during the pandemic. Accordingly, demand also increased and led to increased imports in e-commerce. The import increase during the pandemic might also be caused by closing import access in significant airports and rerouting to Soekarno-Hatta airport. The increase in the average daily shipment of cargo planes indicates this. It increased import volume. De minimis threshold regulations affect different countries differently. Countries with open trade policies, like Singapore and the Philippines, raise their de minimis threshold to be more competitive. Conversely, countries that push for local industry and product consumption lower their threshold, making the imported goods to be taxed and becoming more expensive.

5. CONCLUSION

This study aims to analyse the effect of exchange rates, inflation, income, discounts, and de minimis on the imports of consignment goods. It is found that discounts have significant effects on imports of consignment goods in cross-border e-commerce. The pandemic causes the population to be hesitant when spending for consumption. However, consumption using e-

commerce is maintained even during the pandemic. It is proportional to the imports in e-commerce, which are not severely affected by the pandemic. There is a 40.4% increase in import value during discount periods. When the de minimis threshold was decreased from USD100 to USD75, the monthly mean import value increased by 36.22%. It is consistent with the results of the ECM regression, where discounts have a positive effect on imports. When de minimis fell from USD75 to USD3, there was an actual decrease in imports of 11.30%, even though the regression results were insignificant. From the SME perspective, the import surge threatens their products; therefore, the Indonesian government must mitigate the impacts. A strategy that can be taken is to distinguish the imports in e-commerce from the application for consignment goods and develop a new regulation on the importation process. Indonesia's government shall create a level playing field with fair taxation to protect the local industry, particularly SMEs. A policymaker might implement a parallel mechanism for any identical products to be taxed without applying any discount.

The quantity of data we analysed is relatively small in number since it only used the e-commerce import data from Lazada. Therefore, we suggest that future studies utilize additional data sets that include other marketplaces, as each company has different policies regarding the clearance process of import documents. The result of the research would be more valid if it combined data from several marketplaces using the data panel method. Future research might add more variables, such as reputation and price dispersion, to distinguish plentiful marketplaces. The available data limitation also forced this study to interpolate the GDP from quarter period to monthly. It might affect the accuracy of the result.

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