# THE RESPONSE OF CROSS-BORDER E-COMMERCE MERCHANTS TO *DE MINIMIS* THRESHOLDS IN INDONESIA

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## INFORMASI ARTIKEL

## ABSTRACT:

*In four years, Indonesia has changed the de minimis threshold twice. This study aims to describe on how merchants react to tax regulations, especially international trade taxes, when conducting cross-border e-commerce transactions. By using administrative data on imported documents for shipments for the period 2017-2020, which includes the application period of the three de minimis thresholds of USD 100, USD 75 and USD 3, this study found that in each application period of the De -Minimis a bunching behavior gave threshold for exemption from import duties and taxes related to imports. This study also finds a similar phenomenon at the threshold of low-value shipments around the $1,500 value, where merchants are bunching to use simplified declarations and flat-rate pricing with faster procedures and lower costs.*

**Keywords:** *de minimis Threshold, Low Value Shipment, Bunching, Cross Border E-commerce*

## ABSTRAK:

Dalam kurun waktu empat tahun, Pemerintah Indonesia melakukan perubahan nilai *de minimis threshold* sebanyak dua kali. Penelitian ini bertujuan untuk menganalisis pedagang dalam transaksi *cross border e-commerce* merespon ketentuan perpajakan, khususnya pajak perdagangan internasional. Dengan menggunakan data administratif dokumen impor barang kiriman periode 2017 – 2020 yang mencangkup periode pemberlakuan tiga nilai *de minimis threshold* USD100, USD75 dan USD3, penelitian ini menemukan adanya perilaku bunching pada tiap-tiap periode pemberlakuan *de minimis threshold* untuk mendapatkan pembebasan bea masuk dan pajak dalam rangka impor. Fenomena serupa juga ditemukan pada batasan *low value shipment* di sekitar nilai USD1,500 dimana *bunching* dilakukan agar dapat menggunakan pemberitahuan sederhana dan tarif rata dengan prosedur yang lebih cepat dan biaya lebih rendah.

**Kata Kunci:** *de minimis Threshold, Low Value Shipment, Bunching,* Barang Kiriman

## 1. INTRODUCTION

The growth of international commercial transactions as part of a business-to-consumer system via marketplace platforms (cross-border e-commerce) has increased significantly over the past decade. The global surge in cross-border e-commerce transactions also took place in ASEAN countries. Singapore's cross-border e-commerce transaction value reached US$2.15 billion or 35% of the total e-commerce market share in 2020, and Malaysia's estimated cross-border e-commerce transactions reached US$6 billion or 40% of the total e-commerce market share in 2020 In Indonesia, cross-border e-commerce transactions (imported goods) have increased significantly over the past 5 (five) years, with a trend of 93% per year and 61,075,916 transactions in 2020.

The increase in cross-border e-commerce transactions in Indonesia is the impact of various types of facilitation provided under a trade facilitation agreement. As a member of the World Customs Organization (WCO) and the World Trade Organization (WTO), Indonesia implements facilitation policies, including in the form of the *de minimis* threshold and the low-value consignment threshold. Indonesia set a *de minimis*

threshold of $100 in 2017-2018, which was then lowered to $75 in 2018-2019 and set at $3 in 2020. Transactions with a value below the threshold are not subject to import duties and taxes related to imports. Meanwhile, Indonesia has set the threshold for low-value shipments at $1,500, where transactions with a value below the low-value shipment are adequately reported to customs and excise using a simplified declaration and import tax at a flat rate of 27%.

This study is about understanding how merchants react to the *de minimis* and low-value consignment threshold on cross-border e-commerce transactions. It is important to understand why and how merchants are responding to these policies. The existence of a *de minimis* threshold and a threshold for low-value items creates a discontinuity in the policy. Some researchers in different countries have studied political discontinuity. The discontinuity of policy creates differences in behavior between groups that are below and above the threshold, thereby providing incentives to stay below the threshold. Likewise, the *de minimis* threshold provides an incentive for traders to declare the lower value of goods (undervaluation) in order to obtain an exemption from import duties and taxes related to imports

(World Customs Organization, 2017). The behavior of reporting transaction values below the threshold will disrupt the creation of an efficient economy and sub-optimal government revenues.

Previous research on the phenomenon of responding to policy discontinuities in taxation has still focused on personal income tax and the VAT threshold. In addition, the individual reaction to policy breaks in the context of international trade taxes has not yet been researched. Using the bunching approach, this study will examine whether there are behavioral patterns of buyers or sellers reporting their transaction value below the *de minimis* and low value shipment thresholds for cross-border e-commerce transactions in Indonesia. This study uses administrative data at the level of cross-border e-commerce transactions in Indonesia to describe actual merchant responses to Indonesian tax policies. The data used in three different threshold *de minimis* policy periods can describe three different conditions and the reaction of traders in each period.

## 2. LITERATURE REVIEW

### a. Cross-Border E-commerce in Indonesia

Indonesia introduces the Import Duty and Tax Exemption Facility on Import of Consignment Goods (*de minimis* Threshold / DMT) after enacting Law No. 10 of 1995 on Customs. From 1996 to 2016, Indonesia set the *de minimis* threshold at \$50 per daily shipment. During this time, customs managed the shipments manually. In addition, in 2016, the Indonesian government implemented customs administration reforms for imported shipments or Cross-Border E-commerce (CBE) through Regulation of the Minister of Finance No. 182/PMK.04/2016, including (1) raising the *de minimis* threshold to USD 100 per shipment if underflow of the value of goods not subject to customs and taxation within the framework of importation, (2) creation of a threshold category for low-value shipments up to a value of USD 1,500 with simple customs administration (simplified document) and the introduction of a flat rate of 7.5% import duty, 10 % import income tax and 10% VAT on imports; and (3) creating a category of high-value shipments that are cleared through customs with a general import mechanism (general explanation) and MFN tariffs. During the implementation period of PMK 182/PMK.04/2016, all customs

formalities are processed electronically. To avoid abusive use of the *de minimis* threshold, the government of Indonesia changed the *de minimis* threshold to USD 75 (Ministry of Finance, 2018). It lowered the *de minimis* threshold back to $3 to protect local industry (Ministry of Finance, 2019).

Figure 1. *de minimis* Threshold Period

**b. Bunching Response**

The application of a threshold system in the area of taxation leads to policy discontinuity conditions at the threshold point when tax obligations increase after the threshold point (Kleven, 2016). The difference in tax obligations will encourage individuals to move from above the threshold to below or close to the threshold, known as bunching behavior. First introduced by Saez (2010), uses the bunching approach to demonstrate the existence of an individual response to a particular constraint, particularly related to taxation. Empirical research related to bunching has been extensively conducted in the area of taxation, in particular non-taxable income tax (Kleven, 2016; Saez, 2010a; Tris Fajar et al., undated) and VAT (Anggih et al., 2019; Saputro et al., 2020).

In general, pooling occurs when there is a significant difference in treatment between taxpayers below the threshold and those above the threshold (Anggih et al., 2019). Suppose there is a change in the tax rate above the threshold and individuals do a lot. In this case, there is an accumulation of individuals at the threshold point. Also, there will be a reduction in people around the threshold.

**c. Bunching Response on The Threshold of *de minimis* and Low Value Shipment**

As non-taxable income in the income tax system, the limit on import duty and tax-free import goods (*de minimis* threshold) and the category limit for low-value supplies in the international business tax system leads to policy discontinuities. At the *de minimis* threshold, cross-border e-commerce transactions with a value below the threshold are not subject to import duties and taxes. In contrast, transactions with a value above the threshold are subject to import duties and import taxes at a rate of 27.5%.

There is a difference in the average tax rate below (0%) and above the threshold (27.5%). Meanwhile, cross-border e-commerce transactions with a value below the threshold are subject to simplified

customs administration (simplified document) for low-value shipments. They are subject to a flat rate of 7.5% import duty, 10% import income tax, and 10% import VAT. If the transaction value is exceeded, billing takes place via the general import mechanism (general declaration) and the MFN tariff. The low-value mail threshold increases the difference in marginal tax burden between the under-threshold area (27.5%) and the over-threshold area (MFN).

The response of merchants to cross-border e-commerce transactions to the *de minimis* threshold and the low-value shipment threshold is shown using the bunching approach developed by Saez (2010). Initially, individuals with cross-border e-commerce transactions of $n^*$ will report their imports at the notification value of imported goods $z^*$. Individuals with transactions worth $n^*+dn^*$ will notify them at the notification value of imported goods $z^*+dz^*$ when a threshold (*de minimis* threshold or low-value shipment) is applied at point $z^*$, which causes a difference in the level of tax obligations where the area above $z^*$ is higher. It will result in bunching by individuals previously in the distribution of the value of notification of imported goods $z^*+dz^*$ moving down to the $z^*$ import notification value distribution. In contrast, individuals at the top of the $z^*+dz^*$ import notification value distribution remain at the initial import notification value level. Likewise, individuals located in the distribution of the value of notification of imported goods $z^*$ before the change in the marginal tax rate. When more individuals bunch, the individuals at that level switch to the particular import notification value level that the individual chooses. Thus, there will be excess mass in the distribution of the value of the notification of imported goods at the threshold point (kink point), $z^*$. The increase in distribution in the data distribution diagram shows the bunching.
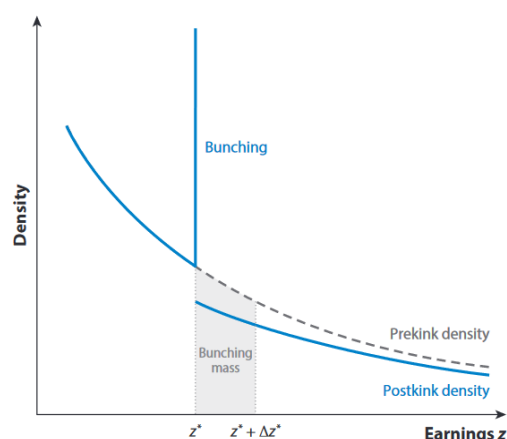


Figure 2. Bunching (Kleven, 2016)

### d. Previous Studies

Research on individual responses to the *de minimis* threshold is still limited. Previous research on the *de minimis*

threshold has focused more on the impact on government revenues (Hintsa et al., 2014; Latipov et al., 2018), costs (Hufbauer & Wong, 2011), and import volumes (Deyanputri, 2020). ). Using a survey approach to member country customs, the WCO (2017) finds that the *de minimis* threshold encourages sellers and buyers to report the lower value of goods (undervaluation) in order to claim exemption from import duties and taxes related to imports receive. Consistent with this, other studies also say that the *de minimis* threshold will increase individual tax non-compliance with sub-accounting practices, but this is not empirically proven (Holloway & Rae, 2012; Pope et al., 2014).

## 3. METHODOLOGY

### a. Data

The cross-border e-commerce import data used in this study is import data through a goods delivery mechanism based on import customs document data (simplified and general explanation) set by customs and excise officials. The data from the Ministry of Finance covers the years 2017 to 2020. This year's election was due to differences in the application of the exemption limit for levying import duties and import taxes on imported

shipments (*de minimis* threshold). A *de minimis* threshold of $100 applied in 2017, which was changed to $75 in 2018 and $3 in 2020. In addition, all import declarations for shipments have been created electronically and centrally in one system since 2017.

### b. Research Method

This study uses the bunching method to determine merchant behavior patterns in cross-border e-commerce transactions around the threshold: de-minimis and low-value shipments. Previous research has used this bunching method, mainly in the context of bunching in taxation (Anggih et al., 2019; Chetty et al., 2011; Kleven, 2016; Saez, 2010b; Saputro et al., 2020; Tris Fajar et al .). The empirical testing of bunching in this article uses the program bund_count developed by Chetty (2011).

The approach in the bunching method is to compare the distribution of data around the threshold range based on existing data with a good pattern based on estimates becoming counterfactual. In estimating the counterfactual, this study installed a polynomial equation by excluding data in the region of the clustering window assumed to be affected by this threshold. Grouping the data into groups of width w, the estimated

polynomial regression is obtained as follows:

$$C_j = \sum_{i=0}^{q} \beta_i \cdot (s_j)^i + \sum_{i=s_l}^{s_u} \gamma_i \cdot 1\,[s_j = 1] + \varepsilon_j$$

Where $c_j$ is the number of cross-border e-commerce transactions on bin j, $s_j$ is the median value for each bin, $q$ is the polynomial order, $s_l$, and $s_u$ are the upper and lower limits of the excluded area. while $\gamma_i$ for the interceptor of each affected bin. The estimated coefficients can estimate the counterfactual value of the notification of the goods. Furthermore, this study excluded data in the affected area to eliminate interference around the threshold.

$$\hat{C_J} = \sum_{i=0}^{q} \hat{B_l} \cdot (s_j)^i$$

$$\hat{B_n} = \sum_{s_l}^{s} C_j - \hat{C_J} \lor$$

$$\hat{H_n} = \sum_{s}^{s_u} \hat{C_J} - C_j \lor$$

The excess bunching mass to the left of the threshold $(B_n)$ and the missing mass to the right $(H_n)$ are obtained by comparing the counterfactual density with the observed density. This study uses the assumption that bundle mass = missing mass because, although the lower bound is easily obtained from the observations, the upper bound, which is scattered, is

difficult to determine (Chetty et al., 2011). Thus the empirical estimate of b is the excess mass around the threshold relative to the average density by the counterfactual results.

## 4. ANALYSIS AND DISCUSSION
### a. Descriptive

This study uses administrative data from the Ministry of Finance of the Republic of Indonesia as import data through a consignment mechanism performed by individual consignees and legal entities from 2017 to 2020. As shown in Figure 3, the number of imported cross-border e-commerce transactions increased by 29% year-on-year in the first two years of the $100 *de minimis* threshold period. However, the upward trend (year-on-year) began to decline when the *de minimis* threshold was set at $75 in 2019, falling 7%. In 2020 the *de minimis* threshold was set at $3, which decreased by 25%. Lowering the *de minimis* threshold seems successful in controlling the increase in import cross-border e-commerce.

Figure 3 shows the number of cross-border e-commerce transactions grouped by import declaration value. Group divided into two groups, namely groups of transactions with a value above the applicable de-minimis threshold and

groups with a value less than the de-minimis threshold. In 2017 2018, when Indonesia enforced the *de minimis* threshold to USD 100, buyers were informed that transactions below the *de minimis* threshold accounted for no less than 80% of the total transactions. In the aftermath of $75 in 2019, more than 75% of transactions valued up to $75 were reported. While more than 25% of total cross-border e-commerce transactions valued up to $3 were reported in 2020, the applicable minimum is below the minimum. The result may indicate that the majority of imported cross-border e-commerce goods entering Indonesia are worth less than $100 and 25% are worth up to $3. There is also an incentive for buyers or sellers to report the lower value of their goods below the *de minimis* threshold in order to obtain import duty and tax exemption upon importation.
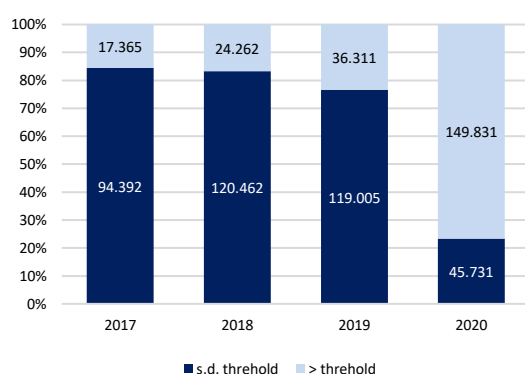


Figure 3. Number of CBE transactions, based on the reporting value in DMT group.

### b. Bunching Response on *de minimis* Threshold

This study uses bunching analysis to determine the transaction value reporting pattern in the implementation of the *de minimis* threshold in imported cross-border e-commerce transactions. This study uses the value range of the $1 transaction value group relative to the *de minimis* threshold with the lower group of -24 to the upper group of 24 in the implementation period of the US$100 and US$75 *de minimis* thresholds. The lower group -2 to the upper group of 24 in the implementation period of the $3 *de minimis* threshold. The blue line shows the actual distribution of cross-border e-commerce transactions around the applicable *de minimis* threshold, the dotted red line shows the applicable *de minimis* threshold, and the solid red line shows the counterfactual distribution. The data distribution plot uses a polynomial of order 5 based on the selection of the polynomial order with the lowest standard error (Anggih et al., 2019).
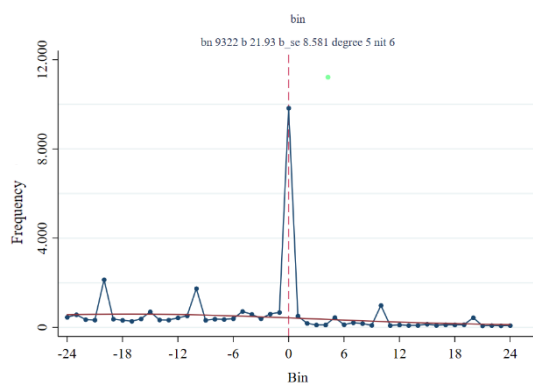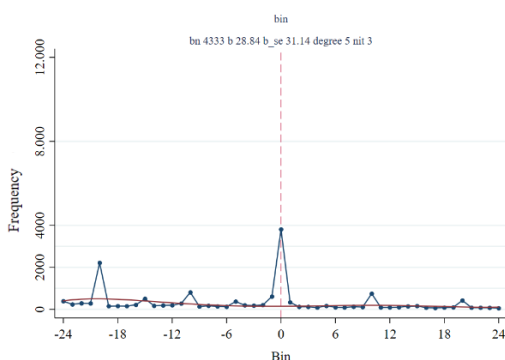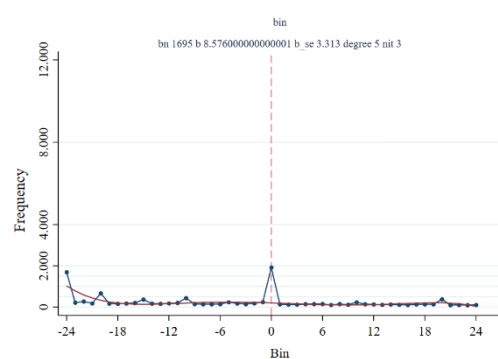
Figure 4. Distribution of CBE transactions on USD100 DMT period (Bin 0 = USD100)



(A)



(B)

Figure 5. Distribution of CBE transactions on USD75 DMT period (A) and USD3 period (B) (Bin 0 = USD100)

Figure 4 shows a distribution phenomenon at the transaction value of $100, the threshold for implementing the *de minimis* threshold of $100 in 2017 2018. The result shows that many cross-border e-commerce transactions were reported in this period with a value of 100 USD, which was the cap for providing import duty and import tax exemption opportunities for cross-border e-commerce transactions. The high number of $100 transactions shows 2 (two) things. First, the large number of transactions at USD 100 does not only come from transactions at USD 100 itself. The result is supported by Figure 5, which shows that in the period after the USD 100 *de minimis* threshold is no longer enforced (period October 2018, January 2020 and period January 2020, December 2020), transactions worth $100 are still quite large, ranging from 2,000 to 4,000 transactions. But not as big as during the implementation period of the USD 100 *de minimis* threshold, up to 10,000 transactions. Second, the large number of transactions at the $100 mark also stem from transactions valued well above the notified threshold, which is lowered to a *de minimis* threshold to avoid imposing an import tax of 27.5%.
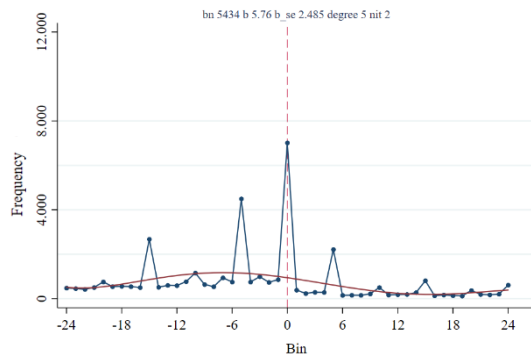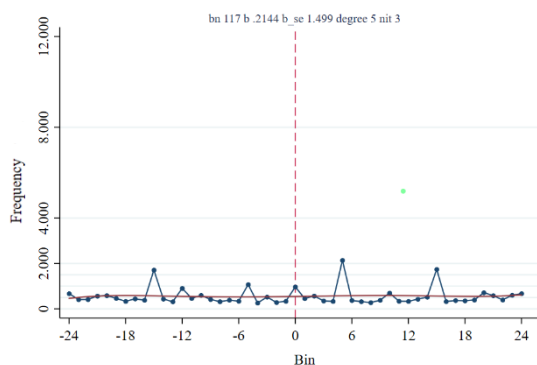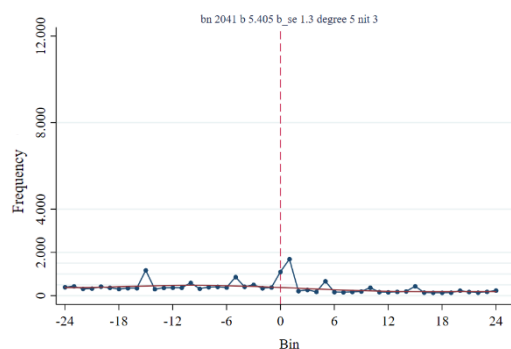
Figure 6. Distribution of CBE transactions on USD75 DMT period (Bin 0 = USD75)



(A)



(B)

Figure 7. Distribution of CBE transactions on USD100 DMT period (A) and USD3 period (B) (Bin 0 = USD75)

The same happened also in the USD 75 *de minimis* threshold, where during the USD 75 *de minimis* threshold implementation period in 2018 2019, there was a phenomenon of accumulation of the number of transactions at the USD 75 value, as shown in Figure 6. The implementation of the *de minimis* threshold of USD 75 did not lead to an accumulation of transactions worth USD 75. Also, there was no reduction in the number of transactions above the threshold as shown in Figure 7(A). Figure 7(B) shows the same. In 2020, during the *de minimis* period, the threshold dropped to $3. As with the phenomenon during the introduction of the $100 *de minimis* threshold, this phenomenon indicates attempts by buyers or sellers to report the value of imported cross-border e-commerce goods that should be above the threshold equal to or below the threshold . This measure aims to avoid the imposition of import duties on imported goods above a threshold of USD 75 at a rate of 7.5% of the customs value and an import tax of 20%. In addition, Figure 7 shows that transactions with values up to the threshold have a higher trend than above. After the threshold point, there is a downtrend bounce.
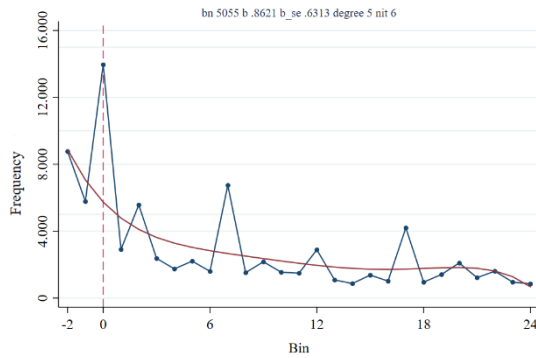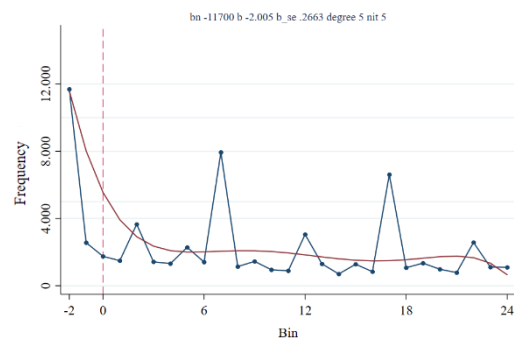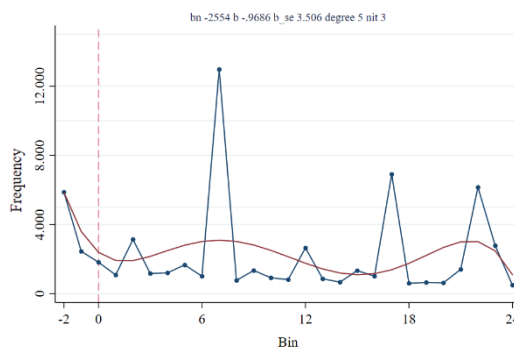
Figure 8. Distribution of CBE
transactions on USD3 DMT period
(Bin 0 = USD3)



(A)



(B)

Figure 9. Distribution of CBE
transactions on USD100 DMT period (A)
and USD75 period (B) (Bin 0 = USD3)

Figure 8 and Figure 9 show the distribution pattern of cross-border e-commerce transactions during the implementation period of the USD 3 *de*

*minimis* threshold. The bunching phenomenon also occurred during this time. Not unlike the introduction of the $100 and $75 *de minimis* thresholds. In 2020, when the threshold is at the $3 level, the transaction distribution will be accumulated at the $3 threshold. However, before Indonesia enforced the $3 *de minimis* threshold in 2020, there was no backlog at $3. From bin -2 to bin 1 in Figure 9, a downward trend is plotted, in contrast to Figure 8, where a surge occurs at bin 0 or the *de minimis* threshold point, indicating a build-up of transactions at that point. Although Indonesia has set the *de minimis* threshold at a low level, bunching activity is still occurring, with reported transactions worth USD 3 reaching 14,000 transactions within a year, in contrast to transactions in the previous period, which averaged no more than 1,000 transactions per year was worth USD3.

Table 1. Bunching Estimation

| Threshold | Period | Obs | Obs. around bunching | b (Excess mass) | Bunching estimator |
|---|---|---|---|---|---|
| USD100 | When Applicable | 28,131 | 12,298 | 9.322 | 21.93 (8.581) |
| | After (75) | 15,855 | 5,084 | 4.333 | 28.84 (31.14) |
| | After (3) | 11,929 | 1,695 | 1.695 | 8.57 (3.313) |
| USD75 | When Applicable | 37,236 | 8,264 | 5.434 | 5.76 (2.485) |
| | Before | 27,234 | 1,757 | 117 | 0.21 (1.409) |
| | After | 18,283 | 3,174 | 2.041 | 5.40 (1.3) |
| USD3 | When Applicable | 78,961 | 22,648 | 5.055 | 0.8621 (0.63) |
| | Before | 62,701 | 5,803 | -11.700 | -2.005 (0.2663) |
| | After | 62,397 | 5,356 | -2.554 | -0.9686 (3.506) |

Nine thousand three hundred and twenty-two transactions demonstrated bunching below the $100 threshold with a bunching estimator of 21.93 during the implementation period of the $100 *de minimis* threshold, as shown in Table 1. In the USD 100 *de minimis* threshold period, the bunching estimator is more significant than in the USD 75 *de minimis* threshold period of 5.76 and in the USD 75 *de minimis* threshold period of 0.8621. The results imply that the lower the *de minimis* threshold, the smaller the bunching estimator and the lower the bunching activity. It shows that the incentive obtained by bunching during the maximum *de minimis* threshold period of US$100 and US$75 avoids imposing a 27.5% import duty. This incentive is far greater than those achieved by bunching during the minimum *de minimis* threshold period. Transactions under $3 will still be subject to 10% VAT, while transactions under $3 will only avoid him being subject to 7.5% import duty. Additionally, notifying a superficial level (less than $3) of a transaction value for a particular product is risky for the buyer or seller as it increases the likelihood of being caught in violation.

The bunching phenomenon at the applicable threshold *de minimis* value only occurs in each period of the *de minimis* threshold application. That is shown by the bunching estimator, which is not significantly different from 0, indicating no bunching in the period before or after. Evidence also supports this, as shown in Table 4.1 and Graph 4.8. During the implementation period of the USD100 *de minimis* threshold, the number of transactions around the value of USD100 reached 12,298 transactions. Subsequently, it decreased by 60-80% to 4,333 and 1,685 transactions during the USD75 and USD3 DMT implementation period. At a value of USD 75, the number of transactions around this value in the period before setting USD75 as the *de minimis* threshold was 1,757 transactions, then increased by 470% to 8,264 transactions when it was set to the de minimus threshold and decreased 70% to 3,174 transactions when the de minimus threshold was at the USD3 level. Likewise, at a low value of USD3, the number of transactions around USD3 in the de minimus period of USD100 and USD75 was in the range of 5,356 – 5,803 transactions but increased by almost 400% to 22,648 transactions when USD3 was set as the *de minimis* threshold. Additionally, before and after setting the *de minimis* threshold, the number of transactions

reported at the minimum threshold ($3) was significantly higher than the maximum threshold ($75 and 100).

Bunching activity not only occurs at threshold points, but also shows value points well below the threshold. Figure 10 (A) and (B) show that many cross-border e-commerce transactions during the *de minimis* period of $100 and $75 have a value of $50, which equals $50. In addition, Figure 10 (C) shows that reported transactions valued at $50 represent only 20% of previous periods. The result shows that during the $100 and $75 *de minimis* threshold period, many buyers or sellers declare the value of their goods as $50 in addition to the applicable threshold, which is still below the threshold applicable during that period. In contrast, in the *de minimis* period of the USD 3 threshold, only a few transactions were reported at this value, since the reporting of transaction values of USD 50 no longer provided incentives in the form of an exemption from import duties and taxes for imports. Reporting of $3 transaction values increased during this period as at that value there were still incentives not to be subject to import duties, albeit not as large as in previous periods.
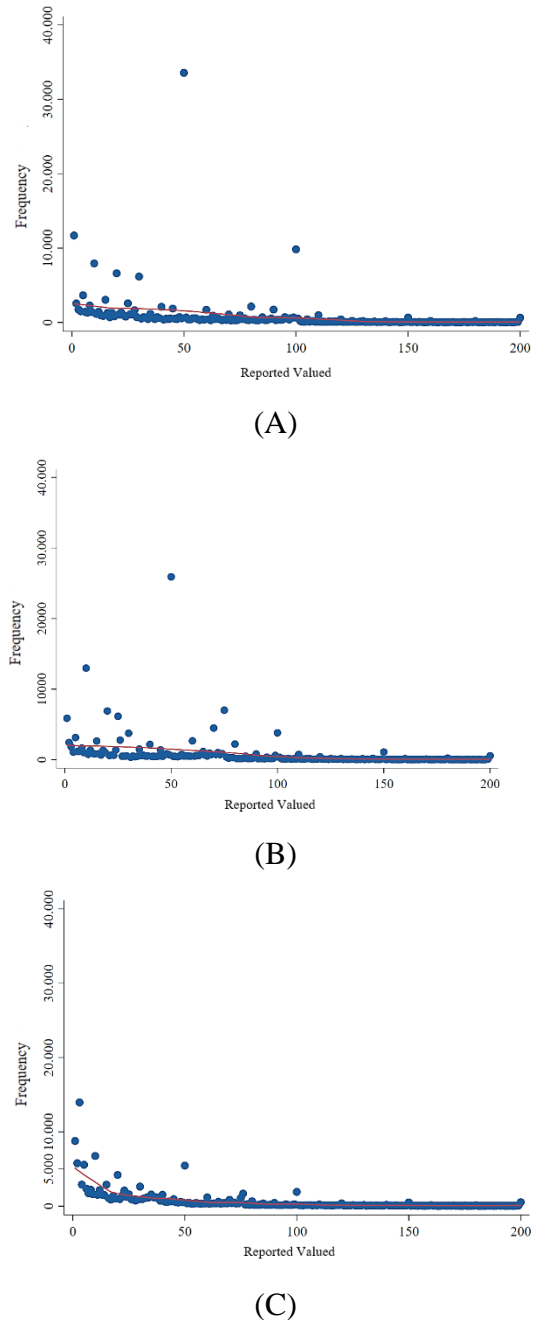


(A)

(B)

(C)

Figure 10. Distribution of CBE transactions on DMT period of USD100(A), USD75 (B), and USD3 (C)

Findings related to pooling activity around the *de minimis* threshold support research by Holloway & Rae (2012) and the World Customs Organization (2017). The result provides empirical evidence

that the application of a value limit to cross-border e-commerce transactions granted an import duty and tax exemption upon import leads to tax non-compliance by understating the value of the goods. This study demonstrates a bunching phenomenon at the *de minimis* threshold that was in effect in each period of application of the *de minimis* threshold. Namely the threshold of $100 in 2017-2018, $75 in 2018-2020 and $3 in 2020. Bunching activity also took place at the threshold and is estimated to be well below the threshold. When the threshold changes, the accumulated transactions at the old threshold point no longer exist. Buyers or sellers underreporting the value of goods below the actual value (underreporting) to stay at or below the threshold to avoid collection of import duties and taxes related to imports at an effective rate of 17.5% - 27.5% to be avoided and exempted from import duties and taxes within the framework of the import.

### c. Bunching Response on Low Value Shipment Threshold

Bunching analysis at the inferiority threshold uses a group value range of $10 relative to the threshold with the lower group of -50 to the upper group of 50 in each implementation period of the *de minimis* threshold with bin 0 at the threshold point of $1,500. In addition, due to limited data availability, the analysis in this section uses only cross-border e-commerce transaction data conducted by individuals excluding legal entities.
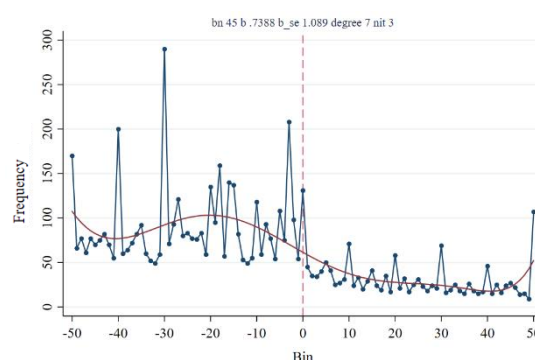


Figure 11. Distribution of CBE transactions around USD1,500 (Bin 0 = USD1,500)

The bunching phenomenon occurs from 2017 to 2020 around the low value shipment threshold of $1,500. Figure 11 shows the clustering phenomenon by the accumulation of transactions to the left of the threshold point (excess mass) and the fewest number of transactions to the right, below the counterfactual line. Import activities are below the threshold to use simplified documents. In addition, they imposed flat-rate tariffs of 7.5% import duty, 10% import income tax and 10% import sales tax on all types of goods. The bunching result suggests some steps to avoid customs clearance with the general

import mechanism (general customs declaration), which can result in fines if there are errors in declaring the value of goods and charging different MFN duties for each item. During this period, 45 transactions showed bunching below the $75 threshold with a bunching estimator of 0.7388. The bunching estimate is less than the bunching estimator at the *de minimis* threshold. The result shows that the difference in the marginal tax burden at the low-value transfer threshold compared to the difference in the average tax burden at the *de minimis* threshold provides little incentive for pooling.

In addition, the analysis uses data for each implementation period of the *de minimis* threshold. In this case, the result shows nothing else. Transactions pile up at the $1,500 threshold. The level of the low-value shipment threshold and the tax limit burden from 2017 to 2020 remain unchanged.
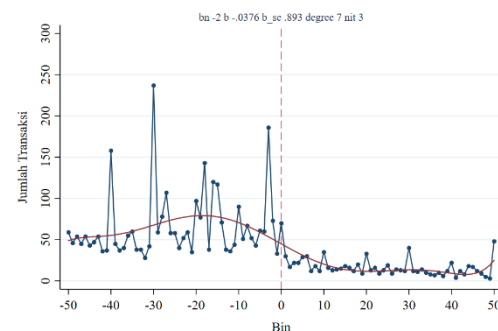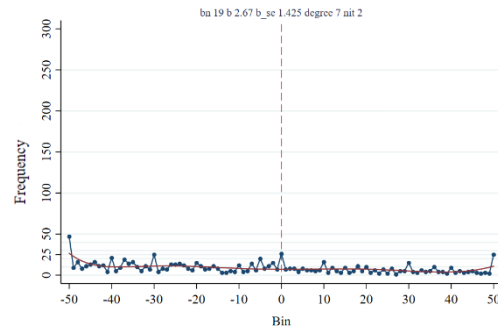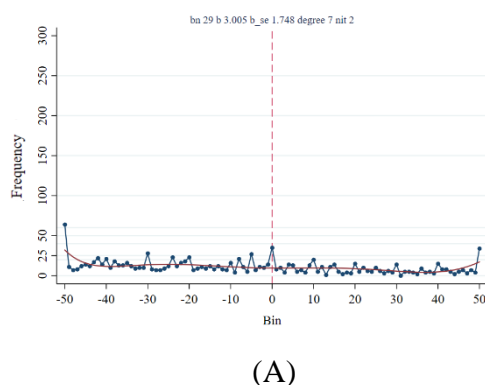


(B)



(C)

Figure 12. Distribution of CBE transactions on DMT period of USD100(A), USD75 (B), and USD3 (C)

The fascinating thing is seen in the USD3 threshold *de minimis* implementation period, where the average transaction around the threshold is higher than in the previous period. The average number of transactions during the implementation of the $3 *de minimis* threshold (Figure 12 C) is more than 100 transactions, while the average number of transactions during the implementation of the $100 and $75 *de minimis* thresholds ( Figure 12 A and B) is in the range of 20-25 transactions. The result is contrary to the conditions shown in Figure 10. Between USD 0 and USD 200 reported



(A)

values, 30,000 transactions with a value of USD 50 were reported during the USD 100 *de minimis* threshold enforcement period. There are more than 20,000 reported transactions valued at $50 during the $75 de-minimis enforcement period.

Meanwhile, the implementation period for the *de minimis* threshold of USD 3 is only 5,000 transactions. If we look at these contrasting patterns, the above two conditions may be related as shown in Figure 3. When the *de minimis* threshold is high, buyers reported most cross-border e-commerce transactions below the *de minimis* threshold. In contrast, cross-border e-commerce transactions are reported at a low *de minimis* threshold, only to spread at values above the threshold.

## 5. CONCLUSION

Merchants in cross-border e-commerce transactions respond to the introduction of the *de minimis* threshold by pooling the value of imported cross-border e-commerce goods with a value below the *de minimis* threshold. The bunching phenomenon occurs in each period of implementation of the threshold *de minimis*: the USD 100 threshold (2017-2018), the USD 75 threshold (2018-2020) and the USD 3 threshold (2020). When the

threshold changes, there is no longer any bunching at the old threshold point. Traders report the value of goods that is lower than the actual value (underreporting) in order to stay at or below the threshold to collect import duties and taxes related to imports at an effective rate of 17.5% - 27.5 % to avoid and obtain exemption from import duties and taxes within the scope of importation. A similar pattern of behavior is also evident around the $1,500 threshold for low value shipments. Merchants bundle to avoid customs formalities with the general importation mechanism (general declaration), which can be punished with fines for misdeclaring the value of goods and collecting MFN duties, which vary according to the type of goods.

## 6. IMPLICATION AND LIMITATION

This research has implications in several aspects. First the academic aspect, namely the next researcher can examine the characteristics of buyers or sellers who bunch. Second, the policy aspect of determining the optimal de-minimis threshold may be required, considering that the de-minimis threshold has changed three times. In addition, it is strongly recommended to detect the existence of

the same pattern (bunching) on the overall threshold, to recommend regular assessment of the impact of the threshold and increased risk mitigation by the customs authority as a preventive measure. Third, the management aspect, namely, bunching behavior related to cross-border e-commerce transactions is a form of tax evasion, so avoiding bunching behavior is strongly recommended.

Limitations in this study include not using cross-border e-commerce transaction data from legal entities in the bunching analysis at values around the insignificance threshold. Also, the characteristics of traders who perform bunching due to limited data availability must be considered.

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