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# Determinants of Indonesia's Intra-Industry Trade of Cosmetic Commodity (HS Code 3304) with Trade Partners Of APEC-4 Countries

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**ABSTRACT**

**Intra-Industrial Trade has increased in recent years followed by the trend of cosmetic commodities starting to dominate there is a diverse diversification of cosmetic commodities, countries that are members of one integration carry out intra-industry trade due to reduced barriers. This study aims to determine the level of integration of Intra-Industrial trade and trading partners in cosmetic commodities, especially those integrating in APEC, whether GDP per capita, exchange rate, and economic distance affect exports and imports between Indonesia and trading partners simultaneously or partially in terms of the level of integration through the IIT Index. Using panel data analysis secondary data from the 2015-2019 time series. Data obtained from databases including UN Comtrade, BI, BPS, World Bank and other databases with keywords Intra-Industry Trade (IIT), determinants, GDP per capita, exchange rates, economic distance, cosmetics. The results of research with the Fixed Effect Model model show that GDP Per Capita, distance and exchange rate have a positive and significant effect on IIT.**

**Keywords:** Intra-Industry Trade, Cosmetics, GDP Per capita, Exchange Rate, Economic Distance.

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## I. Introduction

APEC (Asia Pacific Economic Cooperation) is an organization as a form of cooperation of 21 economies within the Asia-Pacific region. APEC seeks to realize trade liberalization and minimize trade barriers in accordance with the Bogor goals of 1994 (Wilandari, 2017). As part of the APEC member, one of Indonesia's top priorities is to encourage achieving sustainable growth with equity, including strengthening the role of MSMEs and women in the economy. The growing industry trend in Indonesian MSMEs is the cosmetics industry. The development of Indonesia's exports for cosmetic commodities to four APEC countries, namely Malaysia, Phillippine, Rep of Korea and Thailand is shown by Fig 1 during the 2015-2019 period.

Fig 1 shows that the number of Indonesia's exports fluctuates every year. Thailand is the main export share with an export value of $ 29,806,050 in 2015, increasing to 32 million dollars until 2018 and slightly decreasing in 2019 at $ 28,785,737. Furthermore, there is Malaysia which is the share of Exports of Indonesian cosmetic commodities, in recent years Malaysia's exports of cosmetic commodities have continued to increase, starting from 2017, PT. Paragon Technology and Innovation as a cosmetics manufacturer in charge of various trademarks, one of which is Wardah, has just exported six cosmetic containers worth IDR 22.9 billion to Malaysia.

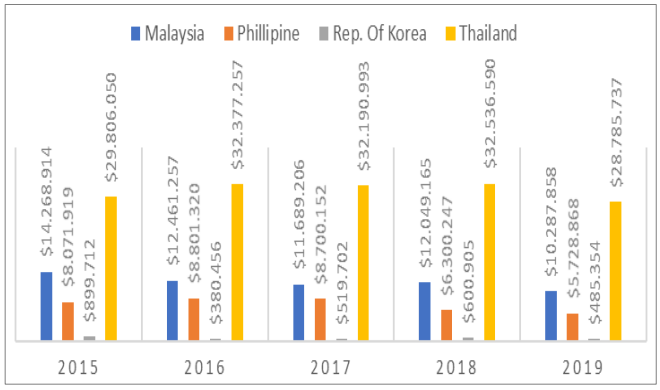


Fig. 1. Indonesian exports with partner countries in 2015-2019.
Sources: United Nation Comtrade Database (2021)

The inclusion of one of the brands named Wardah which has a Tagline as halal cosmetics, can be one of the reasons for the increasing export of cosmetics to Malaysia, this has added value to the share of cosmetic commodity exports in Indonesia to Malaysia.

Today's international trade does not only have trading patterns as described in the Heckser-Ohlin (H-O) comparative trade theory. Along with the times, two-way trade also developed where in trade for the same goods has caused many reactions, this became the forerunner to the emergence of a new trade theory known as Intra-Industry Trade (Bato, 2014). Indonesia has carried out intra-industry trade patterns as evidenced by export and import transactions, especially in cosmetic commodities in 4 destination countries that are also APEC members. Indonesia's imports of cosmetic

commodities are relatively large, with a population of more than 250 million, therefore, Indonesia is also a market share for other countries, especially countries that are integrated into free trade members where there are fewer barriers to trade.

According to data on Indonesian cosmetic imports at United Nation Comtrade Database (2021), the importing countries that are members of APEC are dominated by Thailand and in the last two years Korea has outperformed the share of cosmetic imports in Indonesia, that Korean imports continued to increase until in 2019 it reached $38,470.034 million dollars. This can be due to the excellent quality and supported by qualified technology, but with the Intra-Industry Trade pattern, distance variables, exchange rates, gross domestic product to gross domestic product per capita can affect. In this study, from all economic entities that are members of APEC, 4 countries are taken, namely Malaysia, the Philippines, Rep. Of Korea, Thailand, because they are some of Indonesia's largest export shares in the last 5 years, especially the statement from the Ministry of Trade stating that Malaysia, the Philippines, Thailand are the share of Indonesia's cosmetic exports (Indonesia Ministry of Trade, 2019)

Through the Intra-Industry Trade that occurs between Indonesia and the five APEC economies, we can see the integration that occurs in the Pacific Ocean Rim Region or Asia Pacific. With the integration of APEC, it should be able to have a good impact in increasing trade between Indonesia and the four APEC member economies, because these four economies are included in the main share of the cosmetic commodity export market or actually reduce the level of trade in cosmetic commodities. Based on the problems above, the objectives of this study are: 1) to determine the degree of integration of intra-industry trade for Indonesian cosmetic commodities with trading partners of APEC countries; and 2) to determine the effect of per capita gross domestic product, exchange rate and distance on intra-industrial trade for Indonesian cosmetic commodities with trading partners of five countries that are members of APEC.

## II. Literature Review

### A. *International Trade Theory*

International trade is the trade in goods and services of two or more countries with the aim of making a profit. This trade occurs when there is demand and supply on the international market (Christianto, 2013). Salvatore (2014) mentions several theories of international trade as follow: First, Mercantilism theory which believes that countries benefit from international trade only at the expense of other countries. As a result, they advocate import restrictions, incentives for exports, and strict government regulation of all economic activity. Second, Absolute Advantage Theory from Adam Smith, where both countries will benefit by each specializing in the production of commodities that have absolute advantages and exchanging results with other countries for commodities that have absolute weaknesses.

Third, the theory of comparative advantage by David Ricardo, where a less efficient country should specialize in the production and export of commodities that have a smaller absolute disadvantage (this will be a commodity that is a comparative advantage) and import commodities that have a greater absolute disadvantage. (this will be a commodity with a comparative disadvantage). Fourth, the H-O theory by Heckscher - Ohlin, with the underlying concept of the pattern of international trade and the influence of international trade on the prices of factors of production in two countries. Fifth, Krugman's theory that import protection is export promotion. In this case, the implementation of intervention in the form of protection by limiting imports will cause sales to increase. The elimination of competition from foreign companies will cause the price of goods to increase (to the detriment of consumers), but a decrease in the Marginal Cost of domestic companies is beneficial to producers.

### B. *Exchange Rate Theory*

According to Salvatore (2014) a country's trade exchange rate is defined as the ratio of the price of an export commodity to the price of an imported commodity. In determining the value of foreign currencies, the state needs to determine the exchange rate, so that the foreign exchange rate can be defined as the value of a unit of foreign exchange when exchanged for domestic currency. The determination of foreign exchange is distinguished by two systems, namely: Fixed exchange rate, which means that the central bank sets the price of the foreign currency and the price is not changed for a long period of time. Flexible exchange rates are foreign currency values determined on the basis of changes in demand and supply in the foreign exchange market every day.

### C. *Intra Industry Trading*

Intra Industry Trading is the simultaneous import and export of commodities classified in the same industry or product group. Intra-industrial trade is characteristic of industrialized countries (high-income countries) with a lower average market share of intra-industrial trade for developing countries (low-income countries). Measurement of the size or level or volume of intensity of the degree of international trade integration in this study was carried out by calculating the intra-industry index (IIT Index) value of cosmetic commodities that had been determined based on the four-digit HS code. The most common way to calculate the most frequently used intra industry trade index (IIT Index) is through the Glubel-Lloyd Index (G-L Index). The results of this measurement show that the index to be measured is related to any trade flows between Indonesia and its trading partner countries. The resulting Intra-Industry Trade value is used as an indicator of integration determined based on the vulnerable classification of intra-industry trade index values.

In this study, the variables used were almost the same as the previous research of Kurniawan & Setyari (2018), Ito & Umemoto (2004), Pitaloka (2019). To have a high intra-industrial trade value if the IIT Index value is above 50, but if the IIT Index is below 50, it can be said that the country and its partner countries have a low intra-industrial trade value, but the GL-Index analysis has the disadvantage that it is static, but the advantages of intra-industrial trade itself are very many, it can create a comparative advantage because of the market that produced quite large, so that consumers will also benefit from the increasing variety of choices even with the same type.

TABEL I: INTRA-INDUSTRY TRADE VALUE CLASSIFICATION

| IIT Value | Classification |
|---|---|
| 0,00 | One way trade (no integration) |
| 0,00-24,99 | Weak Integration |
| 25,00-49,99 | Mild Integration |
| 50,00-74,99 | Moderately Integration |
| 75,00-99,99 | Strongly Integration |

### *D. Gravity Model Theory*

Analysis of factors affecting exports was carried out by gravity model method. Gravity models adapt from Newton's law, that is, the attraction or gravitational attraction of two objects is proportional to their mass and inversely proportional to their distance (Yuniarti, 2007).

### *E. Relationship Between Variables*

Gross domestic product per capita is the result of dividing the national income of a country by the total population of that country. If the income distribution of a country is high, the level of demand for an item will also be higher because of their ability to meet needs. This will increase the integration of intra-industry trade, even though the products are the same but have various diversification. This result is in accordance with the research conducted by Kurniawan & Setyari (2018) which states that the Gross Domestic Product per capita partially has a significant effect on the degree of integration of intra-industrial trade of Indonesian cosmetic commodities with ASEAN-5 trading partners. Yuniarti (2007) found that the GDP of exporting and importing countries has a positive relationship on bilateral intra-industrial trade relations, the greater the production capacity, the greater the export value, while the importer's GDP measures the absorption capacity.

Economic distance has a negative effect, because the farther the economic distance between countries from their geographically far enough location, the higher transportation costs will be. Then if the kinship distance is too far, the economy will also be far away in import and export. It is strengthened by research from Raharti *2013) that distance has a probability t-statistic which is smaller than the 5% significance level with a negative coefficient value. Rahman and Astriana (2015) stated that distance (DIST) caused a negative and significant relationship to the index.

The exchange rate has an influence in a positive direction, with every increase in the exchange rate the intra-industry value index will increase, as according to Setyawati *2018) that the exchange rate has a positive and significant effect on intra-industry trade in Indonesia. This means that changes (increases) in exchange rates will increase intra-industry trade or empirically imply that dollar depreciation will increase the share of IIT. Reinforced by research by Bahari (2015) that the average GDP per capita, and the exchange rate of trading partner countries have a positive effect on intra-industrial trade in the Indonesian agricultural sector.

### *F. Hypothesis*

i. Production, international rice prices, and foreign exchange reserves simultaneously have a significant effect on the Variable Gross domestic product per capita, Exchange rate in USD, Economic distance has a significant effect on the degree of integration of Indonesia's intra-industrial trade with APEC 4-economic trading partners (Malaysia, Philippines, Rep Of Korea, Thailand) in 2015-2019.
ii. It is suspected that the difference in Gross Domestic Product per capita between countries has a positive effect on Indonesia's intra-industrial trade in cosmetic commodities
iii. It is suspected that the economic exchange rate between countries has a positive effect on Indonesia's intra-industrial trade in cosmetic commodities.
iv. It is suspected that the economic distance between countries has a negative effect on Indonesia's intra-industrial trade in cosmetic commodities

## III. METHODOLOGY

This study explains the effect of economic distance between countries, gross domestic product per capita, and exchange rate on the level of intra-industry trade. This research was conducted covering the territory of Indonesia and the APEC (Asia-Pacific Economic Organization) region, such as: Malaysia, Philippines, Rep of Korea, and Thailand. Intra-industry trading (Y) in this study is shown by the value of the intra-industry trade index using the Grubel-Llyod Index calculation. The intra-industry trade index value is between 0 and 100 and the value of the index has 4 classifications. The value of the intra-industry trade index will be one-way trade if it is worth 0. Conversely, if the intra-industry trade index value is closer to the value of 100, the greater the role of intra-industrial trade. The variable difference in GDP per capita (X1) is the amount of the average income of the population in a country. The difference in gross domestic product per capita shows the absolute difference in economic levels between countries. Exchange rate (X2), measurement using the exchange rate using the transaction rate presented by BI through the calculation of the middle value of the results of the selling rate and the buying rate. The economic distance (X3) in this study uses the economic distance between Indonesia with the export share country (j), uses km, which uses the distance between the capital of the country of Indonesia and the capital of the country *j*. This study used secondary data obtain from World Bank, UN Comtrade, Central Bureau of Statistics, Bank Indonesia. This study uses panel data, which is a combination of cross section and time series data so that data analysis uses panel data regression analysis techniques.

## IV. RESULTS AND DISCUSSION

### *A. Overview of Indonesia's IIT (Intra Industry Trade) with Trading Partner Countries*

The results of the IIT Index identification for cosmetic commodities in 2015-2019, in general the Intra-Industry Trade that occurs is quite weak, in other words the Indonesian cosmetic industry with trading partners of APEC member countries is quite integrated. In general, the intra-industry trade of cosmetic commodities between Indonesia and trading partners Malaysia and Thailand is at the strongest level, while the intra-industrial trade of cosmetic commodities between Indonesia and trading partners the Philippines and Rep. Of Korea is at a weak to moderate level.

The degree of integration of Indonesia's cosmetic trade with Thailand shows the IIT index with the highest value occurring in 2019 MONTH February of 98.22 which indicates the occurrence of Powerful integrations for cosmetic commodities. This condition will be greatly influenced by trade activities between the two countries, the comparison between the value of exports and imports is large.

The degree of integration of Indonesia's cosmetic trade with Malaysia shows the IIT index with the highest value occurring in 2018 MONTH February of 98.82 which indicates the occurrence of integration in cosmetic commodities. This condition can be influenced by trade activities between two countries, the comparison between the value of exports and imports is very large.

The degree of integration shown by the Rep. Of Korea, the dominant integration created is weak, this can happen because of the distance in km which is the element of calculating the economic size on the X3 variable, also in the Philippines, where the integration is still relatively weak.

### *B. Panel Data Analysis Results*

Based on the results of the regression with the Common Effect Model (CEM) it is known that the Constant value is -134.9153 with a probability of 0.0000. The Adjusted R2 value is 0.466988, which means that the Intra Industry Trade Index (IITI) variation is influenced by GDP per capita, the exchange rate and the economic distance is 46.69% and the remaining 53.31% is influenced by other factors not included in this study. Then the test continued with the Fixed Effect Model test.

Based on the regression results with Fixed Effect Model (FEM) in Table II, it is known that the constant value is -131.7652 with a probability of 0.0000. The value of Adjusted R2 is 0, 480707, which means that the Intra Industry Trade Index (IITI) variation is influenced by GDP per capita, exchange rate and economic distance by 48% and the remaining 52% is influenced by other factors not included in this study. This study used the Fixed Effect Model.

TABLE II: FIXED EFFECT MODEL REGRESSION RESULTS

| Variable | Coefficient | Std. Error | t-Statistic | Prob. |
|---|---|---|---|---|
| C | -131.7652 | 26.51951 | -4.968614 | 0.0000 |
| LNX1_GDPPERKAPITA | 6.636598 | 2.301160 | 2.884023 | 0.0043 |
| LNX2_NILAITUKAR | 13.71441 | 0.988534 | 13.87348 | 0.0000 |
| LNX3_JARAK | 6.403169 | 1.399052 | 4.576791 | 0.0000 |
| Effects Specification | | | | |
| Cross-section fixed (dummy variables) | | | | |
| R-squared | 0.493744 | Mean dependent var | | 45.16354 |
| Adjusted R-squared | 0.480707 | S.D. dependent var | | 33.50804 |
| F-statistic | 37.87353 | Durbin-Watson stat | | 1.013456 |
| Prob(F-statistic) | 0.000000 | - | - | - |

### *C. Classic Assumption Test*

Multicollinearity test was conducted to determine whether there is a high or perfect correlation in the regression model between the independent variables. A good regression model should not have a correlation between the independent variables. Based on the results of the multicollinearity test, it is known that the correlation value between independent variables (GDP per capita, exchange rate and economic distance) is less than 0.80, which means that there is no multicollinearity problem between independent variables in the regression model.

Heteroscedasticity test was carried out to test whether in the regression model there was an inequality of variance from the residuals of one observation to another observation. The test results obtained a significance value above 0.05 so that there were no symptoms of heteroscedasticity in this study.

The normality test aims to test whether in the regression model, the confounding or residual variables have a normal distribution or not. The test was carried out using the Jarque-Bera test (J-B) and the probability value. The results of the normality test obtained a probability value of 0.173972 > 0.05. Thus, it can be concluded that the data is normally distributed.

### *D. Hypothesis Test Results*

Based on Table III, the results obtained from the F test show that the F value is 37.87353 and the probability value is 0.0000 which is smaller than the 0.05 significance (0.0000 < 0.05). This means that GDP per capita, exchange rate and economic distance simultaneously affect the Intra Industry Trade Index (IITI). Reinforced by the adjusted R2 value of 0.480707, meaning that 48.07% of the Intra Industry Trade Index (IITI) variation is influenced by GDP per capita, exchange rates and economic distance by 48.07% and the remaining 51.93% is influenced by other factors not included in this study.

The GDP per capita variable (X1) has a t-count value of 2.884023 and the probability value of GDP per capita is 0.0043 < alpha 0.05. This partially means that the GDP per capita variable has an effect on the Intra Industry Trade Index (IITI). Thus, for every increase in the GDP per capita variable, the Intra Industry Trade Index (IITI) variable will decrease.

The exchange rate difference variable (X2) has a t value of 13,87348 and the probability value of the difference in the exchange rate is 0.0000 < alpha 0.05. This partially means that the variable exchange rate differences have an effect on the Intra Industry Trade Index (IITI). Thus, for every increase in the exchange rate difference variable, the Intra Industry Trade Index (IITI) variable will also increase.

The economic distance variable (X3) has a t-count value of 4.576791 and the probability value of the difference in exchange rates is 0.0000 < alpha 0.05. This partially means that the economic distance variable has an effect on the Intra Industry Trade Index (IITI). Thus, for every increase in the economic distance variable, the Intra Industry Trade Index (IITI) variable will also increase.

TABLE III: HYPOTHESIS TEST RESULTS

| Variable | Coefficient | Std. Error | t-Statistic | Prob. |
|---|---|---|---|---|
| C | -131.7652 | 26.51951 | -4.968614 | 0.0000 |
| LNX1_GDPPERKAPITA | 6.636598 | 2.301160 | 2.884023 | 0.0043 |
| LNX2_NILAITUKAR | 13.71441 | 0.988534 | 13.87348 | 0.0000 |
| LNX3_JARAK | 6.403169 | 1.399052 | 4.576791 | 0.0000 |
| Effects Specification | | | | |
| Cross-section fixed (dummy variables) | | | | |
| R-squared | 0.493744 | Mean dependent var | | 45.16354 |
| Adjusted R-squared | 0.480707 | S.D. dependent var | | 33.50804 |
| S.E. of regression | 24.14656 | Akaike info criterion | | 9.234894 |
| Sum squared resid | 135852.1 | Schwarz criterion | | 9.336412 |
| Log likelihood | -1101.187 | Hannan-Quinn criter. | | 9.275798 |
| F-statistic | 37.87353 | Durbin-Watson stat | | 1.013456 |
| Prob(F-statistic) | 0.000000 | - | - | - |
| Dependent Variable: Y | | | | |
| Method: Panel Least Squares | | | | |

Source: Research Data, 2021

### E. The Effect of GDP Per Capita on Intra-Industrial Trade

The results of this study indicate that the GDP per capita variable has a positive and significant effect on intra-industrial trade in Indonesia. The coefficient of GDP per capita is 6.636698. This means that a 1% change in GDP per capita will increase intra-industry trade by 6.636698. This is in line with Kurniawan and Setyari (2018) who states that the Gross Domestic Product per capita partially has a significant effect on the degree of integration of intra-industrial trade of Indonesian cosmetic commodities with ASEAN-5 trading partners. Yuniarti (2007) also finds that the GDP of exporting and importing countries has a positive relationship on bilateral intra-industrial trade relations, the greater the production capacity, the greater the export value, while the importer's GDP measures absorption capacity.

### F. The Effect of Exchange Rate Differences on Intra-Industrial Trade

The results of this study indicate that the exchange rate has a positive and significant effect on intra-industrial trade in Indonesia. The results show that the exchange rate coefficient is 13.71441 which means that changes (increases) in the exchange rate will increase intra-industry trade or empirically implies that dollar depreciation will increase the share of IIT, as seen in transactions at Bank Indonesia.

### G. The Effect of Economic Distance on Intra-Industrial Trade

The results of this study indicate that economic distance has a positive and significant effect on intra-industrial trade in Indonesia. The result of the research shows that the DISTANCE coefficient is 6.403169 which means that a change (increase) in economic distance will increase intra-industry trade. In terms of economic theory, increasing distance will cause a decrease in trade transactions between countries. However, not all countries will pay attention to distance if the importing country requires the commodity in question. It is undeniable that the need for trade transactions between countries does not only pay attention to the value of profits and market expansion, but also looks at the political needs between countries and the flexibility of each trading country. The results of this study are supported by research by Octaviani (2017) that it is not always the long distance between the exporting country and the importing country that will cause a decrease in trade transactions. Distance has a positive effect on this research because they are in the same integration area which is very likely to reduce trade barriers.

### H. Implication of Research Results

The results of this study indicate that the GDP per capita variable has a positive and significant effect on the Intra Industry Trade Index (IITI). Therefore, the difference in GDP per capita can be used as a benchmark in carrying out exports and imports even in the same commodity because it creates diverse diversification.

The results of this study indicate that the variable exchange rate differences have a positive and significant effect on the Intra Industry Trade Index (IITI). Therefore, efforts are needed so that the exchange rate of the domestic currency against foreign exchange rates does not weaken, because an increase in the exchange rate will increase exports and imports. Thus, Indonesia's intra-industrial trade will increase so that more and more people's needs will be available.

The results of this study indicate that the economic distance variable has a positive and significant effect on the Intra Industry Trade Index (IITI). Therefore, countries need to increase product differentiation in order to increase exports and imports because distance is not an obstacle to conducting international trade transactions. With this product differentiation, it will increase consumer choice in fulfilling their needs.

## V. Conclusion

Based on the results of the analysis, the following conclusions can be drawn. Simultaneous test results show that the probability value is smaller than alpha 0.05, which means that GDP per capita, exchange rate, and distance have an effect on the Intra-Industry Trade Index (IITI) in 2015-2019. The GDP per capita variable has a positive and significant effect. This means partially that the GDP per capita variable has an effect on intra-industry trade, every increase in gdp per capita will increase the value of the intra-industry trade index. The variable of the difference in the exchange rate has a positive effect, as indicated by the coefficient of the variable of the exchange rate which is positive, which means that if the exchange rate increases, the intra-industry trade (IITI) variable will also increase. The economic distance variable partially affects the intra industry trade index (IITI), every increase in the economic distance variable, the economic distance variable will also increase. The results of this test show that the integration of APEC (Asia Pacific Economic Cooperation) between Indonesia and 4 trading partners of cosmetic commodities is quite integrated because some of them show moderate or even weak integration, but some show that they are very strong, this allows for two-way trade in cosmetic commodities, which of course will create product differentiation in the percentage of the test results from other factors. Other than the variables studied, there are many other influencing factors. The cause can be the culture or the lifestyle reference of each individual that affects the demand for a product in a country. Thus, APEC can be a place to promote imports and exports due to reduced trade barriers that may be created from transportation costs, taxes and others.

For the government, GDP per capita, exchange rate and distance between Indonesia and trading partners of cosmetic commodities that are members of APEC can be a reference for taking policies or steps in conducting two-way international trade so that international trade between countries can be carried out optimally and provide benefits. the greater one. For exporting and importing countries, GDP Per Capita can be taken into consideration when carrying out exports and imports because the difference in GDP per capita between countries can create more diverse product variations and greater demand. The exchange rate and distance can also be a reference for exporters and importers to consider because they will affect transportation costs. For further research, it is expected to be able to extend the research period and use more variables, or different organizations in this study in order to obtain results that are close to the previous conditions.

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## APPENDIX

TABLE IV: VALUE OF *INDONESIA'S INTRA-INDUSTRY TRADE INDEX* WITH TRADING PARTNERS APEC-4 ECONOMIES IN 2015-2019 IN 2015

| | Month | IIT | Classification |
|---|---|---|---|
| Reporter: Indonesia Partner: Malaysia | January | 44.93 | Medium integration |
| | February | 89.27 | Powerful integrations |
| | March | 87.16 | Powerful integrations |
| | April | 71.31 | Integrations are a bit powerful |
| | May | 34.06 | Medium integration |
| | June | 53.36 | Integrations are a bit powerful |
| | July | 62.20 | Integrations are a bit powerful |
| | August | 53.37 | Integrations are a bit powerful |
| | September | 49.02 | Medium integration |
| | October | 89.60 | Powerful integrations |
| | November | 31.46 | Medium integration |
| | December | 89.60 | Powerful integrations |
| Reporter: Indonesia Partner: Philippines | January | 29.77 | Medium integration |
| | February | 17.77 | Weak integration |
| | March | 38.91 | Medium integration |
| | April | 4.61 | Weak integration |
| | May | 16.43 | Weak integration |
| | June | 0.48 | Weak integration |
| | July | 3.43 | Weak integration |
| | August | 0.36 | Weak integration |
| | September | 4.72 | Weak integration |
| | October | 7.03 | Weak integration |
| | November | 20.13 | Weak integration |
| | December | 25.38 | Medium integration |
| Reporter: Indonesia Partner: Rep of Korea | January | 26.00 | Medium integration |
| | February | 72.63 | Integrations are a bit powerful |
| | March | 51.05 | Integrations are a bit powerful |
| | April | 41.56 | Medium integration |
| | May | 37.84 | Medium integration |
| | June | 20.62 | Weak integration |
| | July | 18.31 | Weak integration |
| | August | 3.06 | Weak integration |
| | September | 2.34 | Weak integration |
| | October | 2.93 | Weak integration |
| | November | 6.48 | Weak integration |
| | December | 65.25 | Integrations are a bit powerful |
| Reporter: Indonesia Partner: Thailand | January | 92.12 | Powerful integrations |
| | February | 97.09 | Powerful integrations |
| | March | 63.49 | Integrations are a bit powerful |
| | April | 61.07 | Integrations are a bit powerful |
| | May | 92.30 | Powerful integrations |
| | June | 95.30 | Powerful integrations |
| | July | 46.97 | Medium integration |
| | August | 86.07 | Powerful integrations |
| | September | 50.39 | Medium integration |
| | October | 73.95 | Integrations are a bit powerful |
| | November | 59.89 | Medium integration |
| | December | 77.51 | Powerful integrations |

TABLE V: VALUE OF *INDONESIA'S INTRA-INDUSTRY TRADE INDEX* WITH TRADING PARTNERS APEC-4 ECONOMIES IN 2015-2019 IN 2016

| | Month | IIT | Classification |
|---|---|---|---|
| Reporter: Indonesia Partner: Malaysia | January | 63.77 | Medium integration |
| | February | 29.29 | Weak integration |
| | March | 98.00 | Powerful integrations |
| | April | 83.07 | Powerful integrations |
| | May | 96.20 | Powerful integrations |
| | June | 90.63 | Powerful integrations |
| | July | 17.11 | Weak integration |
| | August | 46.79 | Medium integration |
| | September | 43.58 | Medium integration |
| | October | 60.27 | Integrations are a bit powerful |
| | November | 47.15 | Medium integration |
| | December | 21.76 | Weak integration |
| Reporter: Indonesia Partner: Philippines | January | 22.67 | Medium integration |
| | February | 2.62 | Weak integration |
| | March | 5.14 | Weak integration |
| | April | 25.94 | Weak integration |
| | May | 37.12 | Weak integration |

| | Month | IIT | Classification |
|---|---|---|---|
| | June | 19.67 | Weak integration |
| | July | 16.83 | Weak integration |
| | August | 9.67 | Weak integration |
| | September | 12.32 | Weak integration |
| | October | 11.74 | Weak integration |
| | November | 2.45 | Weak integration |
| | December | 19.28 | Medium integration |
| | January | 87.86 | Powerful integrations |
| | February | 54.90 | Integrations are a bit powerful |
| | March | 57.56 | Integrations are a bit powerful |
| | April | 58.83 | Integrations are a bit powerful |
| | May | 85.86 | Powerful integrations |
| Reporter: Indonesia | June | 56.41 | Integrations are a bit powerful |
| Partner: Thailand | July | 69.47 | Integrations are a bit powerful |
| | August | 57.12 | Integrations are a bit powerful |
| | September | 72.67 | Integrations are a bit powerful |
| | October | 85.88 | Powerful integrations |
| | November | 80.52 | Powerful integrations |
| | December | 88.72 | Powerful integrations |
| | January | 14.92 | Weak integration |
| | February | 83.19 | Powerful integrations |
| | March | 17.50 | Weak integration |
| | April | 5.66 | Weak integration |
| | May | 11.62 | Weak integration |
| Reporter: Indonesia | June | 20.42 | Weak integration |
| Partner: Rep of Korea | July | 6.90 | Weak integration |
| | August | 3.71 | Weak integration |
| | September | 1.97 | Weak integration |
| | October | 1.97 | Weak integration |
| | November | 3.51 | Weak integration |
| | December | 2.81 | Medium integration |

TABLE VI: VALUE OF *INDONESIA'S INTRA-INDUSTRY TRADE INDEX* WITH TRADING PARTNERS APEC-4 ECONOMIES IN 2015-2019 IN 2017

| | Month | IIT | Classification |
|---|---|---|---|
| | January | 38.48 | Weak integration |
| | February | 17.47 | Weak integration |
| | March | 70.12 | Integrations are a bit powerful |
| | April | 55.45 | Integrations are a bit powerful |
| | May | 77.51 | Powerful integrations |
| Reporter: Indonesia | June | 50.05 | Integrations are a bit powerful |
| Partner: Malaysia | July | 27.29 | Medium integration |
| | August | 53.98 | Powerful integrations |
| | September | 42.25 | Medium integration |
| | October | 21.73 | Weak integration |
| | November | 96.27 | Powerful integrations |
| | December | 57.07 | Integrations are a bit powerful |
| | January | 23.67 | Medium integration |
| | February | 17.47 | Weak integration |
| | March | 34.65 | Medium integration |
| | April | 52.78 | Integrations are a bit powerful |
| | May | 23.10 | Weak integration |
| Reporter Indonesia | June | 12.73 | Weak integration |
| Partner Philippines | July | 14.12 | Weak integration |
| | August | 15.92 | Weak integration |
| | September | 73.00 | Integrations are a bit powerful |
| | October | 54.20 | Integrations are a bit powerful |
| | November | 66.49 | Integrations are a bit powerful |
| | December | 98.79 | Powerful integrations |
| | January | 51.11 | Integrations are a bit powerful |
| | February | 60.60 | Integrations are a bit powerful |
| | March | 66.85 | Integrations are a bit powerful |
| | April | 70.73 | Integrations are a bit powerful |
| | May | 55.85 | Integrations are a bit powerful |
| Reporter: Indonesia | June | 46.89 | Medium integration |
| Partner: Thailand | July | 55.09 | Integrations are a bit powerful |
| | August | 57.48 | Integrations are a bit powerful |
| | September | 66.08 | Integrations are a bit powerful |
| | October | 9.30 | Weak integration |
| | November | 70.65 | Integrations are a bit powerful |
| | December | 55.35 | Medium integration |
| | January | 45.99 | Medium integration |
| | February | 17.40 | Weak integration |
| Reporter: Indonesia | March | 20.20 | Weak integration |
| Partner: Rep of Korea | April | 18.86 | Weak integration |
| | May | 30.74 | Medium integration |

| | Month | IIT | Classification |
|---|---|---|---|
| | June | 4.15 | Weak integration |
| | July | 0.45 | Weak integration |
| | August | 0.72 | Weak integration |
| | September | 0.32 | Weak integration |
| | October | 11.66 | Weak integration |
| | November | 2.95 | Weak integration |
| | December | 5.01 | Weak integration |

TABLE VII: VALUE OF *INDONESIA'S INTRA-INDUSTRY TRADE INDEX* WITH TRADING PARTNERS APEC-4 ECONOMIES IN 2015-2019 IN 2018

| | Month | IIT | Classification |
|---|---|---|---|
| Reporter: Indonesia Partner: Malaysia | January | 71.85 | Integrations are a bit powerful |
| | February | 98.82 | Powerful integrations |
| | March | 97.31 | Powerful integrations |
| | April | 95.32 | Powerful integrations |
| | May | 92.54 | Powerful integrations |
| | June | 72.93 | Integrations are a bit powerful |
| | July | 63.72 | Integrations are a bit powerful |
| | August | 83.08 | Powerful integrations |
| | September | 83.08 | Powerful integrations |
| | October | 98.21 | Powerful integrations |
| | November | 88.68 | Powerful integrations |
| | December | 84.62 | Powerful integrations |
| Reporter Indonesia Partner Philippines | January | 40.11 | Medium integration |
| | February | 19.15 | Weak integration |
| | March | 55.13 | Integrations are a bit powerful |
| | April | 42.90 | Medium integration |
| | May | 36.41 | Medium integration |
| | June | 0.47 | Medium integration |
| | July | 37.02 | Medium integration |
| | August | 0.00 | No integration |
| | September | 6.27 | Weak integration |
| | October | 29.47 | Medium integration |
| | November | 37.78 | Medium integration |
| | December | 17.52 | Weak integration |
| Reporter: Indonesia Partner: Thailand | January | 77.28 | Powerful integrations |
| | February | 71.63 | Integrations are a bit powerful |
| | March | 87.89 | Powerful integrations |
| | April | 66.10 | Integrations are a bit powerful |
| | May | 80.65 | Powerful integrations |
| | June | 85.24 | Powerful integrations |
| | July | 74.16 | Integrations are a bit powerful |
| | August | 69.57 | Integrations are a bit powerful |
| | September | 72.27 | Integrations are a bit powerful |
| | October | 96.18 | Powerful integrations |
| | November | 92.83 | Powerful integrations |
| | December | 70.68 | Integrations are a bit powerful |
| Reporter: Indonesia Partner: Rep of Korea | January | 1.21 | Weak integration |
| | February | 8.17 | Weak integration |
| | March | 3.48 | Weak integration |
| | April | 10.77 | Weak integration |
| | May | 4.30 | Weak integration |
| | June | 1.00 | Weak integration |
| | July | 4.24 | Weak integration |
| | August | 0.09 | Weak integration |
| | September | 0.12 | Weak integration |
| | October | 0.31 | Weak integration |
| | November | 8.03 | Weak integration |
| | December | 1.20 | Weak integration |

TABLE VIII: VALUE OF *INDONESIA'S INTRA-INDUSTRY TRADE INDEX* WITH TRADING PARTNERS APEC-4 ECONOMIES IN 2015-2019 IN 2019

| | Month | IIT | Classification |
|---|---|---|---|
| Reporter: Indonesia Partner: Malaysia | January | 71.94 | Integrations are a bit powerful |
| | February | 81.97 | Powerful integrations |
| | March | 83.49 | Powerful integrations |
| | April | 91.43 | Powerful integrations |
| | May | 81.45 | Powerful integrations |
| | June | 96.98 | Powerful integrations |
| | July | 60.32 | Integrations are a bit powerful |
| | August | 93.32 | Powerful integrations |
| | September | 88.40 | Powerful integrations |
| | October | 89.26 | Powerful integrations |
| | November | 97.81 | Powerful integrations |
| | December | 94.01 | Powerful integrations |
| Reporter: Indonesia Partner: Philippines | January | 43.54 | Medium integration |
| | February | 0.15 | Weak integration |
| | March | 28.21 | Weak integration |
| | April | 29.41 | Weak integration |
| | May | 24.15 | Weak integration |

| | Month | IIT | Classification |
|---|---|---|---|
| | June | 70.46 | Integrations are a bit powerful |
| | July | 23.41 | Weak integration |
| | August | 42.79 | Weak integration |
| | September | 46.94 | Medium integration |
| | October | 3.17 | Weak integration |
| | November | 7.67 | Weak integration |
| | December | 71.49 | Integrations are a bit powerful |
| | January | 84.93 | Powerful integrations |
| | February | 62.23 | Integrations are a bit powerful |
| | March | 98.41 | Powerful integrations |
| | April | 77.40 | Powerful integrations |
| | May | 76.89 | Powerful integrations |
| Reporter: Indonesia | June | 94.76 | Powerful integrations |
| Partner: Thailand | July | 85.71 | Powerful integrations |
| | August | 89.24 | Powerful integrations |
| | September | 95.50 | Powerful integrations |
| | October | 98.22 | Powerful integrations |
| | November | 86.88 | Powerful integrations |
| | December | 96.75 | Powerful integrations |
| | January | 11.68 | Weak integration |
| | February | 2.91 | Weak integration |
| | March | 0.72 | Weak integration |
| | April | 4.53 | Weak integration |
| | May | 1.44 | Weak integration |
| Reporter: Indonesia | June | 0.54 | Weak integration |
| Partner: Rep of Korea | July | 2.10 | Weak integration |
| | August | 0.66 | Weak integration |
| | September | 0.25 | Weak integration |
| | October | 1.12 | Weak integration |
| | November | 0.75 | Weak integration |
| | December | 3.42 | Weak integration |

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