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Indonesia's Potential Trade Flow to EAEU Countries: The Gravity Model Approach

Didi Ristanto

Master of International and Development Economics, Crawford School of Public Policy, Australian National University, Australia

Email: ristantodidi@gmail.com

Abstract: *This research aims to examine Indonesia's potential trade flow to EAEU countries using the Augmented Gravity Model with Pseudo Poisson Maximum Likelihood (PPML) estimator, revealed comparative advantage (RCA) index and constant market share analysis (CMSA) index on trade flows data for the period 2002-2022. The results indicate that trade relations between Indonesia and EAEU countries align with the Heckscher-Ohlin Theory of trade, which states that dissimilar countries tend to trade more. Furthermore, the finding emphasizes the importance of Indonesia-EAEU preferential trade agreement to reduce or eliminate tariffs which otherwise will increase trade between both parties.*

Keywords: Gravity Model; Pseudo-Poisson Maximum Likelihood; Revealed Comparative Advantage Index; Constant Market Share Analysis Index

INTRODUCTION

International trade is defined as an activity to boost consumption due to more diversified products resulting in investment increase and production factor price decrease. The development of trade flow and freer trade resulted in the emergence of various forms of international trade such as bilateral, regional, and multilateral. All of these are expected to improve trade by reducing or eliminating tariff and non-tariff barriers, which will benefit economic growth (Retnosari & Jayadi, 2020).

Understanding the importance of export for economic growth, the Indonesian National Medium Term Development Plan 2020-2024 mentioned export diversification as one of the strategies to increase exports (Republic of Indonesia, 2020). According to the plan, Indonesia's export diversification will be conducted in two ways, the first way is by diversifying export commodities and services through manufacturing revitalization that supports diversification, especially in the export of high-tech manufactured products while reducing import dependence. The second way is by expanding the export destination country. The plan mentioned that the expansion is mainly focused on Africa, Latin America, and Eastern Europe (Republic of Indonesia, 2020). This diversification strategy is expected to increase market access, which eventually supports long-term economic growth (Sannassee et al., 2014).

Nowadays, Indonesia actively expands its exports by finding new market destinations known as "non-traditional markets". One of the prospective markets is Eurasian region. Eurasia is located between Central Asia and Eastern Europe. The economic intergovernmental organization in this region is the Eurasian Economic Union (EAEU) consisting of Armenia, Belarus, Kazakhstan, Kyrgyzstan, and the Russian Federation. It covers an area of 20.6 million km2 with a total population of around 184 million. In terms of economy, the GDP of EAEU countries is

$1.74 trillion which accounts for 3.2% of world GDP (Gonthmakher, 2021). Indonesia and EAEU have started their Free Trade Agreement (FTA) negotiation. Both parties have conducted two rounds of negotiation, the first round was held in Jakarta from 3 to 5 April 2023 (EEC, 2023b), while the second round was held in Moscow from 24 to 26 July 2023 (EEC, 2023a). Both parties have targeted to conclude the negotiation next year.

Despite the economic potential and the ongoing negotiation, there have been few empirical researches that focus on Indonesia's potential export to EAEU, to the best of my knowledge the closest existing study was done by Quy Thuan Bui and Thanh Cong Ha with their research "Impact of the Vietnam EAEU FTA on the trade between Vietnam and Eurasia Economic Union". Therefore, this research aims to fulfill this knowledge gap and answer three research questions as follows:

1. How significant is the trade potential of Indonesia and EAEU countries?
2. Will the currently ongoing Indonesia EAEU FTA Negotiation benefit both parties?
3. What products/commodities will strengthen trade cooperation between Indonesia and EAEU countries?

The estimation result indicates that GDP and GDP per capita difference have a positive significant effect on trade flow between Indonesia and EAEU, meanwhile, exchange rate, distance and landlock have a significant negative effect on trade flow between the two parties. Based on the predicted and actual trade flow comparison, Kyrgyzstan and Armenia have the potential to be Indonesia's new trading partner in EAEU region. This paper consists of five sections, following introduction is methodology. The third section explains results and followed by discussion. The last section is conclusion.

METHODOLOGY

Gravity model has been largely used to evaluate trade flows. It is adopted from Newton's gravity law in mechanics. The use of gravity model in economics was initiated by Tinbergen (1962). The basic gravity model holds the hypothesis that the trade flow between two countries is determined by the economies of scale and the distance between two countries. The trade flow is expected to be positively related to the economy of scales and negatively related to the distance between the two countries (Wahyudi & Anggita, 2015).

In Gravity model, Gross Domestic Product (GDP) is used to measure the economic scale of a country. Basic gravity model expects that GDP value has positive sign because when the country size is larger as indicated by GDP, its production also becomes larger therefore it has more ability to export, at the same time its consumption also becomes larger which makes its import increases too. Literatures show that GDP for both parties have positive effect to export and trade, such as in Lei et al., (2022) Abbas & Waheed (2015); and Shahriar et al., (2021).

Contrary to GDP, distance has negative relationship with trade flow because the larger the distance between exporting and importing countries, the transportation and logistics services become more costly (Wahyudi & Anggita, 2015). The literatures by Lei et al., (2022), Abbas & Waheed (2015), Kamal et al. (2018) and Karno (2017) show that distance has negative impact to trade flow.

This research uses augmented gravity model by adding variables such as GDP per capita difference, exchange rate and landlocked dummy. The GDP per capita difference is used as a proxy to examine whether the trade relations between two countries follow Heckscher-Ohlin (H-O) theory or Linder theory. The H-O theory of trade was invented in 1933 by Bertha Ohlin and Eli Heckscher, it mentions that country tends to trade more with different level country, compared to country with the same level (Aziz et al., 2016).

H-O theory of trade was argued by Staffan Linder (1961) which states that countries tend to trade more with partners who are at the same stage of development, because they may enjoy the same preferences but differentiated products (Aziz et al., 2016). In other word, it can be inferred that H-O theory of trade explains north-south trade, while Linder theory explains south-south and north-north trade relations. This research examines whether Indonesia and EAEU trade follows H-O or Linder theory. The result can be used to determine whether Indonesia-EAEU FTA negotiation will be optimal and bring benefit for both parties. Some literatures using this variable such as Aziz et al., (2016) to determine Malaysia's trade relation, Batra (2006) to observe India's trade relations and Rahman (2009) to study Australia's trade relations.

Another variable added into gravity model in this research is exchange rate. Exchange rate is defined as the price of one currency expressed in terms of another currency (Karno, 2017). Exchange rates can affect the price of domestic goods and services against the price of goods and services in foreign country. There are two categories of exchange rates, real and nominal exchange rates. Real exchange rate is domestic price of goods between two domestic markets who trade their products in another country, whereas nominal exchange rate is the relative price of the two countries' currency (Retnosari & Jayadi, 2020). An appreciation in domestic currency makes the domestic price of local goods more expensive and the imported goods become cheaper, therefore it will increase import and vice versa. Some literatures take into account the exchange rate as one of variable in their gravity model, such as in Karno (2017), Guan & Sheong (2020), Retnosari & Jayadi (2020) and Bui & Ha (2021). Exchange rate expected to have a negative coefficient because it is inversely proportional to export level (Aziz et al., 2016).

The last variable added into augmented gravity model is landlocked dummy. Same as geographical distance,

landlocked dummy variable is used as a proxy to trade cost. According to Anukoonwattaka (2016) landlocked countries are quite sensitive to border crossing times, an additional day of export processing might reduce export rate. Therefore, it is expected that landlocked dummy will have negative sign in the gravity model. Some literatures that include landlocked dummy such as Batra (2006), Olayungbo & Iqbal (2021) indicate negative effect of landlocked country to export.

Gravity Model

This paper uses Augmented Gravity Model to estimate trade potential between Indonesia and EAEU countries. The basic of gravity model comes from Newton's Law of Universal Gravitation, but then it was used in economics as an analogy to explain the volume of trade flows by Tinbergen (1962). The basic gravity model explains that trade flows between two countries are proportional to the product of each country's economic mass as shown by Gross Domestic Product (GDP) divided by geographical distance as a proxy for transportation cost occurs during trade movement (Kamal et al., 2018). The basic form of gravity model is as follows:

$$x_{ijt} = \frac{GDP_{it} \times GDP_{jt}}{D_{ij}} \tag{1}$$

x_{ijt} denotes exports of country i to country j at time t; then GDP is nominal gross domestic product of country i and j respectively. D_{ij} is geographical distance between country i and j. This formula can be written in linear form as follows:

$$\ln x_{ijt} = c + b_1 \ln(GDP_{it} \times GDP_{jt}) + b_2 \ln D_{ij} + e_{ijt} \tag{2}$$

c is a constant, while b_1 and b_2 are coefficients that are to be estimated and e_{ijt} denotes random error term. Besides the basic model, there are some variables that might affect export flows. Therefore, the gravity model is augmented by other variables such as population, exchange rate, contiguity etc. The augmented Gravity Model used in this research is as follow:

$$\ln X_{odt} = \beta_0 + \beta_1 \ln GDP_{0t} + \beta_2 \ln GDP_{dt} + \beta_3 \ln GDPPCdiff_t + \beta_4 \ln Dist_{od} + \beta_5 \ln ER_t + \beta_6 LLocked_d + \varepsilon_t \tag{3}$$

X_{odt} is dependent variable that denotes total trade between origin country o and destination country d at time t. GDP_{0t} and GDP_{dt} denotes Gross Domestic Product of exporting country and destination country at time t respectively. $GDPPCdiff_t$ denotes absolute value of gap of GDP per capita between exporting and importing country. $Dist_{od}$ denotes geographical distance. ER_t is annual exchange rate. An appreciation in Indonesian Rupiah can be defined that Indonesia need less money when importing goods and EAEU countries need more money when importing from Indonesia. $LLocked_d$ is dummy for landlock country, if the importer is landlocked the value is unity and 0 otherwise. ε_t is the error term.

The Breusch-Pagan test indicates that the data in this research suffers from heteroscedasticity issue, therefore OLS estimator cannot be used because it will result a biased estimation. The estimator used in this research is Pseudo-Poisson Maximum Likelihood (PPML) gravity model. This model was introduced by Silva and Tenreyro (2006) to estimate the gravity model when there are a large number of zero trade flows (Suryanta & Patunru, 2023). PPML estimator can be used to tackle heteroskedasticity issue.

The literatures suggest that β_1 and β_2 are positive. β_4, β_5 and β_6 are negative. The value of β_3 will determine whether the trade relation between exporter and importer follows H-O Theory of Trade or Linder Theory. If β_3 is positive, the relation follows H-O theory and if negative it follows Linder Theory.

Revealed Comparative Advantage (RCA) & Constant Market Share Analysis (CMSA)

To identify the potential commodities that intensify trade and investment between Indonesia and EAEU member countries, this research combines the Revealed Comparative Advantage (RCA) and Constant Market Share Analysis (CMSA) estimation. RCA method was first used by Balassa (1965) and has been widely used such as in Ramadhani & Santoso(2019) and Verico (2020). According to Balassa (1965), RCA is a method to measure country's comparative advantage based on the ratio of the export of certain products in exporting country over the world's export. The RCA formula is as follows:

$$RCA = \frac{x_{ijt}/\sum_{i=1}^{i=n} X_{jt}}{x_{iwt}/\sum_{i=1}^{i=n} X_{jt}} \tag{4}$$

To complement the RCA, this research uses CMSA to measure the dynamic of competitiveness level of a country's commodities. It is an approach used to assess competitive advantage or export competitiveness in the global market (Richardson, 1971). The formula for CMSA is as follows:

$$x_{ijt1} - x_{ijt0} = \sum (x_{iw\Delta t}).x_{ijt0} - x_{ijt0} + \left(x_{iw\Delta t} - \sum x_{iw\Delta t}\right).x_{ijt0} + (x_{ijt1} - x_{iw\Delta t}.x_{ijt0}) \tag{5}$$

The CMSA consists of three parts where each part indicates different aspect:

$\sum(x_{iw\Delta t}).x_{ijt0} - x_{ijt0}$: General Factor (CMSA1)

$(x_{iw\Delta t} - \sum x_{iw\Delta t}).x_{ijt0}$: Composition Factor (CMSA2)

$(x_{ijt1} - x_{iw\Delta t}.x_{ijt0})$: Comparative Factor (CMSA3)

Referring to Verico (2020), this research uses the combination of RCA and comparative factor aspect of CMSA (CMSA3). The combination result of RCA and CMSA3 can be described as follows:

Table 1 Commodity classification according to RCA-CMSA3 estimations

Classification	Conditions
Sunrise	RCA<1; CMSA3>0
Sunset	RCA>1; CMSA3<0
Great	RCA>1; CMSA3>0
Suffer	RCA<1; CMSA3<0

Source: (Verico, 2020)

The results of RCA and CMSA3 are used to observe which classification of the products, which determines the potential of bilateral economic cooperation for those products. For example, if the RCA-CMSA3 shows "great-great" classification, the product is potential for trade, and if it is under "sunset-sunrise", the product is suitable for FDI Inflow. The combination list and its classification are as follows:

Table 2 Bilateral Relations potential based on product-status combination

Type of Cooperation	Exporter Classification	Importer Classification
Trade	Great	Great
	Suffer	Suffer
FDI Inflow	Sunset	Sunrise
FDI Outflow	Sunrise	Sunset

Source: (Verico, 2020)

Data

This research is panel data with time period ranging from 2002 to 2022 for PPML estimation. While for RCA and CMSA3 the time period ranges from 2018-2022. The reason of using shorter and more recent period for RCA-CMSA3 is to capture current trend in exporting country's trade flow. Besides, there is also difference in data aggregation, for PPML estimation, the total trade flow is aggregated in total export and import. While for RCA & CMSA3, the estimation is disaggregated in HS4 digits. Data used for this research are gathered from different sources. Total trade (export and import) data is taken from Trade Map. GDP, GDP Per Capita are from World Bank and Exchange Rate from UNCTADStat, while distance and landlock dummy are from CEPII.

Table 3 Data Source

Variable	Unit of Measurement	EXPECTED SIGN	Source
Total trade	US$, Annual		Trade Map
Gross Domestic Product	US$, Annual	+	World Bank
GDP per capita (difference)	constant 2015 US$	+/-	World Bank
Exchange rate	Currency Exchange Rate, Annual (the price 1 unit of importing country CCY equals to exporting country CCY)	-	UNCTADStat
Distance	Kilometre	-	CEPII
Land locked dummy	1 for land lock country, 0 otherwise	-	CEPII

The descriptive statistics for each variable used in this research is as follows:

Table 4 Descriptive Statistics

Variable	Obs	Mean	Std. Dev.	Min	Max
Total trade (USD)	630	3.371e+09	8.231e+09	6000	4.343e+10
GDPo (billion USD)	630	3.756e+11	4.934e+11	3.705e+09	1.503e+12
GDPd (USD)	630	3.756e+11	4.934e+11	3.705e+09	1.503e+12
GDPPCdiff (USD)	630	4265.751	3202.312	24.497	14692.185
Exchange Rate	630	841.808	5180.434	0	51996.672
Distance (km)	630	4219.168	2948.766	194.978	9869.426
Land lock dummy	630	.5	.5	0	1

Source: Author's calculation (2023)

RESULTS

Gravity Model Estimation Result

Table 5 shows the gravity estimation using OLS and PPML, but the main estimator in this research is PPML. Generally, the model is well-represented with the result of R-Squared is 72.4%. GDP has positive significant effect to trade flow, a 1% increase in GDP of exporter and importer country increase trade flow by 0.05% and 0.04% respectively. Exchange rate has significant negative effect to trade flow, if Indonesian Rupiah appreciates against its trading partner currency by 1%, Indonesia's export decreases by 0.02% assuming other variables are constant.

Table 5 Pseudo-Poisson Maximum Likelihood (PPML) Gravity Model Estimation Results

VARIABLES	(1) Model 1 OLS	(2) Model 2 PPML
Dependent Variable: Ln_Total Trade Independent Variables:		
ln_GDPo	1.004***	0.0535***
	(0.0368)	(0.00206)
ln_GDPd	0.769***	0.0429***
	(0.0521)	(0.00283)
ln_GDP per capita (difference)	0.420***	0.0257***
	(0.0722)	(0.00430)
ln_Exchange Rate	-0.0457***	-0.00217***
	(0.0167)	(0.000817)
Land lock (dummy)	-1.247***	-0.0587***
	(0.210)	(0.0112)
ln_Distance	-1.916***	-0.0976***
	(0.0785)	(0.00322)
Constant	-13.40***	1.090***
	(1.695)	(0.0975)
Observations	630	630
R-squared	0.736	0.724

Standard errors in parentheses
*** $p<0.01$, ** $p<0.05$, * $p<0.1$
Source: Author's calculation (2023)

The estimation result of GDP per capita differential is positive which can be interpreted if difference in GDP per capita increases by 1% the export value will increase 0.025%. The larger the gap of GDP per capita between two countries, the greater their trade flow. The positive sign means that trade flow between Indonesia and EAEU countries follows H-O Theory.

Exchange rate has negative significant effect this can be inferred that if Indonesian Rupiah depreciates by one percent, the export value increases by 0.00217%. The significant result implies that exchange rate is still a key factor of export and import.

Meanwhile, landlocked dummy shows negative effect to trade, this means that if the importer country is landlocked, it decreases trade by 0.058%, this is due to the additional cost occurs during transit process, which does not only increase the cost but also shipping time and at the end it can be discouraging trade. The distance also has negative sign, for every increase of 1% in geographical distance, trade flow between both countries decreases by 0.097%.

The gravity model estimation result is used to calculate the predicted trade flow between Indonesia and EAEU countries. The result is utilized to foresee the trade potential by calculating the ratio of predicted and actual total trade (P/A) and followed by calculating the gap between predicted and actual trade (P-A). Trade potential is indicated by P/A ratio > 1 and P-A>0. The calculation result is as follow:

Table 6 The Comparison between Ratio P/A

	IDN-ARM	IDN-BLR	IDN-KAZ	IDN-KGZ	IDN-RUS
			Ratio P/A		
2018	2.75	0.48	7.12	1.15	1.56
2019	5.00	0.56	1.32	16.72	2.08
2020	6.10	0.70	2.84	13.36	1.95
2021	4.01	0.46	1.70	6.50	1.76
2022	6.17	1.47	0.81	9.09	1.62

Source: Author's calculation (2023)

Table 7 The gap between Predicted and Actual Trade Flow (in million USD)

	P-A (USD million)				
	IDN-ARM	IDN-BLR	IDN-KAZ	IDN-KGZ	IDN-RUS
2018	6.26	-114.87	369.21	2.67	1425.25
2019	9.91	-92.06	112.93	21.16	2242.88
2020	9.23	-50.36	275.27	19.03	1827.91
2021	9.05	-156.63	203.28	19.78	2087.85
2022	19.58	42.68	-134.37	23.39	2208.39

Source: Author's calculation (2023)

The above results show that Kyrgyzstan and Armenia have the largest ratio of predicted and actual trade flow in 2022, with ratio are 9.09 and 6.17 respectively. Kazakhstan has the smallest ratio with 0.81, this means that trade flow between Indonesia and Kazakhstan has reached its optimal value compared to other countries in the EAEU. Looking at Indonesia-Armenia and Indonesia-Belarus, the ratio shows an increasing number, this means that from 2018 to 2022, the trade potential was increasing, this is also reflected in the gap value, where the trade flow gap between Indonesia-Armenia has steadily increased from USD 6.26 million in 2018 to USD 19.58 million in 2022.

When it comes to gap, Russia has the largest value of gap with huge gap compared to other countries, this is not surprising because based on 2022 data, Russia is the Indonesia's 28th export destination country with total export USD 1.38 billion while at the same time, Indonesia is Russia's 20th importer country with total import USD 2.18 billion (Trade Map data 2022).

RCA-CMSA3

Table 8 Comparison of Product Classification, Indonesia-Armenia

RCA-CMSA3 Combination Result			
Indonesia	**Armenia**	Total	Suitable for
Great	Great	17	Trade
Suffer	Suffer	204	
Sunset	Sunrise	33	FDI Inflow
Sunrise	Sunset	3	FDI Outflow

Source: Author's calculation (2023)

Table 5 Comparison of Product Classification, Indonesia-Belarus

RCA-CMSA3 Combination Result			
Indonesia	**Belarus**	Total	Suitable for
Great	Great	10	Trade
Suffer	Suffer	435	
Sunset	Sunrise	4	FDI Inflow
Sunrise	Sunset	47	FDI Outflow

Source: Author's calculation (2023)

Table 6 Comparison of Product Classification, Indonesia-Kazakhstan

RCA-CMSA3 Combination Result			
Indonesia	**Kazakhstan**	Total	Suitable for
Great	Great	13	Trade
Suffer	Suffer	198	
Sunset	Sunrise	52	FDI Inflow
Sunrise	Sunset	7	FDI Outflow

Source: Author's calculation (2023)

Table 7 Comparison of Product Classification, Indonesia-Kyrgyzstan

RCA-CMSA3 Combination Result			
Indonesia	**Kyrgyzstan**	Total	Suitable for
Great	Great	22	Trade
Suffer	Suffer	333	
Sunset	Sunrise	19	FDI Inflow
Sunrise	Sunset	15	FDI Outflow

Source: Author's calculation (2023)

Table 8 Comparison of Product Classification, Indonesia-Russia

RCA-CMSA3 Combination Result			
Indonesia	**Russia**	Total	Suitable for
Great	Great	13	Trade
Suffer	Suffer	370	
Sunset	Sunrise	20	FDI Inflow
Sunrise	Sunset	15	FDI Outflow

Source: Author's calculation (2023)

DISCUSSION

The PPML estimation results as shown in Table 5 show us that Indonesia and EAEU countries have potential to develop their trade. The current FTA negotiation will be beneficial not only to boost trade but also the investment between both parties and it aligns with President Joko Widodo's mandate to open the new trade and investment opportunity in new markets, however it is also necessary to take into account the challenges that might hinder trade between both parties such as exchange rate fluctuation, shipping procedures and time needed to trade. Russia plays pivotal role in terms of commodity distribution, because most of EAEU members are landlock and it is easier to be reached through Russia as a hub.

Table 8 to 12 above showing the result of bilateral RCA-CMSA estimation between Indonesia and EAEU member countries. As previously explained, the combination of industry classification can be used to examine the potential commodities/ products for trade, FDI inflow and FDI outflow. In terms of trade, Indonesia has "suffer-suffer" and "great-great" combinations which indicate trade potential with EAEU countries, the list is sorted based on the potential trade from the highest to the lowest: Belarus (445 products or around 36.66% of total products in HS4), Russia (383 products; 31.2% of total products) Kyrgyzstan (355 products; 29.3% of total products), Armenia (221 products; 18.49% of total products) and Kazakhstan (211 products;17.22% of total products).

Some potential products for trade between Indonesia and Belarus are Chemical wood pulp, soda or sulphate HS 4703), Toilet or facial tissue stock, towel or napkin stock and similar paper for household or sanitary (HS 4803), Petroleum oils and oils obtained from bituminous minerals, crude (HS 2709). For trade between Indonesia and Russia, some products such as Parts and accessories for tractors (HS 8708), T-shirts, singlets and other vests (HS 6109) and Medicaments consisting of mixed or unmixed products for therapeutic or prophylactic use (HS 3004) are potential. For trade with Kyrgyzstan, Indonesia can export coal (HS 2701), footwear (HS 6403), clothing (HS 6209) and sugar (HS 0902). Meanwhile with Armenia, Indonesia can export Ferro-alloys (HS 7202), margarin (HS 1517), copper ores (HS 2603), and cigarette paper (HS 4813). Lastly, products that are potential to be traded with Kazakhstan are inter alia margarine (HS 1517), coal (HS 2701), copper ores (HS 2603), cotton (HS 5203) and cigarettes (HS 2402).

Meanwhile for investment, Indonesia has potential to attract FDI inflow more rather than FDI outflow as shown by the combination of "Sunset-Sunrise", where the highest potential for FDI inflow comes from Kazakhstan (52 commodities), followed by Armenia (33 commodities), Russia (20 commodities), Kyrgyzstan (19 commodities) and the lowest comes from Belarus (4 commodities). Most of products that are suitable for investment in Indonesia are plantation and agriculture commodities such as palm oil (HS 1511), coconut "copra" (HS 1513) and wood charcoal (HS 4402), uncoated paper and paper board (HS4802), cloves (HS 0907).

Inversely, Belarus is the highest potential for FDI outflow from Indonesia with 47 products, followed by Kyrgyzstan and Russia (both 15 products), Kazakhstan (7 products) and Armenia (3 products). Indonesia can invest in Belarus mainly in farming industry such as meat and milk processing, then in agriculture and transportation. While for Kyrgyzstan, most of potential sectors are dominated by farming, agriculture and textile and its derivative. Investment to Russia and Kazakhstan can be focused on mining industry. Lastly, Armenia is potential for its agriculture (fruits), mining (andalusite, kyanite and sillimanite) and garments. The complete list of potential products/commodities for trade and investment in HS4 can be found in Appendix using Trade Map as the reference.

Based on previous explanation, the ongoing Indonesia-EAEU FTA negotiation should incorporate the aforementioned products into the agreements to maximize the benefit of trade and investment between both parties. It is also important to maintain exchange rate stability, since it is one of the main keys to boost trade. The high volatility in exchange rate may be harmful for both exporters and importers.

CONCLUSION

This research aims to examine the significance of the trade potential between Indonesia and EAEU countries and whether current Indonesia-EAEU FTA will be beneficial for both parties. This research also aims to see which products or commodities that will enhance trade and investment relation between both parties.

According to the estimation, GDP and GDP per capita difference have positive significant effect to Indonesia's trade flow to EAEU countries. Meanwhile exchange rate, distance and geographical land lock negatively affect the trade flow. The positive value of GPP per capita difference indicates that the trade relations between Indonesia and EAEU follows H-O theory of trade, where trade relations is more preferable between countries with high gap

of economic power. This result is aligned with current condition where Indonesia's top 3 trading partners are those who have much larger GDP per capita such as the US, China and Japan. This result also shows that trade relations between Indonesia and EAEU will bring benefits to both parties since all EAEU countries have a quite large GDP per capita gap with Indonesia.

The trade potential estimation using ratio and gap between predicted and actual trade flow (P/A and P-A) reveals that among EAEU member countries, Kyrgyzstan and Armenia have more potential as Indonesia's new trading partner. However, in terms of trade value, Russia has the largest potential, this is not so surprising because currently Russia has become one of Indonesia's main trading partner.

The caveat of this research is that the model does not include policy variables such as tariffs, non-tariff measures, control of corruption etc. that might also affect the trade relation, therefore it is suggested to include the forementioned variables in the future research.

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