

# The Impact of Preferential Trade Agreement (PTA) on the Export of ASEAN+4

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This research aims to examine and analyse the impact of the trade agreement on the export of ASEAN member countries (Indonesia, Thailand, Cambodia, Laos, Vietnam, Malaysia, Singapore, Brunei Darussalam, Philippines and Myanmar) and four ASEAN dialogue partners (RRT, Republic of South Korea, Japan, and India) between 1984-2017, using the Poisson Pseudo-Maximum Likelihood (PPML) method. The result shows that the Trade Agreement has a significantly impact on export.

**Keywords:** *Export, GDP, distance, trade agreement and PPML.*

## Background

During the last two decades, the formation of the North American Free Trade Agreement (NAFTA), integration of European Union (EU), and the slowdown of negotiations at multilateral level caused countries to agree to bilateral agreements as part of international trade interest. International treaties with limited membership include articles that only apply to members to secure or increase their respective market access (Limão, 2016). Trade agreements in Balassa (2013) cover the five categories of discriminatory arrangements classified by the World Trade Organisation (WTO) including Partial Scope Agreements (PSAs), Free Trade Agreements (FTA), Custom Unions (CU), common markets and economic unions. Bilateral agreements are a stepping stone for free trade throughout the world (Baldwin, 1997).

Bilateral agreements are a reformed source of trade policy which has been very important for the last 20 years, especially those countries that are members of the FTA and CU (Foster et. al., 2011; Chang and Xiao, 2015). The proliferation of bilateral agreements continues after

the formation of WTO in the period when the Most Favoured Nation (MFN) tariffs are decreased. Some of the biggest growth has occurred during the last decade although the average MFN tariff is at its lowest with an average of less than 8% in 2009 (Limão, 2016). This is due to the fact that tariff reduction under the bilateral agreement was more promising than the MFN. Furthermore, the MFN tariff is the highest (most stringent) tariff charged by WTO members, so that almost all countries join at least one bilateral agreement that contains an agreement to give tariffs on other countries' products lower than their MFN tariff (WITS, 2018).

Trade agreements are divided into bilateral (between two countries), plurilateral (more than two countries), and country-bloc (countries from different continents but forming blocs such as communist blocs) (Asia-Pacific Trade and Investment Report, 2016). The slowing down of negotiations in the multilateral level caused many countries to pursue regional and bilateral liberalisation, including member countries of the Association of Southeast Asian Nations (ASEAN). At present, ASEAN has 11 dialogue partners including the United States, Australia, Japan, Canada, India, South Korea (Republic of South Korea), Russia, New Zealand, the People's Republic of China (PRC), the European Union and the United Nations (UN). According to Lamy (2012), the attractiveness of close trade relations between countries has been a driving force for bilateral and regional free trade agreements. After growing increasing trade agreements from the 1990s, particularly bilateral, recent research has begun to reconsider the influence on international trade development. The existing agreement has made some impact on trade flow. Some studies (Koo et. al., 2006; Eicher and Henn, 2011; Egger and Larch, 2008; Egger et. al., 2011; Foster et. al., 2011; Gil-Pareja et. al., 2014; Cheong et. al., 2015 and 2018) have also been completed concerning agreements to find out their impact on trade.

Research related to the impact of trade agreement are mostly completed using the gravity model as it can compare the trade flow of a particular country with other countries based on economic characteristics from two trading partners (Husted and Melvin, 2010: 8). The pioneers of this model are Tinbergen (1962) and Pöyhönen (1963) who have estimated the trade flows of UE bilateral. Some empirical research have also examined the theoretical foundation for this model, including Anderson (1979), Bergstrand (1985), Mátyás (1997), Anderson and Van Wincoop (2003). In the Asian context, several studies also support this model such as Polak (1996), Sharma and Chua (2000), Lee and Park (2005), Kien and Hashimoto (2005) and Pusterla (2007). In order to estimate this gravity model many researchers use the Ordinary Least Square (OLS) method. Studies using Ordinary Least Square (OLS) method include Koo et. al. (2006); Eicher and Henn (2011); Egger et. al. (2011); Foster et. al. (2011); Gil-Pareja et. al. (2014) and Cheong et. al. (2015 and 2018). However, the use of OLS is not accurate in estimating trade flows with zero value. That is because the OLS method will export data with zero value due to undefined zero logarithms

(Silva and Tenreyro, 2006). Saucier and Rana's research (2017) use the Poisson Pseudo-Maximum Likelihood (PPML) approach to calculate trade flows because it is not sensitive to trade flows with zero values (Westerlund and Wilhelmsson, 2011; Head and Mayer, 2014). In addition, the PPML estimator which includes observation with zero trade value is also consistent with fixed effects that can be included as dummy variable such as in OLS. Coefficient interpretation of PPML model is very simple and follows the same pattern as OLS (Silva and Tenreyro, 2003).

Based on the above explanation, the research examines the effect of agreement on export amongst ASEAN countries (Indonesia, Thailand, Cambodia, Laos, Vietnam, Malaysia, Singapore, Brunei Darussalam, the Philippines, and Myanmar) and four ASEAN dialogue partner countries including the People's Republic of China (China / China), South Korea, Japan and India. This research selects ASEAN member countries as it is related to ASEAN agreements that mostly use a few ASEAN member countries due to data limitation (Sen et. al., 2013). Furthermore, this research also includes four ASEAN dialogue partners as RRT and India represent an emerging market country in Asia and Japan while South Korea represents a developed Asian country. The research also uses dependent variable including exports such as the research conducted by Koo et. al. (2006), Egger et. al. (2011), Foster et. al. (2011), Sen et. al. (2013) and Gil-Pareja et. al. (2014) to capture trade creation due to agreements (Choi, 2004: 297). Independent variables (trade agreement, GDP of importing countries, GDP of exporting countries and distance) as well as control variables (colonial ties, language, boundaries) are uses similar to Sen et. al. (2013), Koo et. al (2006), Egger et. al. (2011), Gil-Pareja et. al. (2014), Cheong et. al. (2015 and 2018) and Saucier and Rana (2017). The research uses the PPML method. So far, a similar research has not been carried out in ASEAN while four ASEAN dialogue partners use the PPML method.

## **Research Methods**

### ***Data and Model***

The information used in this research consists of secondary data in the form of panel data that combines cross-section and time series. Cross-section is used is ten ASEAN member countries and four ASEAN dialogue partners, including the People's Republic of China, Japan, South Korea and India during the period 1984 to 2017. Export value data is obtained through the United Nations Commodity Trade (UN-COMTRADE) and the International Trade Centre (INTRACEN). Importer and exporter GDP data is obtained through the World Development Indicator (WDI). Distance data, colonial ties, languages and territorial boundaries are obtained through Centre d'Etudes Prospectives et d'Informations Internationales (CEPII). Agreements data is obtained through the World Integrated Trade Solution (WITS), especially the Global Preferential Trade Agreements Database (GPTAD).

Some methods can be used in the analysis technique of panel data including Pooled Least Square (PLS), Fixed Effect Model (FEM) and Random Effect Model (REM). However, this research uses Poisson Pseudo Maximum Likelihood (PPML), whereas PLS, FEM and REM will be used as a comparison to reinforce estimation results using the PPML method. The research modes used in this study consist of the below:

$$\ln X_{ijt} = \beta_0 + \beta_1 \text{Agreement}_{ijt} + \beta_2 \ln \text{GDP}_{it} + \beta_3 \ln \text{GDP}_{jt} - \beta_4 \ln \text{Distance}_{ij} + \beta_5 \text{Col}_{ij} \\ + \beta_6 \text{Lang}_{ij} + \beta_7 \text{Border}_{ij} + \varepsilon_{ijt}$$

$X_{ijt}$  is export of country  $i$  to country  $j$  in year  $t$ ,  $\text{Agreement}_{ijt}$  is dummy variable with 1 value when country  $i$  and  $j$  trade according to the agreement in year  $t$  and  $\varepsilon_{ijt}$  is error term,  $\text{GDP}_{it}$  is Gross Domestic Product country  $i$  in year  $t$ ,  $\text{GDP}_{jt}$  is Gross Domestic Product country  $j$  in year  $t$ ,  $\text{Distance}_{ij}$  is demography distance country  $i$  and  $j$ ,  $\text{Col}_{ij}$  is dummy variable with nil i 1 value when country  $i$  and  $j$  have the same colonial ties,  $\text{Lang}_{ij}$  is dummy variable with 1 value when country  $i$  and  $j$  have the same language,  $\text{Border}_{ij}$  is dummy variable with 1 value with 1 value when country  $i$  and  $j$  have the same boundaries.

### ***Poisson Pseudo-Maximum Likelihood***

Silva and Tenreyro (2006) maintain that estimating the gravity equation using standard empirical method is not accurate, due to log-linearization of the empirical model that faces an inconsistent heteroscedasticity problem. Furthermore, log-linearisation is not appropriate with zero value in trade data that creates unsatisfactory solutions, including sample cutting (elimination of trading pairs with zero values).

To overcome various estimation problems, this research uses PPML simple model. This method enables a stronger and more consistent heteroscedasticity pattern. In addition, this method provides an organic way to handle zero in trade data. PPML method uses to bring back the gravity equation and reveal a significant difference from the result obtained through log-linear methodology. On the other hand, according to traditional specifications both Anderson and Wincoop (2003), OLS estimation overrate the results. The results of Monte Carlo simulation and Poisson regression show that heteroscedasticity can cause a significant bias, but that there is evidence of heteroscedasticity, so PPML estimators should be used as a substitute standard for the log-linear model (Silva and Tenreyro, 2006). Furthermore, the best choice for research is to use the PPML command developed by Silva and Tenreyro (2011).

### ***PLS, FEM, and REM***

Pooled-Least Square estimates the model with the Ordinary Least Square (OLS) method that combines all-time series and cross-section data. This approach does not consider the nature of time series and cross-sections of data. Assuming that all objects have the same regression coefficient, the explanatory variables are non-stochastic and exogenous. Furthermore, error terms are independently distributed, on the average equal to zero, and their variance is constant (Gujarati, 2014: 239). The PLS equation model can be written as follows:

$$Y_{it} = \beta_0 + \beta_1 X_{1it} + \beta_2 X_{2it} + \dots + \beta_n X_{nit} + \varepsilon_{it}$$

Subsequently, the Equation model of Model FEM in Greene (2012: 360) can be described as follows:

$$y = X\beta + D\alpha + \varepsilon$$

This model is usually known as the least square variable model. There is an interception difference between cross-sections used as model basic, however intercept consist of constants between time (time-invariant). This panel data estimation technique uses a dummy variable to capture differences between intercepts. This panel data estimation technique uses dummy variables to capture differences between intercepts.

The last equation refers to the REM model as follows:

$$y_{it} = \beta_0 + \beta_1 x_{it1} + \dots + \beta_k x_{itk} + \alpha_i + u_{it}$$

According to Woolridge (2013:492), the REM model estimates the unobservable effect ( $\alpha_i$ ). It appropriates when the unobservable effect is considered to be uncorrelated with all explanatory variables. Subsequently, it can be ignored in error term and all serial correlation generated over time can be handled by the estimation of the least common square (GLS). The ideal REM assumption includes all fixed effects added by the additional requirement that does not depend on all explanatory variables in all periods.

## **Discussion**

### ***Agreement Enforcement***

Table 1 provides a list of trade agreements that involve 10 ASEAN+4 member countries that signed between 1984 to 2017. Based on the table, from nineteen trade agreements, thirteen are bilateral. The India-Japan Comprehensive Economic Partnership Agreement (India-Japan

CEPA) is the earliest bilateral agreement applicable since 1958, while the ASEAN Free Trade Area (AFTA) is the earliest plurilateral agreement.

**Table 1:** Trade Agreements Conducted By ASEAN + 4

<b>Name</b>	<b>Member</b>	<b>Scope</b>	<b>Year</b>
<b>ASEAN <i>Free Trade Area</i> (AFTA)</b>	Indonesia, Thailand, Cambodia, Laos, Viet Nam, Malaysia, Singapore, Brunei Darussalam, Philippines and Myanmar	Plurilateral	1992
<b>ASEAN-China <i>Free Trade Area</i> (ACFTA)</b>	ASEAN and People's Republic of China (PRC)/ China	Plurilateral	2003
<b>ASEAN-Korea <i>Free Trade Area</i> (AKFTA)</b>	ASEAN and Republic of South Korea	Plurilateral	2006
<b>ASEAN-Japan <i>Comprehensive Economic Partnership</i> (AJCEP)</b>	ASEAN and Japan	Plurilateral	2003
<b>ASEAN-India <i>Free Trade Area</i></b>	ASEAN and India	Plurilateral	2005
<b>Brunei Darussalam-Japan <i>Free Trade Area</i></b>	Brunei Darussalam and Japan	Bilateral	2008
<b>RRT-Singapore <i>Free Trade Area</i></b>	People's Republic of China (PRC) and Singapore	Bilateral	2009
<b>Indonesia-Japan <i>Economic Partnership Agreement</i> (IJEPA)</b>	Japan and Indonesia	Bilateral	2008
<b>Japan-Singapore <i>Free Trade Area</i></b>	Japan and Singapore	Bilateral	2002
<b>Japan-Thailand <i>Free Trade Area</i></b>	Japan and Thailand	Bilateral	2007
<b>Japan-Viet Nam <i>Free Trade Area</i></b>	Japan and Vietnam	Bilateral	2007
<b>Japan-Philippines <i>Free Trade Area</i></b>	Japan and Philippines	Bilateral	2008
<b>Laos-Thailand <i>Free Trade Area</i></b>	Laos and Thailand	Bilateral	1991
<b>Singapore-Republic of South Korea <i>Free Trade Area</i></b>	Singapore and Republic of South Korea	Bilateral	2006
<b>RRT-India <i>Free Trade Area</i></b>	People's Republic of China (PRC) and India	Bilateral	1984
<b>India-Japan CEPA</b>	India and Japan	Bilateral	1958
<b>India-Republic of South Korea <i>Free Trade Area</i></b>	India and Republic of South Korea	Bilateral	2010
<b>India-Singapore <i>Free Trade Area</i></b>	India and Singapore	Bilateral	2005
<b>RRT-Japan-Korea <i>Free Trade Agreement</i></b>	PRC, Japan, and South Korea	Plurilateral	2010

Source: Global Preferential Trade Agreement Database (2018)

It is important to note that the number of agreements in table 2 has been applied in different years, which are still developing and making an impact on bilateral trade in 2018. Furthermore, some countries have more than FTA with trading partners, one bilateral and others regional. The India-Japan Comprehensive Economic Partnership Agreement (India-Japan CEPA) became the earliest bilateral arrangement as these two countries share historical ties and pride in the legacy of their civilisation. Current Indian-Japanese relations are rooted in their common perceptions about the environment. One of the contents of their agreement is mutual respect for each other's contribution in promoting peace, stability and development in Asia and beyond.

## Results

This research aim is to analyse the effect of GDP of exporting countries and importing countries, distance, colonial ties, language, and territorial boundaries on export flows between ASEAN member countries (Indonesia, Thailand, Cambodia, Laos, Vietnam, Malaysia, Singapore, Brunei Darussalam, the Philippines, and Myanmar) and four dialogue partner countries (People's Republic of China, Japan, South Korea, and India) from 1984 to 2017. The above data is estimated using the Poisson Pseudo-Maximum Likelihood Method (PPML).

Table 2 shows the PPML regression. It indicates that the GDP variable of exporting countries has positive and significant relations on export value with a coefficient value of approximately 0.057 with 0,000 probability. GDP variable on imports also has a positive and significant influence on export value with coefficient value and probability respectively of 0.064 and 0,000. Distance variable has a negative effect on export value with a coefficient value of 0.014 and a probability of 0.058. Colonial ties have a positive impact on coefficient value with the value of exports with a coefficient of 0.066 and a probability of 0.000. Language variables have a positive relationship with the value of exports with a coefficient value of 0.109 and a probability of 0,000. Territorial boundary variables do not make a significant impact on the value of exports. Agreement variable has a positive relationship with the value of exports with a coefficient of 0.063 and a probability of 0.000, which means it is significant.



**Table 2: Results of PPML, PLS and REM Estimation**

Variable	PPML	PLS	REM
Agreement	0,063***	0,173***	0,174***
LnGDPi	0,057***	1,146***	1,348***
LnGDPj	0,064***	1,269***	1,186***
LnDistance	-0,014*	-1,534**	-1,485***
Col	0,066***	0,544***	0,815**
Lang	0,109***	1,031***	1,139***
Border	0,015	0,229***	0,115
Constant	-0,171*	-31,68***	-35,269***
Number of obs.	6188	5628	5628
Pseudo log-likelihood	-20257,069	-	-
R-Square	0,558	0,729	0,715
LM-test			33.573,31***

**Note:** The significance level ( $\alpha$ ) is marked with \*\*\*for 1%; \*\* for 5%; dan \* for 10%.

Table 2 also shows estimation results using PLS method which indicate that all independent and control variables have a significant influence on dependent variable. GDP variable of exporting countries has a positive relationship with the value of exports with a coefficient of 1.146. GDP variable of importer countries has a positive relationship with the export value with a coefficient of 1.269. Distance variable has a negative relationship with export value with a coefficient of 1.534. In addition, the colonial ties variables, language, boundaries, and trade agreements also have a positive relationship with export and coefficient value which are 0.544, 1.031, 0.229 and 0.173 consecutively. What's more, estimation is conducted using PLS while estimation results use FEM which shows that all independent variables used in this research have a significant influence on the value of exports. Unfortunately, four variable models cannot be estimated (omitted) so it is quite risky to use estimation from this model. Furthermore, estimation results using REM in Table 2 show that all independent variables (except the regional boundary) have a significant influence on the value of exports. The GDP variable of the importer country has a positive relationship with the value of exports with a coefficient of 1.348. The GDP variable of the exporting country has a positive relationship with export value with a coefficient of 1.186. Distance variable has a negative relationship with the export value with a coefficient of 1.485. Colonial, language and Agreement variables have a positive relationship on the value of exports with coefficients 0.815; 1,139 and 0.174 successively.

After estimating models using PLS, FEM and REM, the next step is to choose which estimation model is more appropriate to use. Three tests are used to select PLS, FEM, and REM estimation models. The tests comprise of F-statistics, Hausman-test and LM-test. Selecting PLS or FEM estimation model uses the F-statistic test. Subsequently, the selection



of FEM or REM estimation models is completed by the Hausman-test. Finally, the selection of PLS or REM estimation models uses the Lagrangian Multiplier (LM-test). Based on the estimation results completed in the previous point, the estimation model using FEM is not appropriate to use because several variables are omitted. As a result, the test cannot be completed using F-statistics and Hausman-test, it can only be finished using LM-test which is used to select the PLS or REM estimation model. The test contains two criteria. If the probability of chi-square ( $\text{Prob} > \chi^2$ ) is greater than the level of significance ( $\alpha$ ) then the best model used is PLS. If  $\text{Prob} > \chi^2$  is smaller than the level of significance ( $\alpha$ ) then the more appropriate model to use is REM. Based on the LM-test results using STATA software, the  $\text{Prob} > \chi^2$  value of 0,000 was obtained, therefore it is smaller than its significance.

The GDP variable of importer countries can be described as the market size of the importer country reflecting demand. The higher the GDP of the importer country, the higher the country's ability to buy or import goods (Appleyard and Field, 2014: 195). The results show that the GDP of importer countries has a positive and significant effect on the export of ten ASEAN member countries and four ASEAN dialogue partner countries, specifically the People's Republic of China, Japan, South Korea, and India from 1984 to 2017. The results are consistent with the theory of gravity models and consistent with studies conducted by Anderson (1979), Bergstrand (1985), Polak (1996), Matyas (1997), Sharma and Chua (2000), Anderson and van Wincoop (2003), Kien and Hashimoto (2005), Lee and Park (2005), Eicher and Henn (2011), Pusterla (2007), Foster et. al. (2011), Sen et. al. (2013) and Gil-Pareja et. al. (2014) who realised that the GDP of importing countries can increase trade.

The GDP variable can also represent national income in addition to assessing a country's market size (Appleyard and Field, 2014: 195). A country's GDP can draw offers. When an exporting country's income increases, the country's ability to produce goods to be exported also increases. The research results indicate that the GDP of exporting countries have a positive and significant impact on the exports of ten ASEAN member countries and four ASEAN dialogue partner countries, especially the People's Republic of China, Japan, South Korea, and India from 1984 to 2017. The results are consistent with the theoretical model of research conducted by Anderson (1979), Bergstrand (1985), Polak (1996), Matyas (1997), Sharma and Chua (2000), Anderson and van Wincoop (2003), Kien and Hashimoto (2005), Lee and Park (2005), Eicher and Henn (2011), Pusterla (2007), Foster et. al. (2011), Sen et. al. (2013) and Gil-Pareja et. al. (2014) according to which a country's GDP can increase trade.

Geographical distance (distance) is one of the important variables in the gravity model. Distance has a negative impact on international trade according to the theory of gravity models (Husted and Melvin, 2010: Appleyard and Field, 2014: 195). According to the results, distance has a negative and significant effect on the exports of ten ASEAN member

countries and four ASEAN dialogue partner countries, particularly the People's Republic of China, Japan, South Korea, and India during 1984 to 2017. This research is consistent with the theory of gravity models and agrees with previous research completed by Krugman (1980), Koo et. al. (2006), Egger et. al. (2011), Sen et. al. (2013), Gil-Pareja et. al. (2014), Cheong et. al. (2015), Saucier and Rana (2017), and Cheong et. al. (2018) which maintain that distance has a negative effect on trade.

The variable of colonial ties is taken into account in the gravity model as an indication between importer and exporter countries which are members of trade agreements and have the same colonial history (Feenstra, 2015: 75-178). Countries with the same colonial ties have strong connections because their feeling is the same due to similar experiences, therefore it is easier to conduct trade agreements and ultimately increase the volume of trade. The results also show that colonial ties have a positive and significant effect on the export of ten ASEAN member countries and four ASEAN dialogue partner countries, including the People's Republic of China, Japan, South Korea and India from 1984 to 2017. The research correlates with research conducted by Koo et. al. (2006), Egger et. al. (2011) and Gil-Pareja et. al. (2014) which state that when two countries have similar colonial history, those countries are easier to involve in an agreement.

The language variable can also be easily entered into a gravity model. This variable shows that members of a trade agreement have the same language between importing and exporting countries (Feenstra, 2015: 75-178). Therefore, it will be easier to communicate during the decision making process. The research results point out that language has a positive and significant effect on the export of ten ASEAN member countries and four ASEAN dialogue partner countries, specifically the People's Republic of China, Japan, South Korea and India from 1984 to 2017. This research is consistent with research conducted by Koo et. al. (2006), Egger et. al. (2011), Gil-Pareja et. al. (2014), Cheong et. al. (2015) and Cheong et. al. (2018) according to which similarities in language can facilitate agreements which can increase interstate trade.

Like previous variables such as colonial and language ties, boundary variable can also be included in the gravity model when importing and exporting countries incorporating it within the agreement have the same boundary (Feenstra, 2015: 75-178). According to the research results, boundary variables do not significantly influence the exports of ten ASEAN member countries and four ASEAN dialogue partner countries, which are the People's Republic of China, Japan, South Korea, and India during 1984 to 2017. These results show agreement the research of Sen et. al. (2013). Despite having the proximity of boundaries, this variable has no significant effect on trade. As a result, boundary variables do not affect the export of ASEAN member countries and the four ASEAN dialogue partners.

Trade agreement variable can encourage more bilateral trade amongst member countries and allow the creation of trade agreements (trade creation) under trade agreements (Bhagwati et. al., 1998). The results of this research indicate that the agreement variable has a positive effect on the exports of ten ASEAN member countries and four ASEAN dialogue partner countries, especially the People's Republic of China, Japan, South Korea and India between 1984 and 2017 which are consistent with research conducted by Aitken (1973), Koo et. al. (2006), Eicher and Henn (2011), Egger et. al. (2011), Foster et. al. (2011), Sen et. al. (2013), Gil-Pareja et. al. (2014), Cheong et. al. (2015), Saucier and Rana (2017) and Cheong et. al. (2018) which state that such an agreement can encourage the creation of trade .

## Conclusion

Based on the estimation result that has been completed using PPML, the GDP variable of importer countries affects export of ASEAN member countries and four ASEAN dialogue partners positively and significantly, as the increase of exporting countries will cause that country to buy or import more goods than other countries or exporting countries. The GDP variable of exporter countries affects the export of ASEAN member countries and four ASEAN dialogue partners positively and significantly, because if exporter countries' GDP increases as a result of the ability of exporting countries to produce, then export goods will also increase. Distance variable has a negative and significant effect on the country's export of ASEAN members and four ASEAN dialogue partners, because greater distance between countries will cause an increase in the cost of transportation. Finally, if the cost of transportation increases then export will decrease. There is a positive and significant effect of colonial tie variable on exporting countries of ASEAN member countries and four ASEAN dialogue partners. If a similar colonial history exists between countries, it will cause those countries to have a cultural affinity, as a result of which it will be easier to undertake export and import agreements. Language variable has a positive and significant impact on ASEAN member countries and four ASEAN dialogue partners. If a language is shared between countries it will be easier for them to communicate. Consequently, it will be easier to participate in export and import agreements. The boundaries variable does not have a significant influence on the export of ASEAN country members and four ASEAN dialogue partners. The trade agreement variable has a positive and significant effect on the export of ASEAN member countries and four ASEAN dialogue partners, as such an agreement can encourage more bilateral trade amongst member countries and increase trade volume between them.

Based on the above conclusions, the recommendations are that in order for ASEAN+4 countries and other countries to be able to increase agreements with other countries, each country needs to be involved in an agreement under a bilateral agreement to encourage trade and increase market access to avoid losing competitive advantage over other countries that were previously involved in an agreement. Importing and exporting countries should



increase GDP in order to increase the volume of goods to be imported by importing countries and goods produced by exporting countries.



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