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**Regionalization and Regionalism
in East Asia**

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Introduction

Since the end of the 1990s, an “East Asian Community” has attracted considerable attention. A number of policy makers, academic scholars, and business executives have discussed the possibility of the creation of a regional framework in East Asia². Concerning this topic, there is mutual agreement among international relations scholars that “regionalization” and “regionalism” are different phenomena, but there are unresolved arguments as to whether there is a causal relationship between the two.

Regionalization is defined as an increase in the cross-border flow of capital, goods, and people within a specific geographical area. It develops from the bottom up through societally driven processes coming from markets, private trade, and investment flows, none of which is strictly controlled by governments. The core players are non-governmental actors—firms or individuals. Regionalization can be called a spontaneous, bottom-up process. In contrast, regionalism is defined as a political will (hence *ism* is attached as a suffix) to create a formal arrangement among states on a geographically restricted basis. Since its main participants are governments, it can be expressed as an artificial, top-down process. The “development of regionalization” means an increase in the number of regional economic transactions such as money, trade, and foreign direct investment (FDI). “Regionalism in progress” refers to the agreement of regionally close governments to establish kinds of formal institutions such as the Asia Pacific Economic Cooperation (APEC), the East Asia Summit, or bilateral preferential trade agreements (PTAs) in order to cooperate with each other on various issues. Few scholars oppose the idea that both regionalization and regionalism in East Asia have been developing since the Asian financial crisis of 1997³.

However, there is a huge disagreement over the *relationships* between the two phenomena, in particular, the causal relationship between regionalization and regionalism. One dominant view emphasizes that regionalization automatically promotes regionalism. Contrary to this widely shared view, however, some scholars

² “East Asia” here consists of the ASEAN 10 countries and Australia, the People's Republic of China (hereafter China), India, Japan, New Zealand and the Republic of Korea (hereafter South Korea).

³ However, as I will mention below, Ravenhill (2010) doubts this understanding.

argue that regionalization is not necessarily a catalyst for regionalism. Moreover, because of the complexities of the relationship between the two, some scholars have given up attempting to untangle this problem.

The purpose of this paper therefore is to shed light on the relationship between regionalization and regionalism by use of statistical analyses for East Asian countries. Since a number of political scientists and economists have verified that regional arrangements (the outcome of regionalism) lead to regionalization, this paper focuses on the reversed vector, that is, it investigates whether regionalization promotes regionalism⁴.

1 Existing Research on Regionalization and Regionalism

Since the mid-1990s, a certain number of scholars in international relations have emphasized the necessity of distinguishing between regionalization and regionalism as analytical concepts and of clarifying the relationship between the two (Fishlow and Haggard 1992; Haggard 1993; Frankel 1993; Wyatt-Walter 1995; Pempel 2005). From this time on, many scholars have wrestled with this issue.

First, there is a widely shared view that regionalism leads to a growth in trade, that is, it is one demonstration of economic regionalization (Aitken 1973; Frankel 1993; Winters and Wang 1994). Clearly, this argument is not surprising. As a result of a decrease in tariffs and non-tariff barriers between two or more countries concluding trade arrangements, a so-called “trade creating effect” would cause an increase of trade among members. According to research that uses a CGE (Computable General Equilibrium) model, if East Asian-wide PTAs (ASEAN+3 or ASEAN+6) were established, for example, the economic growth of each member would increase (Kawai and Wignaraja 2009, 19-20). Moreover, some argue that not only trade but also FDI would increase if trade agreements were concluded. Since international institutions, such as PTAs, enable governments to make more credible commitments to a liberal economic policy and prevent even

⁴ As only institutionalized regional agreements in the region are PTAs, I refer to regional arrangements and PTAs interchangeably. This definition is consistent with that of Mansfield and Milner (1999, 592).

developing countries from making arbitrary interventions such as regulation, taxation, or tariff increases, foreign investors can safely make investments in countries joining regional trade arrangements (Büthe and Milner 2008).

However, the economic effect of some individual PTAs in East Asia has not been so clear. Ando (2007), for example, concludes that the Japan-Singapore EPA (Economic Partnership Agreement) has had little impact on trade. Dent (2010, 218) also does not rate the Singapore-Peru PTA, inferring that the expected annual trade and investment liberalization “gains” are possibly less than the actual administrative cost of negotiating and implementing the agreement itself. Thus, there are cases where participation in a regional trade arrangement does not necessarily lead to an increase in economic interaction in East Asia⁵.

I will now examine the reversed vector, that is, whether increased regional economic interdependence (regionalization) encourages governments in the region to conclude or join economic arrangements such as PTAs (regionalism). The number of PTAs has been increasing worldwide since the early 1990s and this tendency is particularly remarkable in East Asia after 2000 (Figure 1). Can this be explained by enlarged economic interdependence in the region?

<Figure1 appears here>

At present, there are two competing views on this issue. The dominant view asserts that regionalization is an inevitable driving force for regionalism. For example, Kawai (2005, 30) argues that “[the] most fundamental rationale behind the emergence of recent economic regionalism is the deepening of regional economic interdependence in East Asia.” Munakata (2006, 29) shares Kawai’s stance by emphasizing that the intensity of economic interaction contributes substance and depth and thereby a basis for institutionalized intergovernmental cooperation, including preferential trade agreements (see also Lim

⁵ Although not the subject of this paper, the question of why states try to conclude PTAs even though their expected economic effects are low is interesting and merits further research and investigation.

1990, 21). Furthermore, Lincoln (2004, chap. 3) takes a negative view as to the necessity and economic effect of East Asian regional trade arrangements because he argues that intra-regional trade has been decreasing rather than increasing and identifies Japan's economic decline as the main factor in this. This logic derives its meaning from the assumption that growth in regional economic interaction drives regionalism. All of these views seem to be based on a conventional international relations thesis—institutions lower transaction costs, reduce uncertainty, monitor compliance, and enhance opportunities for more cooperation (Keohane 1984).

Contrary to this thesis, some scholars are skeptical about this simple, linear relationship. Ravenhill (2010, 182) insists that regionalization in East Asia has indeed been decreasing if we look at row shares in trade, which show the region's changing share of global commerce via the trade intensity index⁶. Therefore, Ravenhill argues that this is not consistent with the widely shared view that both regionalism and regionalization in East Asia have been increasing since the late 1980s. Moreover, Haggard (1997, 45) suggests the possibility that regionalization may *prevent* regionalization, by stating that “despite—and arguably because of—the extremely rapid growth of trade and investment, there has not been strong demand within Asia for greater policy coordination.”

This existing research does have flaws, however. It does not examine the relationship between the two phenomena systematically. The former is no more than policy recommendation without empirical evidence (and does not even make an effort to probe its own arguments). The latter suffers from a similar problem. Ravenhill (2010, 185) points out the odd relationship (from the perspective of existing studies) between China and other countries—those countries that have experienced trade increase with China but have actually eschewed PTAs with it—as an illustration of his arguments. However, this illustration is drawn from a small number of cases, as well as from outcomes, suggesting that selection bias have occurred. Moreover, Ravenhill's main argument is to reject increased economic interdependence (regionalization) in East Asia, not the relationship between regionalization and regionalism itself⁷.

⁶ Ravenhill shares this understanding with Lincoln (2004).

⁷ In this point, Ravenhill (2010, 185) seems to accept the argument that PTAs are negotiated in

The influence of regionalization over regionalism has thus not been fully examined. It is natural for some studies to avoid attempting to make clear which is cause and which is consequence and to simply describe these relations as a “mutual reinforcement process” (Dent 2008, 8). The aim of this paper, therefore, is to settle the dispute by examining systematically the relations between regionalization and regionalism by means of statistical analyses of East Asian trade data from 1948 to 2010.

2 The Method and the Model

The statistical method employed here is called “event history analysis” or “survival analysis.” Since this paper aims to estimate the influence of regionalization over regionalism (PTAs), the dependent variable is a binary outcome denoting whether a PTA exists or not—it equals 1 if a PTA exists between state *i* and state *j*, 0 otherwise. The most important independent variable is the amount of trade in the region from 1948 to 2010⁸. A normal maximum likelihood method, such as logistic regression, raises the problem of endogeneity, that is, if two countries concluded a PTA in 2005 for instance, the amount of trade after 2006 would be affected by the agreement, which is the dependent variable. Since this paper analyses the influence of economic factors over PTAs and not vice versa, the analysis should end once partner countries enforce a PTA. Therefore, conclusion of a PTA is read as the occurrence of the event (this is also called “failure”) and probability of it is estimated. Survival analysis is the most appropriate statistical method for the purposes of this paper. The two country pairs that have not signed PTAs, such as US-Japan, are called “right censored” data. Since this analysis includes time-varying covariates (TVCs), such as the amount of trade or GDP, I have used a discrete-time model. Data are shown in Table 1 below.

response to the policy challenges posed by increasing interdependence. He points out that East Asian countries have concluded or are currently negotiating with states outside the region that have been experiencing growth in economic interaction with the East Asian countries.

⁸ As mentioned above, regionalization refers to a general term including increased trade, FDI, and emigration within a specific region. Therefore, the amount of FDI and emigration should be incorporated into independent variables. However, due to difficulties of data accessibility (especially data for Southeast Asian nations), I use only trade data here. I will try to include FDI and emigration data in future research.

<Table1 appears here>

The unit of analysis is a dyad product year and the dyad is cross-country data. East Asia is defined here as ASEAN+6—the original members of the East Asian Summit. Since ASEAN has unusually had PTAs with individual countries as if they are a single unit, ASEAN is regarded as a country. Therefore, the total number of countries is 17⁹. However, given the fact that many of the current PTAs that East Asian governments have been concluding are cross-regional trade agreements (Katada and Solís 2008), I have expanded the data to APEC countries (except Taiwan)¹⁰ in a different model.

Dependent Variable

PTA data as a dependent variable are drawn from the WTO website¹¹ (see also Figure 1). If a country has PTAs with the same country more than twice through bilateral or multilateral negotiations (for example, China has PTAs with ASEAN, signed in 2005, as well as with Singapore, signed in 2009), I have chosen the bilateral one because bilateral agreements are expected to have a more direct economic impact than multilateral ones. Moreover, if countries concluded more than two multilateral PTAs separately (Indonesia and Malaysia, for example, joined the GSTP [Global System of Trade Preferences among Developing Countries] in 1989 and the AFTA [ASEAN Free Trade Area] in 1992), I have chosen the earlier one. In the case of ASEAN, if a country has PTAs with ASEAN but not with individual ASEAN countries, only the PTA with ASEAN is counted. For example, since New Zealand concluded a PTA with ASEAN in 2010 but not with the Philippines, I have counted only the ASEAN-New Zealand PTA, not the New Zealand-Philippines PTA.

⁹ These are ASEAN, Australia, Brunei Darussalam, Cambodia, China, India, Indonesia, Japan, Republic of Korea, Laos, Malaysia, Myanmar, New Zealand, the Philippines, Singapore, Thailand, and Vietnam.

¹⁰ Taiwan is excluded because no data are found in the IMF Direction of Trade Statistics Dataset. The added countries are Canada, Chile, Hong Kong, Mexico, Papua New Guinea, Peru, Russian Federation, and the United States.

¹¹ http://www.wto.org/english/tratop_e/region_e/region_e.htm (accessed February 6, 2012).

Independent Variables

First, the most important variable is an enlarged economic interdependence (regionalization). I measured this as the volume of trade between two countries. Trade data are taken from IMF's database whose timeframe is from 1948 to 2010¹². As PTA negotiations normally take two to five years from initiation to completion, I have taken three years' lag on the amount of trade (import plus export, expressed in US dollars) as an independent variable¹³. Moreover, not only nominal value but also relative value (the amount of trade between country *j* and country *i* divided by the sum of the total amount of *j*'s worldwide trade and *i*'s worldwide trade)¹⁴ is taken as an independent variable. The natural logarithm of the nominal trade is named *LN_TRADE(NO)* and the relative one *TRADE(RE)* in year *t-3*.

Furthermore, since regionalization implies an ongoing process, continuity of growth in economic transactions may be more important than just one term's trade. Therefore, *INCREASE(NO)* and *INCREASE(RE)* are operationalized as dummy variables that take a value of 1 if the amount of trade (whether nominal or relative) had been increasing for five consecutive years in year *t-3*, and 0 otherwise. If the argument that regionalization leads to regionalism is correct, the following hypothesis will be confirmed.

H1: the greater the amount of trade (or if this is continuously increased), the greater the likelihood that a pair of countries conclude PTAs.

Coefficients of *LN_TRADE(NO)*, *TRADE(RE)*, *INCREASE(NO)*, and *INCREASE(RE)* are expected to be positive.

Contrary to this linear relationship, some scholars have pointed out that bilateral PTAs in East Asia are *not* between pairs of countries that have expectation of a high trade creation

¹² IMF Direction of Trade Statistics Dataset, various years. If two countries' data are not corresponded, I used the developed countries ones.

¹³ Both four and five years' lags are also estimated as Model1-2 and Model1-3 respectively.

¹⁴ Formally, $\text{Trade}_{i,j}(t-3) / (\text{Trade}_{i,\text{world}}(t-3) + \text{Trade}_{j,\text{world}}(t-3))$.

effect nor those that have a large amount of trade interactions (Endo 2006; Ravenhill 2010; Dent 2010; Solís 2011). A large amount of trade means each country is also large economically and this leads to an increase in the number of social economic actors—veto players—which have a vested interest in foreign trade and tend to make policy change difficult (Tsebelis 2002). They may prevent governments from promoting PTAs. Furthermore, there seems little incentive for a government to invest time and money in concluding PTAs with those with whom they have few trade relations. Therefore, the relationship between the amount of trade and PTAs is assumed to be an inverted U-shaped curve. So new variables, *LN_TRADE(NO)_SQ*, *TRADE(RE)_SQ*, *DIFGDP*, and *DIFGDP_SQ* are introduced. *LN_TRADE(NO)_SQ* and *TRADE(RE)_SQ* are the square of *LN_TRADE(NO)* and *TRADE(RE)* respectively. *DIFGDP* is measured as the absolute value of difference of the natural logarithm of nominal GDPs (Gross Domestic Products) between pair countries¹⁵. *DIFGDP_SQ* is the square of *DIFGDP*. GDP data are from the World Bank’s Data Catalog¹⁶. If previous studies are right, the following hypothesis will be correct as well.

H2: The larger (and smaller) the amount of trade, the less likely a pair of countries have PTAs.

LN_TRADE(NO)_SQ, *TRADE(RE)_SQ*, and *DIFGDP_SQ* are expected to have negative coefficient.

Counter to these hypotheses, I expect those variables are not significant at all. As regional economic ties are already strong in East Asia¹⁷, the incentives for policy makers and business elites to create formal arrangements should be weak. The purpose of trade arrangements is to increase trade. Why do governments need to conclude new agreements when economic transactions are already increasing sufficiently? This de-fact integration might have prevented an EU-type regionalism in the region. That is:

¹⁵ $|\ln GDP_i - \ln GDP_j|$

¹⁶

http://databank.worldbank.org/ddp/editReport?REQUEST_SOURCE=search&CNO=2&topic=3 (accessed February 26, 2012)

¹⁷ This is often called “de-fact integration.”

H3: Growth in trade between pair countries has no effects on PTAs.

Other Independent Variables

Although it is not the objective of this project to seek determining factors for increased PTAs in East Asia, other independent variables are introduced in order to control the main variable mentioned above. These other variables are the number of worldwide PTAs in the previous year, a dummy variable which indicates whether two countries are democracies or not, and geographic distance between the two. Much existing research has argued that those factors have been determinants for the creation of regional arrangements.

First, in order to examine the impact of the so-called domino effect (either economic or political [Baldwin 1993, Ravenhill 2010]), which is a defensive response to the risk and threat of trade diversion from regional trade arrangements in other parts of the world, the number of cumulative world PTAs in year t-1 named *WORLDPTA* is included. The hypothesis is as follows:

H4: The more cumulative worldwide PTAs in year t-1, the more PTAs in East Asia in year t. *WORLDPTA* is expected to have a positive coefficient.

Second, following the argument of previous well-known studies that democracies cooperate more and tend to reduce tariffs more (Mansfield et al. 2002, Milner and Kubota 2005), a dummy variable measuring the degree of democracy, *DEMO*, is added. Polity VI data, which are indicators of degrees of democracy are used here¹⁸. I count 1 if pair countries are both defined as a democracy (more than 5 ranging from -10 to 10), 0 otherwise¹⁹. Regarding ASEAN, since there is no period when more than three states are considered as democracies, ASEAN is not regarded as a democracy for the whole period. The hypothesis is as follows.

¹⁸ <http://www.systemicpeace.org/polity/polity4.htm> (accessed February 6, 2012).

¹⁹ There are no Polity VI data on Brunei Darussalam and Hong Kong.

H5: The more democratic the countries, the more PTAs than other pairs have.

DEMO is expected to have a positive coefficient.

Finally, I take the relation between trade and geographic distance into consideration. If the gravity model, which theorizes that the amount of trade has inverse proportion to distance, is correct, the trade volume of two countries is a function of distance. To control this, a natural logarithm of geographic distance between capitals is included. Data are taken from the CEPII (Centre d'Etudes Prospectives et d'Informations Internationales) website²⁰. Distances between Singapore and individual countries are chosen as a proxy here for the distance between ASEAN and those particular states. The name of this variable is *LN_DIS*.

Tables 2 and 3 show descriptive statistics of each variable.

<Table 2 and 3 appear here>

3 Results

Regression results in the case of East Asia are shown in Table 4.

<Table4 appears here>

The following are derived from the survival analyses. First, regionalization has not influenced regionalism at all in East Asia. Both nominal and relative amounts of trade, their square and the continuation of trade increase are not statistically significant and thereby do not affect PTAs in the region. This result challenges conventional wisdom. Second, the democracy factor is not statistically significant either. This result may reflect the fact that non-democratic countries in the region, such as Singapore, have been eager for PTAs. Together with the empirical results presented by Remmer (1998), which point to the fact that democratic factors have little effect on the promotion of cooperation among Mercosur

²⁰ <http://www.cepii.fr/anglaisgraph/bdd/distances.htm> (accessed February 13, 2012).

nations, this result also challenges the recent literature on the relationship between democracy and PTAs. Previous studies may be too Eurocentric. Third, the variable that is always statistically significant is the number of cumulative worldwide PTA in year t-1. This can be a demonstration of the domino theory.

When I expand the region to Asia Pacific, the result becomes slightly different (Table 5).

<Table 5 appears here>

First of all, the logarithm of geographic distance and PTAs has a negative correlation—the nearer the distance, the more pair countries have PTAs. This indicates that intra-regional trade agreements are still in the majority, even though cross-regional ones have attracted considerable attention. Second, continuation of trade increase is statistically significant in the year t-3 and t-4 models. This is not seen in the East-Asia-only model and thus may be evidence of the argument that regionalism is a response to regionalization in the case of cross-regional trade agreements. We can assume that if previous economic interactions are low, such as between Singapore and Peru, but an increase in the amount of trade continues between them, partners would become aware that they are important to each other thus creating incentives to establish PTAs to promote more trade. That is, because (not in spite of) the fact that their economic interdependence is low, an increase in trade leads to regionalism. More investigation is surely needed to probe this. Third, a notable variable is the square of the relative value of trade. This variable is statistically significant in every Asia Pacific model at the 10% level. Yet contrary to the previous prediction (and recent literature), the coefficient sign is positive! What kind of interpretation is possible? This odd result hints at two points. First, a number of developing countries already had cross-regional trade agreements before the 1990s²¹. This fact creates a negative relationship between the amount of trade and the number of PTAs. Second, a certain number of states in the American continent have PTAs with the largest economic giant—the United States. This fact creates a positive relationship between trade and PTAs.

²¹ The Asia Pacific Trade Agreement (APTA) of 1975 and the GSTP of 1989 are two of them.

As a result, the square of the relative value of trade has a U-curve relation with PTAs when the Asia Pacific region is estimated. Further analysis is needed to confirm this explanation.

4 Conclusion and Implications

The relationship between regionalization and regionalism in East Asia is revealed here by survival analyses. The conclusion is that there is no relationship between the two at all. Neither the amount of trade, their square nor continuation of economic transactions is significant. This conclusion challenges the recent literature, which argues that an increase of PTAs in East Asia (regionalism) is the outcome of economic interdependence (regionalization) and presents a source of future study about determinants of PTAs.

Since this paper does not intend to seek factors for the cause of PTAs in East Asia, to shed light on these should be the next subject of study. Moreover, this paper only examines trade data. As mentioned above, regionalization refers not only to trade but also to other economic transactions such as FDI and labor emigration. We need to incorporate this data into the model. Furthermore, the reason why the results of East Asia and Asia Pacific are different remains to be explained. The next step is to tackle these problems not only by the use of statistical analysis but also with case studies.

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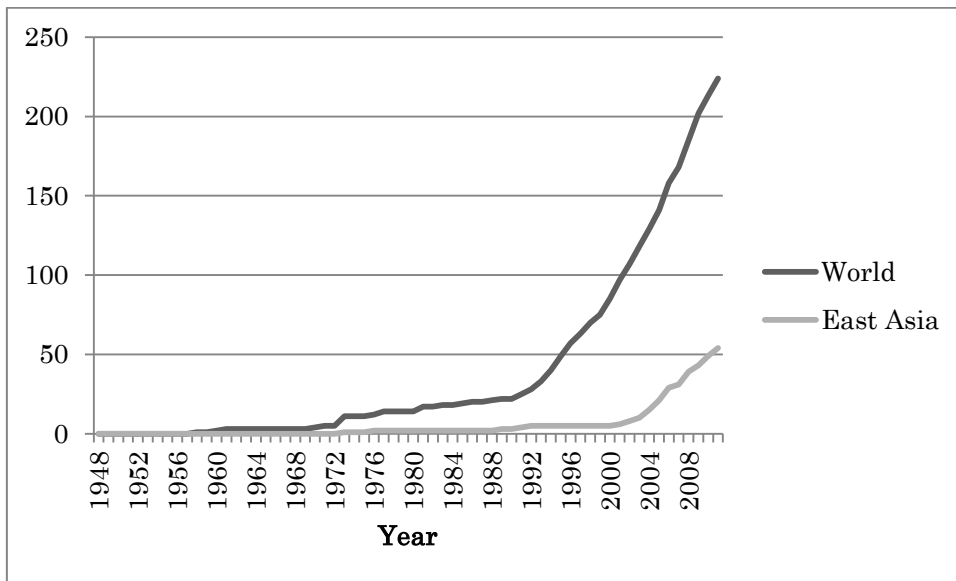


Figure 1: Number of PTAs since 1948

Source: WTO Website, http://www.wto.org/english/tratop_e/region_e/region_e.htm

Dyad	Year	PTA	TRADE(AB) (\$Million)	TRADE(RE)	DEMO	DIS (kilometers)	DIFGDP	INCREASE(AB)	WORLDPTA
Japan-Malaysia	1948	0	0	0	N.A.	5329.095	N.A.	N.A.	0
Japan-Malaysia	1949	0	0	0	N.A.	5329.095	N.A.	N.A.	0
Japan-Malaysia	1950	0	0	0	N.A.	5329.095	N.A.	N.A.	0
Japan-Malaysia	1951	0	0	0	N.A.	5329.095	N.A.		0
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Japan-Malaysia	2003	0	23843.49963	0.022950095	0	5329.095	3.647425351	0	118
Japan-Malaysia	2004	0	26657.90919	0.021832191	0	5329.095	3.608790391	0	129
Japan-Malaysia	2005	0	27310.60538	0.021117183	0	5329.095	3.496453414	0	141
Japan-Malaysia	2006	1	28798.49747	0.019725856	0	5329.095	3.327117217	1	158
Japan-Myanmar	1948	0	2.8	0.002241793	0	4781.767	N.A.	N.A.	0
Japan-Myanmar	1949	0	9.4	0.0062388	0	4781.767	N.A.	N.A.	0
Japan-Myanmar	1950	0	33.9	0.017640631	0	4781.767	N.A.	N.A.	0
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Japan-Myanmar	2009	0	542.3221043	0.00049792	0	4781.767	N.A.	1	202
Japan-Myanmar	2010	0	652.8099391	0.000465786	0	4781.767	N.A.	1	213
Japan-Myanmar	2011	0	N.A.	N.A.	0	4781.767	N.A.	1	224

Table1: An Example of Discrete Data format

Variable	Obs	Mean	Std. Dev.	Min	Max
YEAR	6774	1975.31	16.93813	1948	2011
PTA	6774	0.012696	0.111966	0	1
LN_TRADE(AB)	4377	29.30003	29.99033	-9.11503	12.50115
LN_TRADE(AB)_SQ	4377	4.229652	3.378266	0	156.2789
TRADE(RE)	6011	0.006912	0.017651	0	0.687337
TRADE(RE)_SQ	6011	0.000359	0.007386	0	0.472432
INCREASE(AB)	5892	0.15886	0.365576	0	1
INCREASE(RE)	5892	0.055499	0.228971	0	1
DEMO	4749	0.165087	0.371299	0	1
LN_DIS	6774	8.145802	0.781632	5.754296	9.454152
DIFGDP	3044	2.235033	1.672557	4.05E-05	8.509223
DIFGDP_SQ	3044	7.791902	10.49727	1.64E-09	72.40688
WORLDPTA	6774	26.1457	45.12826	0	224

Table2: Descriptive Statistics for the Variables (East Asia)

Variable	Obs	Mean	Std. Dev.	Min	Max
YEAR	16480	1976.81	17.66578	1948	2011
PTA	16480	0.0082524	0.09047	0	1
LN_TRADE(AB)	10123	4.404725	3.398389	-10.13668	12.96635
LN_TRADE(AB)_SQ	10123	30.94951	30.88987	0	168.1263
TRADE(RE)	13897	0.0064619	0.0202184	0	0.687337
TRADE(RE)_SQ	13897	0.0004505	0.0064511	0	0.472432
INCREASE(AB)	14450	0.1483737	0.3554823	0	1
INCREASE(RE)	14450	0.0487197	0.2152889	0	1
DEMO	10223	0.1942678	0.3956553	0	1
LN_DIS	16480	8.721296	0.8844083	5.754296	9.894045
DIFGDP	8353	2.391766	1.788438	0.0000405	9.042055
DIFGDP_SQ	8353	8.918674	11.90662	1.64E-09	81.75876
WORLDPTA	16480	31.57197	51.40125	0	224

Table3: Descriptive Statistics for the Variables (Asia Pacific)

	Model1-1 (t-3)	Model1-2 (t-4)	Model1-3 (t-5)	Model2-1 (t-3)	Model2-2 (t-4)	Model2-3 (t-5)
LN_TRADE(AB)	0.181 [1.17]	0.1729 [1.15]	0.2253 [1.49]	0.1724 [0.95]	0.181 [1.01]	0.1866 [1.21]
LN_TRADE(AB)_SQ				0.0093 [0.42]	0.004 [0.18]	0.0124 [0.60]
TRADE(RE)	-10.6912 [-0.69]	-9.4697 [-0.65]	-11.9346 [-0.73]	-32.4129 [-1.01]	-25.9242 [-0.85]	-21.8415 [-0.49]
TRADE(RE)_SQ				211.277 [0.88]	169.7888 [0.75]	54.1412 [0.11]
INCREASE(AB)	-0.5512 [-1.43]	0.0394 [0.11]	-0.3979 [-0.95]	-0.5511 [-1.43]	0.0522 [0.14]	-0.4215 [-1.00]
INCREASE(RE)	0.7356 [1.55]	0.607 [1.36]	0.5122 [0.97]	0.7102 [1.49]	0.5934 [1.33]	0.5 [0.95]
DEMO	0.1429 [0.23]	0.1648 [0.25]	-0.3148 [-0.47]	0.1611 [0.25]	0.1718 [0.26]	-0.2848 [-0.43]
LN_DIS	-0.437 [-1.14]	-0.2628 [-0.68]	-0.5265 [-1.31]	-0.4416 [-1.15]	-0.2769 [-0.72]	-0.5375 [-1.33]
DIFGDP	0.0106 [0.03]	0.0707 [0.21]	0.0592 [0.19]	-0.0201 [-0.06]	0.0634 [0.18]	-0.002 [-0.01]
DIFGDP_SQ	-0.0396 [-0.71]	-0.0591 [-1.00]	-0.064 [-1.24]	-0.0321 [-0.52]	-0.058 [-0.91]	-0.0486 [-0.84]
WORLDPTA (t-1)	0.0255 [3.79]***	0.0236 [3.62]***	0.0259 [4.11]***	0.0243 [3.33]***	0.023 [3.22]***	0.0244 [3.57]***
_cons	-1.8722 [-0.56]	-2.3372 [-0.71]	-3.8786 [-1.10]	-1.8698 [-0.55]	-2.2579 [-0.69]	-3.6505 [-1.04]
Pseudo R-squared	0.2371	0.2473	0.2501	0.238	0.248	0.2507
N	2281	2217	2145	2281	2217	2145

Table4: Regression Result (East Asia only)

* p<0.1, ** p<0.05, *** p<0.01

Country fixed effects and time trend are included but are not shown.

Z-values are in parentheses.

	Model3-1 (t-3)	Model3-2 (t-4)	Model3-3 (t-5)	Model4-1 (t-3)	Model4-2 (t-4)	Model4-3 (t-5)
LN_TRADE(NO)	0.1224 [1.19]	0.0987 [0.98]	0.0932 [0.93]	0.1247 [1.07]	0.0732 [0.71]	0.0649 [0.67]
LN_TRADE(NO)_SQ				0.0101 [0.73]	0.0171 [1.35]	0.0185 [1.59]
TRADE(RE)	3.6454 [0.37]	3.5205 [0.38]	3.2283 [0.34]	-29.6316 [-1.36]	-33.7928 [-1.60]	-34.2184 [-1.55]
TRADE(RE)_SQ				225.6162 [1.85]*	231.8985 [1.99]**	223.7178 [1.83]*
INCREASE(NO)	-0.4874 [-1.62]	-0.0748 [-0.26]	-0.5257 [-1.59]	-0.4261 [-1.43]	-0.0253 [-0.09]	-0.5246 [-1.60]
INCREASE(RE)	0.807 [2.18]**	0.7173 [1.99]**	0.3897 [0.87]	0.7274 [1.98]**	0.6445 [1.81]*	0.3445 [0.78]
DEMO	0.3003 [0.75]	0.3601 [0.90]	0.1955 [0.48]	0.2836 [0.69]	0.3692 [0.91]	0.2229 [0.54]
LN_DIS	-0.4605 [-1.99]**	-0.4552 [-2.03]**	-0.5767 [-2.53]**	-0.4751 [-2.03]**	-0.4763 [-2.12]**	-0.6099 [-2.67]***
DIFGDP	0.2064 [0.87]	0.2809 [1.16]	0.3078 [1.31]	0.1768 [0.73]	0.2516 [1.01]	0.2513 [1.03]
DIFGDP_SQ	-0.0591 [-1.30]	-0.0761 [-1.62]	-0.0805 [-1.84]*	-0.0566 [-1.18]	-0.0721 [-1.44]	-0.0687 [-1.47]
WORLDPTA (t-1)	0.0248 [4.79]***	0.0239 [4.69]***	0.0253 [5.02]***	0.0236 [4.35]***	0.022 [4.13]***	0.0235 [4.49]***
_cons	-30.9596 [-0.02]	-29.4842 [-0.03]	-30.164 [-0.02]	-29.2441 [-0.03]	-29.4766 [-0.03]	-28.6311 [-0.03]
Pseudo R-squared	0.2163	0.2214	0.2131	0.2197	0.2256	0.2174
N	5119	4992	4854	5119	4992	4854

Table5: Regression Result (Asia Pacific)

* p<0.1, ** p<0.05, *** p<0.01

Country fixed effects and time trend are included but are not shown.

Z-values are in parentheses.