

地域貿易協定の貿易フローに対する影響

Regional Trade Agreements and Bilateral Trade Flows¹

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Abstract

I analyze the effect of free trade agreements and quasi-trade agreements on trade flows using a gravity model. Judging from the t-values I obtained, The RTAs such as EU plus 13 candidate nations, MERCOSUR, and FTAA members already have a tendency to trade more among member nations even before formal agreements are reached. NAFTA and ASEAN Free Trade Area don't show strong trade concentration within the areas. On the other hand, quasi-trade arrangement groups such as APEC and ASEM show trade concentration beyond the geographical bound. The rest of trade relational groups such as EAEC, EU-Mexico Free Trade Agreement, ASEAN-China Free Trade Area, ASEAN Free Trade Area - Australia-New Zealand Closer Economic Relations Trade Agreement don't show some feature of their special tie over the observed period. In conclusion, even after holding constant for such natural determinants of bilateral trade as size and distance, and regardless of the status of RTAs, one in force or one under negotiation (or just nominal), RTAs are not always a decisive factor to regulate international trade flows. In other words, increasing number of RTAs does not mean its increasing influence over the world trade flow.

Introduction

Regionalism or rather Regional Trade Agreements (RTAs) are once again a buzzword not only in the world but also in Japan. In the 1960s, there was what Bhagwati(1991) called the First Regionalism when Latin American Free Trade Association(LAFTA), Pacific Free Trade Area(PAFTA), and other blueprints for preferential arrangements were flooding the earth. But most of them came to a halt except European Community (EC) and European Free Trade Association (EFTA).

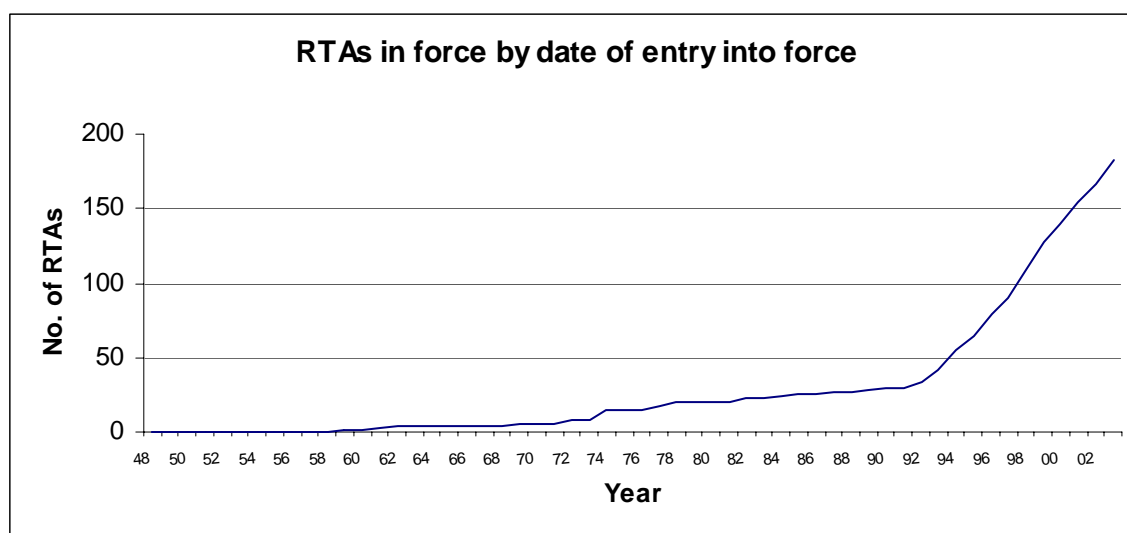
In the world almost all the World Trade Organization (WTO) members have RTA

¹ Regional Trade Agreements(RTA) and Free Trade Agreements(FTA) are used in this paper interchangeably. Although RTAs may take the form of free trade areas(FTAs), customs unions(CUs), or agreements leading to the formation of one or the other, free trade areas are generally more prevalent than customs unions. For type of agreement, see the pie chart in appendix.

membership. In the early 1990s, the number of RTAs was 51 but by the end of December 2002, a total of 259 RTAs has been notified to the WTO though only 176 RTAs are currently in force as you can see it in chart 1. Multilateralism which promoted the dramatic expansion of world trade after the Second World War seems to have given its way to regionalism. To prove this point a little bit further, last year's The Group of Eight summit in Evian, France saw leaders of G8 carefully avoided the matters of multilateral trade negotiations in favor of RTAs.² By 2005, if RTAs planned or already under negotiation are concluded, the total number of RTAs in force might well approach 300.

In practice, nearly all of the WTO's members have notified participation in one or more RTAs; some members are party to twenty or more. For example, Mexico has over twenty FTAs as is show in Table 1. In addition, not all RTAs notified in the last half century are still in force today. Many of the discontinued RTAs have, however, been superseded by redesigned agreements among the same signatories. Therefore, even though we call such agreements regional trade agreements, in some case they are interregional (e.g. the current negotiations on free trade for the Americas span two continents and involve over 30 countries), in other, they are not necessarily geographically grouped (e.g. ASEAN-EU negotiation and Japan-Mexico negotiation).

Chart 1



source:WTO secretariat web page

² Hugh Cortaazi. "Do G-8 summits have value?" *The Japan Times* June 7, 2003

If the current trend of regionalism continues, the structure of world trade would be shaped not only by multilateral framework of WTO but also by RTAs. Therefore, it is very interesting to know how trade arrangements make a difference in international trade flows.

Then taking a close look at Chart 2, we come to know that some trade agreements are in force; the others are under negotiation or just blueprints. Therefore I wonder whether or not for some countries, the effect of regional trade arrangements on a tendency to trade more among them is nominal. In addition, with respect to the causes of regional trade concentration, there is no agreement among eminent economists: Krugman (1991) and Summers (1991) say that most of intraregional trade bias may be due to proximity; Bhagwati (1993) asserted that the explanation for the trade concentration must be existing discriminatory trading arrangements.

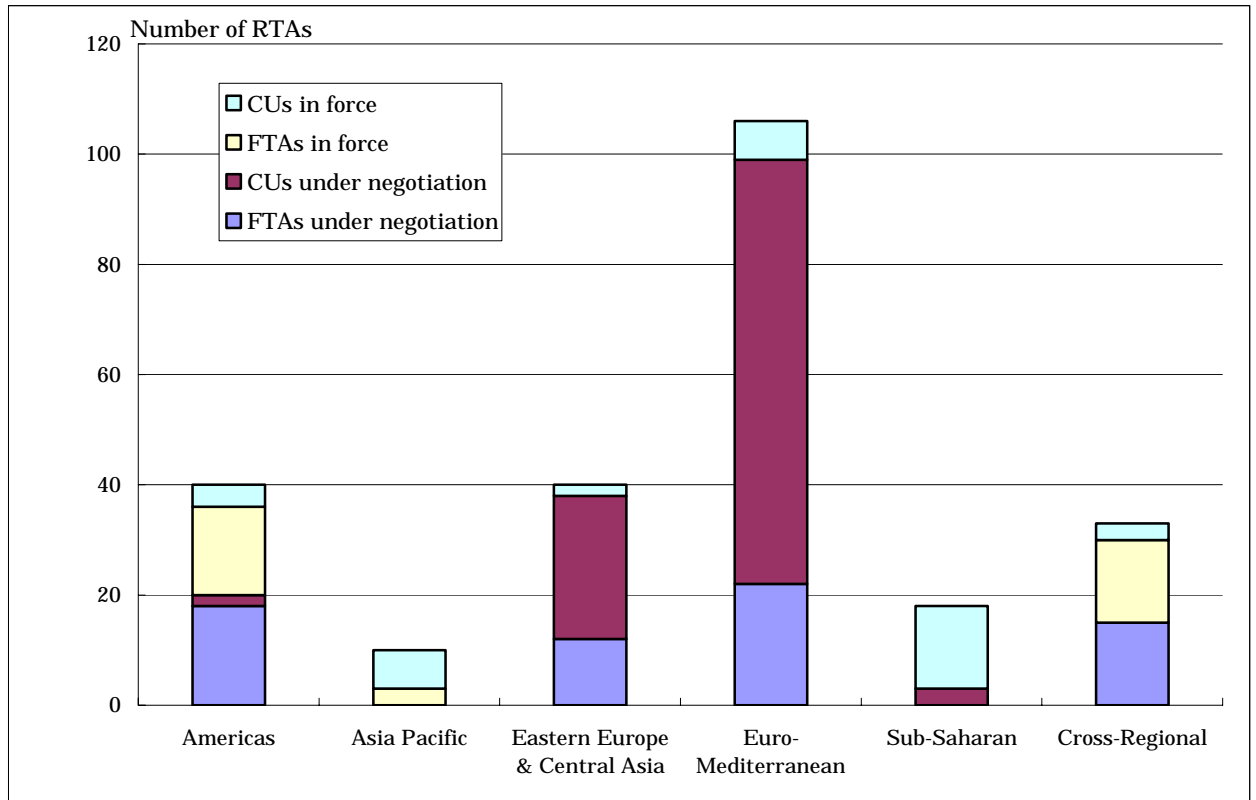
Therefore, the basic purpose of this paper is to find out if RTAs are influential in determining the direction of world trade flows.

Gravity model of bilateral trade

Basically it is gravity equation that relates trade between two countries positively to the products of their incomes and negatively to the distance between them. Isaac Newton's law of universal gravitation says that the force between any two bodies is directly proportional to the product of their masses and inversely proportional to the square of the distance between them.³ A Gravity model is reminiscent of the law of gravity in physics.

³ *The Penguin Concise Columbia Encyclopedia*(1987), p.344

CHART 2 Geographical Distribution of RTAs, 2001⁴



source: *WTO Annual Report 2002*, p.40

⁴ A difference between CUs and FTAs is in the imposition of external tariffs; under CUs, they are made uniform, while under FTAs, members retain their individual external tariffs.

TABLE 1 FTAs in force and under negotiation of APEC members (January 2003)

Member name	In force	Under negotiation
United States	Israel, Jordan, NAFTA	FTAA, Singapore, Chile
Canada	NAFTA, Israel, Chile, Costa Rica	FTAA, Singapore, El Salvador, Honduras, Nicaragua, Guatemala
Mexico	El Salvador, Honduras, Nicaragua, Guatemala, NAFTA, Israel, Chile, Costa Rica, EU, EFTA, Venezuela, Colombia, Bolivia, Uruguay	FTAA, Singapore, Japan, MERCOSUR
Chile	Canada, Mexico, El Salvador, Honduras, Nicaragua, Guatemala, Costa Rica,	EU, United States, EFTA, South Korea, FTAA, New Zealand, Singapore
China		Hong Kong(China), ASEAN
Hong Kong(China)		China, New Zealand
Chinese Taipei		Singapore, Panama
South Korea		Chile
Singapore	Japan, New Zealand, AFTA	United States, EFTA, Mexico, Canada, Australia, Chile
Thailand	AFTA	Australia, Bahrain
Philippines	AFTA	China+ASEAN
Viet Nam	AFTA	China+ASEAN
Malaysia	AFTA	China+ASEAN
Brunei Darussalam	AFTA	China+ASEAN
Indonesia	AFTA	China+ASEAN
Australia	New Zealand	Singapore, Thailand
New Zealand	Australia, Singapore	Hong Kong(China), Chile
Russia	Commonwealth of Independent States	

Source: Ministry of Foreign Affairs, Japan Web site

In the field of international economics, Tinbergen (1962) is mentioned as the first user of gravity model in explaining trade flows. Poyhonen (1963) contemporaneously used his gravity model. His model explained the bilateral trade between two countries in terms of their GNPs, and the distance between them. Then Linnemann (1966) advanced his work. He added a population variable to his equation, reflecting the role of scale economies. The gravity model in the international economic world was said to be a model without graceful theoretical foundations. But empirically, gravity models have been successful and Deardorff (1984) welcomed Linnemann's model telling us something important about what happens in international trade.⁵ Frankel (1997) seems to do most of his work adopting this framework extensively. Gravity models in international trade have been a powerhouse for empirical studies of impact of regional factors on international trade.

Following these predecessors, an application of gravity model to international trade flow seems to be the best. The model is fitted to the data by means of ordinary least-squares regression analysis.

Basic assumption of gravity model is that trade between two countries or areas is posited to increase with their size and to decline with transaction costs. The former is represented by their gross domestic products and populations. The latter is substituted with geographic distance between them.

Other explanatory variable, per capita GDPs is to be added. Dummy variables are also included to assess the impact of common border, common language and common membership in regional trade arrangements in the gravity model framework.

Thus the total trade(exports plus imports) between countries *i* and *j* is considered to be a function of the explanatory variables as in the following equation to be estimated:

$$\begin{aligned} \log(\text{TTRADE}_{ij}) = & \alpha + \beta_1 \log(\text{GDP}_i \text{GDP}_j) + \beta_2 \log(\text{GDP}/\text{POP}_i \text{GDP}/\text{POP}_j) + \\ & \beta_3 \log(\text{DIST}_{ij}) + \beta_4 (\text{ADJ}_{ij}) + \beta_5 (\text{LANG}_{ij}) + \beta_7 (\text{APEC}) + \beta_8 (\text{EU}) + \beta_9 (\text{NAFTA}) + \\ & \beta_{10} (\text{AFTA}) + \beta_{11} (\text{EAEC}) + \beta_{12} (\text{ASEM}) + \beta_{13} (\text{MERCOSUR}) + \beta_{14} (\text{EUMEX}) + \\ & \beta_{15} (\text{CHIASE}) + \beta_{16} (\text{AFTACER}) + \varepsilon_{ij} \end{aligned}$$

Where $\text{GDP}_i \text{GDP}_j$ is the product of the two countries' GDPs, the so-called gravity variable,⁶ $\text{GDP}/\text{POP}_i \text{GDP}/\text{POP}_j$ is the product of the two countries' per capita incomes,

⁵ Deardorff(1984) pp.502-4

⁶ According to Frankel et al.(1998), the idea that bilateral trade depends on the product

$DIST_{ij}$ is the Great Circle distance in kilometers between the capitals of the two countries, ADJ_{ij} is a dummy variable indicating whether the two countries are contiguous, taking a value of 1 if they share a common border, $LANG_{ij}$ is equal to 1 when the two countries share a common language, and ε_{ij} is disturbance term.

Expected sign of estimated coefficients

$DIST$ is expected to have negative coefficient. As we choose pairs of countries that are farther and farther apart, their respective traders are less and less likely make contact. This is due both to increased transport costs and to reduced business knowledge. These are represented by $DIST$ variable. The distance between two points on the globe can be measured with the Great Circle distance between the two latitude longitude combinations. Distance between two capitals is taken for a proxy for transaction costs at a distance. Kindleberger (1962) said that the cost of shipping an article from one country to another may be said to depend on a number of considerations: its weight, bulk, value, physical characteristics, the distance to be traversed, the mode and speed of transport, the character of route, the existence of other cargoes going between the same points, especially in the opposite directions, and so on.⁷ Making a general statement about transport costs without going into a lot of detailed analysis is extremely difficult. $DIST$ could be a good proxy for trade resistance measure.

The adjacency variable, ADJ is included in the model to know if there is difference in the volume of trade when a country shares its border with the other. Intuitively neighboring countries tend to trade more each other, especially if they share a common border, not isolated from each other.

Language problems, implicit knowledge, and cultural differences may play a part. $LANG$ variable is a proxy for these matters and expected to have positive sign. It is added to the model to pick up cultural links or familiarity between both of a pair. English, Spanish, Chinese, Arabic, French, German, Japanese, and Dutch are counted. If their language is more than one, they have more than one links with other nation. The United States legally does not define English as an official language. Therefore, it has English and Spanish linguistic links with other English or Spanish speaking countries.

Finally, economic alliances such as customs union and free trade agreements may reduce the physical and psychic resistance to trade. So the dummy variables representing group of nations are supposed to have plus sign.

of GDPs can be justified by Helpman(1987) and Helpman and Krugman(1985).

⁷ Kindleberger(1962) p.11

Preference-group membership dummy variables

The use of the dummy variables to reflect preference-group membership has interesting implications for the analysis of such groups. The estimated coefficient of the dummy variable can be used to know if the two countries trade more with each other than would be predicted by their incomes, populations and geographical location in the sample. If the dummy variable has positive coefficient, it is said to imply trade-creating effect. When it has negative coefficient, it implies trade-diverting effect.⁸ The 10 group dummy variables are as follows:

1) The Asia-Pacific Economic Cooperation (APEC)⁹

The Asia-Pacific Economic Cooperation(APEC) was established in 1989, and is an example of “open” regionalism which promotes open trade and cooperation. By contrast, regional trade agreements provides for partners to grant each other preferential tariff treatment on a reciprocal basis. APEC economies are: Australia; Brunei Darussalam; Canada; Chile; China; Chinese Taipei; Hong Kong, China; Indonesia; Japan; Republic of Korea; Malaysia; Mexico; New Zealand; Papua New Guinea; Peru; Philippines; Russian Federation; Singapore; Thailand; United States; and Viet Nam.

If they literally have “open” regionalism policy, APEC variable does not have strong sign of regional trade concentration.

2) The European Union (EU13)

The process of European integration was launched on 9 May 1950 when France officially proposed to create 'the first concrete foundation of a European federation'. Six countries (Belgium, Germany, France, Italy, Luxembourg and the Netherlands) joined from the very beginning. Today, after four waves of accessions (1973: Denmark, Ireland and the United Kingdom; 1981: Greece; 1986: Spain and Portugal; 1995: Austria, Finland and Sweden) the EU has 15 Member States and is preparing for the accession of 13 eastern and southern European countries.

Historically European integration has been and will be expanding. Regional trade concentration may be expected.

3) North American Free Trade Agreement (NAFTA)

It was established in 1994 among the Unites States, Canada and Mexico. In Frankel’s gravity model estimation of explicit regional trading arrangements, NAFTA bloc variable does not have statistically significant coefficients over the period from 1965-92.¹⁰

⁸ Leamer and Stern(1970)

⁹ APEC is a loose cooperation scheme.

¹⁰ Frankel(1997) p.66

4) The ASEAN Free Trade Area (AFTA)

The Association of Southeast Asian Nations or ASEAN was established on 8 August 1967 in Bangkok by the five original Member Countries, namely, Indonesia, Malaysia, Philippines, Singapore, and Thailand. Brunei Darussalam joined on 8 January 1984, Vietnam on 28 July 1995, Laos and Myanmar on 23 July 1997, and Cambodia on 30 April 1999. Ultimately, tariffs will be completely abolished by 2010 for ASEAN-6 and 2015 for Viet Nam, Lao People's Democratic Republic, Myanmar and Cambodia with flexibility on some sensitive products until 2018. Apart from AFTA, ASEAN Preferential Trading Arrangements has been effective since 1977. Therefore more or less, there must be some intra-regional trade concentration.

If everything goes on schedule, AFTA variable is expected to have positive coefficient.

5) The East Asia Economic Caucus (EAEC)

The East Asia Economic Caucus (EAEC), initially known as the East Asia Economic Group (EAEG), was floated by YAB Perdana Menteri in 1990 as a consultative forum to discuss common economic problems. With a common voice in international dialogue, EAEC aims at enhancing economic cooperation, promote and protect free trade, accelerate economic growth, promote open regionalism and contribute to the multilateral trading system. The EAEC was not to be turned into a trade bloc. Proposed members of EAEC at the time of the announcement were the ASEAN 7, China, Japan and the Republic of Korea. EAEC initiatives had been strongly opposed by the United States. In practice there was no official move. All of them are now the members of ASEAN + 3 (East Asia Cooperation). In November 1999, they declared their first Joint Statement on East Asia Cooperation. After that, they had several ASEAN + 3 summits. Their next summit will be held in Indonesia in October 2003. Then EAEC variable is likely to have a positive sign.

6) The Asia-Europe Meeting (ASEM)

ASEM (the Asia-Europe Meeting) is an informal process of dialogue and cooperation bringing together the fifteen EU Member States and the European Commission, with ten Asian countries (Brunei, China, Indonesia, Japan, South Korea, Malaysia, the Philippines, Singapore, Thailand, and Vietnam). The ASEM dialogue addresses political, economic and cultural issues, with the objective of strengthening the relationship between two regions, in a spirit of mutual respect and equal partnership.

The first ASEM Summit was held in Bangkok in March 1996, giving rise to an ongoing process including Summit-level meetings every second year, Ministerial-level meetings in the intervening years (although now normally once a year) plus a range of

meetings and activities at the working level. The inaugural ASEM Summit was held in Bangkok in March 1996, and proposed the creation of a new partnership between Asia and Europe, strengthening the relationship between two regions by means of an enhanced political dialogue, reinforced economic cooperation, as well as cooperation in other areas (social, cultural and intellectual). The second ASEM was held in London in April 1998, confirming and enhancing the progress made over the two preceding years, and discussing in particular the issues arising from the financial crisis in Asia. ASEM variable must have a positive coefficient since it aims at strengthening the relationship between two regions.

7) Mercado Comun del Sur(MERCOSUR)

By SOUTHERN COMMON MARKET (MERCOSUR) AGREEMENT Treaty, It established a Common Market between the Argentine Republic, the Federal Republic of Brazil, the Republic of Paraguay and the Eastern Republic of Uruguay. It came into force in 1995. Since it is a common market, its members must have an intra-regional trade tendency.

8) EU-Mexico Free Trade Agreement (EUMEX)

Following the signature of the EU-Mexico FTA at the European Council in Lisbon in March 2000 (Joint Council of the Interim Agreement on Trade and Trade-related Matters), tariff dismantling between Europe and Mexico allowing for preferential access for European and Mexican exporters into their respective markets began on 1 July 2000. With my data of 1999, effect of the agreement of 2000 cannot be directly measured, but there could be a tendency for trade flows to be affected in advance of the date when the agreement goes into force, as exporters position themselves for future markets.¹¹ A positive sign is expected.

9) ASEAN-China Free Trade Area (“ASEAN-China FTA”;CHIASE)

At the ASEAN-China Summit held on 6 November 2001 in Bandar Seri Begawan, Brunei Darussalam, they made decision to establish an ASEAN-China Free Trade Area (“ASEAN-China FTA”) within ten years with special and differential treatment and flexibility for the newer ASEAN Member States of Cambodia, Lao People’s Democratic Republic, Myanmar and Viet Nam (“the newer ASEAN Member States”) and with provision for an early harvest in which the list of products and services will be determined by mutual consultation. The FTA has not yet to come, but for the same reason as just above, even in the year of 1999, there could be a tendency to trade more.

10) ASEAN Free Trade Area (AFTA) - Australia-New Zealand Closer Economic

¹¹ Eichengreen and Irwin(1995)

Relations Trade Agreement (CER) (The AFTA-CER CLOSER ECONOMIC PARTNERSHIP;AFTACER)

The ASEAN Free Trade Area (AFTA)-Closer Economic Relations (CER) Linkage was established in September 1995 during informal consultations between ASEAN Economic Ministers and Ministers from Australia and New Zealand (the CER countries), with the aim of facilitating trade and investment flows between the two regions. At the ministerial talks in October 1999, ASEAN and CER Ministers agreed to establish a High Level Task Force to explore the feasibility of an AFTA-CER free trade area by 2010. In October 2000, at their 5th annual consultations, AFTA-CER Ministers agreed that the two regions should work towards economic integration through a Closer Economic Partnership (CEP). In this context, AFTACER variable must have a positive coefficient.

11) the Free Trade Area of the Americas (FTAA)

The effort to unite the economies of the Americas into a single free trade area began at the Summit of the Americas, which was held in December 1994 in Miami, U.S.A. The Heads of State and Government of the 34 democracies in the region agreed to construct a Free Trade Area of the Americas, or FTAA, in which barriers to trade and investment will be progressively eliminated. They agreed to complete negotiations towards this agreement by the year 2005.¹²

The framework of the FTAA can give a trade-creating effect among the members, since, according to Frankel (1997), the greatest increase in intraregional trade concentration often seems to take place after an agreement has been decided but before it actually takes effect. Firms rush to open business in order to establish a stake in what they expect to be an important market.¹³

12) the EU-Mercosur Interregional Framework Co-operation Agreement (EUMERCOSUR)

At present, the EU-Mercosur relationship is based on the EU-Mercosur Interregional Framework Co-operation Agreement signed on 15 December 1995 in Madrid between the EC and its Member States and the Mercosur and its Party States. The framework agreement fully entered into force on 1 July 1999 however the provisional application already took place from 1996 onwards. The Agreement consists of three main elements: political dialogue, co-operation and trade issues.¹⁴ This is not a formal free trade agreement, and therefore, it's unpredictable to know the effect on trade flow.

¹² the Official Website of the FTAA (http://www.ftaa-alca.org/View_e.asp)

¹³ Frankel (1997) p.31

¹⁴ The EU's relations with Mercosur
(http://europa.eu.int/comm/external_relations/mercotur/intro/)

Data

My basic data source is United Nations Statistical Databases and supplemented with *Direction of Trade Yearbook 1993 and 2001*. The former tends to have a lot of missing values. Maybe for political reason, data are not available for Taiwan. They present figures on the value of merchandise exports and imports by trade partners; they do not show the export and import of services on a country-by-country basis, and so the analysis had to be confined to commodity trade flows. The trade flows expressed in US dollars can be obtained from them directly. The data covers 104 countries so that this gives us $(104 \times 103) / 2 = 5356$ data points from 1984 through 2000. These years were chosen because of their availability¹⁵ The 104 countries are listed by region in table 2.

For some country pairs, the data value is zero, probably because it is actually zero, too small to be recorded, and/or has been rounded down to zero. This causes a problem for a regression analysis. The trade flow equation is linear in the logarithms and all the observations must be transformed into their logarithms. But one cannot take the log of zero. In order to avoid it, Linnemann (1966) suggested substituting arbitrary small numbers for the zero. But this is ad hoc. In my data set, 239 pairs, about 10% of the total, were dropped for the benefit of computation in the year of 1999.¹⁶ Thus, depending upon the number of missing values, dropping rate is different for each year. In addition, *Direction of Trade Statistics* uses the millions of US dollars unit, that is, the value is rough approximation of real trade. Thus there is some limitation to my empirical study.

TABLE 2 Countries included in the empirical analysis by region

Europe	Western Hemisphere	Asia, Pacific	Africa	Middle East
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¹⁵ I must admit that the data for both Luxembourg and Belgium have not been dealt with until 1997, because prior to that year, that data were available only for Belgium-Luxembourg combined bases.

¹⁶ Eichengreen and Irwin(1998) suggested taking the log of (trade volume + 1). But it involves some econometric complications.

Germany	Canada	Japan	South Africa	Egypt
France	United States	Indonesia	Ethiopia	Iran
Italy	Argentina	Chinese Taipei	Ghana	Israel
United Kingdom	Brazil	Hong Kong(China)	Kenya	Kuwait
Belgium	Chile	South Korea	Morocco	Libya
Denmark	Colombia	Malaysia	Algeria	Saudi Arabia
Luxembourg	Ecuador	Philippines	Tunisia	
Netherlands	Mexico	Singapore	Nigeria	
Greece	Peru	Thailand	Sudan	
Ireland	Venezuela	China		
Portugal	Bolivia	Brunei Darussalam		
Spain	Paraguay	Cambodia		
Austria	Uruguay	India		
Finland		Lao People's Dem.		
Sweden		Republic		
Switzerland		Myanmar		
Iceland		Pakistan		
Turkey		Papua New Guinea		
Hungary		Vietnam		
Macedonia, FYR		New Zealand		
Poland		Australia		
Russia				
Norway				

Member countries of FTAA

Antigua and Barbuda, Argentina, Bahamas, Barbados, Belize, Bolivia, Brazil, Canada, Chile, Colombia, Costa Rica, Dominica, Dominican Republic, Ecuador, El Salvador, Grenada, Guatemala, Guyana, Haiti, Honduras, Jamaica, Mexico, Nicaragua, Panama, Paraguay, Peru, St. Kitts and Nevis, St. Lucia, St. Vincent and the Grenadines, Suriname, Trinidad and Tobago, Uruguay, Venezuela, the United States

13 candidate countries for EU

Bulgaria, Cyprus, Czech Republic, Estonia, Latvia, Lithuania, Malta, Poland, Romania, Slovakia, Slovenia, Turkey, Hungary

Results

For the benefit of my presentation, the results of regression for each year are left in

the appendix, and here we pay our attention to the t-values of preference variables; they are put into two groups with threshold value of 2. They are shown in Charts 3 and 4. Chart 3 shows the t-value of preference variables whose value is more than 2. The dummy variables for APEC, ASEM, MERCOSUR, EU13, and FTAA seem to have positive effect on trade flow or at least its effect is not zero. They tend to trade among member countries.

Among these groups, APEC and ASEM are not formal trading agreement groups. Eichengreen and Irwin found that dummy variables for preferential arrangements often suggested statistically significant trade-creating effects even before the actual formation of those blocs. Judging from the result, they seem to have similar effects as that of formal trading agreement.

On the other hand, Chart 4 indicates the t-value of less than 2 meaning they seem not to have trade-creating effect among party members though there are several exceptional years.¹⁷ The reason why informal or future trading groups are included in my analysis is to know if they have a tendency to trade among themselves before they start a formal trading agreement. In other words, one of the aims of RTAs could be not to significantly increase trade flow but to lock in the current trade flow.

We find all five standard gravity variables such as GDPGDP, GDP/POPGDP/POP, DIST, ADJ, LANG to be highly significant statistically all the years except LANG variable of 1989.

¹⁷ Frankel (1997) showed that the coefficient for a NAFTA is almost never significant, not even in 1992, when NAFTA was actually negotiated. He reasoned lack of significance could be due in part to the small number of observations $(3 \times 2) / 2 = 3$

Chart 3

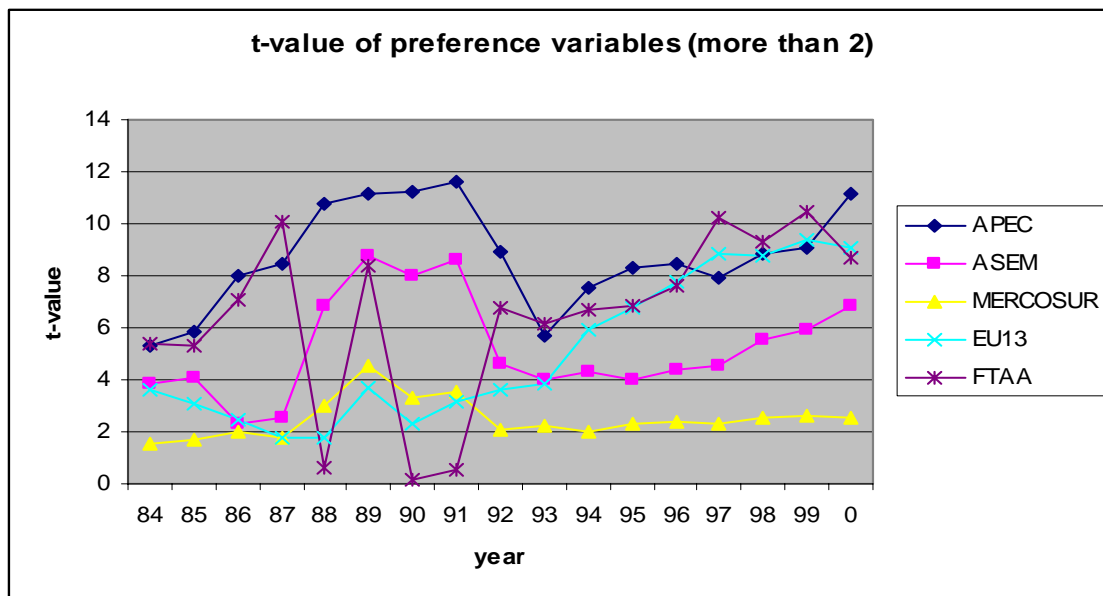
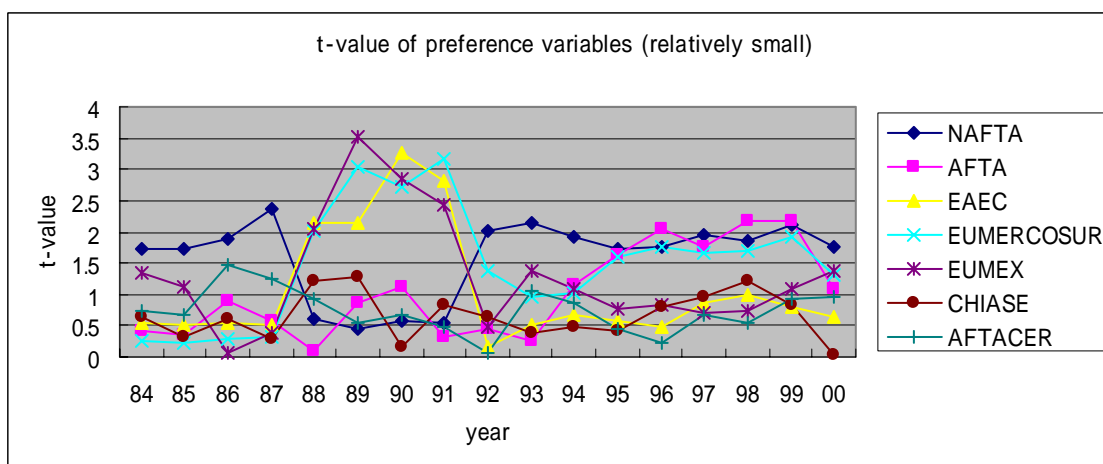


Chart 4



Other factors influencing trade flows

Traditional approach to international trade stresses comparative advantage doctrine and factor proportions theory. The analyses based on this line assume perfect competition in both product and factor markets and unit costs as invariant. Then the trade composition can be explained through the difference in factor proportions and consumer preferences among nations. Other approach focuses on the role of economies of scale as a powerful explanatory variable.¹⁸ Another approach introduced systematic

¹⁸ Linder, S.B.

institutional factors such as the parent-affiliate relation and bilateral trade arrangement. Tilton emphasized that the importance of non-price factors has significant repercussions for the nature of trade ties, international trade theory and policy. He suggested that for some buyers and sellers they prefer long-term business relations to freedom to choose source or market solely on a price basis.

It must be very important to take into account as many other factors as we reasonably can. Otherwise, we might get biased coefficient estimates. As an example of other factor, political idea may interfere with RTAs. The Asia-Europe Meeting (ASEM) does not include Myanmar, Lao People's Democratic Republic and Cambodia due to the opposition from some European countries about their human rights issues.¹⁹ Also, Turkey is having a hard time gaining membership with EU probably due to religious reason though it has been accepted as a candidate member to EU. Cuba is not included in Free Trade Area of the Americas (FTAA) for some political reason. In making a selection of trading partners of the first Japanese preferential trade agreement, Japan agreed with Singapore to establish the Japan-Singapore Economic Agreement for a New Age Partnership in order to carefully avoid its touchy agricultural problem. Even before the RTA, Singapore's export of agricultural produce to Japan is almost nil. On the other hand, Singapore has a strategic idea that being among the first few countries to have a number of RTAs with economically significant economies ensures that Singapore is not discriminated ex post in case that its competitors form RTAs with third countries. In fact, this year, Singapore became the first Asian country to sign an FTA with the United States.

Eichengreen and Irwin (1998) argue that history plays a role in shaping the direction of international trade. In other words, past trade pattern may influence current trade flows. Also, there are some explanations for hysteresis in trade. After a temporary shock, trade does not return to its previous level. You may think of some Japanese automobile firms transplanted its production abroad after they had experienced appreciation of the value of Yen. Then they continue to influence trade by producing automobiles abroad even after the disturbance is gone.

However, it is unavoidable that we cannot take everything into account. So the bottom line is that given the data, even after holding constant for such natural determinants of bilateral trade as size and distance, and regardless of the status of RTAs, one in force or one under negotiation, RTAs are not always a decisive factor in international trade flows.

¹⁹ Ken Aoki, p.30

Concluding remarks

Formal trading groups to-be such as FTAA and EU plus 13 candidates already have tendency to trade more within their individual group even before formal trade agreements are reached, and then informal or quasi-trading groups such as APEC and ASEM have trading concentration among members. Therefore, judging from my observation, it seems that some RTAs or quasi-RTAs are supposed to lock in the current trend and /or direction of trade intentionally or without any intention. Its implication for non-member country is pretty serious. That is, once they set their RTAs in motion, their intraregional or in-group trade concentration would increase thanks to their external tariff barriers.²⁰ In addition, judging from positive signs of estimated coefficients of MERCOSUR, they tend to have trade-creating effect: the two countries trade more with each other than would be predicted by their incomes, populations, and geographical location and the average behavior of countries in the sample. Potentially, for non-member countries could be adversely affected by trade-diverting effect.

The rest of trade relational groups such as EAEC, EU-Mexico Free Trade Agreement, ASEAN-China Free Trade Area, ASEAN Free Trade Area - Australia-New Zealand Closer Economic Relations Trade Agreement don't show some feature of their special tie over the observed period. In conclusion, even after holding constant for such natural determinants of bilateral trade as size and distance, and regardless of the status of RTAs, one in force or one under negotiation (or just nominal), RTAs are not always a decisive to regulate international trade flows.

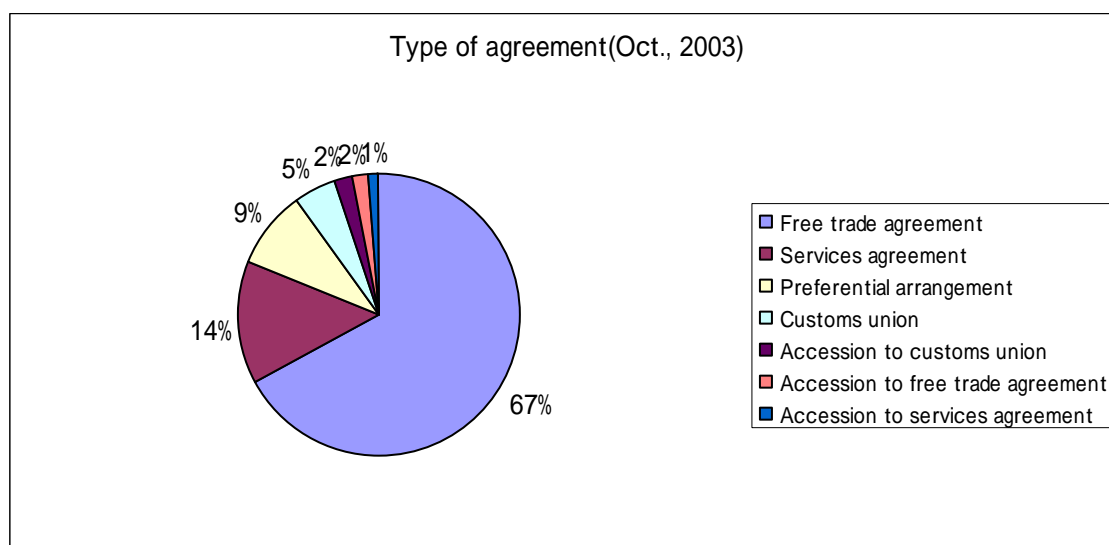
²⁰ The GATT Article XXIV stipulates that trade barriers against nonmembers not be made more restrictive than before. But, trading groups tend to delay this implementation.

Appendix: Data

Variable name	Definition	Source
TRADE	Total merchandise trade(exports plus imports) : Exports by partner in current US\$; goods [code 14540]+ Imports; merchandise; c.i.f.; US\$ (IMF) [code 6400]	UNDatabase, IMF, Direction of Trade Statistics 1993,2000
GDPGDP	Product of GDPs per capita of two trade partners in current international dollar (PPPs)(WB estimates) [code 29923]	UNDatabase
GDP/POPGDP/POP	Product of GDPs per capita of two trade partners at market prices, current prices, US\$ (UN estimates) [code 19450]	UNDatabase

As to Chinese Taipei, some data come from Taiwanese sources; see the reference below.

Appendix : Type of Regional trade agreement



source: WTO web page

Appendix: Results of regression

Year 1984

R ²	adjusted R ²	Standard error of estimator
.699	.696	1.837

Dependent variable: TTRADE	Independent variables	Non-Standardized Coefficient		Standardized Coefficient	t-value	Probability Significance
		B	Standard Error	Beta		
	Constant	-31.744	1.016		-31.254	.000
	GDPGDP	.965	.021	.707	46.928	.000
	GDP/POPGDP/ POP	.353	.029	.176	12.136	.000
	DIST	-.507	.042	-.179	-12.148	.000
	ADJ	.991	.295	.049	3.363	.001
	LANG	.498	.108	.065	4.601	.000
	APEC	1.039	.196	.081	5.290	.000
	NAFTA	-2.293	1.335	-.023	-1.718	.086
	AFTA	.497	1.209	.011	.411	.681
	EAEC	.317	.581	.011	.546	.585
	ASEM	.792	.205	.074	3.858	.000
	MERCOSUR	1.675	1.107	.029	1.513	.130
	EUMERCOSUR	-.188	.768	-.011	-.244	.807
	EUMEX	-.885	.654	-.054	-1.353	.176
	CHIASE	-.384	.592	-.013	-.648	.517
	AFTACER	.528	.715	.016	.739	.460
	EU13	.943	.263	.072	3.583	.000
	FTAA	.990	.183	.081	5.416	.000

Year 1985

R ²	adjusted R ²	Standard error of estimator
.720	.718	1.854

Dependent variable: TTRADE	Independent variables	Non-Standardized Coefficient		Standardized Coefficient	t-value	Probability Significance
		B	Standard Error	Beta		
	Constant	-31.280	.939		-33.320	.000
	GDPGDP	.940	.019	.725	50.635	.000
	GDP/POPGDP/ POP	.384	.028	.185	13.489	.000
	DIST	-.485	.042	-.162	-11.632	.000
	ADJ	1.013	.293	.047	3.454	.001
	LANG	.498	.105	.063	4.747	.000
	APEC	1.154	.198	.083	5.830	.000
	NAFTA	-2.324	1.346	-.022	-1.727	.084
	AFTA	.445	1.219	.009	.365	.715
	EAEC	.298	.586	.009	.509	.611
	ASEM	.838	.207	.073	4.049	.000
	MERCOSUR	1.852	1.115	.030	1.660	.097
	EUMERCOSUR	-.181	.774	-.010	-.233	.815
	EUMEX	-.747	.660	-.043	-1.132	.258
	CHIASE	-.200	.597	-.006	-.335	.738
	AFTACER	.489	.721	.013	.678	.498
	EU13	.815	.263	.058	3.094	.002
	FTAA	.912	.171	.075	5.321	.000

Year 1986

R ²	adjusted R ²	Standard error of estimator
.715	.713	1.853

Dependent variable: TTRADE	Independent variables	Non-Standardized Coefficient		Standardized Coefficient	t-value	Probability Significance
		B	Standard Error	Beta		
	Constant	-28.350	.716		-39.568	.000
	GDPGDP	.918	.013	.758	68.890	.000
	GDP/POPGDP/ POP	.602	.039	.161	15.643	.000
	DIST	-.639	.036	-.194	-17.594	.000
	ADJ	1.014	.220	.046	4.604	.000
	LANG	.573	.081	.072	7.093	.000
	APEC	1.236	.155	.083	7.995	.000
	NAFTA	-2.085	1.097	-.018	-1.901	.057
	AFTA	.759	.861	.021	.881	.378
	EAEC	.230	.428	.008	.536	.592
	ASEM	.387	.166	.030	2.335	.020
	MERCOSUR	2.000	.989	.024	2.022	.043
	EUMERCOSUR	-.178	.605	-.009	-.295	.768
	EUMEX	-.037	.517	-.002	-.071	.943
	CHIASE	-.303	.501	-.010	-.605	.545
	AFTACER	-.752	.508	-.025	-1.481	.139
	EU13	.458	.187	.031	2.446	.014
	FTAA	.850	.120	.081	7.058	.000

Year 1987

R ²	adjusted R ²	Standard error of estimator
.729	.728	1.791

Dependent variable: TTRADE	Independent variables	Non-Standardized Coefficient		Standardized Coefficient	t-value	Probability Significance
		B	Standard Error	Beta		
	Constant	-28.605	.688		-41.603	.000
	GDPGDP	.924	.013	.771	70.328	.000
	GDP/POPGDP/ POP	.310	.019	.165	16.036	.000
	DIST	-.605	.035	-.186	-17.157	.000
	ADJ	1.019	.215	.047	4.741	.000
	LANG	.421	.078	.053	5.398	.000
	APEC	1.317	.156	.087	8.454	.000
	NAFTA	-2.516	1.061	-.022	-2.371	.018
	AFTA	.465	.829	.013	.561	.575
	EAEC	.207	.409	.008	.507	.612
	ASEM	.402	.160	.032	2.517	.012
	MERCOSUR	1.663	.956	.021	1.739	.082
	EUMERCOSUR	-.182	.585	-.009	-.311	.756
	EUMEX	-.190	.500	-.010	-.380	.704
	CHIASE	.142	.485	.005	.293	.770
	AFTACER	-.611	.492	-.021	-1.243	.214
	EU13	.329	.183	.023	1.803	.071
	FTAA	1.176	.116	.113	10.112	.000

Year 1988

R ²	adjusted R ²	Standard error of estimator
.570	.567	2.274

Dependent variable: TTRADE	Independent variables	Non-Standardized Coefficient		Standardized Coefficient	t-value	Probability Significance
		B	Standard Error	Beta		
	Constant	-15.761	.795		-19.830	.000
	GDPGDP	1.290	.030	.583	43.241	.000
	GDP/POPGDP/ POP	.310	.025	.166	12.531	.000
	DIST	-.742	.045	-.226	-16.456	.000
	ADJ	1.707	.269	.078	6.347	.000
	LANG	.184	.098	.023	1.880	.060
	APEC	2.144	.199	.139	10.787	.000
	NAFTA	-.836	1.346	-.007	-.621	.535
	AFTA	.092	1.056	.002	.087	.931
	EAEC	-1.126	.521	-.040	-2.160	.031
	ASEM	1.377	.202	.107	6.827	.000
	MERCOSUR	3.629	1.212	.044	2.994	.003
	EUMERCOSUR	-1.493	.741	-.072	-2.013	.044
	EUMEX	1.302	.633	.065	2.056	.040
	CHIASE	.740	.616	.024	1.203	.229
	AFTACER	-.575	.624	-.019	-.920	.357
	EU13	.407	.230	.028	1.770	.077
	FTAA	-.083	.143	-.008	-.581	.561

Year 1989

R ²	adjusted R ²	Standard error of estimator
.413	.410	2.639

Dependent variable: TTRADE	Independent variables	Non-Standardized Coefficient		Standardized Coefficient	t-value	Probability Significance
		B	Standard Error	Beta		
	Constant	13.747	.685		20.079	.000
	GDPGDP	1.118E-12	.000	.330	23.078	.000
	GDP/POPGDP/ POP	.810	.052	.234	15.658	.000
	DIST	-.637	.052	-.193	-12.356	.000
	ADJ	2.452	.308	.113	7.954	.000
	LANG	.009	.113	.001	.082	.935
	APEC	2.440	.219	.163	11.120	.000
	NAFTA	-.724	1.563	-.006	-.463	.643
	AFTA	-1.065	1.221	-.029	-.872	.383
	EAEC	-1.294	.601	-.046	-2.153	.031
	ASEM	2.054	.234	.159	8.789	.000
	MERCOSUR	6.376	1.406	.077	4.535	.000
	EUMERCOSUR	-2.606	.860	-.124	-3.029	.002
	EUMEX	2.592	.735	.128	3.529	.000
	CHIASE	.913	.712	.030	1.282	.200
	AFTACER	-.394	.724	-.013	-.544	.587
	EU13	.971	.265	.066	3.658	.000
	FTAA	-1.393	.167	-.131	-8.350	.000

Year 1990

R ²	adjusted R ²	Standard error of estimator
.579	.577	2.287

Dependent variable: TTRADE	Independent variables	Non-Standardized Coefficient		Standardized Coefficient	t-value	Probability Significance
		B	Standard Error	Beta		
	Constant	-15.438	.787		-19.616	.000
	GDPGDP	1.336	.030	.598	44.107	.000
	GDP/POPGDP/ POP	.415	.047	.120	8.912	.000
	DIST	-.796	.045	-.236	-17.729	.000
	ADJ	1.844	.267	.083	6.910	.000
	LANG	.350	.098	.043	3.570	.000
	APEC	2.110	.188	.139	11.238	.000
	NAFTA	-.785	1.351	-.007	-.581	.562
	AFTA	1.151	1.020	.031	1.128	.259
	EAEC	-1.674	.514	-.060	-3.255	.001
	ASEM	1.626	.203	.123	8.027	.000
	MERCOSUR	4.073	1.219	.048	3.342	.001
	EUMERCOSUR	-2.024	.746	-.094	-2.714	.007
	EUMEX	1.807	.637	.087	2.836	.005
	CHIASE	-.092	.602	-.003	-.153	.879
	AFTACER	-.407	.605	-.013	-.673	.501
	EU13	.525	.231	.035	2.275	.023
	FTAA	-.027	.145	-.002	-.185	.854

Year 1991

R ²	adjusted R ²	Standard error of estimator
.588	.586	2.261

Dependent variable: TTRADE	Independent variables	Non-Standardized Coefficient		Standardized Coefficient	t-value	Probability Significance
		B	Standard Error	Beta		
	Constant	-15.679	.768		-20.413	.000
	GDPGDP	1.291	.029	.586	44.638	.000
	GDP/POPGDP/ POP	.287	.023	.160	12.320	.000
	DIST	-.742	.044	-.219	-16.721	.000
	ADJ	1.800	.262	.081	6.878	.000
	LANG	.533	.097	.065	5.524	.000
	APEC	2.132	.184	.141	11.579	.000
	NAFTA	-.710	1.336	-.006	-.532	.595
	AFTA	.316	1.007	.008	.314	.754
	EAEC	-1.405	.501	-.050	-2.805	.005
	ASEM	1.727	.200	.131	8.644	.000
	MERCOSUR	4.221	1.204	.050	3.505	.000
	EUMERCOSUR	-2.329	.737	-.108	-3.161	.002
	EUMEX	1.542	.630	.074	2.446	.014
	CHIASE	.502	.596	.016	.841	.400
	AFTACER	-.286	.597	-.009	-.479	.632
	EU13	.713	.229	.047	3.120	.002
	FTAA	-.077	.141	-.007	-.542	.588

Year 1992

R ²	adjusted R ²	Standard error of estimator
.735	.734	1.806

Dependent variable: TTRADE	Independent variables	Non-Standardized Coefficient		Standardized Coefficient	t-value	Probability Significance
		B	Standard Error	Beta		
	Constant	-26.205	.653		-40.123	.000
	GDPGDP	.913	.013	.769	71.836	.000
	GDP/POPGDP/ POP	.202	.017	.117	11.600	.000
	DIST	-.660	.035	-.196	-18.948	.000
	ADJ	1.340	.207	.061	6.468	.000
	LANG	.704	.077	.086	9.093	.000
	APEC	1.319	.148	.087	8.928	.000
	NAFTA	-2.140	1.067	-.018	-2.005	.045
	AFTA	.371	.803	.010	.462	.644
	EAEC	-.060	.398	-.002	-.151	.880
	ASEM	.738	.160	.055	4.604	.000
	MERCOSUR	1.982	.961	.023	2.062	.039
	EUMERCOSUR	-.807	.586	-.037	-1.378	.168
	EUMEX	-.235	.505	-.011	-.466	.642
	CHIASE	-.310	.476	-.010	-.650	.515
	AFTACER	.031	.477	.001	.066	.948
	EU13	.625	.173	.043	3.609	.000
	FTAA	.775	.115	.071	6.758	.000

Year 1993

R ²	adjusted R ²	Standard error of estimator
.779	.778	1.760

Dependent variable: TTRADE	Independent variables	Non-Standardized Coefficient		Standardized Coefficient	t-value	Probability Significance
		B	Standard Error	Beta		
	Constant	-30.696	.695		-44.191	.000
	GDPGDP	1.018	.014	.813	75.181	.000
	GDP/POPGDP/ POP	.173	.020	.089	8.839	.000
	DIST	-.685	.036	-.202	-19.089	.000
	ADJ	1.166	.223	.050	5.217	.000
	LANG	.685	.084	.080	8.157	.000
	APEC	1.037	.181	.061	5.726	.000
	NAFTA	-2.231	1.048	-.019	-2.130	.033
	AFTA	.248	1.003	.005	.247	.805
	EAEC	-.256	.504	-.007	-.508	.611
	ASEM	.722	.180	.052	4.017	.000
	MERCOSUR	2.133	.960	.026	2.222	.026
	EUMERCOSUR	-.584	.601	-.027	-.971	.331
	EUMEX	-.714	.513	-.034	-1.392	.164
	CHIASE	-.199	.517	-.005	-.385	.701
	AFTACER	.635	.609	.015	1.044	.297
	EU13	.672	.175	.046	3.831	.000
	FTAA	.740	.120	.067	6.157	.000

Year 1994

R ²	adjusted R ²	Standard error of estimator
.751	.750	1.722

Dependent variable: TTRADE	Independent variables	Non-Standardized Coefficient		Standardized Coefficient	t-value	Probability Significance
		B	Standard Error	Beta		
	Constant	-26.181	.589		-44.414	.000
	GDPGDP	.955	.012	.802	81.999	.000
	GDP/POPGDP/ POP	.118	.017	.065	7.110	.000
	DIST	-.723	.031	-.222	-22.976	.000
	ADJ	1.409	.183	.066	7.696	.000
	LANG	.548	.073	.066	7.500	.000
	APEC	1.074	.142	.068	7.549	.000
	NAFTA	-1.967	1.017	-.016	-1.935	.053
	AFTA	.904	.775	.025	1.166	.244
	EAEC	-.242	.365	-.009	-.665	.506
	ASEM	.659	.153	.048	4.319	.000
	MERCOSUR	1.848	.909	.021	2.034	.042
	EUMERCOSUR	-.565	.548	-.025	-1.032	.302
	EUMEX	-.524	.481	-.024	-1.089	.276
	CHIASE	-.208	.442	-.007	-.471	.638
	AFTACER	.434	.511	.014	.849	.396
	EU13	.745	.125	.060	5.935	.000
	FTAA	.719	.108	.065	6.657	.000

Year 1995

R ²	adjusted R ²	Standard error of estimator
.762	.761	1.711

Dependent variable: TTRADE	Independent variables	Non-Standardized Coefficient		Standardized Coefficient	t-value	Probability Significance
		B	Standard Error	Beta		
	Constant	-27.365	.582		-47.050	.000
	GDPGDP	.966	.011	.801	84.202	.000
	GDP/POPGDP/ POP	.137	.016	.076	8.512	.000
	DIST	-.705	.031	-.212	-22.674	.000
	ADJ	1.381	.180	.064	7.671	.000
	LANG	.670	.072	.079	9.270	.000
	APEC	1.186	.143	.073	8.317	.000
	NAFTA	-1.746	1.009	-.014	-1.729	.084
	AFTA	1.253	.771	.033	1.625	.104
	EAEC	-.213	.362	-.007	-.587	.557
	ASEM	.607	.151	.043	4.015	.000
	MERCOSUR	2.061	.902	.023	2.284	.022
	EUMERCOSUR	-.870	.544	-.038	-1.599	.110
	EUMEX	-.371	.478	-.017	-.777	.437
	CHIASE	-.184	.439	-.006	-.419	.675
	AFTACER	.231	.508	.007	.455	.649
	EU13	.848	.125	.066	6.770	.000
	FTAA	.727	.106	.064	6.847	.000

Year 1996

R ²	adjusted R ²	Standard error of estimator
.758	.757	1.721

Dependent variable: TTRADE	Independent variables	Non-Standardized Coefficient		Standardized Coefficient	t-value	Probability Significance
		B	Standard Error	Beta		
	Constant	-27.547	.586		-47.045	.000
	GDPGDP	.966	.012	.799	83.925	.000
	GDP/POPGDP/ POP	.143	.016	.078	8.724	.000
	DIST	-.702	.031	-.211	-22.431	.000
	ADJ	1.295	.182	.059	7.099	.000
	LANG	.693	.073	.082	9.506	.000
	APEC	1.209	.142	.074	8.492	.000
	NAFTA	-1.772	1.015	-.014	-1.746	.081
	AFTA	1.521	.740	.040	2.055	.040
	EAEC	-.180	.364	-.006	-.494	.621
	ASEM	.664	.153	.047	4.350	.000
	MERCOSUR	2.153	.908	.024	2.372	.018
	EUMERCOSUR	-.964	.547	-.042	-1.762	.078
	EUMEX	-.405	.480	-.018	-.842	.400
	CHIASE	-.358	.441	-.012	-.811	.417
	AFTACER	.097	.455	.003	.214	.830
	EU13	.976	.125	.077	7.782	.000
	FTAA	.822	.108	.072	7.642	.000

Year 1997

R ²	adjusted R ²	Standard error of estimator
.755	.754	1.747

Dependent variable: TTRADE	Independent variables	Non-Standardized Coefficient		Standardized Coefficient	t-value	Probability Significance
		B	Standard Error	Beta		
	Constant	-28.428	.591		-48.117	.000
	GDPGDP	.996	.011	.812	87.397	.000
	GDP/POPGDP/ POP	.198	.031	.055	6.304	.000
	DIST	-.712	.031	-.212	-22.700	.000
	ADJ	1.285	.185	.058	6.961	.000
	LANG	.496	.071	.058	6.937	.000
	APEC	1.124	.142	.068	7.938	.000
	NAFTA	-2.027	1.030	-.015	-1.968	.049
	AFTA	1.344	.756	.035	1.776	.076
	EAEC	-.315	.360	-.011	-.875	.382
	ASEM	.685	.151	.048	4.554	.000
	MERCOSUR	2.086	.919	.022	2.270	.023
	EUMERCOSUR	-.927	.552	-.041	-1.680	.093
	EUMEX	-.347	.488	-.016	-.712	.476
	CHIASE	-.430	.446	-.014	-.964	.335
	AFTACER	.314	.478	.010	.657	.511
	EU13	1.091	.124	.086	8.813	.000
	FTAA	1.085	.106	.095	10.209	.000

Year 1998

R ²	adjusted R ²	Standard error of estimator
.762	.761	1.662

Dependent variable: TTRADE	Independent variables	Non-Standardized Coefficient		Standardized Coefficient	t-value	Probability Significance
		B	Standard Error	Beta		
	Constant	-28.742	.580		-49.516	.000
	GDPGDP	.986	.011	.802	86.143	.000
	GDP/POPGDP/ POP	.116	.016	.066	7.338	.000
	DIST	-.633	.030	-.197	-20.928	.000
	ADJ	1.191	.175	.057	6.791	.000
	LANG	.572	.071	.069	8.053	.000
	APEC	1.188	.134	.077	8.870	.000
	NAFTA	-1.810	.981	-.015	-1.846	.065
	AFTA	1.574	.722	.043	2.180	.029
	EAEC	-.339	.343	-.012	-.988	.323
	ASEM	.786	.143	.059	5.513	.000
	MERCOSUR	2.236	.875	.025	2.557	.011
	EUMERCOSUR	-.883	.525	-.041	-1.683	.092
	EUMEX	-.344	.464	-.017	-.742	.458
	CHIASE	-.523	.425	-.017	-1.232	.218
	AFTACER	.251	.454	.008	.552	.581
	EU13	1.044	.120	.087	8.732	.000
	FTAA	.991	.107	.086	9.276	.000

Year 1999

R ²	adjusted R ²	Standard error of estimator
.766	.766	1.635

Dependent variable: TTRADE	Independent variables	Non-Standardized Coefficient		Standardized Coefficient	t-value	Probability Significance
		B	Standard Error	Beta		
	Constant	-27.707	.562		-49.281	.000
	GDPGDP	.976	.011	.807	89.559	.000
	GDP/POPGDP/ POP	.097	.015	.055	6.433	.000
	DIST	-.646	.029	-.201	-21.971	.000
	ADJ	1.225	.173	.058	7.100	.000
	LANG	.535	.068	.065	7.900	.000
	APEC	1.234	.136	.075	9.076	.000
	NAFTA	-2.030	.965	-.016	-2.104	.035
	AFTA	1.613	.739	.040	2.181	.029
	EAEC	-.281	.345	-.010	-.814	.415
	ASEM	.864	.145	.063	5.941	.000
	MERCOSUR	2.197	.851	.025	2.581	.010
	EUMERCOSUR	-.970	.502	-.046	-1.935	.053
	EUMEX	-.474	.440	-.023	-1.076	.282
	CHIASE	-.349	.418	-.011	-.835	.404
	AFTACER	.432	.461	.013	.936	.349
	EU13	1.092	.116	.091	9.389	.000
	FTAA	1.068	.102	.094	10.499	.000

Year 2000

R ²	adjusted R ²	Standard error of estimator
.732	.730	1.544

Dependent variable: TTRADE	Independent variables	Non-Standardized Coefficient		Standardized Coefficient	t-value	Probability Significance
		B	Standard Error	Beta		
	Constant	-22.560	.571		-39.532	.000
	GDPGDP	.851	.011	.751	74.295	.000
	GDP/POPGDP/ POP	.142	.015	.092	9.374	.000
	DIST	-.567	.029	-.204	-19.735	.000
	ADJ	1.183	.164	.066	7.201	.000
	LANG	.479	.069	.065	6.910	.000
	APEC	1.426	.128	.103	11.130	.000
	NAFTA	-1.620	.913	-.015	-1.775	.076
	AFTA	.738	.681	.022	1.085	.278
	EAEC	-.216	.333	-.009	-.649	.516
	ASEM	.938	.138	.082	6.815	.000
	MERCOSUR	2.016	.804	.027	2.507	.012
	EUMERCOSUR	-.615	.474	-.035	-1.297	.195
	EUMEX	-.572	.416	-.034	-1.373	.170
	CHIASE	.017	.395	.001	.042	.966
	AFTACER	.391	.405	.014	.967	.334
	EU13	.995	.110	.099	9.048	.000
	FTAA	.912	.105	.088	8.656	.000

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