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How Far Has Regional Integration Deepened?
– Evidence from Trade in Services

Soon-Chan Park

KOREA INSTITUTE FOR
INTERNATIONAL ECONOMIC POLICY

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Executive Summary

Deep regional integration is accompanied by harmonization and coordination of regulatory regimes and policies. Such developments may boost and facilitate trade in services, since liberalization of trade in services requires regulatory reforms to reduce the market segmenting effect of domestic policies. To examine how far regional integration agreements have advanced, this paper estimates the effects of regional integration on trade in nine services by using a gravity model. The results show that the existing regional blocs are at different stages. We identify that the efforts of the EU towards deep integration have had a significant impact on trade in services between members, while NAFTA, Mercosur and Andean trade less with their own members than their potential as suggested by income and geography.

JEL Classification: F14, F15

Keywords: deep integration, effects of RIAs on trade in services, gravity equation

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I. Introduction

In recent years, deep integration has become a new dimension of regional integration agreements (Hoeckman and Konan, 1999). The term 'deep integration,' which Lawrence (1996) distinguishes from shallow integration, refers to the harmonization or coordination of regulatory regimes and policies. The impetus for deep integration has come from the EU with its introduction of the euro and the Single Market Programme, a set of measures for coordination and cooperation on regulatory regimes including harmonization or mutual recognition of health and safety regulations, licensing and certification regimes, and unrestricted rights of establishment of EU firms, financial institutions and other service providers. NAFTA also goes well beyond the regional free trade area of goods. On services and investment, the coverage of NAFTA is in principle very wide, adopting the negative list approach and also incorporating standards and commitments on intellectual property protection (Snape, 1996). These devel-

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opments of RIAs around the world provide us with an opportunity to assess the degree of integration deepening.

How can progress towards deep integration be empirically evaluated? There have been a number of studies assessing the impacts of economic integration on trade, competitiveness, growth and many other economic variables. Aitken (1975), Frankel (1997), Bayoumi and Eichengreen (1995) estimate the effects of European integration on trade volume by using a gravity model. Allen et al. (1996) assess the competitiveness effects of the Single Market Programme on trade flows in the EU. However, these studies concentrate only on the effects of economic integration on the manufacturing sector, which can be driven simply by eliminating tariffs (without harmonization and coordination of market segmenting domestic policies).

Our method for evaluating deep integration is simple. Since progress towards deep integration requires elimination of regulatory barriers by harmonizing or coordinating different domestic regimes into a united policy, the effects of deep integration might be reflected in services trade. Since barriers to trade in services do not take the form of tariffs, but rather of quantitative restrictions and regulations, liberalization of trade in services requires regulatory reforms to reduce the market segmenting effect of domestic policies. Hence, progress towards deep regional integration would promote trade in services within a regional bloc. In this context, we examine the progress of RIAs by estimating the effect of regional integration on trade in services.[1)]

1) Studies in an anthology edited by Buigues et al. (1993) assess the impacts of the Single Market Programme in the EU on the services sector. These studies typically compare simple changes in the structure and per-

By estimating the effects of RIAs on trade in nine service sectors, we identify that the EU is the most advanced RIA. Other regional blocs such as NAFTA, Mercosur and Andean generally show that trade in services among their members has not reached their potentials, as justified by income and geography.

The remainder of this paper is organized as follows. Section II describes the efforts of RIAs towards progress on the liberalization of services. Section III constructs a basic empirical framework to capture the bloc effect on trade in services. Section IV shows the results of the estimations. Section V provides a summary and concluding remarks.

formance of an individual sector before and after integration. Probably due to lack of data, however, they do not provide a comprehensive analysis on the effects of the advancement in economic integration.

II. Services Liberalization in RIAs

Although services liberalization is a major issue in the ongoing Doha Development Agenda negotiations, services liberalization at the multilateral level has achieved rather limited progress. In contrast, services liberalization at the regional level has shown relatively rapid progress through several regional integration arrangements, going well beyond the achievements reached at the multilateral level.

Following Stephenson (1999), two approaches to services liberalization can be clearly discerned. The first type of approach, which is followed by NAFTA and Andean, involves a comprehensive liberalization of trade in services and investment based on a negative list system. Under this approach cross-border trade in all sectors of services as well as services supplied through establishment (foreign direct investment) are free of restrictions unless specified otherwise in a list of exceptions. This approach does not require the negotiation of commitment schedules since liberalization is guaranteed for all sectors and all service suppliers under unrestricted provisions on MFN and national treatment.

The second approach is one based on the WTO GATS. ASEAN adopted a Protocol on Services in the form of a framework agreement and a similar Protocol was also established by Mercosur members in 1997. The Protocol sets out a liberalizing modality identical to that of the GATS with gradual liberalization of the service markets, carried out through incremental rounds of negotiated commitments.

1. EU

Liberalization in services is provided for in the Rome Treaty, but there was little progress until the Single Market Programme. The Rome Treaty contains detailed liberalization obligations for goods, but it lacks details on services liberalization. Prior to the Single Market, provision of services was subject to numerous regulatory barriers. The Single Market Programme sought to open up the market on a non-discriminatory basis by separating the issue of market access from technical rules on supervision, market stability, safety and consumer protection. Thus, minimum EU licensing requirements were set, general interest provisions were harmonized and the mutual recognition approach was pursued where the right of establishment to practice is conditional on qualifications (Robson, 1998).

Despite progress in implementing the Single Market Programme, the EU still does not have a fully integrated services market. The European Council at Lisbon adopted an economic reform program for the EU to become the most competitive and dynamic knowledge-based economy in the world by 2010. Recognizing that a crucial element to achieving this goal is to improve the Internal Market in services, the European Commission adopted the two-stage Internal Market Strategy for Services. The first stage of the strategy involves identification and analysis of existing barriers to the cross-movement of services. Through this procedure, the European Commission (2002) concluded that the previous barriers have been replaced by legal barriers arising from national and regional regulations and new barriers arising from the behavior of administrations, including the use of discretionary powers or non-transparent procedures favoring domestic providers. In the second stage of the strategy, based on this analysis, appropriate solutions will be devised. While the previous Internal Market Programmes were effective in removing physical and technical barriers, the new program is expected to make more significant progress towards a fully integrated services market.

2. NAFTA

NAFTA, which came into effect in 1994, goes well beyond a simple free trade agreement, although it does not go as far as the EU. NAFTA contains provisions for the reduction of technical barriers to trade by harmonizing industrial and sanitary standards and liberalizing government procurement. The agreement also has a chapter on liberalizing trade in services. Unlike the GATS, NAFTA employs a negative list approach to coverage. That is, all services are covered unless they are explicitly excluded in an annex. In addition, most favored nation (MFN) treatment is applied to new service provisions.

3. ASEAN

Member governments at the Fourth ASEAN Summit in 1992 in Singapore, decided to liberalize intra-regional trade through the establishment of an ASEAN Free Trade Area (AFTA). In the next two years, ASEAN economic integration was broadened as the ASEAN membership rose from six countries to nine.[2] Concomitantly, the in-

2) ASEAN membership is now expanded to ten, as Cambodia joined ASEAN in 1999.

tegration was also deepened by liberalizing trade in services. In 1994, ASEAN economic ministers decided to include services in the liberalization efforts and adopted an ASEAN Framework Agreement on Services. The objectives of the agreement are to enhance cooperation in services amongst members by substantially eliminating restrictions to trade in services. The approach of ASEAN to services liberalization in the Framework Agreement is based on the WTO GATS, namely a gradual opening based on the negotiation of specific commitments to liberalize either market access or national treatment practices for specific service sectors. The initial package covers four sectors: tourism, telecommunications, maritime transport and business services.

Pursuant to Article IV of the ASEAN Framework Agreement on Services, subsequent negotiations were carried out and a second package of commitments was reached. In 1997, ASEAN members agreed to extend their specific commitments under GATS to ASEAN members who are non-WTO members. Recently, the ASEAN economic ministers adopted a Protocol to implement the third package of commitments under the ASEAN Framework Agreement on Services in 2001. The third round is meant to go beyond the commitments made in the first two rounds, by covering all service sectors and all modes of supply. In particular, several commitments have been made on ICT-related services with the aim of facilitating the realization of the e-ASEAN initiative. While the previous two Protocols represent a marginal improvement on the commitments in the national schedules of the ASEAN WTO members under the GATS, this third package is expected to contain more significant liberalization measures.

4. MERCOSUR

After liberalizing in the area of trade in goods, Mercosur members proceeded to deepen their regional integration efforts by including trade in services in their liberalization efforts. Like ASEAN, the basic approach adopted by Mercosur members is similar to that of the GATS, including the rules on MFN treatment, market access and national treatment. However, the Mercosur Protocol sets out the objective of achieving full liberalization of traded services within a ten-year period. Under the integration arrangements, Mercosur members have committed to a specific timetable for the complete elimination of restrictions to trade carried out by member service providers. They have also agreed in principle to go far beyond the scope of liberalization at the multilateral level, in order to realize a common market much along the lines of the European Union.

5. ANDEAN

Although the original Cartagena Agreement, signed in 1969, aimed at the establishment of a customs union within a decade, this was not realized. In 1997, the five Andean members took a step forward towards deepened integration through the signing of the Trujillo Protocol. It sets the stage for the adoption of several decisions setting out common policies for many of the newer, non-tariff trade issues, including investment, standards and technical regulations, competition policy, and intellectual property rights.

In regard to services liberalization, the Andean Community adopted a general Framework of Rules and Principles for the Liberalization of Trade in Services. The Andean Decision 439 sets out the objective of achieving full liberalization of trade in services within a ten-year period, which is to be carried out through a negative list approach. An inventory of measures restricting trade in services is to be adopted by the Andean Commission, after which the member countries are to hold annual negotiations aimed at the gradual and progressive removal of all such restrictions (Stephenson, 1999).

So far, we have discussed the efforts of each RIA to deepen integration, focusing on liberalization in services. Theoretically, there are three different types of RIAs: free trade areas (FTAs), customs unions (CUs), and common markets (CMs). The five RIAs, discussed above, clearly go beyond an FTA, although they adopt different approaches to liberalizing trade in services. From these simple descriptions of progress in RIAs, however, it is not easy to identify how far regional integration has advanced. Moreover, describing every effort to deepen integration may not be efficient. It is an empirical problem.

III. Empirical Analysis

In developed countries, services typically account for over 60 percent of GDP, but on average, services account for a much smaller portion of GDP in developing and least developed countries. The share of trade in services represents over 20 percent of the world's total trade in products. Despite the increasing importance of services in the economies around the world, the effects of regional integration on trade in services are seldom estimated.

In order to capture the effects of RIAs on trade, simple statistics on the intra-regional trade concentration ratio[3)] as well as total trade are shown. This measure is designed to obtain information about the geographical distribution of trade in a regional group. If trade is concentrated within a given group of countries, then the concentration ratio of that regional group will exceed one.

Table 1. Trade Volume in Services and Intra-regional Concentration Ratios

	Export	Import	Intra-regional trade concentration ratio
EU	438,119	443,279	0.66
NAFTA	251,429	200,226	0.27
ASEAN	74,396	63,309	0.85
Mercosur	12,243	24,187	0.21
Andean	3,797	6,649	0.39

Source: GTAP

3) The ratio is calculated as the intra-regional trade share in total trade of the region divided by the region's share of world trade. Peri (1993) called this measure the double-relative measure of intensity.

Table 1 shows total export in services, total import and intra-regional trade concentration ratio in five RIAs. Although the concentration ratios of the EU and ASEAN are relative high, none of the groups shows a ratio in excess of one. This implies that members of each RIA trade less with each other than would random pairs of countries. From this measure the conclusion is drawn that services trade in RIAs is not geographically concentrated.

However, it is well known that the regional concentration is attributed not only to the natural factor of geographical proximity but also the artificial factor of preferential trade policy. We do not intend here to replicate the discussion on the dominant determinant of the concentration of trade, which is geographical proximity according to Krugman (1991) and Summers (1991), or existing discriminatory trading agreements according to Bhagwati (1992) and Panagariya (1995). Instead, this paper examines the intra-regional trade bias by using a simple gravity model, which includes geographical factors as well as preferential trade policies.

The gravity equation has been widely used for investigating patterns of trade. The trade between two countries typically depends on the countries' incomes and transaction costs. Following the theoretical and empirical works of Anderson (1979), Bergstrand (1985, 1989), Deardorff (1998) and many others, the empirical gravity equation to be estimated is

$$\ln EX_{ij} = \beta_1 \ln GDP_j + \beta_2 \ln GDP_i + \beta_3 \ln D_{ij} + \beta_k \sum_k Z_k + \gamma_f \sum_f B_f + \gamma_k \sum_k BO_k, \qquad (1)$$

where EX_{ij} is export from i country to j country, D_{ij} indicates the distance between the capital cities of i and j. Z_{ij} represents a dummy variable such as a common language and border that takes the value 1 when two countries have linguistic links or share a land border. We consider English, French, German, Chinese, Spanish and Portuguese and allow multiple languages. B_f is a dummy variable for a regional bloc that takes the value 1 if both countries in the pair belong to the regional bloc *f*. Tested are five RIAs: ASEAN, NAFTA, EU, Mercosur and Andean. Following Bayoumi and Eichengreen (1995) and Frankel (1997), we isolate intra-bloc trade effects from the effects of an RIA on trade with non-members by including the overall openness of the regional bloc *k*, BO_k , which has the value 1 if a country in the regional bloc *k* imports services from non-members.

Our data source for trade flows is GTAP database (version 5), from which we obtain bilateral trade flows for 52 countries in 1997.[4) The GTAP database is based on IMF payment balance statistics and rearranges them according to GTAP industry classifications. The empirical analysis of the gravity equation here is limited to the nine service sectors: construction, trade, transport, communication, financial services, business, electricity and gas distribution, recreation and cultural services, and other services. The data for GDP are from the World Bank's Global Development Network Growth Database, and the distance is the great circle distance between the capital cities of the countries.[5)]

4) GTAP Database includes 66 regions, but we have excluded some aggregated regions such as rest of South Asia.

5) The source for distance is the web site http://www.indo.com

IV. Results

Table 2 presents coefficient estimates and t-statistics estimated according to the empirical gravity equation (1), excluding the openness dummy.[6] The estimated econometric model has greater explanatory power (the adjusted R^2 s in most regressions are above 0.7), implying that the gravity model fits the pattern of trade in services well. For all service sectors, the coefficient estimates for GDP of exporter and importer is positive and statistically significant at the 1 percent level.

The coefficient estimate for distance is negative in eight cases and proves to be statistically significant at least at the 5 percent level. However, the sign of the distance's coefficient for transport services is unexpectedly positive. This may be because transport services in valve the delivery of goods or services across distances. Since greater delivery distances result in higher transport costs, trade volume in transport services may increase in proportion to distance. A notable point is the magnitude of the distance's coefficient. Except for the construction and electricity and gas distribution, it ranges from -0.1 to -0.2, while Frankel (1997) reports that the figure is about -0.6 for trade in goods. This considerably lower coefficient for services implies that trade in services is less affected by distance than trade in goods. However, the distance's coefficient of -0.2 is still substantial,

6) We find that hetroscedasticity is in presence. We use the White estimator, since OLS standard errors are biased. However, our estimates have not changed, because the least square estimators are still unbiased and consistent, and asymptotically normally distributed.

meaning that when the distance between two countries increases by 1 percent, trade between them falls by about one-fifth of a percent. As Crafts and Venables (2002) and Ghemawat (2001) have put it, predictions of the 'death of distance' seem to be premature. Distance still matters not only in manufactures but also in services.

The language coefficient for trade, transport, finance and business is positive and statistically significant. The language coefficient for business services shows the greatest level of 0.34, implying that two countries sharing linguistic links tend to trade 40 percent more than otherwise similar countries. When we consider the importance of mutual understanding between consumers and suppliers in business services, the positive linkage between common language and business services is quite reasonable. The language coefficient for electricity and gas distribution, and recreation and cultural services are negative, but statistically insignificant.[7)]

Now, we look at the effect of RIAs. Each bloc dummy variable represents the case in which both members of the country pair belong to the same regional bloc. The EU's coefficient of all service sectors is positive and statistically significant at the 1 percent level, except for the category of other services. The estimate for business services is 1.32. This suggests that in 1997, two of the EU-15 countries traded about 270 percent more with each other, after holding constant for GDP, distance and other variables, than two otherwise similar countries.

7) Many authors include a dummy variable for a common border. So, we also tried to add this variable, but found that the coefficient was insignificant in most cases. Furthermore, this specification did not increase the explanatory power of the models. So we have deleted the common border variable in the regressions.

Table 2. Effect of RIAs on trade in services (without openness dummy)

	Construction	Trade	Transport	Communication
Constant	-21.937*** (-27.74)	-30.998*** (-56.68)	-32.452*** (-96.49)	-30.450*** (-52.84)
Importer's GDP	.794*** (43.96)	.947*** (76.03)	1.003*** (134.97)	.922*** (74.64)
Exporter's GDP	.833*** (42.89)	.959*** (86.48)	.959*** (123.55)	.897*** (67.94)
Distance	-.618*** (-12.07)	-.109*** (-3.03)	0.056*** (2.67)	-.091** (-2.50)
Languages	.126 (1.40)	.207*** (3.00)	.101*** (2.60)	-.038 (.581)
ASEAN	-.895*** (-3.01)	1.165** (2.29)	1.444*** (6.22)	1.054*** (2.72)
NAFTA	-2.46*** (-16.84)	-1.409*** (-7.91)	-.098 (-.615)	-.153 (-.284)
EU	.704*** (4.07)	1.143*** (12.44)	.568*** (9.12)	.668*** (6.00)
Mercosur	-4.25*** (-11.76)	-3.031*** (-6.47)	-.598 (-1.45)	-1.754** (-2.05)
Andean	-3.55*** (-12.07)	-1.400*** (-6.36)	-.489*** (-2.81)	-1.767*** (-3.19)
Adj. R-square	.617	.779	.911	.754
No. of Observation	2599	2599	2599	2599

***, **, and * show that the estimated coefficients are significant at 1%, 5% and 10% level, respectively.

Values of t-staticstics are reported in parentheses.

Table 2. Continued

	Finance	Business	Electricity/Gas	Recreation	Others
Constant	-30.010*** (-62.90)	-26.648*** (-43.13)	-9.836*** (-7.21)	-31.605*** (-51.70)	-29.945*** (-68.70)
Importer's GDP	.892*** (91.93)	.865*** (62.45)	.918*** (29.37)	.934*** (72.21)	.927*** (102.20)
Exporter's GDP	.960*** (95.47)	.937*** (72.56)	.913*** (30.40)	.991*** (71.49)	.923*** (99.79)
Distance	-.121*** (-3.41)	-.212*** (-5.45)	-.864*** (-10.40)	-.205*** (-5.15)	-.115*** (-3.97)
Languages	.205*** (3.99)	.341*** (4.29)	-.044 (-.30)	-.069 (-.998)	.157*** (3.41)
ASEAN	.022 (.10)	1.519** (2.48)	1.414 (1.55)	.988* (1.92)	.119 (.81)
NAFTA	-.914** (-2.27)	-.508 (-1.33)	.328 (.49)	-.683*** (-2.91)	.159 (.493)
EU	.546*** (5.25)	1.321*** (14.36)	1.011*** (4.50)	1.075*** (9.94)	.139 (1.59)
Mercosur	-2.170*** (-3.54)	-3.955*** (-6.76)	-1.138 (-1.02)	-2.508*** (-4.64)	-1.737*** (-7.15)
Andean	-.557 (-.78)	-2.596*** (-5.13)	-3.258*** (-7.78)	-1.194*** (-3.01)	-.509*** (-3.12)
Adj. R-square	.821	.719	.445	.770	.870
No. of Observation	2599	2599	2601	2599	2599

***, **, and * show that the estimated coefficients are significant at 1%, 5% and 10% level, respectively.

Values of t-staticstics are reported in parentheses.

The ASEAN's coefficient for trade, transport, communication and business are positive and statistically significant at the 1 or 5 percent level, but its coefficient for remaining services is not significant, implying that there has been progress towards deep integration sectorally, but not overall. A point to be noted is that ASEAN's coefficient for construction is negative and significant, meaning that construction services in ASEAN are supplied mainly by non-members. The coefficients for Mercosur and Andean are negative in all sectors, implying that two countries belonging to these blocs trade less than otherwise similar countries. The estimates for NAFTA are also mostly negative and statistically insignificant. Therefore, there is little evidence that NAFTA, Mercosur and Andean promote trade in services among their members.

However, the estimated results above do include the effects of an RIA on trade with non-members. The gravity model with dummy variables for RIAs captures their effect on intra-regional trade, which is the sum of trade-creation and trade-diversion for RIAs (Soloaga and Winters, 1999). That is, coefficients on dummy variables for RIAs tend to soak up all respects in which those countries differ in their trade performance that are not controlled for in the gravity equation (Bayoumi and Eichengreen, 1995). To isolate intra-bloc trade effects from the trade effects of blocs' overall openness[8], following Frankel (1997), we extend the gravity equation with two dummies: one captures intra-bloc trade effects and the second captures extra-bloc trade effects.

8) The dummy variable for the openness is designed to capture the trade effect generated by trade with non-members. Since the dependent variable in the regression is export, it takes one if a country in a regional bloc imports from non-members and zero otherwise.

Table 3. Effects of RIAs on trade in services (with openness dummy)

	Construction	Trade	Transport	Communication
Constant	-23.219*** (-27.19)	-31.412*** (-55.24)	-32.347*** (-93.31)	-29.973*** (-49.26)
Importer's GDP	.822*** (38.18)	.947*** (67.29)	.984*** (117.39)	.897*** (61.57)
Exporter's GDP	.833*** (43.80)	.964*** (86.81)	.964*** (125.05)	.898*** (68.59)
Distance	-.540*** (-10.32)	-.083** (-2.27)	.0713*** (3.46)	-.094** (-2.53)
Languages	.128 (1.49)	.249*** (3.63)	.133*** (3.44)	-.060 (-.92)
AESEAN	-1.033*** (-3.14)	.918* (1.74)	1.339*** (5.57)	.463 (1.15)
NAFTA	-2.051*** (-11.49)	-.893*** (-4.49)	.145 (.86)	-.205 (-.37)
EU	.723*** (3.96)	.914*** (9.15)	.325*** (4.85)	.552*** (4.57)
Mercosur	-3.157*** (-8.56)	-2.646*** (-5.50)	-.480 (-1.13)	-1.427* (-1.64)
Andean	-2.661*** (-8.34)	-1.338*** (-5.39)	-.348* (-1.86)	-1.441** (-2.54)
ASEAN openness	.095 (.63)	.357*** (2.58)	.232*** (3.30)	.711*** (5.95)
NAFTA openness	-.539*** (-3.89)	-.420*** (-3.56)	-.086 (-1.22)	.225* (1.66)
EU openness	-.066 (-.65)	.355*** (4.67)	.395*** (8.77)	.248*** (3.25)
Mercosur openness	-1.116*** (-7.88)	-.293*** (-2.90)	-.004 (-.006)	-.185 (-1.39)
Andean openness	-.941*** (-6.90)	.019 (.174)	-.040 (-.609)	-.199* (-1.67)
Adj. R-square	.629	.784	.915	.761
No. of Observation	2599	2599	2599	2599

***, **, and * show that the estimated coefficients are significant at 1%, 5% and 10% level, respectively. Values of t-staticstics are reported in parentheses.

Table 3. Continued.

	Finance	Business	Electricity/ gas	Recreation	Others
Constant	-30.028*** (-60.52)	-26.274*** (-41.80)	-6.736*** (-4.78)	-31.38*** (-49.25)	-29.43*** (-62.99)
Importer's GDP	.888*** (77.10)	.832*** (52.35)	.794*** (22.87)	.929*** (61.49)	.903*** (84.41)
Exporter's GDP	.961*** (95.82)	.942*** (74.09)	.921*** (31.49)	.989*** (72.44)	.925*** (99.66)
Distance	-.111*** (-3.10)	-.192*** (-4.92)	-.934*** (-11.04)	-.223*** (-5.52)	-.119*** (-4.08)
Languages	.205*** (3.98)	.339*** (4.47)	-.118 (-.81)	-.109 (-1.62)	.143*** (3.13)
AESEAN	-.013 (-.054)	1.036* (1.66)	.130 (.137)	-.010 (-.019)	-.039 (-.240)
NAFTA	-.979** (-2.34)	-.561 (-1.38)	-.455 (-.646)	-.617** (-2.41)	-.053 (-.162)
EU	.500*** (4.57)	1.062*** (10.43)	.592*** (2.80)	1.083*** (9.17)	.053 (.559)
Mercosur	-1.610* (-2.57)	-2.809*** (-4.61)	-1.735 (-1.44)	-2.118*** (-3.86)	-1.521*** (-5.89)
Andean	-.783 (-1.087)	-2.684*** (-5.14)	-2.371*** (-5.18)	-0.999** (-2.40)	-.465** (-2.52)
ASEAN openness	.067 (.69)	.673*** (5.02)	1.704*** (5.99)	1.076*** (8.23)	.237*** (3.11)
NAFTA openness	.103 (.761)	.302* (1.88)	1.493*** (5.93)	.030 (.231)	.343*** (3.93)
EU openness	.084 (1.39)	.477*** (5.53)	.894*** (5.88)	.058 (.77)	.178*** (3.31)
Mercosur openness	-.523*** (-4.87)	-.938*** (-6.27)	1.077*** (4.09)	-.291** (-2.56)	-.122 (-1.64)
Andean openness	.255*** (2.61)	.267** (2.09)	-.450** (-2.09)	-.090 (-.729)	.036 (.452)
Adj. R-square	.824	.733	.467	.782	.872
No. of Observation	2599	2599	2601	2599	2599

***, **, and * show that the estimated coefficients are significant at 1%, 5% and 10% level, respectively.
Values of t-staticstics are reported in parentheses.

Introducing the overall openness dummy raises the explanatory power in all services sectors. The significance and sign for importer's and exporter's GDP, distance and language does not change, though their absolute values do change somewhat.

The EU's bloc effect remains positive and statistically significant, but the effect becomes slightly weaker. The coefficient for European trade in services decreases from 1.14 to 0.91. The same coefficient for the EU's openness is a highly significant 0.35, indicating that EU members traded about 42% more with all partners than did two otherwise similar countries. The positive coefficient for openness implies that the formation of a regional bloc does not divert trade.

Adding the overall openness variable changes the bloc effect of ASEAN considerably. The coefficient for trade and business drops from 1.16 to 0.92 and from 1.52 to 1.04, respectively and becomes statistically significant only at the 10% level. In particular, the coefficient for communication services turns out to be negative. Instead, the coefficient for ASEAN's openness in this sector is a highly significant 0.71. This implies that the trade effect of ASEAN in those sectors is mainly attributable to extra-bloc trade with all partners.

The bloc effect of NAFTA, Mercosur and Andean are not changed by the introduction of the openness dummy. The coefficient of the NAFTA bloc for construction, trade, finance and recreation is also negative and statistically significant. The estimate for Mercosur and Andean is statistically significant but negative in many cases. The coefficient of NAFTA's openness is statistically significant at least at the 10% level in construction, trade, communication, business, electricity/gas and other services. But its sign for construction and trade is negative.

Our results on the effect of RIAs on trade in services differ from those of Frankel (1997) which are drawn from estimating trade in manufacturing goods for 1970-92. He shows that the coefficient for the EC is positive and significant, but it turns out to be negative and significant when data are pooled over 1970-92 and the dummy variable for openness is introduced. It implies that there is little intra-EC trade left over to be attributed to the effect of the RIA itself. Moreover, in contrast to our results, the estimated coefficients on NAFTA, ASEAN and Mercosur are positive and highly significant. Lee and Park (2002), estimating the bloc effect on trade in goods for 1990, 1995 and 1999, present similar results. They find a significant bloc effect in the EU and ASEAN on intra-regional trade in goods, but little evidence of an effect boosting intra-regional trade in NAFTA, Mercosur and Andean.[9)]

9) Bayoumi and Eichengreen (1995) find a significant effect of the expansions of the European Community in 1972, 1981 and 1986. Hamilton and Winters (1992) also find a significant effect of the EC-12 for 1984-86, but the effect of Andean is insignificant for the period tested (1985-86).

V. Concluding Remarks

This paper attempts to evaluate the progress of RIAs by estimating the effect of regional integration on trade in services. As expected, our estimations show that the existing regional blocs are at different stages. Our empirical results show that the EU is the most advanced RIA, while NAFTA, ASEAN, Mercosur and Andean have not deepened their economic integration. Though the magnitude of the effect is different from sector to sector, two members of the EU trade more with each other in eight service sectors than otherwise similar countries. The EU is the only regional bloc in which the bloc's coefficient for most service sectors is positive and statistically significant. In contrast to the EU, the estimates for Mercosur and Andean are negative, indicating that trade among these countries is less than its true potential. For the case of NAFTA, the bloc effect is negative and statistically insignificant in many cases. The NAFTA has a positive and significant effect only in financial services.

Since the trend of the regional bloc effects is not analyzed because of lack of data, we can not say that the formation of an RIA leads to an increase of trade in services. With our empirical results, however, it is difficult to avoid the conclusion that the efforts of the EU towards deep integration have had a significant impact on Europe's trade in services that can not be attributed to the economic characteristics of the member countries. The EU shows a relatively advanced degree of regional integration, while other regional blocs in general traded significantly less than they should have.

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