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Regional Trade Agreements Versus Broad Liberalization: Which Path Leads to Faster Growth? Time-Series Evidence [1]

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Abstract

Should a closed economy open its trade to all countries or limit itself to participation in regional trade agreements (RTAs)? Based on time-series evidence for a data set for 1950-92, this paper estimates and compares the growth performance of countries that liberalized broadly and those that joined an RTA. The comparisons show that economies grew faster after broad liberalization, both in the short and long run, but slower after participation in an RTA. Economies also had higher investment shares after broad liberalization, but lower ones after joining an RTA. The policy implications support broad liberalization.

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SUMMARY

Should a closed economy liberalize by opening trade to all countries, or discriminate by participating in regional trade agreements (RTAs)? Based on a data set for the period 1950-92, this paper estimates the growth performance of countries that liberalized to world trade (nondiscriminatory, or broad liberalization) or joined an RTA (discriminatory liberalization).

Time-series evidence shows that economies have grown faster on average after broad liberalization, both in the short and long run, but not after joining an RTA. The impact of participation in an RTA is significantly negative for most empirical specifications. In addition, economies have higher investment shares after broad liberalization, but lower ones after joining an RTA.

The results show that the impact of openness on growth is direct and indirect (through higher investment). This contrasts with the literature that uses cross-country evidence and finds only an indirect effect. The results suggest that closed economies that want to open their markets to free trade and face the dilemma of global versus regional integration should choose the global path.

I. INTRODUCTION

Globalization has become one of the most popular topics of the 1990s. Articles and studies on the formation of the new open world economy are abundant. Do countries benefit from free trade? What is the impact of a large open economy on welfare, growth, investment, technology and income inequality? What policies can maximize the benefits from globalization while minimizing the costs? These are some of the questions often asked by both international economists and policy makers.

Alongside the globalization process, countries have been increasing their regional economic links through regional trade agreements (RTAs). Global versus regional integration has become a very important policy dilemma that needs to be addressed by both economists and politicians.

Do open economies prosper more than closed economies? Based on cross country regressions for the 1970s and 1980s, Dollar (1992), Edwards (1992), Barro and Sala-I-Martin (1995), Sachs and Warner (1995), Wacziarg (1996), Vamvakidis (1997) and other studies have found that economies with low trade barriers grew faster. However, this is not a robust result. For example, Levine and Renelt (1992) and Baldwin and Seghezza (1996a) have found that openness variables are not significant in growth regressions that include investment over GDP as an independent variable. Nonetheless, openness is significant in regressions that have the investment share as the dependent variable.

Do member-countries of an RTA prosper more than non-members? Even though there is a considerable theoretical literature on trade creation versus trade diversion in RTAs, there are very few empirical growth studies, and no theoretical ones, to address the issue of opening to the world economy versus opening to an RTA. Vamvakidis (1996 and 1997) has shown that participation in an RTA does not explain cross country growth differences. Open economies grow faster while closed economies grow slower regardless of their participation in an RTA[2].

What are the policy implications of the cross country evidence? Can we infer that if an economy liberalizes it will grow faster? The answers in the existing literature to these questions are not satisfying and have often been criticized. One reason is that faster growth may be resulting in more trade and not the other way around. Another reason is that openness variables may be proxies for other country characteristics that have very little to do with trade. For example, most of the developing countries that have reduced trade barriers in recent decades have also implemented a variety of other policy reforms in fiscal and

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[2] Ben-David (1993) has shown that EU members have experienced convergence. This is possible, even though an EU dummy is not significant in a cross country regression as Vamvakidis (1996 and 1997) has shown.

monetary policy, capital flows, financial regulation and labor markets. Furthermore, most of the economies with high trade barriers are often also characterized by government intervention in internal competition and the financial sector, subsidy and tax programs favoring specific sectors in the economy, inefficient bureaucracy, inconsistent macroeconomic policies and high inflation. Therefore, policy implications for the impact of openness on growth based on cross-country regressions should be treated with caution. Variables that attempt to measure trade distortions may be capturing other distortions instead.

These problems can be tackled to a satisfactory extent by using time series evidence. In this case, many of the characteristics that differ across countries and are correlated with trade intervention do not influence the estimates. Comparing the growth performance of countries before and after trade liberalization can suggest what will happen when other countries follow similar policies in the future. Estimates of the impact of discriminatory, versus non-discriminatory, liberalization on growth can lead to similar policy implications. This methodology can resolve the issue of whether a closed economy should liberalize to all countries or opt for a discriminatory approach via RTA. It also allows us to disentangle both the short and long term effects of changes in trade policy.

Based on a data set for the period 1950-1992, this paper estimates the growth performance of countries that liberalized to world trade or joined an RTA. The paper considers 109 cases of participation in an RTA and 51 cases of broad liberalization, between 1960-1989.

The results suggest that closed economies that want to open their markets to free trade and face the dilemma of global versus regional integration should choose the first path. According to the estimates in the paper, economies have grown faster on average after liberalization, both in the short and long run, but not after joining an RTA. The impact of RTAs on growth is actually negative and statistically significant in most empirical specifications. The results also suggest that broad liberalization leads to higher investment shares, while RTAs lead to lower ones.

International economists have long been saying that openness fosters growth, but evidence in this paper shows that this advice must be qualified. Empirical findings show that only non-discriminatory openness fosters growth. Thus, a closed economy seeking to open its markets will be better off with world integration, as opposed to regional integration, in order to enjoy the benefits for short and long run growth.

This time series evidence is robust, in contrast to cross country regressions that have found mixed evidence as to whether the impact of openness on growth is direct or indirect (through investment). To test the robustness of the estimates this paper uses two measures of openness, the Sachs and Warner (1995) measure, and the trade share (total trade/GDP). Both are positive and statistically significant in fixed effects regressions, when either growth or the investment share is the dependent variable.

Even though RTAs and broad liberalization are not mutually exclusive in theory, evidence in this paper shows that countries rarely follow them simultaneously. In most cases, there have been two alternative paths of liberalization, and this is how this paper treats them. However, this has not always been the case in more recent liberalization episodes, which are not considered in this paper.

We should also point out that this paper assumes that RTAs have regional trade liberalization as one of their main purposes, but this has not always been the case. Indeed, even though most RTAs seem to have led to more trade among their members, there are some cases where this effect is not very large. However, our main conclusions remain valid when we consider each RTA separately.

This paper does not address the issue of whether an already open economy should conduct RTAs. Most of the countries in our sample that participated in RTAs had high trade barriers. This is not always the case for more recent RTAs, but only future research can measure their impact on growth.

The paper is organized as follows: Section 2 reviews very briefly the conclusions from the recent theoretical trade and growth literature, motivating the empirical tests of the paper; Section 3 discusses the data and the empirical methodology; Section 4 compares growth performance ten years before to ten years after broad liberalization or participation in an RTA; Section 5 uses a fixed effects growth model to estimate the impact of broad versus regional liberalization on growth; Section 6 uses the same empirical model to estimate short- and long-run effects of trade liberalization on growth; Section 7 estimates the impact of RTAs and broad liberalization on investment using a fixed effects model; Section 8 discusses the main characteristics of RTAs and their implications for the empirical results; and finally Section 9 concludes by summarizing the main results and discussing policy implications.

II. THEORETICAL ASPECTS OF THE IMPACT OF LIBERALIZATION ON GROWTH

The theoretical literature on trade and growth has changed its predictions in the last two decades. As Krueger (1997) points out:

> Ideas with regard to trade policy and economic development are among those that have changed radically. Then and now, it was recognized that trade policy was central to the overall design of policies for economic development. But in the early days, there was a broad consensus that trade policy for development should be based on "import substitution"... The contrast with views today is striking. It is now widely accepted that growth

prospects for developing countries are greatly enhanced through an outer-oriented trade regime and fairly uniform incentives...[3]

The empirical literature on the openness-growth connection has contributed significantly to this shift. Open economies have grown much faster than economies with high protection during the last three decades. In addition, some of the economies that followed import substitution policies experienced economic crisis and collapsed during the 1980s and 1990s (Sachs and Warner (1995)). These stylized facts have motivated a rich theoretical literature that attempts to explain them. Most studies have focused on two main channels through which trade fosters economic growth: technology and investment.

The first channel has been supported mainly by Grossman and Helpman (1989, 1990, 1991), Rivera-Batiz and Romer (1991a, 1991b), Romer (1990) and Krugman (1990, ch. 11). The main conclusion from this literature is that countries open to free trade benefit from the following four reasons: i) a large international market provides technological spillover effects; ii) there are economies of scale in the R&D sector; iii) a large international market provides higher profits to innovators; and finally, iv) there is avoidance of replication of R&D efforts across countries. Coe and Helpman (1995) and Coe, Helpman and Hoffmaister (1997) have provided empirical evidence for these arguments, showing that trade affects the rate of technological progress.

Other theoretical studies, however, have argued that investment is the main link between trade and growth. Baldwin and Seghezza (1996 a and b) have presented models where trade fosters investment because of the following three reasons: i) the traded sector is more capital intensive than the non-traded sector; ii) the production of investment goods uses imported intermediates; and finally, iii) competition in the international market of machinery and capital equipment lowers the price of capital. Lee (1993, 1994) presented neoclassical growth models where domestic production uses imports of capital equipment as primary inputs. His models show that trade liberalization fosters growth through a rise in imports of capital goods. Empirical evidence by Levine and Renelt (1992), Baldwin and Seghezza (1996a) and Wacziarg (1996) support the argument that trade fosters growth through its positive impact on investment. The first two studies find that this is the only channel, and some take this as a suggestion that the impact of openness on growth is not robust.

Both of these two channels may be important, but it is very difficult to empirically disentangle the effects of investment and technology, since most investment incorporates new technology and most new technology results in more investment.

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[3] Krueger (1997), page 1.

It is surprising that previous theoretical openness-growth literature does not address the issue of multilateral trade, versus regional integration through RTAs. However, all of the above models would support opening for free trade without any discrimination, versus opening only for trade with a few neighboring countries, while still intervening to distort trade with the rest of the world. Nonetheless, more research on the theoretical links of regional integration with growth would help considerably in designing trade policy.

III. DATA AND METHODOLOGY

The data set includes all countries with available data for the period from 1950 to 1992. This is a quite large sample, allowing us to estimate growth performance before and after liberalization. Data for real GDP per capita, the investment share and population growth are from the Penn World Table data set described by Summers and Heston (1991). Trade shares are from the World Tables (The World Bank, 1994), and school enrollment ratios are from Barro and Lee (1994).

There are a variety of measures that have been used in the previous literature to measure openness. Trade shares, growth of exports, tariff and non-tariff barriers and black market premia are some of those. The problem with these measures is that they cannot suggest the precise year that a country opened for free trade.

However, Sachs and Warner (1995) have constructed a measure of openness that deals successfully with this problem. Based on their definition, an economy is defined as open if all of the following five conditions are true: i) average tariff rate is less than 40 percent; ii) average non-tariff barriers are less than 40 percent; iii) black market premium is less than 20 percent of the official exchange rate; iv) it does not have a communistic government; and finally v) there is no state monopoly on major exports. Using this approach, they review regulations that have changed trade policy in most countries of the world since the 1950s, and they provide the dates of liberalization for countries that are considered as open. This paper uses their methodology to determine the year a country liberalized to international trade. According to this approach there were 51 cases of broad liberalization between 1958 and 1989[4].

This measure is broad since it not only includes direct trade protection, but other distortions as well, such as exchange rate misalignment and state interventions in the economy, which can also be barriers to free trade. However, the results of this paper are robust when the trade share ((exports+imports)/GDP) is used to measure openness. Other

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[4] We do not consider cases of liberalization after 1989, since they are too recent. We also do not consider cases for which the date of independence is defined as the liberalization date.

measures of openness have only cross country variations and therefore are not relevant for our analysis.

The use of trade shares has been criticized in the past, because these shares are negatively correlated with country size. However, this criticism applies only to cross country regressions. The present paper is on time series evidence and therefore the use of trade shares is justified (the results do not change when we control for country size).

The dates of participation in an RTA are available in UNCTAD (1994). The data set includes 18 RTAs with a total of 109 member countries, which are all RTAs for the period 1958-1989. If a country participates in more than one RTA, the earliest entry is regarded as the date of participation. Most of the member countries have available data for the period in consideration. However, there are not enough observations yet to estimate the effect of more recent RTAs. Appendix 1 provides the list of the RTAs this paper considers.

Most RTAs since 1950 have been South-South agreements. With very few exceptions, they include developing countries which are mainly small, highly protected and similar in their economic endowments. Such agreements have been often part of the import substitution policies their members were following and, as a result, they may have diverted trade from more efficient external sources of production. Even though some of these agreements were not fully implemented, it is very important to estimate their impact on economic growth, in order to determine why they have or have not succeeded. Most countries thought that these agreements were an alternative path to broad liberalization, and therefore they are relevant for the inquiry of this paper.

The calculations use a dummy variable for participation in an RTA and therefore treat all RTAs equally. This may be a problem, since, as mentioned above, some RTAs were implemented to a larger extent than others, and also not all RTAs had regional trade as their main purpose (political cooperation was sometimes the main reason for an RTA). However, the conclusions of the paper do not change if we treat each RTA separately, having a dummy variable for each of them.

The methodology is very straightforward. One very simple test is to compare the average real GDP per capita growth rate ten years before and ten years after both discriminatory and non-discriminatory liberalization. In this case the estimations do not include liberalization cases and RTAs of the 1980s.

Another simple approach would have been to estimate the change in the trend of GDP per capita after liberalization, or an RTA, for each country in the sample. However, the GDP series are following a unit root for almost all countries in the sample and therefore this

methodology will not be appropriate.[5] A solution is to use the growth rate as the dependent variable, and then estimate its change after the dates of opening for free trade, or for an RTA.

Following this methodology, this paper estimates a fixed effects growth model.[6] The observations are five year averages for the period 1950-1992.[7] The model controls for the initial GDP per capita, population growth, the share of investment, secondary school enrollment, growth of world GDP per capita, a dummy for participation in an RTA, the Sachs and Warner (1995) openness dummy, or the trade share, and the growth of world GDP per capita. The choice of variables follows Levine and Renelt (1992), except for the growth of world GDP per capita. The inclusion of this variable in the regression controls for the effect of world output fluctuations on domestic output. The reason we may need to control for such an impact is that the period after liberalization or participation in an RTA includes the 1970s in most cases, which is a decade characterized by worldwide productivity slowdown. However, the results are not sensitive to the inclusion of this variable in the regression.

Most studies have estimated this model using cross country regressions. However, a fixed effects model will be more useful for policy implications. As the introduction pointed out, time series evidence is more relevant to determine the impact of trade policy changes on growth performance.

Finally, the paper estimates the same empirical specifications of the fixed effects model, but with the investment share as the depended variable. The impact of RTAs and broad liberalization, measured by the openness dummy, or the trade share, on investment is then investigated.

IV. GROWTH BEFORE AND AFTER BROAD LIBERALIZATION AND RTAs

This section compares growth performance ten years before and ten years after discriminatory and non-discriminatory liberalization. Table 1 includes only countries that liberalized during 1960-1980, the year of their liberalization and their growth rates ten years before and ten years after this date. Table 2 shows similar information for countries that joined an RTA. Based on the Sachs and Warner definition of openness most countries that conducted RTAs during the 1960s and 1970s had high protection. The EU was the only RTA

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[5] See Campbell and Perron (1991).

[6] The fixed effects model allows for the constant to vary across countries. Therefore, the model estimates are based on within variation.

[7] The openness and RTA dummies take the value of one if the change in trade policy occurred in the first two years of the five-year period.

Table 1. Growth 10 Years Before and 10 Years After Liberalization

Countries	Year of openness	Growth 10 years before liberalization	Growth 10 years after liberalization
Australia	1964	2.09	2.55
Austria	1960	5.68	4.22
Belgium	1960	2.46	4.08
Botswana	1979	9.17	2.02
Chile	1976	-0.46	1.83
Denmark	1960	3.59	3.29
France	1959	3.61	4.78
Finland	1960	4.04	4.36
Germany	1959	6.74	3.92
Greece	1959	4.59	6.62
Indonesia	1970	1.08	6.97
Ireland	1966	3.46	3.97
Italy	1959	4.75	5.51
Japan	1962	7.85	6.77
Jordan	1965	6.92	5.78
Korea	1968	4.77	6.43
Luxembourg	1959	2.29	1.78
Netherlands	1959	2.23	4.62
Norway	1960	2.95	3.72
Portugal	1960	4.24	6.85
Spain	1960	4.81	5.46
Sweden	1960	3.10	2.92
Taiwan	1963	3.58	6.29
UK	1960	2.26	2.55
Average		3.99	4.47

Table 2. Growth 10 Years Before and 10 Years after Participation in an RTA

RTAs	Year in the RTA	Open	Growth 10 years before the RTA	Growth 10 years after the RTA	RTAs	Year in the	Open	Growth 10 years before the RTA	Growth 10 years after the RTA
MRU			1.41	0.50	**CARICOM**			4.51	1.033
Guinea	1973	no	-0.49	2.84	Barbados	1973	yes	5.42	1.49
Liberia	1973	no	2.72	-1.06	Jamaica	1973	no	5.61	-1.65
Sierra Leone	1973	no	2.00	-0.29	Trin.&Tob.	1973	no	2.50	3.26
UDEAC			1.29	3.62	**LAIA/LAFTA**			1.70	2.58
Cameroon	1966	no	1.04	2.85	Mexico	1961	no	2.64	3.95
Centr.Africa	1966	no	-1.15	1.14	Argentina	1961	no	1.16	2.10
Chad	1966	no	-0.46	-1.20	Bolivia	1961	no	-0.82	4.01
Congo	1966	no	-0.67	5.03	Brazil	1961	no	3.54	3.64
Gabon	1966	no	7.71	10.27	Chile	1961	no	1.81	2.59
CEPGL			3.50	0.50	Colombia	1961	no	1.19	2.62
Burundi	1976	no	2.01	2.15	Ecuador	1961	no	2.07	2.56
Rwanda	1976	no	6.80	1.80	Paraguay	1961	no	-0.55	1.84
Zaire	1976	no	1.70	-2.45	Peru	1961	no	3.08	2.78
ASEAN			2.98	5.78	Uruguay	1961	no	1.67	0.54
Indonesia	1967	"yes"	-0.63	5.29	Venezuela	1961	no	2.95	1.78
Malaysia	1967	no	2.83	6.02	**EU**			3.81	3.00
Philippines	1967	no	1.85	2.79	Belgium	1958	"yes"	2.37	3.80
Singapore	1967	no	3.34	10.53	France	1958	"yes"	3.91	4.37
Thailand	1967	yes	5.58	4.27	Germany	1958	"yes"	7.35	3.88
ACM			3.00	2.33	Italy	1958	"yes"	4.92	5.51
Egypt	1964	no	2.77	1.49	Luxembourg	1958	"yes"	2.58	0.64
Iraq	1964	no	3.28	2.49	Netherlands	1958	"yes"	3.21	4.49
Jordan	1964	"yes"	7.55	3.83	UK	1973	yes	2.55	1.04
Mauritania	1964	no	-1.61	1.52	Ireland	1973	yes	4.10	2.16
CACM			2.08	2.78	Denmark	1973	yes	3.29	1.13
El Salvador	1960	no	1.84	2.48					
Guatemala	1960	no	0.83	2.03					
Honduras	1960	no	0.83	1.78	Average			2.56	2.74
Nicaragua	1960	no	3.04	3.99					
Costa Rica	1960	no	3.88	3.64					

Note: "yes" indicates countries that liberalized within three years before or after joining an RTA.

that included only open economies. Therefore, it seems that most RTAs during this period were efforts to increase the market size available to closed economies, and may have delayed broader liberalization. Table 2 also indicates countries that opened at the same time (three years before or after) that they joined an RTA. For EU, only three countries (UK, Ireland and Denmark) liberalized before joining (in addition, these three countries had already been members of other earlier RTAs). Furthermore, the productivity slowdown during the 1970s may influence the results, since these countries joined the EU in 1973. The tables report the results for EU, but any conclusions from them may be misleading.

According to the evidence in both Tables 1 and 2, economies grew faster ten years after broad liberalization, or participation in an RTA, compared to ten years before, but this effect seems to be larger, but not significantly, for the first case (the impact of openness on growth is even higher if we exclude Germany and Japan from the sample, since during the decade before their liberalization they were recovering from World War II).

Most of the countries grew faster after opening their markets to international trade, although they did not experienced economic "miracles". This result does not change if we exclude countries that joined an RTA at the same time they liberalized (three years before or after joining an RTA). However, these comparisons can be misleading, since it is not clear what is driving the results. To understand, the full impact of these two different forms of liberalization on growth we need to control for changes in other variables, as the following sections show.

V. ESTIMATION OF A FIXED EFFECTS GROWTH MODEL

Estimation of a fixed effects model shows that economies grow faster after broad liberalization. Table 3 presents these results. Regressions (1)-(5) include the Sachs and Warner openness dummy, while regressions (6)-(10) include the trade share. Both variables have positive and statistically significant coefficients, at least at the 5 percent level.[8] These results are not sensitive to the inclusion of other independent variables. Based on regression (5), economies grew 1.5 percent faster after broad liberalization on average. Based on regression (10), an increase in the trade share of a country by 10 percent leads to faster growth by 0.56 percent on average.

The estimated coefficients for the other variables confirm previous findings in the literature. Keeping everything else constant, a low GDP per capita, a high investment share and a low population growth rate lead to faster growth. The impact of secondary school

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[8] Levine and Renelt (1992) have found based on cross country regressions that trade fosters growth only indirectly, through higher investment. We find that this is not true for a fixed effects model.

Table 3. Openness, Trade Share and Growth

Independent variables	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
ln(initial gdp per cap.)	-0.041 (-10.258)	-0.045 (-11.572)	-0.052 (-8.606)	-0.053 (-8.996)	-0.056 (-9.265)	-0.077 (-12.68)	-0.076 (-12.668)	-0.074 (-11.292)	-0.076 (-11.731)	-0.065 (-9.062)
Openness dummy	0.025 (5.214)	0.021 (4.527)	0.019 (2.552)	0.016 (2.291)	0.015 (2.137)					
Trade share						0.068 (6.171)	0.060 (5.403)	0.053 (4.597)	0.054 (4.791)	0.056 (5.060)
Investment share		0.193 (7.124)	0.227 (6.310)	0.238 (6.772)	0.230 (6.523)		0.129 (3.871)	0.201 (5.511)	0.217 (6.045)	0.200 (5.610)
Secondary school enrollment			0.006 (0.299)	-0.006 (-0.273)	-0.649 (-0.320)			0.034 (1.668)	0.025 (1.226)	0.037 (1.817)
Population growth				-1.082 (-4.756)	-1.049 (-4.618)				-1.136 (-4.117)	-1.090 (-4.001)
Growth of world GDP per capita					0.132 (2.084)					0.637 (3.394)
Number of countries	109	109	89	89	89	137	137	105	105	105
Number of observations	765	765	525	525	525	605	605	493	493	493
R-squared	0.14	0.20	0.22	0.26	0.27	0.26	0.28	0.31	0.34	0.36

Note: t-statistics in parenthesis

enrollment is not robust, which also agrees with previous findings. Finally, the growth rate of world GDP per capita has a positive and statistically significant coefficient, justifying its inclusion in the regression. Fluctuations in world output do have an effect on domestic output. The estimations in this and the next section also confirm these results.

In contrast to broad liberalization, participation in an RTA does not foster growth. Table 4 actually shows the impact of RTAs, if any, to be negative. The coefficient of the RTA dummy is always negative, and statistically significant in regressions (1)-(3), at least at the 10 percent level. The t-statistic decreases as we add more independent variables in the regression. The estimates however are not small. For example, based on regression (5), growth decreases after participation in an RTA by 0.6 percent.

The results do not change significantly if we use a different dummy variable for each RTA (and therefore we do not report these results). As it was mentioned above, all RTAs are not the same and therefore using a different dummy for each of them may be the appropriate methodology. However, in this case the estimates for the RTAs are still negative for most of them, but not always statistically significant, as is also the case with the results we report.

Broad liberalization has a significant effect on growth even after controlling for participation in an RTA. As regressions (6) and (7) of Table 4 show, both the openness dummy and the trade share have positive and statistically significant coefficients.

To summarize, even controlling for changes in other economic variables, RTAs do not appear to have a robust impact on growth (if there is any impact, it seems to be negative). In contrast, countries have grown faster on average after non-discriminatory liberalization. This result is true not only for cross country regressions, but also for time series regressions, as this paper has shown, and it is robust to different measures of openness and specifications of the empirical model.

VI. SHORT RUN VERSUS LONG RUN AND LAGGED EFFECTS OF BROAD LIBERALIZATION AND RTAs

Did countries experience the growth effects of changes in their trade policies in the short run, long run, or both? If trade policy has an impact on growth with a lag, the results in the previous two sections may not be accurate. In any case, this is an interesting question. Policy makers and academics often disagree as to whether countries experience the effects of changes in trade policy soon enough to make them worthwhile.

To address this important issue, the empirical model includes lags for the openness and the RTA dummies. One lag measures the impact of changes in trade policy on growth after five years, while two lags measures this impact after a decade. If the estimate of the lagged liberalization (broad or RTA) is insignificant, then this means that the short-run effect

Table 4. RTAs and Growth

Independent variables	(1)	(2)	(3)	(4)	(5)	(6)	(7)
ln(initial gdp per cap.)	-0.028 (-7.776)	-0.032 (-9.202)	-0.042 (-7.847)	-0.045 (-8.411)	-0.048 (-8.854)	-0.064 (-8.991)	-0.055 (-8.856)
RTA dummy	-0.007 (-2.251)	-0.006 (-1.909)	-0.007 (-1.761)	-0.006 (-1.415)	-0.006 (-0.494)	-0.003 (-0.659)	-0.003 (-0.678)
Trade share						0.057 (5.087)	
Openness dummy							0.016 (2.234)
Investment share		0.167 (6.722)	0.209 (6.377)	0.219 (6.790)	0.209 (6.490)	0.198 (5.495)	0.227 (6.388)
Secondary school enrollment			0.015 (0.751)	0.005 (0.265)	0.003 (0.167)	0.037 (1.823)	-0.006 (-0.300)
Population growth				-0.927 (-4.320)	-0.893 (-4.180)	-1.077 (-3.937)	-1.033 (-4.519)
Growth of world GDP per capita					0.158 (2.634)	0.603 (3.081)	0.133 (2.093)
Number of countries	147	147	109	109	109	105	89
Number of observations	943	943	621	621	621	493	525
R-squared	0.11	0.16	0.20	0.23	0.24	0.36	0.27

Note: t-statistics in parenthesis

of the policy continues in the longer run. If it is positive (negative) and significant, it means that the impact of liberalization is greater (smaller) in the long run.

RTAs do not seem to have a statistically significant impact, positive or negative, in the long run. Results in Table 5 show that RTAs lead to slower growth in the short run (coefficients of the RTA dummy), a result statistically significant at least at the 10 percent level in regressions (1)-(3) and (6)-(8). In contrast, the long-run effect of RTAs (coefficients of the one and two lags of the RTA dummy) does not always have the same sign and is not significant in any of the regressions.

Short-term and long-term effects are both positive and statistically significant only in the case of broad liberalization. Countries grow faster, both in the short and long run, after they open their market without discrimination to international trade. The results in Table 6 show that the openness dummy has a significant coefficient, at least at the 10 percent level, implying that countries grew faster within the first five or ten years after broad liberalization. The coefficient for the one lag of the openness dummy is significant in most specifications, implying that the growth effect of openness not only continues in the period following the first five years after opening for free trade, but is also stronger. The coefficient of the two lags of the openness dummy is always significant, implying that the short run impact of liberalization on growth becomes stronger in the period ten years after liberalization.

These results suggest that closed economies intending to open their markets to international trade will grow faster if they follow the path of broad as opposed to regional liberalization. All time series evidence in this section show that RTAs, if anything, lead to slower growth, especially in the short run. In contrast, broad liberalization fosters growth both in the short and long run. These results hold even after keeping constant other independent variables.

An also interesting question is whether the positive impact of trade on growth is increasing or decreasing as the trade share rises. The estimates show the second case to be true. Table 7 shows that the estimated coefficient of the trade share is positive and significant, but that of the trade share squared is negative and significant. The total effect of trade on growth however is still positive. In addition, the estimated coefficient of the trade squared, although negative, is very small. The estimates of regression (5) for example, imply that an increase of the trade share by 10 percent results in faster growth by 0.8 percent. It is interesting to notice that the inclusion of the trade share squared in the regression increases the coefficient of the trade share (compare Table 7 with Table 3).

Table 5. RTAs and Growth in the Short and Long Run

Independent variables	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
ln(initial gdp per cap.)	-0.028 (-7.822)	-0.033 (-9.274)	-0.043 (-7.875)	-0.045 (-8.381)	-0.048 (-8.799)	-0.028 (-7.471)	-0.032 (-8.843)	-0.040 (-7.229)	-0.043 (-7.733)	-0.046 (-8.205)
RTA dummy	-0.009 (-2.372)	-0.009 (-2.255)	-0.009 (-1.941)	-0.007 (-1.476)	-0.006 (-1.230)	-0.008 (-2.179)	-0.006 (-1.840)	-0.007 (-1.672)	-0.005 (-1.306)	-0.006 (-1.375)
One lag of the RTA dummy	0.004 (0.946)	0.005 (1.211)	0.004 (0.820)	0.002 (0.482)	-0.001 (-0.184)					
Two lags of the RTA dummy						0.0003 (0.081)	0.000 (0.041)	0.005 (1.204)	0.006 (1.453)	-0.007 (-1.579)
Investment share		0.168 (6.763)	0.209 (6.383)	0.219 (6.787)	0.209 (6.474)		0.167 (6.718)	0.211 (6.430)	0.221 (6.863)	0.212 (6.566)
Secondary school enrollment			0.014 (0.681)	0.005 (0.230)	0.003 (0.179)			0.018 (0.895)	0.009 (0.436)	0.007 (0.351)
Population growth				-0.918 (-4.263)	-0.896 (-4.179)				-0.943 (-4.395)	-0.909 (-4.259)
Growth of world GDP per capita					0.161 (2.593)					0.163 (2.705)
Number of countries	147	147	109	109	109	147	147	109	109	109
Number of observations	943	943	621	621	621	943	943	621	621	621
R-squared	0.11	0.16	0.20	0.23	0.24	0.11	0.16	0.20	0.23	0.24

Note: t-statistics in parenthesis

Table 6. Openness and Growth in the Short and Long Run

Independent variables	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
ln(initial gdp per cap.)	-0.045 (-10.340)	-0.049 (-11.588)	-0.057 (-8.791)	-0.057 (-8.897)	-0.059 (-9.121)	-0.045 (-10.021)	-0.050 (-11.527)	-0.060 (-8.992)	-0.061 (-9.322)	-0.065 (-9.626)
Openness dummy	0.019 (3.271)	0.015 (2.683)	0.014 (1.783)	0.013 (1.730)	0.013 (1.675)	0.023 (4.567)	0.018 (3.687)	0.018 (2.450)	0.016 (2.193)	0.014 (2.025)
One lag of the openness dummy	0.012 (2.139)	0.012 (2.180)	0.014 (2.131)	0.010 (1.518)	0.008 (1.254)					
Two lags of the openness dummy						0.009 (1.814)	0.012 (2.550)	0.017 (2.795)	0.016 (2.751)	0.017 (2.865)
Investment share		0.193 (7.132)	0.221 (6.161)	0.233 (6.631)	0.227 (6.425)		0.199 (7.356)	0.231 (6.484)	0.242 (6.942)	0.234 (6.687)
Secondary school enrollment			0.002 (0.096)	-0.008 (-0.392)	-0.008 (-0.415)			-0.005 (-0.220)	-0.016 (-0.768)	-0.017 (-0.839)
Population growth				-1.033 (-4.500)	-1.011 (-4.413)				-1.067 (-4.726)	-1.032 (-4.578)
Growth of world GDP per capita					0.121 (1.898)					0.141 (2.233)
Number of countries	109	109	89	89	89	109	109	89	89	89
Number of observations	765	765	525	525	525	765	765	525	525	525
R-squared	0.14	0.21	0.23	0.26	0.27	0.14	0.21	0.23	0.27	0.28

Note: t-statistics in parenthesis

Table 7. Openness and Growth in the Short and Long Run

Independent variables	(1)	(2)	(3)	(4)	(5)
ln(initial gdp per cap.)	-0.076 (-12.665)	-0.075 (-12.654)	-0.074 (-11.227)	-0.075 (-11.644)	-0.063 (-8.805)
Trade share	0.103 (5.760)	0.092 (5.102)	0.088 (4.745)	0.083 (4.516)	0.092 (5.050)
Trade share squared	-0.013 (-2.489)	-0.012 (-2.249)	-0.012 (-2.426)	-0.010 (-2.002)	-0.012 (-2.476)
Investment share		0.123 (3.715)	0.194 (5.341)	0.210 (5.862)	0.191 (5.350)
Secondary school enrollment			0.028 (1.374)	0.020 (1.008)	0.033 (1.612)
Population growth				-1.071 (-3.872)	-1.007 (-3.692)
Growth of world GDP per capita					0.696 (3.696)
Number of countries	137	137	105	105	105
Number of observations	605	605	493	493	493
R-squared	0.27	0.29	0.32	0.34	0.37

Note: t-statistics in parenthesis

VII. THE IMPACT OF BROAD LIBERALIZATION AND RTAs ON INVESTMENT

As was mentioned earlier, one part of the existing literature has found using cross-country evidence that the impact of trade on growth is only through higher investment. In contrast, the results of the previous sections based on time-series variation suggest that there is a direct effect of openness on growth. This section investigates if there is also an indirect effect, through higher investment. If economies invest more after broad liberalization, then they will grow faster, keeping everything else constant. This section also estimates the impact of RTAs on investment. For reasons of comparison and simplicity, the estimates in this section use the same models as in the previous sections, but with investment over GDP as the dependent variable.

The results of this inquiry are presented in Tables 8 to 12. The main conclusion is that broad liberalization leads to higher investment shares, while RTAs, if there is any impact, leads to lower shares. Therefore, there is also an indirect effect of liberalization on growth, a positive for broad liberalization, and a negative, if any, for RTAs.

Both the openness dummy and the trade share are always positive and significant at least at the 5 percent level (Tables 8 and 9). The estimates of regression (4) in Table 8 imply that the investment share of an economy increases by 2.7 percent after opening its markets for free trade. The estimates of regression (9) in the same table imply that an increase of the trade share of an economy by 10 percent increases its investment share by 0.56 percent.

In contrast, the RTA dummy is always negative and significant at the 10 percent level in most specifications (Table 9). The estimates of regression (6) in Table 9 imply that the investment share of an economy decreases by 1.6 percent after joining an RTA.

The negative impact of RTAs on investment is for both the short and long run, but not always significant (Table 10). The estimates in Table 10 show that the RTA dummy is always negative, but not always significant. When it is significant, the level of significance is only 10 percent. The 'one lag of the RTA dummy' variable is always negative, but the 'two lags of the RTA dummy' variable is always positive. However, none of them is significant, which implies that the short-run effect of RTAs continues in the long run.

The positive impact of openness is significant in the short run, but its long-run impact seems to be slightly higher or slightly lower, depending on the specification (Table 11). The estimates in Table 11 show that the openness dummy is always positive and significant. The 'one lag of the openness dummy' variable is always positive, but significant only in regression (3), and at the 10 percent level. In contrast, the 'two lags of the openness dummy' variable is always negative, but significant only in regression (5). Since these lagged variables do not have robust coefficients, we could argue that the impact of broad liberalization on investment is the same in the short and long run.

Table 8. Openness, Trade Share and Investment

Independent variables	(1)	(2)	(3)	(4)	(5)	(6)	(8)	(9)
ln(initial gdp per cap.)	0.021 (3.794)	0.027 (3.337)	0.027 (3.380)	0.022 (2.644)	-0.009 (-1.038)	-0.003 (0.290)	0.004 (0.405)	0.016 (1.567)
Openness dummy	0.021 (3.050)	0.028 (2.916)	0.029 (2.996)	0.027 (2.786)				
Trade share					0.064 (4.227)	0.050 (3.145)	0.048 (3.065)	0.056 (5.060)
Secondary school enrollment		-0.104 (-3.837)	-0.099 (-3.615)	-0.099 (-3.640)		-0.112 (-3.994)	-0.104 (-3.679)	-0.089 (-3.095)
Population growth			0.438 (1.408)	0.482 (1.556)			0.849 (2.178)	0.884 (2.285)
Growth of world GDP per capita				0.201 (2.334)				0.715 (2.682)
Number of countries	109	89	89	89	137	105	105	105
Number of observations	765	525	525	525	605	493	493	493
R-squared	0.07	0.07	0.07	0.09	0.04	0.06	0.08	0.09

Note: t-statistics in parenthesis

Table 9. RTAs and Investment

Independent variables	(1)	(2)	(3)	(4)	(5)	(6)
ln(initial gdp per cap.)	0.029 (5.926)	0.034 (4.762)	0.035 (4.911)	0.030 (3.998)	0.017 (1.699)	0.026 (3.147)
RTA dummy	-0.007 (-1.679)	-0.009 (-1.699)	-0.010 (-1.831)	-0.011 (-1.886)	-0.013 (-2.228)	-0.016 (-2.549)
Trade share					0.052 (3.308)	
Openness dummy						0.016 (2.234)
Secondary school enrollment		-0.108 (-4.032)	-0.102 (-3.790)	-0.104 (-3.859)	-0.087 (-3.044)	0.032 (3.281)
Population growth			0.494 (1.681)	0.533 (1.819)	0.937 (2.430)	0.557 (1.801)
Growth of world GDP per capita				0.209 (2.549)	0.537 (1.939)	0.202 (2.353)
Number of countries	147	109	109	109	105	89
Number of observations	943	621	621	621	493	525
R-squared	0.04	0.05	0.06	0.07	0.11	0.10

Note: t-statistics in parenthesis

Table 10. RTAs and Investment in the Short and Long Run

Independent variables	(1)	(2)	(3)	(4)	(5)	(6)	(8)	(9)
ln(initial gdp per cap.)	0.030 (6.008)	0.034 (4.736)	0.035 (4.866)	0.030 (4.045)	0.029 (5.625)	0.032 (4.257)	0.033 (4.390)	0.028 (3.596)
RTA dummy	-0.004 (-0.758)	-0.009 (-1.391)	-0.010 (-1.567)	-0.008 (-1.294)	-0.008 (-1.659)	-0.010 (-1.768)	-0.011 (-1.910)	-0.011 (-1.956)
One lag of the RTA dummy	-0.006 (-0.995)	-0.001 (-0.250)	-0.001 (-0.113)	-0.005 (-0.774)				
Two lags of the RTA dummy					0.001 (0.176)	0.006 (1.077)	0.007 (1.162)	0.006 (1.043)
Secondary school enrollment		-0.108 (-3.993)	-0.102 (-3.768)	-0.102 (-3.792)		-0.111 (-4.132)	-0.106 (-3.897)	-0.107 (-3.950)
Population growth			0.492 (1.665)	0.517 (1.758)			0.511 (1.736)	0.547 (1.865)
Growth of world GDP per capita				0.226 (2.660)				0.205 (2.494)
Number of countries	147	109	109	109	147	109	109	109
Number of observations	943	621	621	621	943	621	621	621
R-squared	0.04	0.05	0.06	0.07	0.04	0.05	0.06	0.07

Note: t-statistics in parenthesis.

Table 11. Openness and Investment in the Short and Long Run

Independent variables	(1)	(2)	(3)	(4)	(5)	(6)	(8)	(9)
ln(initial gdp per cap.)	0.021 (3.463)	0.021 (2.448)	0.021 (2.405)	0.017 (1.952)	0.028 (4.449)	0.030 (3.417)	0.031 (3.439)	0.025 (2.733)
Openness dummy	0.020 (2.500)	0.023 (2.279)	0.024 (2.303)	0.023 (2.220)	0.025 (3.566)	0.029 (2.950)	0.029 (3.027)	0.027 (2.816)
One lag of the openness dummy	0.001 (0.140)	0.013 (1.539)	0.016 (1.750)	0.013 (1.439)				
Two lags of the openness dummy					-0.016 (-2.339)	-0.008 (-0.980)	-0.008 (-0.944)	-0.007 (-0.829)
Secondary school enrollment		-0.108 (-3.958)	-0.102 (-3.730)	-0.102 (-3.730)		-0.099 (-3.570)	-0.094 (-3.368)	-0.095 (-3.413)
Population growth			0.512 (1.636)	0.540 (1.730)			0.430 (1.382)	0.474 (1.530)
Growth of world GDP per capita				0.183 (2.108)				0.197 (2.287)
Number of countries	109	89	89	89	109	89	89	89
Number of observations	765	525	525	525	765	525	525	525
R-squared	0.07	0.08	0.08	0.09	0.08	0.07	0.08	0.09

Note: t-statistics in parenthesis

Table 12. Openness and Investment in the Short and Long Run

Independent variables	(1)	(2)	(3)	(4)
ln(initial gdp per cap.)	-0.008 (-0.990)	0.003 (0.366)	0.005 (0.504)	0.018 (1.773)
Trade share	0.094 (3.817)	0.081 (3.133)	0.085 (3.285)	0.093 (3.623)
Trade share squared	-0.011 (-1.556)	-0.011 (-1.528)	-0.013 (-1.780)	-0.015 (-2.105)
Secondary school enrollment		-0.117 (-4.142)	-0.109 (-3.837)	-0.093 (-3.247)
Population growth			0.923 (2.361)	0.975 (2.515)
Growth of world GDP per capita				0.776 (2.908)
Number of countries	137	105	105	105
Number of observations	605	493	493	493
R-squared	0.04	0.07	0.08	0.10

Note: t-statistics in parenthesis

Finally, even though the trade share has a positive coefficient, the trade share squared has a negative coefficient, but is not always significant (Table 12). This suggests that the positive impact of trade on investment decreases as the trade share rises. The coefficient of the trade share is again greater in regressions that include the trade share squared.

Regarding the estimates for the other variables, the only puzzling result is the coefficient for the secondary school enrollment, which is negative and significant. Even though the inclusion of this variable in the regression does not change the other results, it is really hard to explain its negative coefficient. Perhaps better measures of human capital are necessary to get a more reasonable estimate.

VIII. RTAs IN THE PAST PRESENT AND FUTURE: HOW DIFFERENT ARE THEY?

As was mentioned earlier, some of the RTAs this paper considers were not fully implemented. However, they did result in very significant increases in trade among their members. Table 13 presents intra-group trade as a percentage of total trade for each RTA from 1960 to 1991. Even though the share of intra-group trade over total exports is very small for most RTAs, it did increase significantly during this period, in some cases by more than 100 percent.There may be a lot of driving forces of this increase, but it is reasonable to argue that the implementation of RTAs was one of them.

The fact that the share of intra-group trade was so small in most RTAs suggests that their members should have expected that the effect on growth will be negligible. Their effort to create large regional markets failed and valuable time for broader liberalization was lost. As was emphasized above, this has been the case for the majority of RTAs, with few exceptions. As Table 13 shows, at least for the RTAs with available data, EU is the only one with high average intra-group trade shares.

When a small developing economy joins an RTA, the agreement will mainly include small developing economies by definition (being regional). Most countries in the world are neighbors with similar economies. Very few developing economies are in the same region with developed economies. In addition, very few closed economies are neighbors with open economies. As a result, intra-trade shares will also be small by definition (intra-industry trade is very high among developed economies but not among developing economies). Most RTAs have been among small developing economies with relatively high protection, and unless trade agreements stop being regional, this trend will probably persist.

Table 13. Intra-Group Trade in RTAs as a Percent of Total Exports, and Percentage Changes

RTA	1960	1970	1975	1980	1990	1991	change:1960(7 to 1980	change:1960(70) to 1991
MRU	.	.	.	.	.	.	.	.
UDEAC	1.6	3.4	3.9	4.1	4.3	4.2	156.25	162.5
CEPGL	.	0.2	0.1	0.2	0.5	.	.	150
ASEAN	.	14.7	13.9	17.8	18.5	19.3	21.09	23.83
ACM	.	.	.	.	.	.	.	.
CACM	7.5	26.8	21.6	22	15.6	16.4	193.33	118.67
CARICOM	4.5	7.3	6.7	6.4	5.6	5.3	42.22	17.78
ECOWAS	1.2	2.1	3.1	3.9	5.6	6.1	225	408.33
ECO	2.2	1.1	0.7	2.7	3.7	3.5	22.73	59.09
LAIA/LAFT	7.7	10.2	12.8	13.5	10.9	13.2	75.32	71.43
EU	34.6	48.9	52.5	.	60.7	61.4	51.73	77.46

Source: UNCTAD (1994).

The argument often mentioned claiming that recent RTAs are different appears wrong, except in a few cases. All closed economies today are either developing or ex-socialist economies in transition. Given that most countries in the same region with them are economically homogenous, any RTA they can conduct, as an alternative path to broad liberalization, will be similar with most RTAs cited in this paper. Therefore, the empirical results of this paper do not only describe the past but may also provide useful policy implications for the present and future.

Some of the reasons why most RTAs did not result in faster growth may be that intra-group trade, even if it increased after the agreement, remained small, trade with more efficient developed countries was diverted, technological spillover effects, if any, were very small, and high trade barriers still kept these economies closed for most of the rest of the world. In the meantime, the members of most RTAs lost the opportunity to benefit from broader liberalization. There are good theoretical reasons to believe that these results do not apply to some of the recent RTAs which include large and developed economies. However, the results do suggest that broad liberalization will be more beneficial for growth than most RTAs.

The main question of this paper is how should a closed economy liberalize, through an RTA or through non-discriminatory openness, and the answer is clearly in support of the second path. Given the strong empirical evidence on the positive impact of non-discriminatory liberalization on growth, it is still a puzzle why countries avoid full liberalization and target regional integration instead.

To summarize, when a closed, which implies developing, economy is facing the dilemma of non-discriminatory openness versus participation in an RTA, we should understand that the actual dilemma most of the times is between non-discriminatory openness versus an RTA with other also small, developing and closed economies. Notice that the two strategies are not necessarily conflicting. As we have seen, some countries liberalized and joined RTAs at the same time. However, this has happened mainly for EU countries. Recent history has shown that countries often joined RTAs instead of following broader liberalization.

IX. CONCLUSIONS AND POLICY IMPLICATIONS

This paper has presented time series evidence that economies have grown faster on average after broad liberalization, both in the short and long run, but not after joining an RTA. The estimates for the RTAs are actually negative, and statistically significant in some specifications. These results are true for a variety of empirical specifications of the estimated model.

This paper has also found that time series variation shows a robust impact of openness on growth, in contrast to some of the cross country evidence. Openness has a direct effect on growth, but also an indirect effect, through higher investment. In contrast, RTAs are found to have a negative impact, even though not always statistically significant, on both growth and investment.

There are good reasons to believe that the effect of broad liberalization on growth will be higher in the decades to come than the results in this paper suggest for the past. Vamvakidis (1997) has shown that the benefits of trade liberalization depend positively on the openness of the world economy. Since the world economy is moving toward more open trade regimes--former socialist economies have joined the world market and many developing countries seem to have abandoned import-substitution policies in favor of more outward-oriented policies--one would expect the benefits from free trade to have greater potential in the future. Even though this is what existing theory would predict, only future developments can verify these predictions.

Future research should focus more on establishing theoretical foundations to support the empirical results of this paper. Many of the arguments in this paper need to be formalized by better theoretical models that address directly the impact of RTAs versus broad liberalization on growth. Future empirical research should attempt to explain the determinants of trade policy. Better liberalization policies could be designed if we knew why countries protect trade in the first place and why they resist reducing trade barriers even though the growth benefits have been so well documented. Political economy arguments may not explain the whole story.

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Regional Trade Agreements and Members

MRU
Guinea
Liberia
Sierra Leone

UDEAC
Cameroon
Centr. Africa
Chad
Congo
Gabon

CEPGL
Burundi
Rwanda
Zaire

ASEAN
Indonesia
Malaysia
Philippines
Singapore
Thailand

ACM
Egypt
Iraq
Jordan
Libya
Mauritania
Yemen

ANCOM
Bolivia
Colombia
Ecuador
Peru
Venezuela

CACM
El Salvador
Guatemala
Honduras
Nicaragua
Costa Rica

CARICOM
Ant.&Barb.
Barbados
Jamaica
St.Kitts&Nevis
Trinidad$Tob.
Belize
Dominica
Grenada
Montserrat
St. Lucia
St.Vinc.&Gren.

EFTA
Norway
Switzerland
Iceland

LAIA/LAFTA
Mexico
Argentina
Bolivia
Brazil
Chile
Colombia
Ecuador
Paraguay
Peru
Uruguay
Venezuela

EU
Belgium
France
Germany
Italy
Luxembourg
Netherlands
UK
Ireland
Denmark

BENELUX
Belgium
Netherlands
Luxembourg

IOC
Comoros
Madagascar
Mauritius
Seychelles

SADC
Angola
Botswana
Lesotho
Malawi
Mozambique
Namibia
Swaziland
Tanzania
Zambia
Zimbabwe

ECOWAS
Cape Verde
Gambia
Ghana
Guinea-Bissau
Nigeria
Togo

SPARTECA
Australia
Cook Islands
Fiji
Kiribati
Nauru
New Zealand
Niue
Pap.New Guin.
Solom.Islands
Tonga
West.Samoa

ECO
Iran
Pakistan
Turkey

GCC
Bahrain
Kuwait
Oman
Qatar
Saubi Arabia
UAE