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Trade Logistic and Regional Integration in Latin America & the Caribbean

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Abstract

During the past few decades, the landscape of the world economy has changed. New trade patterns reflect the globalization of the supply chain and intra-industry trade, and increasing flows between neighboring countries and trading blocs with similar factor endowments. Similarly, the approach to production, trade, and transportation has evolved incorporating freight logistics as an important value-added service in the global production. This integrated approach have become essential, and as such, both the trade agenda and freight logistics are beginning to converge providing an unparalleled opportunity for countries to deepen their integration with neighboring countries and their national performance for transport related services. Consequently, developing countries are finding themselves hard-pressed to adjust their policy agendas to take into account costs not covered in past rounds of trade negotiations.

This paper focuses on the importance of freight logistics in trade facilitation measures, examines the transport and logistics cost in international trade, addresses the logistics performance in Latin America and the Caribbean and the regional initiatives to advance the integration process and finally exchanges views on the future of trade logistics and the regional agenda to deepen integration.

Summary

During the past half-century, the world trading system has undergone a substantial transformation. Since the early 1960s, world trade has grown at an average annual rate of 6.5 percent and trade relative to output has more than tripled.[1] In line with these developments or as a consequence of them, the world trading system has brought about changes in governance and spurred technological innovation. On the one hand, the evolution of a rules-based system monitored by the World Trade Organization has helped establish an environment where beggar-thy-neighbor policies are all but nonexistent and tariff barriers to trade have substantially declined – globally, tariff rates have fallen from close to 30 percent in the 1980s to about 10 percent in 2005 (WB 2009c). On the other, the development of long-distance maritime transportation and communication technologies has helped reduce trade costs and time of delivery.

The globalization of the supply chain and intra-industry trade – fueled by increased trading of intermediate and final goods, which accounted for 27 percent of all trade in 2006 – have reached unprecedented levels, with increasing opportunities for developing countries to take on ever more active roles in the global economy (Brülhart 2008). At the same time, scale economies in transport, advances in infrastructure and transport services, containerization, further streamlined processes, and the production of manufactured goods have all led to economic agglomeration and changed the landscape of the world economy. Trade patterns have shifted, with increasing flows between neighboring countries and trading blocs with similar factor endowments.

As a result, countries are rethinking the value of regional trading blocs and creating stronger incentives to deepen integration. Similarly, freight logistics, specialized infrastructure, and trade facilitation measures have become of increasing importance in reducing non-tariff barriers and transportation costs to reap benefits from increased integration. A 10 percent decrease in freight costs and tariffs would boost bilateral imports of Latin America and the Caribbean (LAC) by 46 percent and intraregional exports by an average of 60 percent (IDB 2003). Consequently, developing countries are finding themselves hard-pressed to adjust their

[1] Authors' calculation based on WDI 2009.

trade policy agenda to take into account trade costs not covered in past rounds of trade negotiations.

Latin America and the Caribbean have been no exception to the new trends in regional trade and transport logistics. Tariffs in the region have declined from over 40 percent in the mid-1980s to about 10 percent in 2008, while more than 57 regional integration initiatives have been subscribed between countries and trading blocs since 1990 (WB 2009b, WTO 2009b). Nevertheless, the share of intra-regional trade within the region's major trading blocs has declined – when compared with the commodities trade – or remained at about the same level as in 2000, pointing to limitations in the integration process (WTO 2009b). In part, these have been caused by limited progress in trade facilitation measures, but difficulties have also arisen from deficiencies in funding opportunities and political deadlocks in advancing a more integrated trade and policy agenda.

Thus, despite efforts to increase regional cooperation in trade and infrastructure, LAC shows weak performance when compared not just with industrial countries but also with other developing regions. Logistics performance indicators consistently show LAC countries underperforming relative to other emerging markets, not to mention the member countries of the Organisation for Economic Co-operation and Development. According to the World Economic Forum's Enabling Trade Index, which measures and analyzes institutions, policies, and services enabling trade in national economies around the world, LAC ranks above the less-developed Central Asia and sub-Saharan Africa countries. Furthermore, intra-regional trade within the region's largest trading blocs represented only 13 percent of total merchandise exports compared with 74 percent for the 27 members of the European Union in 2007.[2] In large part, physical integration to facilitate intra-regional trade has proved difficult to consolidate due to geographical limitations, complex environmental concerns, and financial restrictions that increase the associated commercial risk of transnational and regional projects and impede a regional physical integration agenda from flourishing.

Nevertheless, although the challenges posed by deepening the process of integration through trade facilitation measures are great and can be costly, the potential benefits of such efforts far outweigh their costs (see Milner et al. 2005 for a review of associated literature).

[2] Authors' calculations based on WTO International Trade Statistics. The figures for LAC include MERCOSUR, CARICOM, and CAN.

Increased efficiency in freight logistics and the advancement of trade facilitation infrastructure will effectively enable new regional players to enter the global economy – promoting competition, improving distribution and reducing logistic costs of companies, and allowing firms to take advantage of market access opportunities created through regional and multilateral trading agreements. However, without a renewed focus on trade transaction costs, the region will continue to be left out of self-reinforcing production and trade networks while economies of scale in production and related transportation performance are making it more difficult to compete at the global level. As such, freight logistics and trade facilitation measures are of paramount importance in the new regionalism engulfing the continent.

Here, the role of the Inter-American Development Bank (IDB) is of increasing importance. As political agendas between member states require balance with the development of a cohesive regional political and economic architecture, the IDB can spearhead many of these initiatives as an efficient vehicle for policy, projects, and regional cooperation. The policy recommendations and the agenda developed have been expanded to increase coordination of national trade and freight logistics initiatives while emphasizing the harmonization of cross-border interactions. Policy recommendations included in the Bank's agenda place emphasis on the following: provision of basic infrastructure, particularly road networks and the developments of trucking service industry; improvements in services and regulations that facilitate public-private partnerships, as in port and railroad infrastructure; improved services delivered by the State, such as customs management, border crossings, information and communication technologies, and security; support to logistic and value chain management development in small and medium-size enterprises, operators, and intermediaries; implementation of an institutional organization for high-quality logistics; integration of an "axis-based" regional infrastructure development criteria, giving priority to projects of greater regional impact; development of financial mechanisms to increase investment in key areas; and commitment to an agenda for productive integration and freight logistic services, supporting national and subnational entities in the public and private sectors.

Overall, these initiatives will help the region better cope with a changing international environment and allow it to exploit the positive links between trade, integration, and economic growth.

I. Introduction

The last decades have seen a remarkable opening of international barriers to trade, led in large part by the preceding trade rounds establishing the World Trade Organization (WTO) as well as significant improvements in maritime transportation, freight containerization, and information and communication technologies (ICT) that have helped reduce the time and cost of international commercial exchanges. At the same time, international trade has been widely recognized as one of the most important drivers of economic development, as seen by the experiences of the newly industrialized countries of Asia, specifically China, in increasing economic output achieved in large part through export-led growth strategies. Correspondingly, countries searching to expand their markets through increased bilateral trade agreements have also begun to look within their regions. More than a third of world trade occurs within the 32 regional trading blocs currently ratified by the WTO – most countries are members of at least one of these blocs (WB 2009b). In many cases, deeper regional integration has not only increased the bargaining power of developing countries at the global level but has also created opportunities to exploit intra-regional trade and the positive links between trade and economic growth.

Recognizing the potential benefits of increased trade liberalization, countries in Latin America and the Caribbean (LAC) have embarked on a transformational process to reduce their trade barriers, increase bilateral trade agreements, and deepen their integration process. Since the mid-1980s, the region reduced its average tariffs from around 40 percent to 9.7 percent in 2007 while its export share of gross domestic product increased from 13 percent in 1980 to 23 percent in 2008 (WB 2009b). For the same time period, the region increased its exports by an average growth rate of 6 percent, with manufacturing goods representing 16 percent of exports at the beginning of the period and 54 percent by 2007 (WB 2009b). Since 1990, 31 south-south and 26 north-south bilateral and multilateral trade agreements have been signed and ratified, while a further 17 are currently under negotiation (WTO 2008).

Despite these achievements, the region continues to lag behind most industrialized countries and many developing regions in its efforts to secure the potential benefits from increased trade liberalization and deeper regional integration.

The region's reduction in average applied tariffs on manufacturing remained over the world average (8.9 percent) for 2007 as well as over that of middle-income developing countries (8.7 percent) and notably above those of high-income Organisation for Economic Co-operation

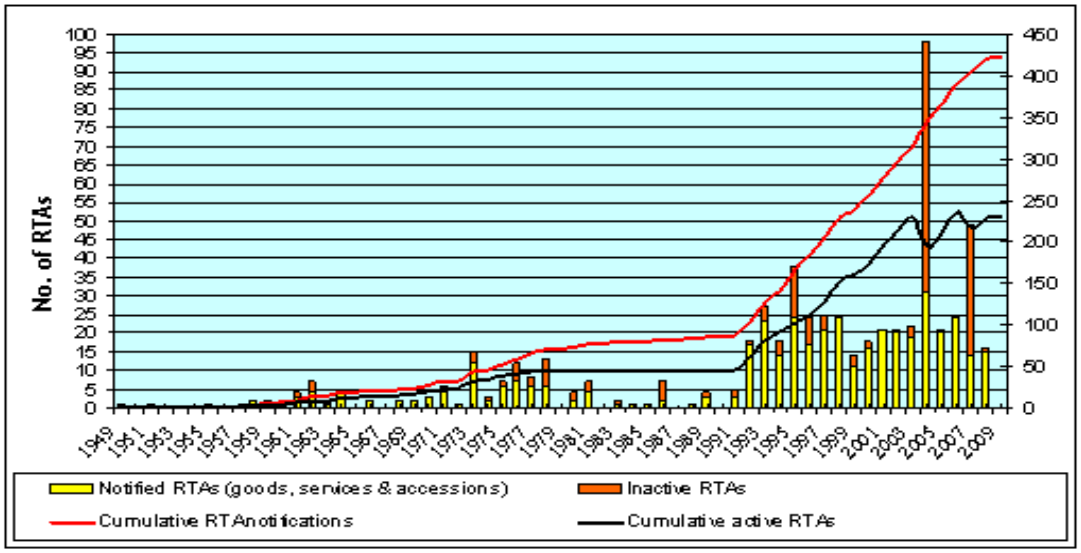
and Development (OECD) countries (2.9 percent, with the United States having an average tariff of 2.7 percent and the EU, 1.6 percent).[3] The region has been unable to maintain its share of world merchandise exports and has seen its participation drop from 11.3 percent in 1948 to 3.7 percent in 2007, while Asia increased its share from 14 percent to 28 percent in the same time period (WTO 2008).

Despite efforts to increase regional integration, intra-regional trade within the largest trading blocs represented only 13 percent of total merchandise exports, compared with 25 percent for the Association of Southeast Asian Nations, 51 percent for the signatory countries of the North American Free Trade Agreement, and 74 percent for the European Union (EU-27) in 2007.[4] In 2008 the Union of South American Nations (UNASUR), modeled on the European Union, was ratified by the 12 countries of South America as an intergovernmental union integrating the regional agreements in the region (the Common Market for the South (MERCOSUR) and the Andean Community of Nations (CAN)), as part of a continuing process of South American integration.

[3] World Bank dataset on trends in average applied tariff rates. See http://econ.worldbank.org/WBSITE/EXTERNAL/EXTDEC/EXTRESEARCH/0,,contentMDK:21051044~pagePK:64214825~piPK:64214943~theSitePK:469382,00.html

[4] WTO International Trade Statistics. The figures for LAC include MERCOSUR, CARICOM and CAN.

Figure 1. Regional Trade Agreements Notified to GATT/WTO (1948–2008), Including Inactive Agreements, by Year of Entry into Force[5]



Source: WTO Secretariat

Table 1. Intra-Regional Exports of Major Trading Blocs (Percentage of Merchandise Exports, 1990–2007)

Intra-Regional Exports

Trading Bloc	(% of total merchandise exports)		
	1990	*2000*	*2007*
ASEAN	20	24	25
EU-27*	71.4	73.5	73.8
ANDEAN COMMUNITY	4	8	8
CARICOM**	12	19.6	16.3
MERCOSUR***	9	21	14
NAFTA****	43	56	51

* EU-27 1990 data corresponds to trade within Western Europe

** CARICOM data for 2006 was used since 2007 was still unavailable.

*** MERCOSUR was signed in 1991.

**** NAFTA was signed in 1994

Source: *WTO International Trade Statistics 2000 & 2008; CARICOM Trade and Investment Report 2000 & Intra-Regional Trade Report 2009*

[5] WTO Secretariat. See http://www.wto.org/english/tratop_e/region_e/regfac_e.htm

One explanation for why LAC countries have lagged in their integration into the world trading system is their inability to cope with a globalization process that is inherently transport-intensive and where supply chains are now being organized on a global scale. Technological innovations driven by transport technology developments have changed the economic landscape of the world, allowing countries to exploit economies of scale in both the transport and the production of manufactured goods. However, the region continues to invest less than others in infrastructure and the logistics performance that would allow it to fully benefit from these developments.

During the past two decades, infrastructure investment in LAC has been shaped by drastic fiscal adjustment measures arising from macroeconomic crises, by the incorporation of private investment in infrastructure that has not increased sufficiently to cover the substantial decline in public financing, and by a concentration of financing in a limited number of countries and sectors.[6] In 1980, the region's coverage of productive infrastructure, including roads, electricity, and telecommunications networks, was higher than in the newly industrialized countries of Asia. Today, they lead LAC by a factor of three to two. While LAC spent on average less than 2 percent of gross domestic product (GDP) in 2005 on infrastructure, down from 3.7 percent from 1980–85 (WB 2005), Asian countries invested 7 percent (ADB 2005).

An array of logistic performance indicators shows the region lagging behind most industrialized countries and several developing regions. The 2009 Enabling Trade Index (ETI) shows Latin America and the Caribbean achieving an overall score of 3.76 out of 6, with the global average being 4.27. Similarly, the Logistics Performance Index overall ranking positions LAC countries behind those of the Middle East and Northern Africa as well as the industrialized countries of Asia, with its lowest scores being in customs performance (2.37 out of 5) and infrastructure (2.38). Poor logistics performance has also led to higher transport costs for the region relative to its counterparts – currently, logistics costs in LAC range between 18 and 34 percent of product value, while the OECD benchmark is 9 percent (Guasch and Kogan 2006).

Increasingly, the infrastructure and freight logistics gap between LAC and other regions is being analyzed as one of the root causes of the limited potential output gains from economic

[6] According to the World Bank, between 1990 and 2003, 93% of private investment (by total project value) in LAC infrastructure went to just six countries (Argentina, Brazil, Chile, Colombia, Peru and Mexico) and was concentrated in telecommunications and energy sectors (WB 2005).

and trade related policies. Calderon and Serven (2004a) suggest that if LAC countries caught up to the region's leader in terms of infrastructure quantity and quality, their long-term per capita growth gains would range between 1.1 and 4.8 percent per annum. Furthermore, if they caught up to the East Asian median country (South Korea), the potential growth rate gains would range from 3.2 to 6.3 percent. This scenario requires the region to have an uninterrupted infrastructure investment rate ranging between 5 and 7 percent of GDP for 20 years to sustain maintenance investment requirements and further expansions of the infrastructure network. However, achieving this requires substantial investment and sound policies, strong and robust institutions, and sensible investment planning.

As a result of underinvestment in infrastructure and poor performance in freight logistics, the LAC region is pressed to rethink its trade facilitation agenda to incorporate physical integration projects, transport services, and specialized logistic infrastructure in an effort to reduce non-traditional trade costs. Djankov et al. (2006) show that each additional day that a product is delayed prior to being shipped reduces trade by more than 1 percent – equivalent to a country distancing itself from its trading partners by about 70 kilometers.

Without a renewed focus on trade facilitation measures – including physical infrastructure, overall land use and planning for logistic corridors and multimodal transport services, and regulatory frameworks to simplify international trade procedures – the region will continue to be left out of self-reinforcing production and trade networks while transport and logistics costs will make it more difficult to compete at the global level.

This paper is organized as follows. The first section focuses on the historical process of regional integration experienced by LAC countries, highlighting future concerns for deeper integration. The second section highlights recent developments in the global economy and its effects on international trade with and within LAC countries. The third and fourth sections look at the increasing importance of trade logistics and transport costs in the global economy. The fifth section analyzes the region's performance in terms of logistics and physical integration. The sixth section looks at existing regional initiatives to advance the physical integration of the region. The final section examines the future of trade logistics in LAC and the agenda to deepen regional integration, with particular emphasis placed on the actual and potential role of the IDB.

II. Trade agreements and regional integration in Latin America and the Caribbean.

The post-war period has been marked by two important phenomena in the political economy of trade relations. First, globalization has changed the economic geography of the world, with increased agglomeration and larger concentrations in urban spaces and with far better and more complex transport networks that have led to cost reductions and just-in-time production methods. Second, regionalism has marked developments in the global trading system, driven by the same forces as globalization as well as by the democratization of political power and the search for stability in once-volatile areas of the world. Currently there are over 200 regional trade agreements, 90 percent notified to the WTO since 1990 (WTO 2009a).

These phenomena are in large part a result of successive efforts to establish a rules-based world trading system. Multilateral negotiations through the General Agreement on Tariffs and Trade (1947) led to the establishment of the World Trade Organization (1995), with a growing number of member countries (153 to date) and a reduction in tariffs across the world significantly expanding opportunities for countries to participate in the world economy. Latin America and the Caribbean have been active participants in both these transformational processes that have deepened considerably since the 1990s with the unilateral opening of economies and increased regional trade agreements.

Latin America has had a long tradition of regional cooperation and integration strengthened in the 1960s through the rise of import-substituting industrialization (ISI) development strategies and the creation of the Latin American Free Trade Association (LAFTA) in South America and the Central American Common Market (CACM).[7] Briefly, ISI strategies focused on promoting infant industries through high levels of external protection, state participation, and investment regulation, with the promise of achieving export-led growth and decreased dependence on industrial countries. Regional integration provided an opportunity to deepen the potential of ISI through an increased market. This allowed the infant industries to grow in size and create production efficiencies until the achieved scale allowed them to compete. Consequently, LAFTA and CACM became the first formal attempts to harmonize trade flows and increase regional integration in Latin America.

[7] In 1980, LAFTA gave way to the formation of the Latin American Integration Association (or ALADI).

However, ISI policies did not establish macroeconomic stability and economic growth; the first attempt at regional integration was unsuccessful due to a complicated political and economic climate. Among many factors, the region had an intrinsic tendency for national protectionism marked by tension between the state and the private sector. Trade negotiations did not provide sufficient incentives to create a rule-based system whereby the benefits accrued from increased exchange would be evenly distributed to member countries. Finally, the development of national and regional infrastructure, coupled with low levels of investment and maintenance as well as poor transport services, limited the potential gains from increased regional cooperation.

Caribbean states had a remarkably different history of economic integration, given the late independence of many of the islands from primarily Anglo-Saxon colonial rule, which stymied the first attempts at economic integration (the West Indies Federation was established in 1958 under British dictate but collapsed with the withdrawal of Jamaica in 1962.)

With independence, the Caribbean Free Trade Association was established in 1968 (modeled on the European Free Trade Association) to promote liberalized trade between its members, although few efforts were made to establish extra-regional trade relations. As a result of this, as well as of the uneven benefits accrued by its member nations, the free trade agreement was dropped in favor of the Caribbean Community (CARICOM), which was established in 1973.

In the 1990s, following what is now commonly referred to as the Debt Crisis and the structural reforms promoting trade and financial liberalization that ensued, Latin America and the Caribbean entered into a period of revived regionalism still present today. The policy framework established during this period set the stage for unilateral measures to reduce traditional barriers to trade while promoting open and competitive economies (see Devlin and Estevadeordal 2001). Furthermore, it encouraged a development strategy based on recognition of the economic and political benefits of increased cooperation and trade by securing reform through institutional and rules-based arrangements.

This cooperation initially led to an increasing number of North-South reciprocal trade agreements, followed by a rethinking of traditional approaches to integration in the region. Since 1960, a total of 37 south-south and 26 north-south bilateral and multilateral trade agreements have been notified to the WTO, and a further 17 are currently under negotiation (WTO 2009a). Simultaneously, average tariffs in the region have declined from over 40 percent in the mid-1980s to about 10 percent in 2008.

Importantly, sub-regional initiatives, including MERCOSUR, CAN, and CARICOM, did not limit their agreements to trade but incorporated structural considerations to reform their institutional environment and build longer-term strategic policies to compete in the world trading system. These included agreements in standards, transport, customs cooperation, services, investment, dispute settlement, labor (except for MERCOSUR), and competition, while none included agreements concerning intellectual property rights – a clause included in all North-South trade agreements with Latin America except for the Canada-Chile agreement signed in 1997 (WB 2005). Through these measures, countries sought to enforce internal regulatory measures as well as capture the benefits of increased opportunities for export diversification, foreign direct investment (FDI), greater specialization, product differentiation, and intra-industry trade resulting from increased market access and a clear regulatory framework.

Table 2. Major Regional Trading Blocs in the World

Regional Trade Agreement by Region	Year of Notification	Type	% of World Merchandise Exports			
			1990	*1995*	*2000*	*2007*
High-income and low-and middle-income economies						
APEC	1989	None	68.7	71.7	73.1	67.4
EEA	1994	EIA	69.4	67.3	68.6	69
EFTA	1960	EIA	0.7	0.7	0.6	0.7
European Union	1957	EIA, CU	67.8	65.8	67.3	67.5
NAFTA	1994	FTA, EIA	42.2	46.2	55.7	51.3
SPARTECA	1981	PTA	10.5	12.9	10.7	10.5
Trans-Pacific SEP	2006	EIA, FTA	1.5	1.7	0.8	0.8
East Asia and Pacific and South Asia			*1990*	*1995*	*2000*	*2007*
APTA	1975	PTA	3.3	6.8	8	11.2
ASEAN	1967	FTA	19.8	24.5	23	25.2
PICTA	2001	FTA	0.2	1	1.7	2
SAARC	1985	FTA	3.6	4.4	4.2	5.3
Europe, Central Asia, and Middle East						
CEFTA	1992	FTA ..		7.8	15.3	16.8
CIS	1991	FTA ..		28.6	20	19.8
COZ	2003	FTA ..		23.8	17.1	16.2
EAEC	1997	CU ..		14.8	12.5	11.8
ECO	1985	PTA	3.2	7.9	5.6	9.2
GCC	1981	CU	5.8	6.8	4.8	5.4
PAFTA (GAFTA)	1997	FTA	8.9	9.8	7.2	10.6
UMA	1989	NNA	3.3	3.8	2.2	2.3
Latin America and the Caribbean			*1990*	*1995*	*2000*	*2007*
CAN	1969	CU	5.6	8.6	7.7	7.4
CACM	1961	CU	17.6	21.8	19.1	17
CARICOM	1973	CU	8.2	12.1	14.4	15.7
LAIA (ALADI)	1980	PTA	12.2	17.3	13.2	15.1
MERCOSUR	1991	CU	9.9	18.9	16.4	12.8
OECS	1981	NNA	9	12.6	10	8.1
Sub-Saharan Africa			*1990*	*1995*	*2000*	*2007*
CEMAC	1994	CU	2	2.1	1	1.1
COMESA	1994	FTA	3.6	6.1	4.6	4.7
EAC	1996	CU	7.4	19.5	22.6	20.4
ECCAS	1983	NNA	1.3	1.5	1	0.6
ECOWAS	1975	PTA	9.7	9	7.6	9.4
Indian Ocean Commission	1984	NNA	4.8	5.9	4.4	5.7
SADC	1992	FTA	17.9	32.8	9.5	10.1
UEMOA	1994	CU	11.3	10.3	13.1	15.2

Types: CU is customs union; EIA is economic integration agreement; FTA is free trade agreement; NNA is not notified agreement; PTA is preferential trade agreement

Source: WTO Secretariat, WB 2005

Table 3. Trade Agreements in Latin America and the Caribbean, South – South Agreements

South - South Agreements		
Participating Countries/Trading Blocs	*Year of Signature*	
Central American Common Market (CACM)	1961	**Customs Union**
Caribbean Community (CARICOM)	1973	
Andean Community (CAN)	1988	
Southern Cone Common Market (MERCOSUR)	1994	
Latin American Integration Association (ALADI)	1980	**Preferential Trade Agreements**
Global System of Trade Preferences among Developing Countries (GSTP)	1989	
Chile - India	2007	
Programa de Integración y Cooperación entre Argentina y Brasil (PICAB)	1986	**Free Trade Agreements**
Central American Integration System (SICA)	1993	
Chile-Venezuela	1993	
Bolivia-Mexico	1994	
Group of Three (G-3)	1994	
Costa Rica - Mexico	1995	
Bolivia-MERCOSUR	1996	
Chile-MERCOSUR	1996	
Chile-Peru	1998	
Mexico - Nicaragua	1998	
Chile - Mexico	1999	
Chile- Central American Common Market (CACM)	1999	
CARICOM-Dominican Republic	2000	
Mexico-Northern Triangle of Central America	2000	
El Salvador - Mexico	2001	
Guatemala - Mexico	2001	
Chile - Costa Rica	2002	
Costa Rica-Trinidad and Tobago	2002	
MERCOSUR - Comunidad Andina	2002	
MERCOSUR - Perú	2003	
Panama - El Salvador	2003	
Bolivarian Alliance for the Americas (ALBA)	2004	
CARICOM - Costa Rica	2004	
MERCOSUR - India	2004	
MERCOSUR - Colombia	2005	
Chile - China	2006	
Panama - Chile	2008	
Panama - Costa Rica	2008	
Union of South American Nations (UNASUR)	2008	
Chile - Colombia	2009	
Brazil-China	T.B.A	**Under Negotiation**
Brazil-Russia	T.B.A	
Central American Common Market - Dominican Republic	T.B.A	
Mexico-Ecuador	T.B.A	
Mexico-Panama	T.B.A	
Mexico-Peru	T.B.A	
Mexico-Trinidad and Tobago	T.B.A	

Source: WTO Secretariat, IDB 2002

Table 4. Trade Agreements in Latin America and the Caribbean, North – South Agreements

North - South Agreements		
Participating Countries/Trading Blocs	*Year of Signature*	
North American Free Trade Agreement (NAFTA)	1994	Free Trade Agreements
Canada - Chile	1997	
Mexico-European Union	1999	
Israel - Mexico	2000	
European Free Trade Association - Mexico	2001	
Canada - Costa Rica	2002	
Chile-European Union	2002	
European Free Trade Association - Chile	2004	
Korea, Republic of - Chile	2004	
Panama and the Separate Customs Territory of Taiwan, Penghu, Kinmen and Matsu	2004	
United States - Chile	2004	
Japan - Mexico	2005	
Dominican Republic - Central America - United States Free Trade Agreement (CAFTA-DR)	2006	
Panama - Singapore	2006	
Trans-Pacific Strategic Economic Partnership	2006	
Chile - Japan	2007	
MERCOSUR- Israel*	2007	
United States - Panama	2007	
Canada - Colombia	2008	
EC - CARIFORUM States Economic Partnership Agreement	2008	
European Free Trade Association - Colombia	2008	
Nicaragua and the Separate Customs Territory of Taiwan, Penghu, Kinmen and Matsu	2008	
Australia - Chile	2009	
Canada - Peru	2009	
Peru - Singapore	2009	
United States - Peru	2009	
Canada - El Salvador - Guatemala - Honduras - Nicaragua	T.B.A.	Under Negotiation
Korea, Republic of - Mexico	T.B.A.	
Canada - Caribbean Community	T.B.A.	
Canada - Dominican Republic	T.B.A.	
European Free Trade Association - Peru	T.B.A.	
Andean Community - European Union	T.B.A.	
Central American Common Market - United States	T.B.A.	
Caribbean Community-European Union	T.B.A.	
Mercosur-European Union	T.B.A.	
Uruguay-United States	T.B.A.	

* Not signed by Venezuela

Source: WTO Secretariat, IDB 2002

More recently, initiatives aimed at establishing a hemispheric cross-continental market, namely the Free Trade Area of the Americas (FTAA), have met with less success. These highlight the political limitations the region faces in moving forward on a common agenda for deeper integration. Equally important to note are some of the potential costs of increased regional commercial integration, such as trade and investment diversion away from other world markets, conflicts arising from asymmetric development impacts of regional integration, and, perhaps most important, the administrative and institutional strained caused by a web of different trade arrangements.

Only four of the 39 countries in Latin America and the Caribbean are not part of any regional trade agreement, while the average number of regional trade agreements per country is eight (WTO 2009a). Complex trade agreements can increase trade costs through customs procedures, technical standards, and complex rules of origin that undermine efforts to facilitate trade between countries. A recent study by Estevadeordal and Robertson (2009) finds significant evidence of an increasing tariff effect that is consistent with trade diversion as a result of the proliferation of bilateral agreements in LAC that has coincided with declining enthusiasm for further multilateral liberalization, in this case the FTAA. These findings present a challenge to policy-makers to develop a framework where these costs are minimized and the productivity gains from increased trade and regional cooperation are better redistributed.

Among the most important challenges the region faces for the future of its integration process is the development of regional infrastructure. Given the size, complex geographical limitations, and environmentally sensitive areas of rainforest and valuable biodiversity, the region has consistently lacked quality infrastructure for regional integration. Traditional urban settlement principles that clustered along valleys and “internal regions” have prevented countries from effectively pursuing a more systematic approach to infrastructure development and long-distance land-based transport networks.

As a result of its encroaching development principles and the lack of combined land and territorial planning, the region underperforms in a series of indicators. This reflects a chronic underinvestment in new infrastructure and in maintenance of existing projects, especially in terms of its road network, the efficiency and capacity of ports, and the readiness of the airport infrastructure. In both the Logistic Performance Index (LPI) and the Enabling Trade Index, LAC ranks below the world average in terms of transport and communications infrastructure and

related national and international transport shipment services. Furthermore, according to a 2007 ranking of ports, only eight out of 125 ports by total cargo volume were located in LAC while 11 made the ranking in terms of container traffic (Lloyds MIU 2009).

Recent developments in the global economy shed light on international trade trends in LAC and the role that China and India will play in driving the demand for commodities. In 2008, the global economy entered the most severe economic recession in the post-war period. The gross world product contracted by 6.25 percent (annualized) in the fourth quarter of 2008 (representing a remarkable turn of events, given the 4 percent growth a year earlier) and global activity is projected to decline by 1.3 percent in 2009 (IMF 2009b). Even countries with largely diversified export sectors and trading partners are being adversely affected by the contraction. Global production and supply chains are by and large more integrated than in the past, which has been an added shock for productive forces. In addition, given the nature of the present crisis and its roots in financial markets, the availability and affordability of trade finance, which has been substantially reduced, has further weakened prospects of recovery, although coordination from international institutions and financial centers is ongoing and could alleviate the need for long-term financing.

While LAC countries are not as reliant on foreign trade as other regions – exports as a percentage of GDP are 23 percent for the region, 10 percentage points below the world average and far from the 41 percent for the Euro area and 35 percent for East Asia – they have not been exempt from the severity of the global economic recession (WB 2009b). Commodity prices reached record peaks, expected to drop by over 33 percent compared with 2008 and recover only 3 percent in 2010. For Central American and Caribbean countries, which are net commodity importers, the overall effect of declining commodity prices on their terms of trade has been positive, enabling them to maintain healthy balances in their international reserves from the low cost of fuel imports. Their external financial linkages are generally limited, and the impact of the crisis was not as significant as in other areas of the region. Net commodity exporters with inflation-targeting regimes (Brazil, Chile, Colombia, Mexico, and Peru) have been adversely affected by declining commodity prices, causing their terms of trade to shift.

As a consequence of the crisis, the rise in protection measures further threatens recovery of world trade growth to its pre-crisis levels. In 2008, anti-dumping investigations increased by 28 percent from the year before (WTO 2009b). Many countries have adopted policies to

maintain production and consumption within their national borders – usually through non-tariff trade barriers, which are easier to disguise and more difficult to sanction, and contingency measures, including increased anti-dumping measures. Although these have proved in most cases to be transitory measures and closely linked to falling economic activity, their widespread use reduces the possibility of negotiating international arrangements and limits the rapidity and depth of substantial recovery in international trade flows. The Doha round of trade talks will be difficult to revive in such an environment.

Developing countries – led by Brazil, Russia, India, and China – are feeling empowered after this most recent crisis to take a leading role in negotiations concerning the international financial architecture and world trading system. Most important, and spearheaded by Chile and Peru in the region, Asia has risen as a new player with growing importance for future trade relations with the region. Trade along the Pacific Rim is growing, with important contributions of the Asia-Pacific Economic Cooperation, which has deepened the process of integrating emerging markets in Asia and LAC. South American commodity exporters see this mostly as a new market, lifting export volumes and world prices, while Mexico and Caribbean countries perceive these linkages as an increased source of competition, especially from China and its ability to attract FDI flows.

The importance of China and India as a destination for LAC exports has increased fourfold since 1990. Trade with China has grown at an annual rate of 40 percent since 2003, the same year that the nation became Brazil's largest trading partner (Economist).[8] Lederman et al. (2007) show that, overall, the growth of China and India in world markets is an opportunity for LAC exporters and importers – accounting for up to 8 percent of LAC exports in 2004, mainly driven by China. Furthermore, the study concluded that there is no robust evidence of substitution between China's trade flows and LAC exports to third markets. As trade relations grow and China continues to play an ever more important role in the world economy, and in LAC in particular (becoming a member of the IDB in 2008), economic cooperation with China will be a source of increased value to trade relations through knowledge-sharing and technology transfers.

Nonetheless, these opportunities have yet to be fully exploited, given the size of the markets served. In order to do so, the region needs to address deficiencies in the quality of

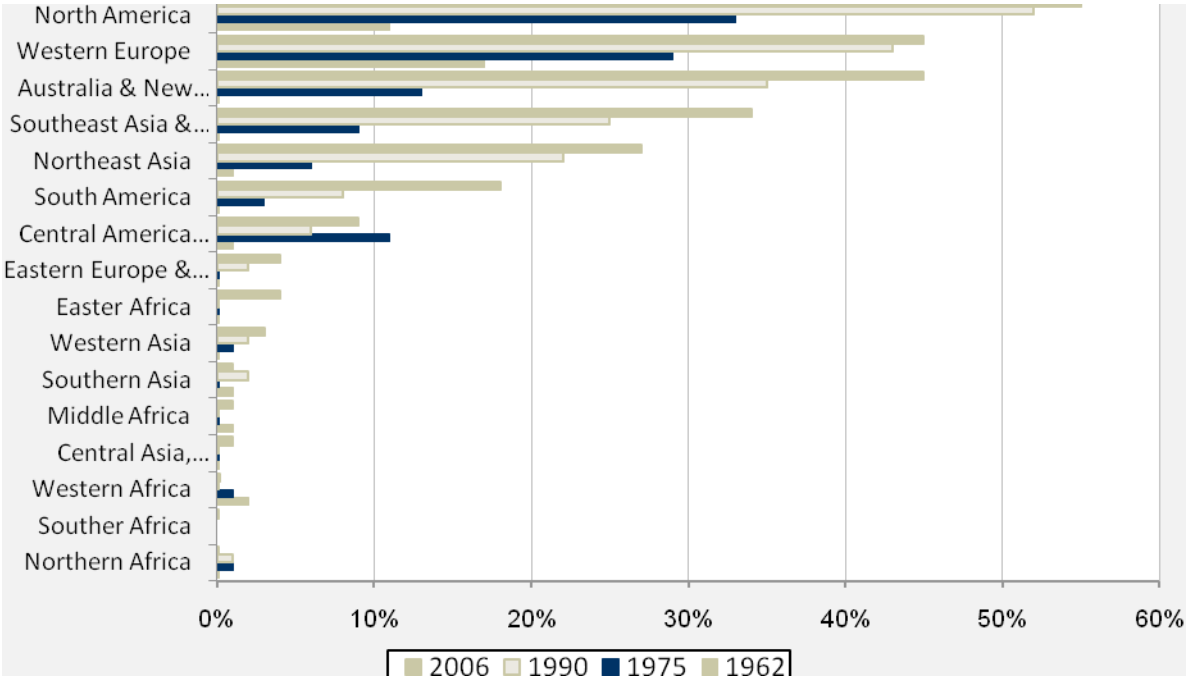
[8] http://www.economist.com/displaystory.cfm?story_id=14209932

infrastructure together with rigid regulatory frameworks and weak freight logistics.

III Transport and Logistics Costs in International Trade and Logistic Performance in Latin America and the Caribbean

World trade patterns are constantly changing due to advances in technology, including those in the area of logistics services and transport. As technologies for manufactured production have become more available, trade in intermediate and final goods has increased, creating greater opportunities for countries to reap benefits from specialization. In 2006, intra-industry trade accounted for 27 percent of all trade; however, it is highly concentrated in North America, Europe, and Australia (accounting for half of all intra-regional trade) as well as Southeast Asia (roughly 35 percent), while the figure for LAC is closer to 15 percent (Brülhart 2008).

Figure 2. Grubel-Lloyd Index of Intra-industry Trade by Region



Source: Brülhart 2008

As countries increase their trade in manufactured goods and as supply chains become vertically integrated in a global production process international trade patterns reflect increased commerce with neighboring markets with similar production and consumption capabilities. In 2009, more than 24 percent of world trade will occur between bordering countries; this accounts for 21 percent of all trade in LAC, while North America tops the list with 52 percent and Western Europe, 40 percent (WB 2009b). In the latter countries, the benefits of a well-developed integration infrastructure and development mechanisms along the borders of each country are key to trade and freight logistic development. Another factor influencing trade patterns through technological innovations in transport is the significant rise in intermodal transport – mainly in high capacity and more efficient modes such as maritime, waterway and railway transport – and the integration of separate transport systems through the use of at least two different modes. This has shifted the freight logistic components to the entire supply chain, as these processes are increasingly seen as whole rather than as a series of sequences, each with its particular documentation and cost structure.

From the regulation of infrastructure and the provision of well-developed transport services, a robust and strategic approach is needed to enable a better quality of infrastructure as well as transport services. For international trade, a more efficient, reliable, and secure interaction between different transport modes is of paramount importance, given the geographic space and the volume that the global economy now occupies. These trends further support the view that globalization has been transport-intensive, as economies of scale have affected not only production but also transport costs, further reinforcing trade in a virtuous and mutually enforcing cycle.

Over time, the main reductions in transportation costs, due to higher investments in transportation infrastructure, technological innovation, transportation reform, and lower overall trade barriers, have been in road and air transport, while maritime transport was revolutionized by containerization. In particular, innovations in air and maritime transport, the two modes of transport that have most influenced the growth of international trade and globalization, have been of particular importance. For instance, advances in technologies for air shipping – which accounts for about 40 percent of the value of international trade – have caused the average revenue per ton-kilometer shipped to drop by a factor of 10 between 1955 and 2004 (Hummels 2007, Rodrigue 2007). Similarly, ocean shipping, which constitutes 99 percent of world trade by

weight, has seen its costs consistently decline during the last 20 years in large part through containerization – with estimates showing that using containers can lower shipping costs by 3–13 percent (Hummels 2007) – and the advent of larger than post-Panamax vessels (the largest ships that can pass through the Panama Canal). Lower vehicle costs and the deregulation of the trucking industry have pushed road transport costs down by almost 40 percent during the past three decades (WB 2009c).

Nonetheless, transport and trade costs have traditionally been hard to measure due to limited information of varying quality. Over the past three decades, transport costs have fluctuated due to changes in the price of fuels, uneven regulatory frameworks in which many of these industries develop, and rising concerns about security costs. Air transport has been characterized by technological developments, monopoly power of large state operators, and fluctuations in price regarding the commodity being shipped. For maritime freight operations, costs have been reduced in large part through containerization, the rise of large maritime vessels, and the advent of fewer freight lines, together with the efficiency gains in port operation and infrastructure that allow for reduced direct port costs from greater storage capacity. Competition for transshipment services has also contributed to reducing the cost of international shipping while sometimes negatively affecting internal trade with higher tariffs than those offered to international freight.

Since the transport sector is generally characterized by high entry and maintenance costs, owning physical infrastructure consolidates economic power. In 2003, some 20 percent of the world's carriers owned or controlled close to 60 percent of global port slot capacity (WB 2009c). Maritime markets have had limited competition in part due to the high entry costs into the market, compounded by the indivisibility of infrastructure facilities when providing transport services. As a result, markets for these services are rarely competitive and are usually owned by the state (in the case of seaport and airport infrastructure) or by large international companies (for transport services).

At a more aggregated level, the lack of well-regulated markets creates disincentives for investments to provide spatial transformation in ICT, in transport infrastructure, and in the development of new transport services – which are all essential for output and productivity growth. Although at early stages market concentration is more likely, given the high fixed costs associated with transport projects, as spatial economies deepen the incentives for competitive

forces to enter the market become more apparent. Without the appropriate focus of public policy for increasing possibilities for exploiting these links, the ability of developing countries to compete globally will remain compromised.

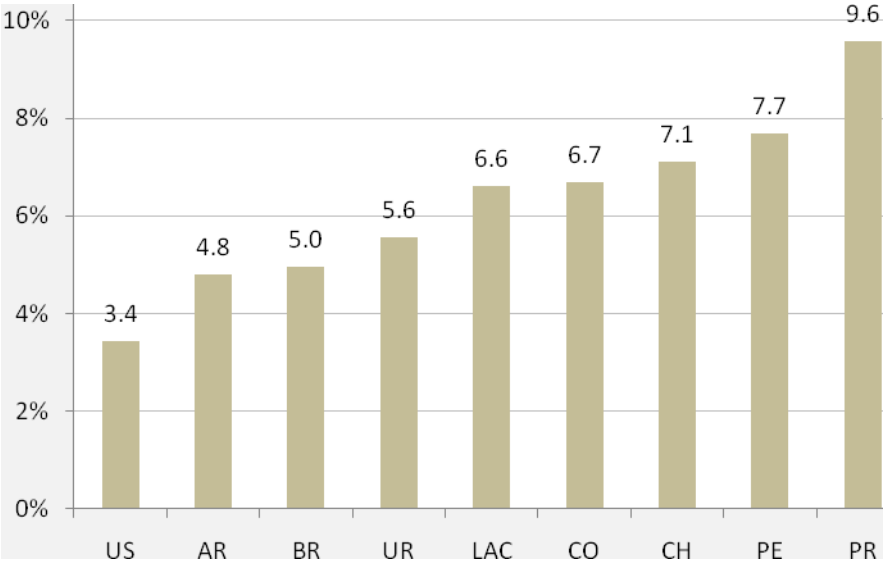
Another phenomenon in the globalized economy is the falling cost of communications due in large part to innovations in ICT and the sophistication of the Internet. The reduced costs in communication have minimized search costs associated with finding potential customers and trading partners as well as variable costs, which tend to be more important for intra-industry trade, from interactions regarding product quality and specifications. Importantly, falling communication and transport costs have led to a fragmentation of production processes, the "globalization of the supply chain," and the outsourcing of intermediate production and certain services across countries. Initially, these processes were driven by low wage costs, but mutually reinforcing international transportation services and shorter production cycles are beginning to outweigh wage savings, causing further relocation. The notion of a mutual interdependence between trade and transport is fundamental to the freight logistics and trade facilitation conundrum: "for as long as there has been trade, transportation activities have been there to support it" (Rodrigue 2007: 1).

Finally, it is important to recognize the development costs associated with improvements in transportation, freight logistics, and trade over the past decades. The challenge to public policy is to find ways of creating incentives for the transport industry to internalize these development costs and of increasing fuel efficiency and safety standards. Several estimates, including the *Stern Review* on the economics of climate change (Stern 2006), have placed the current cost of internalizing emissions well within historical variations in fuel prices. Recently, the UN Climate Change Conference in Copenhagen has shown increased political will from industrial and emerging markets to tackle emissions, with the transport sector representing close to 13.5 percent of total greenhouse gases. Controlling the development costs derived from transport will play an increasingly important role in the development of future trade logistics and is likely to lead to renewed economies of scale in both transport and production through increased efficiency.

Unfortunately, Latin American and Caribbean countries have not fully benefited from positive trends in transport and logistics developments. During the 1970s, the region experienced high levels of infrastructure investment relative to other regions, reaching higher coverage of productive infrastructure than East Asia by 1980. But after experiencing a decade of economic

adjustments, with substantial gains in transport infrastructure specifically, logistics services only emerged in the 1990s. Today, many of these gains have rapidly reversed. The region continues to spend nearly twice as much as the United States to import goods, while airfreight costs in 2006 actually rose in relation to their level in 1995 – with the Caribbean seeing an increase of as much as 36 percent (Mesquita Moreira, M. et al. 2008). The region's exports, with their reliance on abundant natural resources (including a weight-to-value ratio much higher than many capital-intensive goods) and proximity to the world's largest markets, are much more transport-intensive than its competitors' exports. Thus LAC countries, whose economies mainly depend on the export of large and bulky raw materials, are more exposed to changes in demand as well as being more sensitive to the quality and quantity of their transport infrastructure.

Figure 3. Total Import Freight Expenditures as a Share of Imports, 2006 (%)



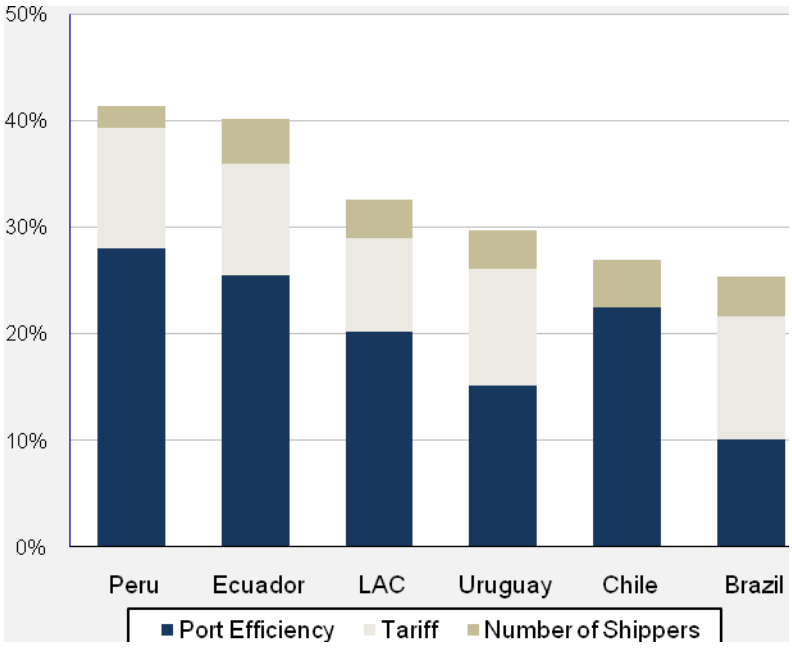
Source: Mesquita Moreira, M. et al. 2008.

Overall, about 40 percent of the difference in shipping prices between the region and the United States and Europe can be explained by port and airport efficiencies, while only 17 percent of these differences are accounted for by higher tariffs (Mesquita Moreira, M. et al. 2008). For example, LAC exports to the United States pay ocean freight rates that are on average 70 percent

higher than those paid by exports from the Netherlands. As result, for a typical LAC country, improving port efficiency to the U.S. level would lower costs by 20 percent. Reducing tariff rates and increasing competition to the U.S. levels would further reduce transport costs by nine and four percent, respectively.

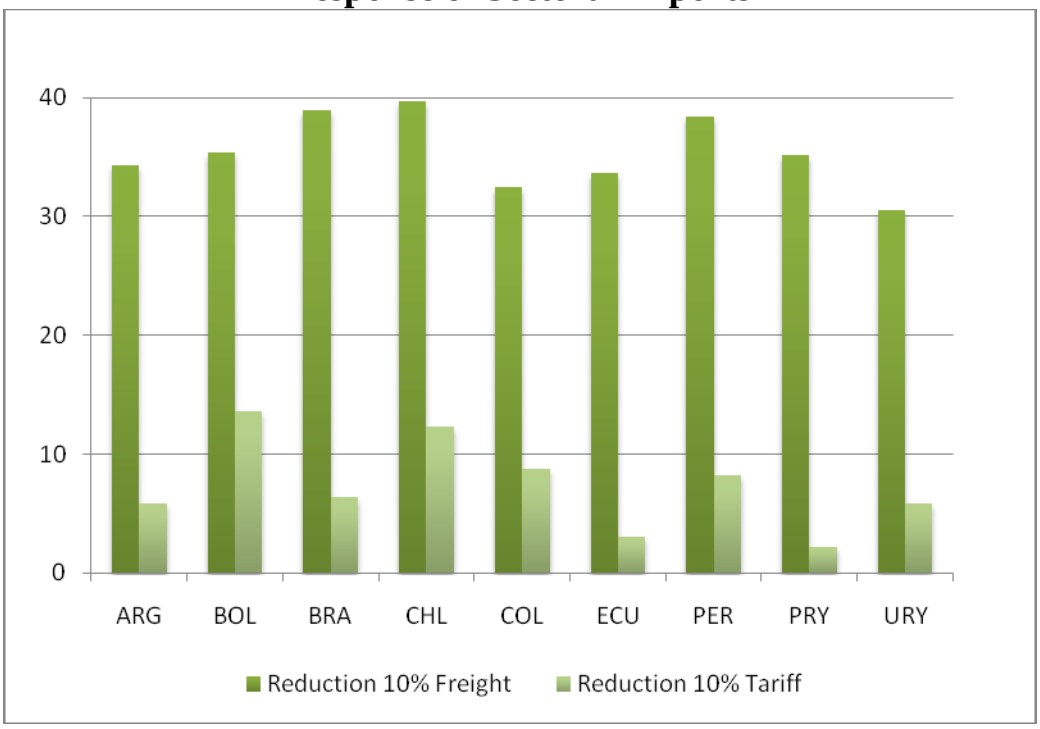
Intra-regional exports largely depend on the development of transport infrastructure in general and regional integration transport infrastructure more specifically. In contrast, the same reduction would allow exports to the United States to increase by 39 percent on average compared with less than two percent from a reduction in import tariffs by 10 percent (Mesquita Moreira, M. et al. 2008). Reducing trade costs by 10 percent would cause an average increase of 60 percent (with substantial variations with respect to different commodities weight-to-value ratios) (Mesquita Moreira, M. et al. 2008).

Figure 4. Percentage Reductions in Transport Costs from a Change in Port Efficiency, Tariff Rates, and Number of Shippers to U.S. Levels, Base Year 2005



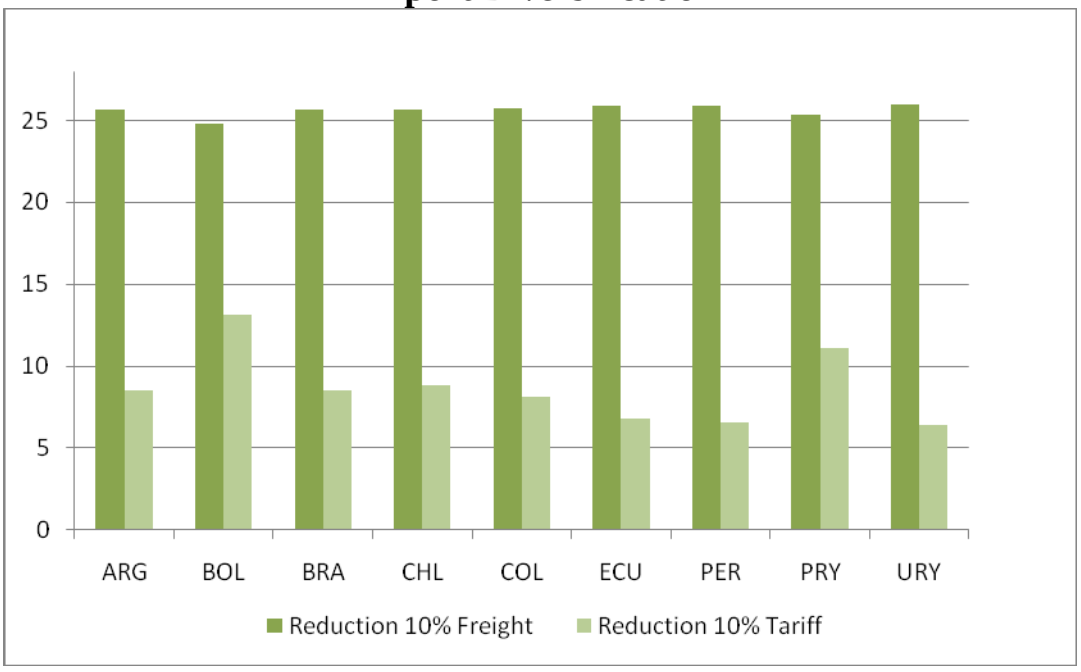
Source: Mesquita Moreira, M. et al. 2008

Figure 5. Reductions in Transport Costs and Tariffs and Median Response of Sectoral Exports



Source: Mesquita Moreira, M. et al. 2008

Figure 6. Reductions in Transport Costs and Tariffs and Median Response of Export Diversification



Source: Mesquita Moreira, M. et al. 2008.

These findings highlight not only the importance of improved freight logistics and transport infrastructure for the development of countries' export sectors (with corresponding productivity and output growth) but also the limitations that transport development have had over regional integration. Despite geographical constraints and the long distance between its most populous urban centers, people in LAC currently live within 25 kilometers of a border (16 percent in mountain areas) or a coastline (48 percent in tropical areas), respectively – figures that increase to 37 percent and 54 percent living within 75 kilometers (WB 2009b). Nonetheless, very few urban settlements have been developed along border regions (as opposed to North American cities), and therefore few productive centers are located less than 200 kilometers from borders. Accordingly, since urban settlements house economic activities further from borders, transport costs to and from borders hinder the development of related infrastructure.

After the surge of regional initiatives in the early 1990s and the corresponding progressive reduction in non-tariff barriers, the region new trade agenda needs to focus on more practical issues, centered on measures needed for reducing transport and logistics costs, which will increase productivity growth and competitiveness internally and externally. Potential gains from spatial economies in remote areas are limited due to the highly complex coordination needed at the regional level to make progress on the integration agenda. Several efforts to do so are currently under way, including the development of strategic corridors such as the Initiative for the Regional Integration of Infrastructure in South America (IIRSA) and the Mesoamerica Project.

Shorter supply chain processes including just-in-time production and the outsourcing of logistics procedures have set the stage for substantial improvements in the modernization of supply chain and logistics management in sector firms. As a result, the demand for freight transport has changed substantially, incorporating the need to minimize logistics costs in line with inbound and outbound traffic, warehousing, inventory costs at different stages of the production cycle, damaged stock, and other costs associated with the physical flow of goods. Furthermore, as freight logistics technology and its associated costs are consistently present throughout the entire product life cycle, the quality of service and efficiency associated with these is of increasing importance in competitive international markets.

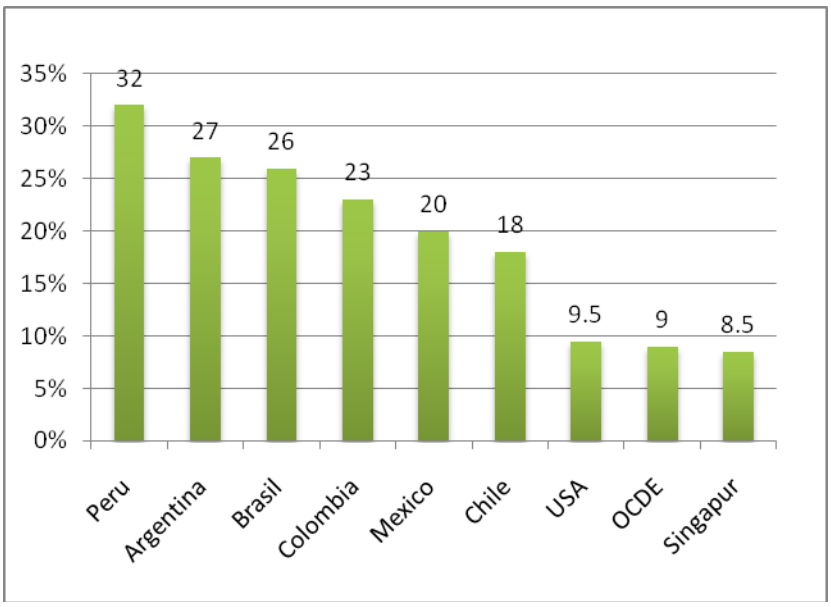
Nonetheless, the development of a comparative metric system and associated measurement for logistic services on international shipments is an increasingly complex process

given the nature of the services, the array of procedures involved and their many combinations. As one United Nations Economic Commission for Europe study concludes, the volume of information about the link between logistics and competitiveness is growing however there is a persistent inadequacy of tools and methodologies to effectively asses the transport sector's contribution to the competitiveness in the context of transport's role in supply chains (Economic Commission for Europe 2009). As the supply chain uses different modes of transport (maritime, air, rail and truck) for both international and national trade and deliveries and the fragmentation of production across different countries increases the amount of freight in circulation, measuring logistics performance is neither an easy task nor one safe from controversy.

Correspondingly, logistics performance has been measured in several ways: macro-based approaches based on national accounts and looking at costs relative to a country's balance of payments; micro-based approaches that use firm surveys to measure cost, quality, and productivity relative to sales value; and perception-based approaches, which develop global indicators based on surveys of qualified stakeholders in the logistics industry. One novel approach uses stock estimations as a proxy to determine the relative impact of transport services and freight logistics on companies. LAC countries perform poorly across all indicators and are becoming increasingly uncompetitive vis-à-vis their industrial and developing country counterparts. Overall, these indicators all point to the same conclusion: there is ample room for trade logistics improvement in LAC countries.

Guasch and Kogan (2006) analyzed logistic performance indicators at the macro level as well as inventory stocks for developing countries to assess their impact on countries' growth and competitiveness. Their findings in terms of logistic performance indicators show that countries in LAC spend on average two or three times as much as OECD countries on logistics; inventory stocks show that they are on average 15 percent of GDP, two to five times larger than OECD averages. As a result, the logistics cost as percentage of product value for LAC countries is twice that of OECD countries and the United States. Overall, LAC countries' competitiveness suffers from poor transportation services, which affect the ability of companies to streamline internal processes, and from the large financial costs required to maintain stock at an efficient level.

Figure 7. Logistics Costs as Percentage of Product Value for Selected Economies, 2004



Source: Guasch, J.L. and Kogan, J., 2006

Table 5. Comparison of Average Inventory Levels, Losses to Markets, and Logistics Costs in Latin America and OECD, 2004

Country	Raw material	Finished products
Chile	2.17	1.76
Venezuela	2.82	1.63
Peru	4.19	1.65
Bolivia	4.20	2.74
Colombia	2.22	1.38
Ecuador	5.06	2.57
Mexico	1.58	1.46
Brazil	2.98	1.98

Source: Guasch, J.L. and Kogan, J., 2006

Micro-level indicators developed by Georgia Tech-Cap Gemini-Oracle-DHL and the World Bank in *Doing Business* show that the outsourcing of logistics services in LAC is generally weaker than in more developed countries. Of the firms surveyed in LAC, 70 percent outsource their national and international transport and 62 percent their storage and stock management, while for East Asia and Pacific countries the figures are 92 percent and 75 percent respectively (WB 2009a). The indicators also highlight a clear gap between LAC and OECD in logistics performance related to international trade.

The Logistic Performance Index elaborated by the World Bank uses perception-based indicators that point to the negative relative logistic performance of LAC countries. The results cover seven areas: customs performance, infrastructure, international shipments, logistics competence, timeliness, tracking and tracing, and domestic logistics costs. Of the 150 countries ranked, LAC countries occupy positions ranging from 32 (Chile) to 141 (Guyana), showing significant variation in the region.

Another perception-based index is the Enabling Trade Index 2008 elaborated by the World Economic Forum. Similar to the LPI, the ETI is developed in collaboration with international trade experts and leaders from the logistics and transport industry, providing a comprehensive index intended to capture the full range of issues that contribute to impeding trade and ranking nations according to factors that facilitate the free flow of goods across borders.

Recognizing the gap in infrastructure investments by the private sector in LAC, another set of indicators was developed by the World Economic Forum, the Infrastructure Private Investment Attractiveness Index, considering the investment environment for infrastructure in 12 LAC countries. The index assesses the main drivers of private investment in infrastructure projects for ports, airports, roads, and electricity by looking at macroeconomic performance, legal framework, political risk, the track record of private investments in infrastructure, and the willingness of government and society to pay for infrastructure, among other factors. The results are summarized in an overall index of infrastructure and private investment and two sub-indexes covering general investment environmental factors and infrastructure-investment-specific factors ranked on a scale of 1 and 7, with 1 being the “worst possible scenario” and 7 the “best possible scenario” for each set of variables. The overall results show Chile ranking highest in the region, followed by Brazil, Colombia, and Peru while the bottom slots are occupied by Venezuela,

Bolivia, and the Dominican Republic.

Finally, an Infrastructure Quality Gap Index analyses the relative needs and deficiencies of infrastructure development in each of the 12 countries covered. The gap is computed with respect to Germany, ranked first in the infrastructure pillar of the Global Competitiveness Report (2006–07), where 0 means that the country has achieved world-class levels of infrastructure development and therefore does not need additional investment in the sector. The results show Bolivia, Peru, and Colombia having the largest gaps, with the most developed infrastructure sectors occupied by Chile, El Salvador, and Mexico.

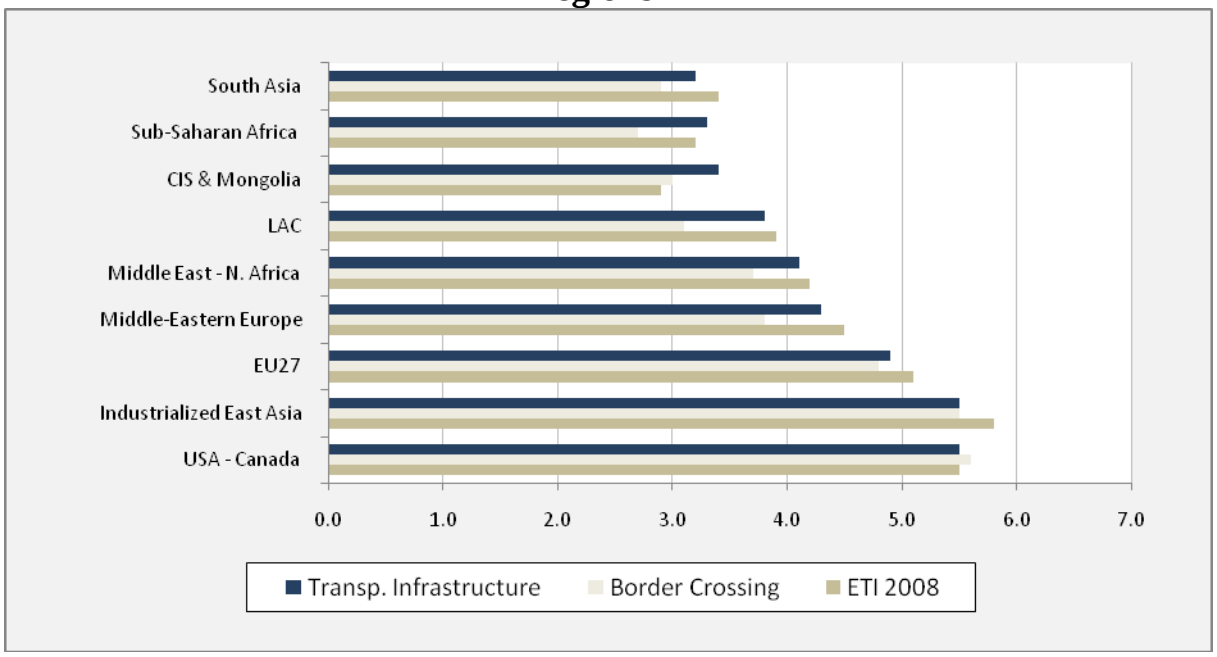
Table 6. Trading Across Borders[9]

Region	Export			Import		
	Documents (Number)	*Time (Days)*	*Cost (US$ container)*	*Documents (Number)*	*Time (Days)*	*Cost (US$ container)*
Far East and the Pacific	6.7	23.1	909	7.1	24.3	925.8
East Europe and Central Asia	6.5	26.8	1,581	7.8	28.4	1,773
LAC	**6.8**	**18.6**	**1,243**	**7.3**	**20.9**	**1,481**
Middle East and Northern Africa	6.4	22.5	1,034	7.4	25.9	1,221.7
OCDE	4.3	10.5	1,089	4.9	11	1,145.9
South Asia	8.5	32.4	1,364	9	32.2	1,509
Sub-Saharan Africa	7.8	33.6	1,941	8.8	39.4	2,365

Source: Doing Business Report 2009

[9] On average, LAC countries' export and import requirements are more bureaucratic than those of OECD countries but on a par with those of Southeast Asia and the Pacific; LAC requires 6.8 and 7.3 documents to export and import, respectively, while OECD countries only require 4.3 and 4.9. In terms of import and export times, the region performs relatively well in comparison with other regions, but its costs remain one of the most expensive in the world (with the exceptions of South Asia and sub-Saharan Africa). Within the region, Venezuela lags significantly, while Panama leads with an average nine days to import or export a product.

Figure 8. Logistic Perception Index 2008: LAC Compared with Other Regions [10]



Source: World Economic Forum

[10] The LPI ranks 150 countries based on a survey of operators (global freight forwarders and express carriers), providing feedback on the logistics "friendliness" of the countries in which they operate and those with which they trade. Feedback from these operators is then supplemented with data on the performance of key components of the logistics chain in the home country, resulting in an index based on a 1 to 5 scale (lowest to highest performance). Overall, the index shows LAC countries' performance lagging behind OECD countries, industrialized Asia, China, and the Middle East & North Africa in most measures. Its weakest performances are in customs, infrastructure, and logistics competence.

Table 7. Most Fragile Components in Trade Facilitation Performance [11]

Country	ETI08	Customs efficiency	Exp Imp processes efficiency	Customs transparency	Transport infrastructure	Transport services	TICs
ARGENTINA	78	60	69	96	80	51	49
BOLIVIA	94	93	80	75	93	85	101
BRASIL	80	73	61	58	91	42	56
CHILE	27	17	30	18	45	38	45
COLOMBIA	75	37	73	55	83	67	63
COSTA RICA	44	65	53	42	68	88	52
ECUADOR	96	118	87	108	89	87	75
EL SALVADOR	55	72	64	49	94	68	73
GUATEMALA	54	19	81	63	84	84	72
HONDURAS	64	77	77	74	70	105	90
MEXICO	65	63	76	57	87	55	58
NICARAGUA	67	85	65	73	96	107	100
PANAMA	46	41	20	67	26	57	70
PARAGUAY	83	64	83	95	101	100	94
PERU	69	113	55	50	92	69	77
R DOMINICANA	63	50	47	78	73	109	66
URUGUAY	56	75	79	28	61	83	51
VENEZUELA	115	112	106	115	95	91	57

Source: Enabling Trade Index 2008

IV. Regional Initiatives to Advance the Integration Process

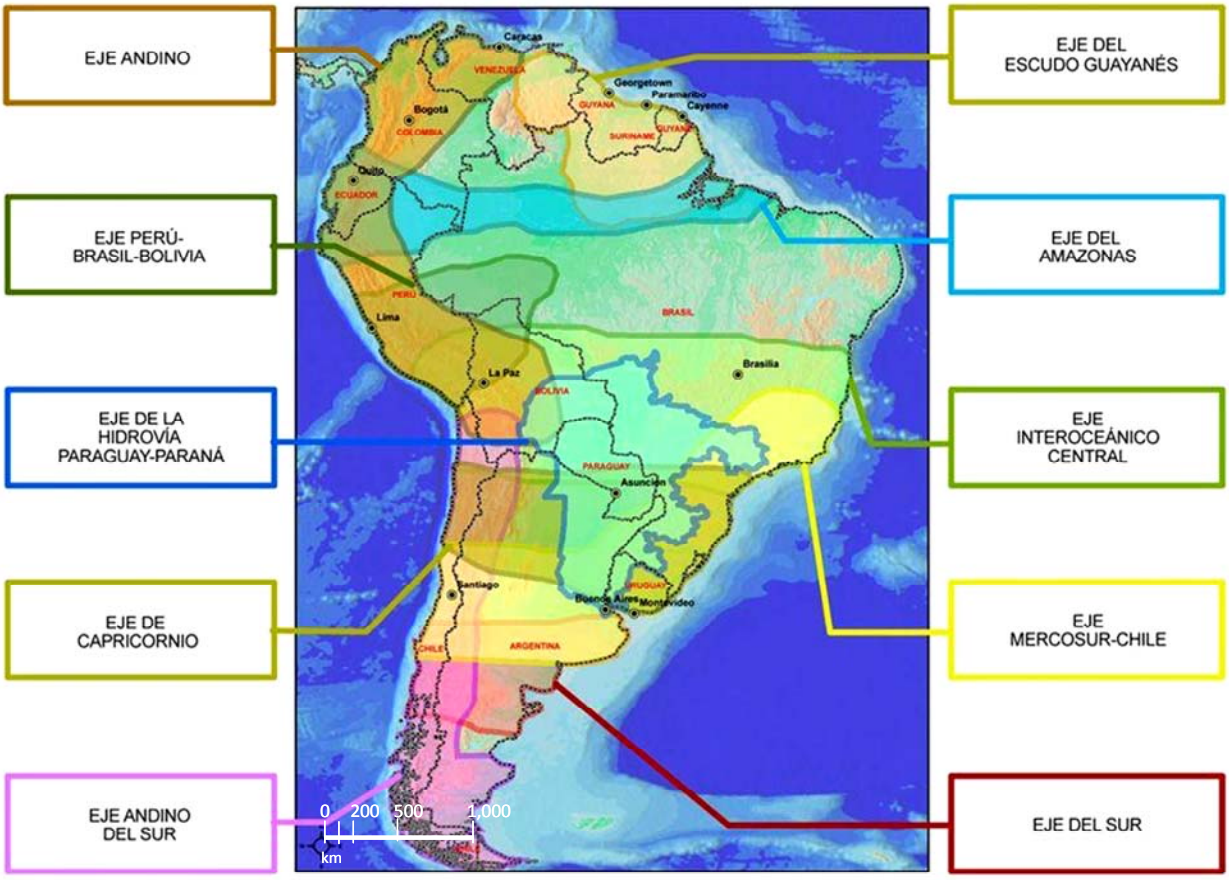
Despite lagging trade logistics performance in the region, there have been considerable achievements toward an integrated regional agenda and improved connectivity. LAC has undergone a process of commercial and political integration that has encouraged physical integration initiatives to ensure the connectivity of the infrastructure networks. In this sense, the most important regional initiatives have been the Initiative for the Integration of Regional Infrastructure in South America and the Mesoamerica Project. The objective of both initiatives is to increase intra-regional trade through trade facilitation measures and to give priority to

[11] The index covers four main sub-indexes that include measures of market access, border administration, transport and communications infrastructure, and business environment. Each of the 121 countries covered by the index is ranked on a scale from 1 to 7 (lowest to highest performance). Again, the rankings show substantial variations within the region, with Chile ranked 19th and Venezuela 119th.

economic geography approaches and regional planning as a means of deepening integration at the regional level.

IIRSA, the largest of these initiatives, encompassed 514 infrastructure projects by end-2008, totaling US$69 billion. It originated in 2000 with a view to advancing the physical integration of the South American continent. It is an institutional mechanism for intergovernmental coordination that incorporates novel methodological approaches, developing a strategic vision to align the regional portfolio of infrastructure projects through increased coordination and harmonization of standards in infrastructure, and border crossing services as well as infrastructure investment. This is carried out through the identification of 10 strategic sub-regional corridors for cross-country infrastructure development.

Figure 9. IIRSA Corridors

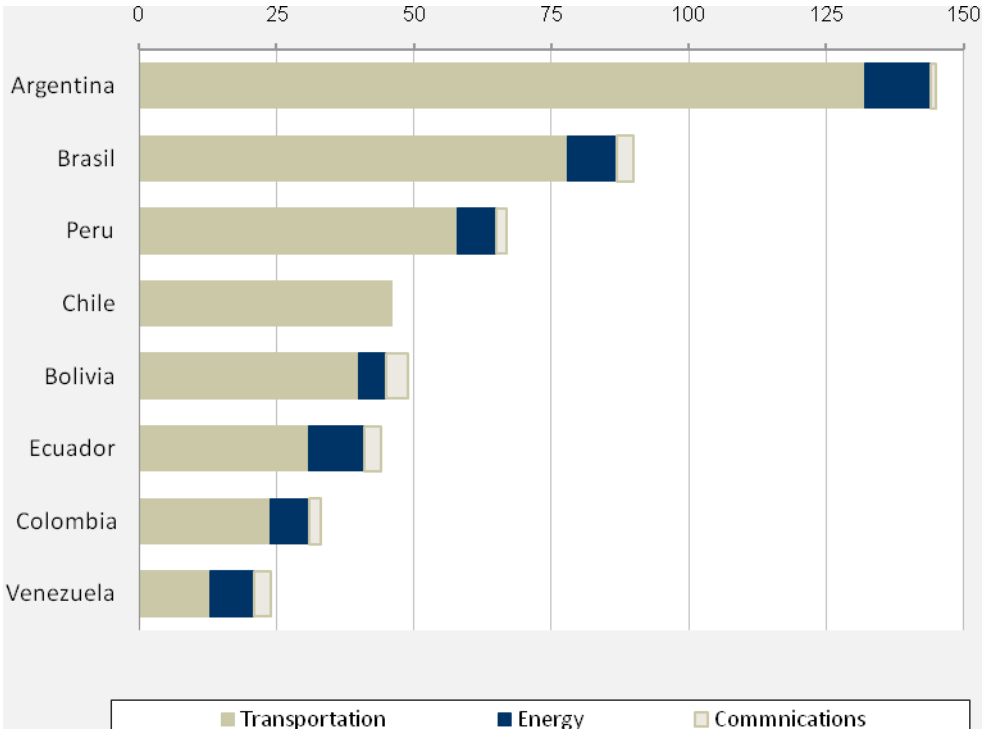


Source: Guerrero, P., 2009

These are then complemented by key initiatives aimed at unleashing potential synergies from scale economies in transport and knowledge transfers while emphasizing monitoring and evaluation procedures to recover important lessons learned and improve future performance. As a result of these initiatives, IIRSA has been identifying key processes for integration that require normative harmonization, such as the regulation of transport and energy markets, ICT infrastructure, and border crossing management.

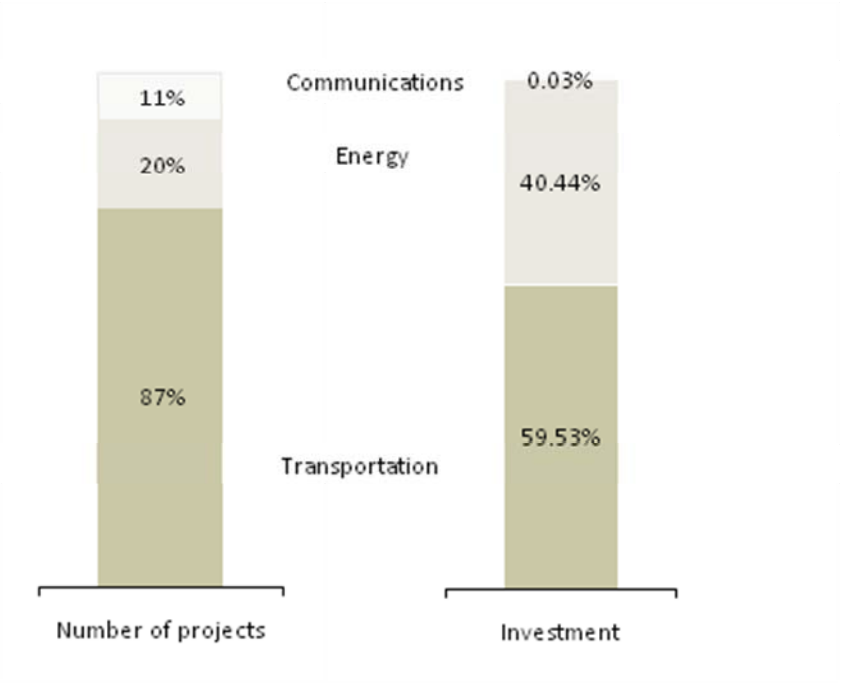
Importantly, the IIRSA-established financial structure has helped incorporate the private sector into transport investments with the backing of regional multilateral funding. The Inter-American Development Bank, Andean Development Corporation (CAF), and the Fund for the Development of the River Plate Basin support more than 25 percent of the total investment (US$9.7 billion) required by 247 projects currently in progress or finished – about 70 percent of the entire portfolio. Furthermore, 46 percent of its financing capital is derived from the public sector, 35 percent from public-private partnerships (PPPs), and 19 percent from the private sector.

Figure 10. IIRSA Project Portfolio by Country



Source: Guerrero, P., 2009

Figure 11. IIRSA Project Portfolio by Sector



Source: Guerrero, P., 2009

Table 8. IIRSA Project Status and Financing Structure

Project status	Projects (#)	US$ MM	%
Completed *	190	7.506	10%
In execution *	29	30.728	38%
In preparation	28	17.383	20%

*Financing structure of projects **

Financing	Projects (#)	US$ MM	%
Public	190	17,641	46%
PPP	29	52.2	35%
Private	28	6.6	19%
TOTAL	**247**	**38,234**	*100%*

Source: Guerrero, P., 2009

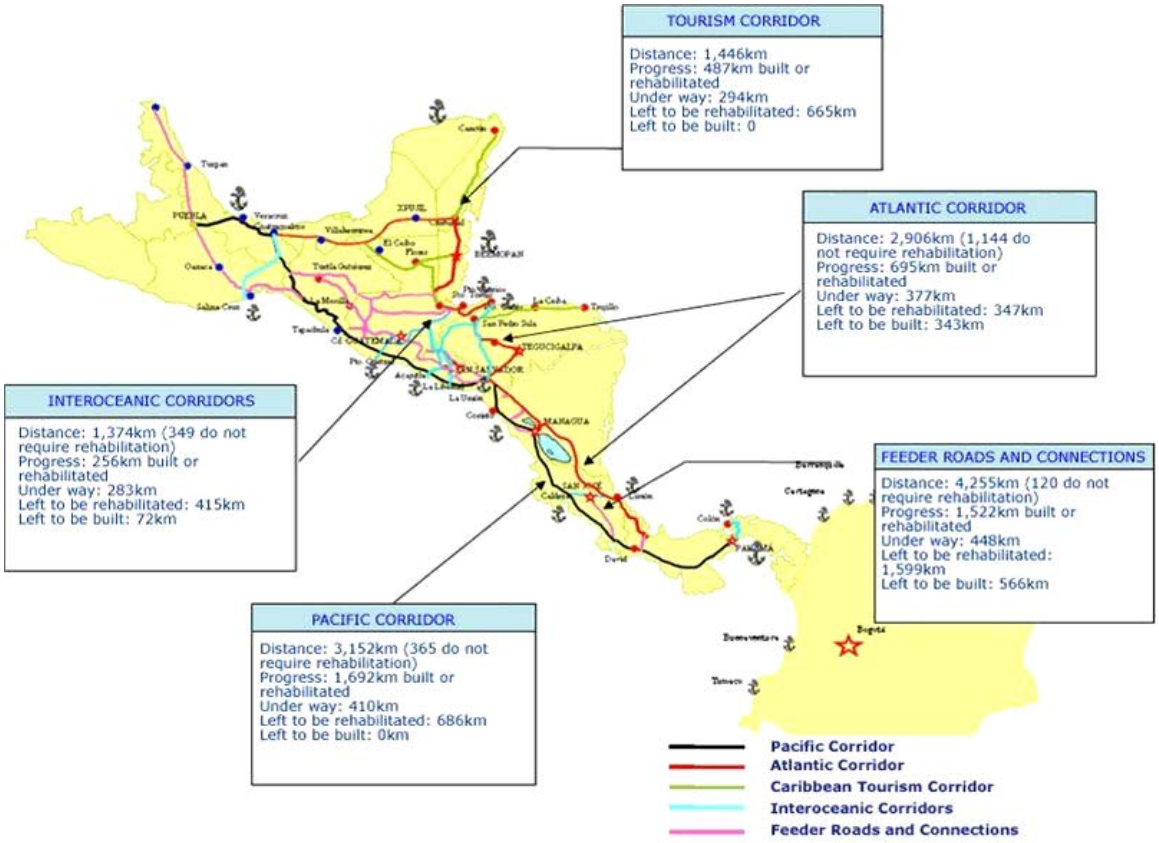
Finally, IIRSA has deepened the development of methodologies for integration projects with increased economic assessments of transnational projects, strategic environmental assessments, productive and logistic integration, and development of digital maps and geographic information systems. Productive integration has been further developed by taking advantage of potential linkages between the removal of physical barriers and increased logistic and economic integration, extending the scale of production and markets, promoting

competitiveness, and taking advantage of agglomeration economies. Furthermore, the development of logistic services is helping add value to IIRSA projects through knowledge transfers, capacity-building initiatives, and improved local and regional institutional performance and competitiveness.

In 2008, the Mesoamerica Project was born from the original Plan Puebla Panama (established in 2001) as an effort to integrate the Central American Corridor and Mexico through infrastructure and social projects. Currently the project includes nine countries,[12] from Mexico to Colombia, coordinating over 100 regional integration projects worth US$8 billion. Importantly, the initiative seeks to move beyond the physical integration of its participating countries and into areas of trade facilitation and increased investment in social services, such as health, education, and environmental protection. As a result of these efforts, strong synergies have become apparent in the integration projects, particularly in the smaller countries, where infrastructure has been one of the traditional bottlenecks. It has integrated other regional initiatives, such as the Central American Integration System, while attracting the multilateral participation of the IDB, the Central American Bank for Economic Integration, the CAF, and the Secretariat for Central American Economic Integration.

[12] Belize, Costa Rica, El Salvador, Guatemala, Honduras, Mexico, Nicaragua, Panama, and Colombia.

Figure 12. Mesoamerica Project Corridors



Source: Guerrero, P 2009

V. Regional Agenda to Deepen Integration. The Importance of Freight Logistics in Trade Facilitation.

Over the past two decades, multilateral and bilateral trade negotiations have reduced bound tariff rates and, to a lesser extent, softened non-tariff barriers to trade. Increasingly, however, trade transaction costs such as those resulting from poor transport infrastructure have proved to be more costly; Djankov et al. (2006) found that on average each additional day of delay in shipping reduced trade by at least one percent. As a result, developing countries are being forced to rethink their trade policy agenda to take into account trade costs not covered in past rounds of negotiations. Without a renewed focus on non-policy trade costs and the relevance of freight logistics and specialized transport infrastructure on the trade facilitation agenda, developing countries will continue to be left out of self-reinforcing production and trade networks.

The incorporation of transport-oriented specific measures in trade facilitation has become a key policy initiative to enhance future gains from trade. Activities include both the services provided by the state as well as the flow of freight both internally and externally. Clearly, developing countries have much to gain, given the high transaction costs of their trading patterns. Trade facilitation measures focusing on customs procedures and regulatory environments can lead to improved controls, reduced administrative costs, and thus increased cooperation between the public and private sectors even when applying these measures implies costs.

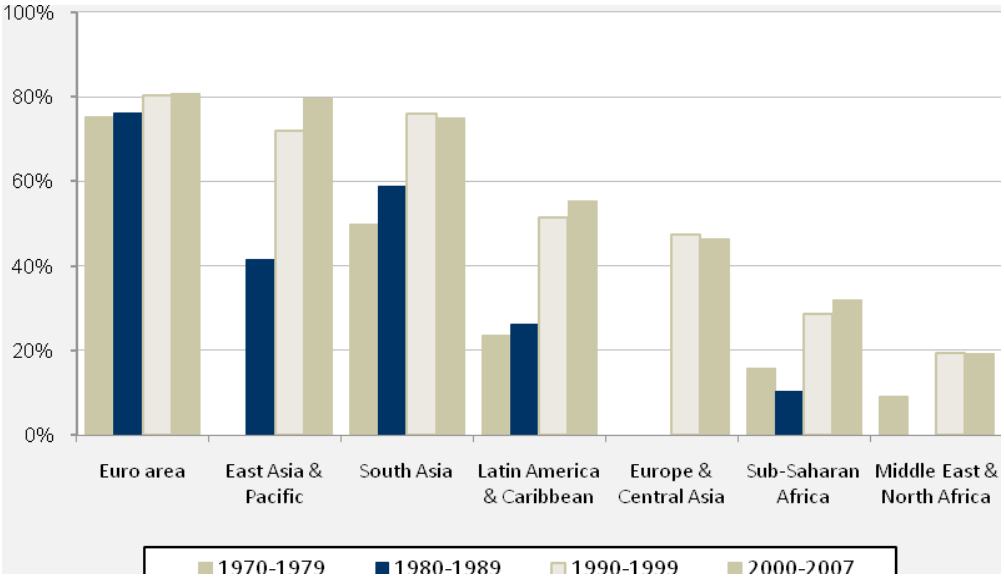
For example, Otsuki et al. (2003), using a sample of 75 countries (weighted toward developing economies) found that improving these countries' trade facilitation records to the global average resulted in trade gains equivalent to US$377 billion, representing an increase of about 9.7 percent in total trade – with Latin America accruing about 20 percent of these gains (South Asia got the largest share, 40.3 percent). A little over 40 percent of these gains would come from improved service sector infrastructure, while nearly 20 percent are due to improvements in the regulatory environment.

Firms in developing countries also witness delays in inventory holdings, an area of particular concern for countries that rely on exports of bulky natural resources with short shelf lives, as is the case for many LAC countries. The implied costs of holding inventories through tied-up capital, increases in unit costs, and diminished competitiveness can be extremely costly to the development of export sectors in LAC and the increases with shipping delays. Guasch (2003) found that while U.S. businesses typically hold inventories of around 15 percent of GDP,

inventories in Latin America and other developing regions are often twice that. In addition, if the interest rate for financing holdings is between 15 and 20 percent, the cost to an economy of additional inventory holdings is more than two percent of GDP. Eliminating excess inventories will, in return, develop reliable and efficient transport networks, affordable and available transport services, and the required logistic services. Consequently, excessive inventory costs provide a further example of how improvements in trade facilitation and freight logistic measures such as port efficiency, ICT, infrastructure, harmonization standards, and customs procedures can further increase the benefits of trade through a virtuous circle that allows countries to exploit economies of scale in both transport and production.

Unfortunately, much remains to be done in order to improve the region's weak trade facilitation measures and close both the trade and infrastructure gap it holds with other regions. In large part, the region's relatively weak trade performance is aggravated by its infrastructure and income gap relative to other regions; in relation to East Asia, for example, the infrastructure gap could account for as much as one-third of the income gap (Easterly and Servén 2003).

Figure 13. Manufactured Exports by Region (% of merchandise exports) [13]



Source: World Development Indicators 2009

[13] In LAC, manufactured goods as a percentage of total merchandise exports have risen from 24 percent in 1970–79 to 55 percent in 2000–07. However, this remains substantially lower than in Southeast Asia (80 percent) and the high-income OECD countries (79 percent) for the latter period.

Overall, a renewed focus on trade facilitation measures has become of increasing importance to the region's trade agenda as traditional trade restrictions have been substantially reduced and trade benefits have not been fully realized. Furthermore, through increased coordination and harmonization of customs and border procedures, trade facilitation supports efforts for increased regional integration. Similarly, these measures tend to enhance the efficiency of revenue collection agencies and are associated with increased government revenue while incorporating the private sector into productive activities.

If better provision of transport infrastructure from the public sector and the enabling of more-efficient transport services from the private sector are key to spurring national trade, investment in regional physical infrastructure projects is essential to reducing costs of international land-based transport. This is particularly true for landlocked countries and for the development of regions closer to international borders and distant from national ports.

Improving trade logistics through deepened trade facilitation measures has become of increasing importance to LAC's regional integration agenda. Given the substantial decline in tariffs and other traditional barriers to trade, logistics performance and the institutional capacity to provide it seem fundamental to expanding productivity gains and benefiting from existing trade agreements. Reforming the current institutional climate to promote much needed transformations in terms of increased human capital, private-sector development, logistic services, infrastructure quality, and increased investment in transport infrastructure is a costly and sometimes lengthy process. The challenges to public policy in designing, executing, and evaluating a successful strategy that gives priority to key issues and efficiently tackles the many problems intrinsic to the current logistics performance of LAC countries are many. Nonetheless, the future benefits of these processes are more likely to exceed their costs in most aspects of economic and political activity.

What limitations help explain the weak logistics performance in LAC countries? First, the region is underserved by a weak institutional capacity that limits its ability to cope with the demands of accessible and reliable transport infrastructure and the services provided by the state for a rapidly growing trade facilitation agenda. In particular, scarce human resources, weak ICT infrastructure and regulation, and monitoring and evaluation systems adversely affect the reform agenda needed to expand its institutional arrangements. Consequently, the coordination capacity

of LAC countries is weak and impedes the necessary development of the existing logistics agenda.

Second, the region's infrastructure network in general and transport infrastructure in particular have suffered from chronic underinvestment.[14] Estimates of the investment needs of the current infrastructure framework are between five percent and seven percent of the region's GDP over 20 years in order to satisfy construction and maintenance requirements, increase coverage, and tap growing demand (WB 2005). Nevertheless, in 2000–01, the investment rate in the sector was about four percent, with three percent coming from the public sector and one percent from private investments. At the peak of private investments in 1998, the total value of participation only reached 1.7 percent of GDP (WB 2005). The latest figures show that the region is investing about 3–4 percent of GDP in infrastructure while East Asian economies are committing 6–10 percent, with China at 8 percent and India at 4 percent (Latin Business Chronicle 2008, 2009). Finally, the infrastructure gap in LAC countries is exacerbated by poor project preparation in the public sector matching a weak private sector adversely affected by chronic shortages of human resources and access to technology.

Restrictions of investment capital have also contributed to the underdevelopment of small- and medium-size enterprises (SMEs) as providers of logistics services. Land transportation services, mostly trucking and logistics operators, have had limited expansion and remain relatively weak performers in the logistics chain, with room to improve and modernize the industry. Another limitation on the logistics performance of SMEs is their inability to exploit economies of scale and substantial institutional roadblocks. Finally, performance across countries has remained uneven, with limitations ranging from demand-related obstacles such as freight imbalances and seasonality to a lack of harmonization in the organization of the logistics supply chain across borders. In addition, there is also the significant heterogeneity within countries, especially the geographically larger countries of the region that have the highest potential opportunities to exploit scale economies and increase agglomeration. As a consequence of these limitations, the logistics gap is widening, aggravated by weak performance in multiple components of the logistics chain, notwithstanding great heterogeneity across LAC countries.

In response to the limitations and weak performance of LAC countries as a whole, a rethinking of the current agenda to transform trade logistics requires actions at the national,

14 A recent IDB luce growth according to infrastructure professionals in LAC (IDB 2008). What is "luce"?

subnational, and regional level. Specifically, it requires project and program coordination in the areas of transport infrastructure and related transport services, specialized logistic infrastructure, and trade policies, as well as in sectors where the agendas converge.

Improvements in trade logistics must focus on the provision of basic infrastructure, particularly in the road network, in order to expand coverage and maintain quality standards. Importantly, regulations that facilitate and encourage private-public partnerships, especially for large regional infrastructure projects such as ports and railroads, need to be improved. Well-functioning specialized logistic infrastructure is also needed to ease freight handling, streamline inspection processes, and provide value-added services in areas closer to ports, airports, and border crossings. Equally important is the establishment of clear guidelines to support logistics management development for SMEs, logistic operators, and intermediaries. At the same time, services delivered by the state, including customs and cross-border crossings and security provision, need to be substantially improved. Additionally, efforts need to be formalized to implement institutional organizations for high-quality logistics.

In the area of information and communication technologies, there is ample room to capture the benefits of improved routing, packing, and picking that could effectively reduce kilometers traveled per vehicle, hence effectively contributing to reduced carbon dioxide emissions. There is also a transformation in the economic environment in which businesses work when these technologies are incorporated: job transformation (wholesalers, postal operators, and carriers/logisticians) and job creation, such as virtual links in the delivery chain, supply-demand *interfacers*, and suppliers of complete logistics solutions (EC 1998).

The agenda for physical integration, on the other hand, must facilitate the coordination and harmonization of standards across borders to further reap the benefits of economic agglomeration. Projects of greater potential impact must be given priority, while regional integration of infrastructure projects should be axis-based, with clear development criteria that equitably distribute the costs and benefits of integration among its members. In order for this strategy to achieve its full potential impact, it must be accompanied by a significant resource allocation.

Hence, the region must develop financial mechanisms to provide affordable financial resources for these projects, such as a common fund or earmarked resources for infrastructure integration. In this respect, the experience of the EU is of particular importance: a cohesion

policy for transport infrastructure was developed to allow countries to catch up to regional standards and funds were earmarked for integration projects.

Finally, in the areas where agendas converge, transport and trade facilitation measures need to be deepened to allow for further coordination and gains from cooperation. Continued emphasis on key processes regarding the development and harmonization of border crossings and the regulation of diverse transport modalities is of particular importance. Furthermore, the agenda for the expansion of productive integration and intra-regional logistics services must support both national and subnational organizations in order to fully achieve the economies of agglomeration necessary to reap the most benefits from these costly reforms.

The European Union's Infrastructure Integration

Until the 1990s, the EU's transport networks were characterized by their independent nature, dominated by national interests and inward developments. Nonetheless, since the Treaty of Rome, the region has developed a network where access, mobility, and travel are available for all cities on the continent (Giaoutzi and Nijkamp 2008). As a result, the EU-27 currently has 5 million kilometers of paved roads (out of which 61,600 kilometers are motorways), 215,400 kilometers of rail lines (out of which 107,400 kilometers are electrified), and 41,000 kilometers of navigable inland waterways (EC 2009b). These developments have been the result not only of substantial infrastructure investments but also of a common transport policy aimed at developing transnational and pan-European networks.

During the mid-1990s, the EU began the development of its Trans-European Transport Network (TEN-T) designed to connect all major modes of transport across the continent for the transport of people and freight. The first action plan for a coordinated continental transport policy was not adopted until 1996 and has only recently been institutionalized with the creation of the TEN-T Executive Agency (2006). Nevertheless, since the Helsinki Declaration of 1997, when the EU set aside €62 billion for 56 integration projects (31 in transport, 17 in energy, and 8 in high-speed communications networks, research & development, and innovation), the region has coordinated funding to integrate its infrastructure network (Tanzi 2005). Importantly, the European Commission was able to estimate funding for these projects along the lines of a 60/40 public-private resource structure.

For the period 2000–06, the total investment in transport infrastructure was €859 billion (EC 2009b). These developments occurred in most part through national transport policies; however, with the creation of the TEN-T Executive Agency, these will now be coordinated regionally. As a result of the EU expansion and other demographic developments, the growth of traffic within EU-27 is expected to double by 2020. Consequently, in order to complete and modernize the TEN-T, it will require an estimated €500 billion in infrastructure investments from 2007 to 2020, including €270 billion for priority axis and projects (EC 2009b). Financing for the transport network is orchestrated through a number of common financial instruments and loans from the European Investment Bank. The most important instruments are the Structural Fund and the Cohesion Fund, which allow EU members whose gross national income per capita is below 90 percent of the EU average to tap over €277 billion and €70 billion respectively for 2007–13. The latter of these funds is used specifically for environment and transport projects.

Here, the IDB can support the development of a cohesive regional political and economic architecture by helping to strengthen institutional capacity at the national and subnational levels. Furthermore, the IDB can add value as a knowledge bank of ideas, thereby facilitating the coordination of thematic agendas by calling on regional experts in all fields and disciplines. Private-sector logic over state-led integration to deepen regional ties is important to the process, as is the costs of non-trade issues in doing so. As such, there is a huge potential in the convergence of experiences, drawing from state modernization and private-sector development

initiatives as well as the development of comprehensive joint approaches considering territorial and transport planning as well as spatial and scale economies.

The IDB is prepared to spearhead many of these initiatives as an efficient vehicle for policy, projects, and regional cooperation. Importantly, the Bank's agenda has been expanded to support the coordination of national initiatives while emphasizing the harmonization of cross-border interactions. This agenda places emphasis on the following: provision of basic infrastructure, particularly road networks; improvements in services and regulations that facilitate PPPs, like in ports and railroads; improved services delivered by the state, like customs management, border crossings, and security; support to logistic management development in SMEs, operators, and intermediaries; implementation of an institutional organization for high-quality logistics; integration of an "axis-based" regional infrastructure development criteria, giving priority to projects of greater regional impact; development of financial mechanisms to increase investment in key areas; and commitment to an agenda for productive integration and logistics services, supporting national and subnational organizations. Overall, these initiatives will help the region better cope with a changing international environment and allow it to exploit the positive links between trade, integration, and economic growth.

Annex. Commonly Cited Latin American Regional Trade Agreements

Name	Established	Members
Latin American Integration Association (ALADI)	The Treaty of Montevideo (1980) established ALADI as a successor for the Latin American Free Trade Association (LAFTA).	Argentina, Bolivia, Brazil, Chile, Colombia, Cuba, Ecuador, Mexico, Paraguay, Peru, Uruguay and Venezuela.
Andean Community of Nations (CAN)	The Cartagena Agreement was signed by Bolivia, Chile, Colombia, Ecuador and Peru in May 1969. Venezuela acceded in February 1973 and withdrew in 2006 while Chile withdrew in October 1976.	Bolivia, Colombia, Ecuador, Peru.
Central American Common Market (CACM)	The General Treaty on Central American Economic Integration was signed by Guatemala, Honduras, El Salvador and Nicaragua in December 1960. Costa Rica acceded in July 1962.	Costa Rica, El Salvador, Guatemala, Honduras and Nicaragua.
North American Free Trade Agreement (NAFTA)	The agreement was signed in December 1992, ratified by the three national legislatures in 1993, and entered into force in January 1994.	Canada, Mexico and the United States.
Southern Cone Common Market (Mercosur)	The four member states signed the Treaty of Asunción in March 1991.	Argentina, Brazil, Paraguay and Uruguay.
Union of South American Nations (UNASUR)	The agreement was signed in May of 2008 after negotiations dating to the creating of the South American Community in 2004.	Argentina, Bolivia, Brasil, Chile, Colombia, Ecuador, Guyana, Paraguay, Peru, Suriname, Uruguay y Venezuela.
Free Trade Area of the Americas (FTAA)*	Talks began with the Summit of the Americas in Miami on December 11, 1994, subsequent meetings (Santiago 1998, Quebec City 2001, Miami 2003 and Mar de Plata 2005) have not been able to establish an agreement on the FTAA.	Antigua and Barbuda, Bahamas, Barbados, Belice, Canada, Colombia, Costa Rica, Dominican Republic, El Salvador, Grenada, Guatemala, Guyana, Haiti, Jamaica, Mexico, Panama, Paraguay, Peru, St. Kitts and Nevis, St. Lucia, St. Vincent and the Grenadines, Suriname, Trinidad and Tobago, United States, Uruguay.
The Bolivarian Alliance for the Peoples of Our America (ALBA)	The first agreement establishing ALBA comes about through the Cuba-Venezuela Agreement signed in December of 2004. Susequently, the People's Trade Agreement was signed in April of 2006.	Antigua & Barbuda, Bolivia, Cuba, Dominica, Ecuador, Honduras, Nicaragua, Saint Vincent and the Grenadines, Venezuela.

* The following countries retracted from the FTAA: Argentina, Brazil, Bolivia, Chile, Ecuador, Dominica, Honduras, Nicaragua and Venezuela.

When it was launched, ALBA had two member states, Venezuela and Cuba.[2] Subsequently a number of other Latin American and Caribbean nations have entered into this Peoples' Trade Agreement (Spanish: Tratado de Comercio de los Pueblos, or TCP) which aims to implement the principles of ALBA

Source: WTO Secretariat, IDB 2002

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