2018 TRADE AND INTEGRATION MONITOR

FLYING TO QUALITY

EXPORT SOPHISTICATION AS AN ENGINE OF GROWTH

Coordinated by
Paolo Giordano

IDB

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The Monitor is the result of a collaborative research effort undertaken within the IDB Integration and Trade Sector (INT) and its Institute for the Integration of Latin America and the Caribbean (INTAL), carried out under the general supervision of Fabrizio Opertti, Sector Manager.

This edition was coordinated by Paolo Giordano, INT Principal Economist, and written in collaboration with Rosario Campos, Cloe Ortiz de Mendívil, Kathia Michalczewsky, and Jesica De Angelis, INT and INTAL consultants. Alejandro Ramos, Bárbara Ramos, Sebastián Franco, Ángel Pérez, Ziga Vodusek, and Jeremy Harris participated in the research and provided support in the preparation of the document. The team acknowledges and appreciates comments from Antoni Estevadeordal and Mauricio Mesquita Moreira.

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Contents

Prologue

In 2017, after four years of contraction, global trade in goods expanded. This was the result of both a recovery in prices and the synchronization of growth in the main advanced and emerging economies. Services exports accelerated even more, increasing robustly in 2017 and growing strongly in the first few months of 2018. However, the initial traction that came with this growth phase was tempered in the first half of 2018, in particular due to the slowdown in the volume of trade in goods.

The value of goods and services exports from Latin America and the Caribbean followed the general global pattern, although its behavior was more volatile. Export values recovered throughout 2017 but slowed somewhat in the first half of 2018. The region's external sales were mainly boosted by the increase in the prices of oil and other commodities, while the growth in export volumes was unsteady. From the beginning of 2018 on, the factors that had sustained this trend reversal began to weaken, revealing how vulnerable the region is to external dynamics and highlighting the region's need to diversify its exports.

The Trade and Integration Monitor 2018 analyzes the ongoing trade recovery in the region and tracks its competitiveness in global markets, with a particular focus on the capacity for positioning itself in higher-quality, sophisticated, and technology-dense sectors. This edition is the latest in a series of reports of the Integration and Trade Sector of the Inter-American Development Bank (IDB) that study the evolution of the position of Latin America and the Caribbean in the global trading system, drawing on available data from INTrade, the IDB trade and integration information system.

The report argues that in order to move beyond the current environment marked by increasing external risks, Latin American and Caribbean countries should resolutely aim to increase the quality of their exports and take better advantage of the potential for regional integration. In this context, it is of extreme importance to exert all possible efforts to overcome trade barriers through an improvement of infrastructure and connectivity to decrease transportation costs, increase market openness to reduce regulatory and tariff costs, and deploy more sophisticated export promotion activities to reduce information costs. These actions represent antidotes to overcome the end of the commodity price boom.

We hope that this edition of the Trade and Integration Monitor will provide the countries of the region with useful information for identifying, designing, and implementing policies aimed at supporting a competitive position in the most sophisticated segments of international trade.

Fabrizio Opertti
Manager, Integration and Trade Sector

List of Abbreviations

AM	Agricultural Manufactures
AP	Agricultural Primary (Products)
EU	European Union
F&E	Fuels and Energy
FTA	Free Trade Agreement
GDP	Gross Domestic Product
IM	Industrial Manufactures
IMF	International Monetary Fund
LA	Latin America
LAC	Latin America and the Caribbean
MM	Mineral Manufactures
MP	Mineral Primary (Products)
OECD	Organisation for Economic Co-operation and Development
OPEC	Organization of the Petroleum Exporting Countries
PM	Primary Manufactures
PP	Primary Products
ROW	Rest of the World
SITC	Standard International Trade Classification
TWT	Two-Way Trade
U.S.	United States
WTO	World Trade Organization

Executive Summary

After four years of downturn, the value of Latin American and Caribbean (LAC) exports rose by 12.2% in 2017 before slowing down to 9.7% in the first half of 2018. Although the intensity of this upturn varied from one country to another, it was largely due to increased prices, while the subsequent slowdown was due to a weakening of export volumes. Looking to the future, there are growing downside risks associated with the instability of external demand, the appreciation of the dollar, and the effects of global trade tensions. From a more structural perspective, the low level of sophistication of LAC's export supply makes it particularly vulnerable to these external risks. On the one hand, the region did not witness the quality upgrade needed to position itself in the most profitable global markets. On the other, due to a growing lag in competitiveness that built up in the post-crisis period, LAC has lost market share within the region itself, particularly in the sectors that make the greatest contribution to the sophistication of the overall export supply. This points to how urgent it is for LAC countries to adopt policies to promote the quality of exports and undertake trade integration initiatives that stimulate complex productive complementarities and trade in more sophisticated goods.

This edition of the Trade and Integration Monitor identifies the factors underlying the recent recovery in LAC exports, examines risks for its sustainability, and, looking to the future, maps the sophistication of the region's exports and the main challenges it faces in strengthening its position in the most profitable segments of global trade.

The recent recovery in the region's exports lost momentum as a result of the slowdown in real flows, while growth in services exports was lower than the global average. Forecasts for the second half of 2018 point to greater downside risks.

The synchronized expansion of the global economy and the upturn in commodity prices, particularly the price of oil, that helped LAC overcome the longest trade contraction in its recent history are losing momentum. LAC's goods exports grew 12.2% in nominal terms in 2017 and slowed to 9.7% in the first quarter of 2018. Growth in services exports fell from 6.3% to 6.0% in the same period, in stark contrast with this

sector's strong growth at the global level. In real terms, LAC's external sales in the first half of 2018 were the least dynamic in the world, growing just 3.1% year-on-year. While there is still some evidence of expansion, the most recent trend indicators point to a substantial cooling in the region's export performance. The outlook features downside risks in connection with greater instability in external demand, the appreciation of the dollar, and the effects of global trade tensions, which are compounded by prospects of lower economic growth in LAC.

Developing a complex and sophisticated external sector is key to productive transformation and growth of the economy. Despite making some progress decades ago, LAC's export profile still displays a low level of sophistication. The increase in the quality of exports has not been sufficient for the region to gain a firm footing in more profitable markets. However, there are some success stories and clear opportunities for LAC to better position itself in higher-value-added sectors.

Although the region's export quality indexes have increased in some primary sectors, the gap between the region and its global competitors is wide and has remained unchanged for decades. High-quality products represent only one third of the total value of LAC exports while in Asia they account for two thirds of the total. Although there is wide heterogeneity throughout the region, most exported goods are in the medium-quality range. Increasing the quality of exports would allow LAC to diversify its global trade integration pattern and would contribute to higher economic growth. This study points to some success stories and identifies the products with the greatest potential for quality upgrade, such as in the food sector.

The pattern of intraregional trade is notably more sophisticated than the extraregional one. However, in the post-crisis period, due to a marked drop in competitiveness LAC has lost market share within the region, particularly in the sectors that contribute most to the sophistication of the export basket. A fresh impetus to the integration processes would contribute to strengthening the region's capacity to compete in both the regional market and the global economy.

Compared to extraregional exports, the intraregional basket is more diverse, contains a larger proportion of manufactures, has higher technology content, and is of higher quality. The buildup of a marked lag in competitiveness vis-à-vis global rivals is undermining this strategic advantage. Initiatives that seek to complete and rationalize the trade architecture coupled with investment in infrastructure that help bringing

down the trade costs would provide incentives for promoting trade in productive inputs. This, in turn, would help reverse the competitiveness lag and prevent more sophisticated products from losing further market share. Strengthening regional value chains and higher-quality trade flows would not only favor export diversification in LAC countries, it would also help increase the competitiveness of the region's economies in global markets.

Having overcome the longest trade contraction in recent history, the outlook that LAC countries are now facing is less favorable than it was before the crisis. Although the recent economic upturn has brought some relief to the export sector, there are several risks that could become more significant in the future. LAC's export pattern is heavily concentrated in commodities, which leaves it vulnerable to exogenous fluctuations in the terms of trade. Insufficient progress on improving the quality of exports is hampering LAC's ability to find a firm footing in more stable and profitable markets. The lag in competitiveness that has built up in the region and the shortcomings in its trade architecture are hindering the emergence of complex value chains, which in turn prevents the region from positioning itself in more sophisticated sectors. In an environment characterized by a cooling in real demand, the appreciation of the dollar which affects commodity prices, and an increase in global trade frictions which could undermine the dynamism of the multilateral trading system, the region needs to generate new momentum in the external sector. LAC countries urgently need to adopt policies to promote the quality of exports and undertake trade integration initiatives that stimulate complex productive complementarities and trade in more sophisticated goods.

Introduction

In 2017 and the first half of 2018 exports from Latin America and the Caribbean (LAC) began to recover, in line with the expansion of global trade. This upturn was rooted in a reversal of the intense deflationary pressure that built up in the previous three years and in a synchronized growth in the main global economies. However, in the first half of 2018 the Latin American recovery began to lose momentum as prices settled and the growth in export volumes slowed down, against a backdrop of greater risks. If the region is to consolidate its export performance, it needs to take on the challenge of increasing the sophistication of its exports by increasing quality and regaining the competitive ground it has lost in the regional market.

This publication analyzes the main features of the recent recovery in LAC's exports of goods and services and concludes that the current expansion is relatively fragile. Most export prices have entered a downward phase in the cycle, the growth in export volumes is slowing markedly, and the balance of global risks is tilted on the downside. The end of the commodities boom that sustained LAC's external demand for more than a decade, the endemic shortfalls in the region's competitiveness which have eroded its market share, and the risk that global trade tensions negatively affect global trade, all point to the need to prioritize policies that lead to a more sophisticated export supply and to the relaunching of regional integration initiatives.

The first chapter examines the main features of the expansionary phase in global and regional trade since early 2017, documents the loss of momentum in 2018, and assesses the downside risks. The second chapter provides a detailed overview of the region's recent trade performance, highlighting the singularities of each country and subregion, and disentangling the effects of changes in prices and export volumes. The analysis of the trade outlook reveals that although there continue to be growth factors at work, LAC is facing risks associated with volatility in commodity markets, divergence in its trading partners' growth rates, and uncertainty regarding the future of the global trade architecture.

From a medium and long-term perspective, a more structural analysis points to the need to increase the sophistication of LAC's external sector. The third chapter presents a new set of indicators that describes the quality of the region's exports,

positions them on global quality ladders, and identifies the sectors where the greatest opportunities for qualitative upgrade lie. Finally, after acknowledging the strategic significance of the regional market for the sophistication of LAC exports, the last chapter analyzes the lag in the region's competitiveness in the highest-quality and most technologically advanced sectors, and examines the limitations of regional integration initiatives in promoting complex productive complementarity.

1 Growing Global Uncertainty

In 2017 global trade in goods recovered as the deflationary pressures present since 2014 were reversed, in conjunction with synchronized improvements in the main economies' activity. The increase in trade volumes accelerated but did not move beyond the new normal of low growth typical of the post-crisis period. Latin American and Caribbean exports of goods and services followed the global trend, although with a more volatile pattern. In 2018, tighter global financial conditions and the uncertainty surrounding trade policies negatively affected the recovery. During the first half of the year, growth in the value of the region's goods exports lost traction due to a moderate increase in prices and a significant slowdown in real flows.

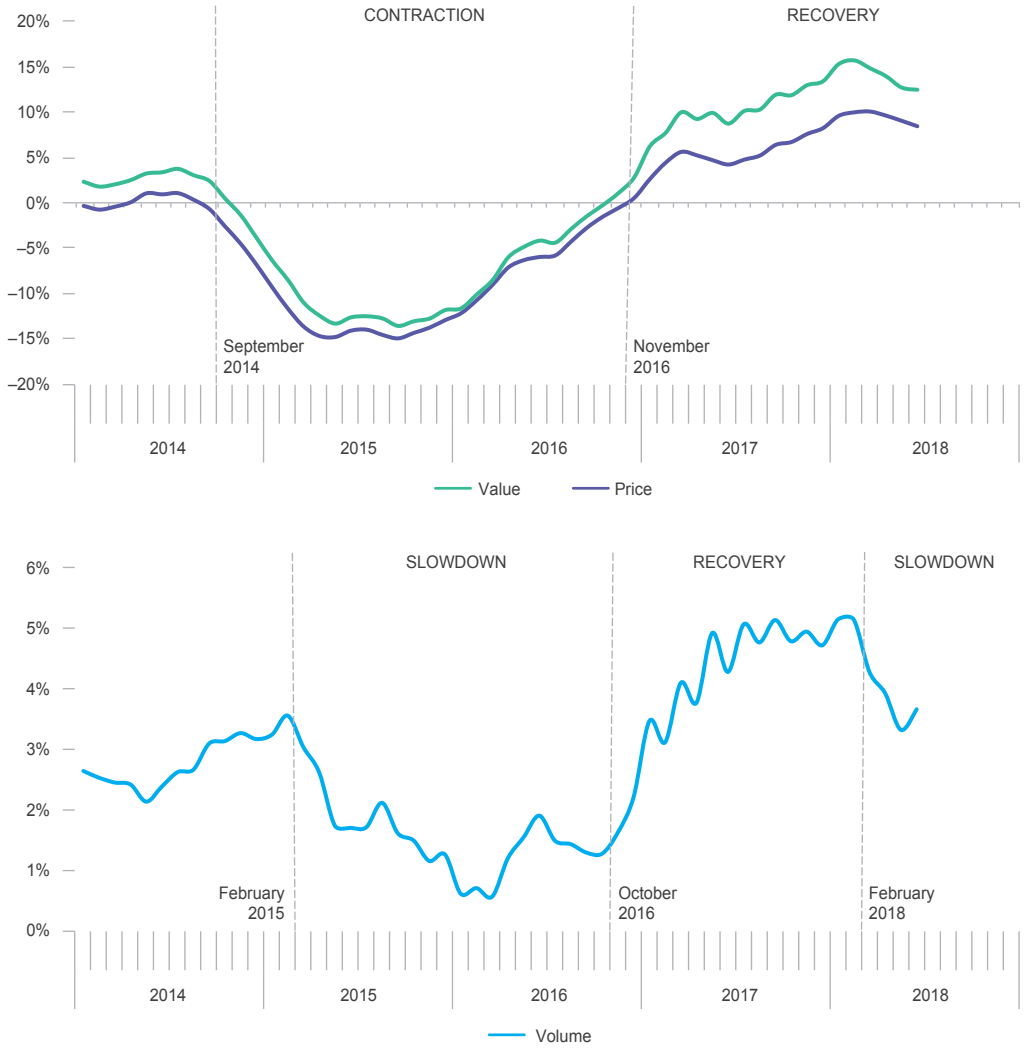
The Slowdown in Global Trade

Global trade recovered after a prolonged contraction.

In 2017 and the first half of 2018, global trade in goods increased significantly, leaving behind the prolonged contraction that began in mid-2014 (Figure 1). The value of world trade increased 11.0% in 2017 and 13.5% year-on-year between January and June 2018. Over the course of that year and a half, growth increased as the marked deflationary pressures that had been present since mid-2014 began to ease. The evolution of the price of oil played a decisive role in this process (Box 1). This expansion was also reinforced by growth in trade volumes, although this was more pronounced in 2017 and lost momentum in 2018. During this 18-month period, trade measured at constant prices grew at an average annual rate of 4.4%, more than double the 2.1% recorded between 2014 and 2016. However, growth did not break with the so-called new normal—that is, low growth rates in real trade flows compared to the period before the financial crisis when trade flows grew around 8% annually (2003–2007).[1]

[1] For more details on the new normal of global trade and the impact on Latin America and the Caribbean, see Giordano (2016).

FIGURE 1 • TRENDS IN WORLD TRADE IN GOODS
(Quarterly moving average of the year-on-year growth rate, percentage, 2014–2018)



Source: IDB Integration and Trade Sector with data from the Netherlands Bureau for Economic Policy Analysis (CPB).
Note: The value of global trade is the average of global imports and exports. The phases marked in the figures reflect trends in total prices and volumes, which do not always coincide.

The recovery in real flows lost traction in 2018.

The recovery in 2017 was driven by a 6.1% increase in prices and a 4.6% increase in volumes exported. However, the expansion of real flows weakened at the start of 2018. When the year began, the incipient normalization of monetary policy in the United States (U.S.) and the Eurozone brought about global financial and currency shocks. Meanwhile, growing uncertainty

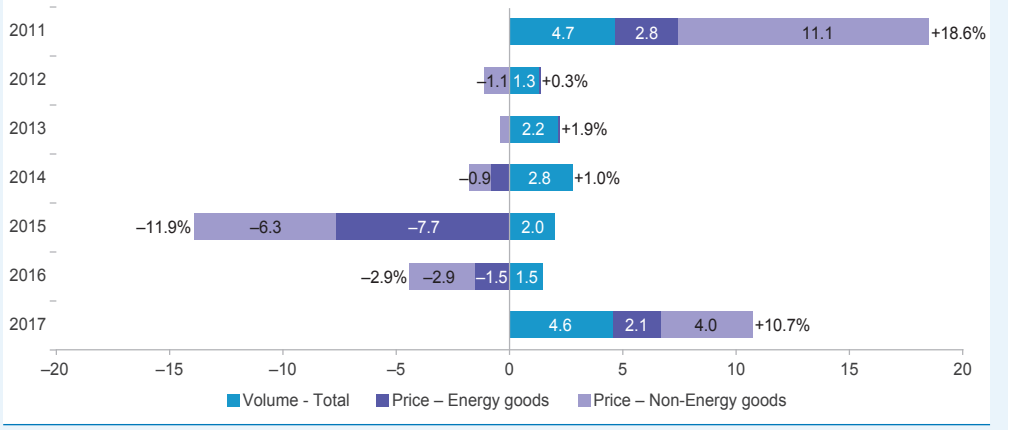
BOX 1: DEFLATIONARY PRESSURES AND THE PRICE OF OIL

Two specific features have characterized world trade in the aftermath of the financial crisis. On the one hand, real flows began to experience lower relative growth. On the other, deflationary pressures began to spread, which had a strong impact on the nominal values of trade flows. The years 2012 and 2013 saw modest increases in trade volumes that came hand-in-hand with drops in prices. The downward trend bottomed in 2015, when a 14.0% drop in prices prompted the value of trade to contract by 11.9%. These pressures continued, albeit less intensely, in 2016 and were reversed in 2017.

Variations in the price of oil and energy goods explain the strong deflation that affected trade in 2015 and 2016, as well as the subsequent recovery of 2017. In 2015, over half the reduction in global trade prices was caused by the direct effect of contraction in the prices of these goods. In 2016 and 2017, one-third of the decrease and the recovery, respectively, were due to the same cause.

The recent wide fluctuations in oil prices can be divided into three stages. During the first stage, prices plummeted as demand increased more slowly than supply, a situation that was considerably exacerbated when nonconventional crude oil from the U.S. came onto the market. Throughout 2014, this continuing disparity led to a marked increase in oil stocks and a fall in prices. During the second stage, in 2015, the Organization of the Petroleum Exporting Countries (OPEC) sought to preserve market share by implementing a strategy of increasing supply to put pressure on the profitability of nonconventional producers. As a result, in the third quarter of 2016 the average price of crude oil was around US$33 per barrel, 69% below the level in the third quarter of 2014. OECD member countries' oil stocks passed the 3 billion barrel mark (a 21%

CONTRIBUTION OF PRICE AND VOLUME EFFECTS TO THE VALUE OF WORLD TRADE BY TYPE OF GOODS
(Annual growth rate, percentage and percentage points, 2011–2017)



Source: IDB Integration and Trade Sector with data from the CPB, BACI, and Bloomberg.
Note: The total variation in value is shown at the end of each bar. Energy goods correspond to chapter 27 of the Harmonized System. In some years, the sum of the parts differs from the total due to rounding. Preliminary data was used for 2017. Unreported values are insignificant.

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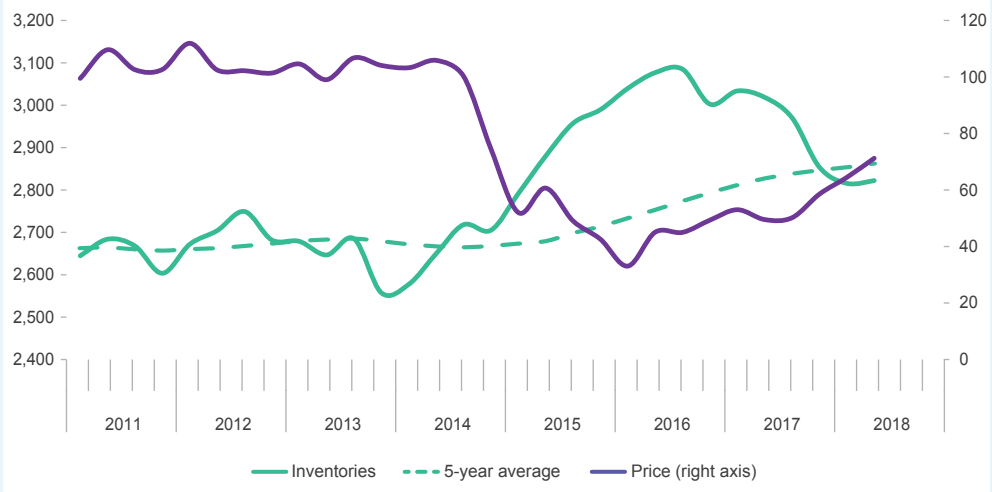
BOX 1: DEFLATIONARY PRESSURES AND THE PRICE OF OIL *(continued)*

OIL PRICES AND STOCKS
(US$ per barrel and billions of barrels, 2011–2018)



Source: IDB Integration and Trade Sector with data from Bloomberg and the International Energy Agency.
Note: The price is the average of Brent Blend, WTI, and Dubai crude. The stocks correspond to private-sector stocks in the OECD countries at the end of each quarter. The five-year average is used as a reference for regular stock levels.

increase between the fourth quarter of 2013 and the third quarter of 2016). The last phase began in 2016 and was initially caused by the gradual withdrawal of nonconventional crude supply from the market. It continued into 2017, when OPEC reached an agreement to restrict supply with non-OPEC producers such as Mexico and Russia. Recovering oil prices and improvement in the performance of the global economy led to reduced deflationary pressures in international trade. Nevertheless, in the third quarter of 2018, the average price of crude oil was still 33% lower than in the same period in 2014.

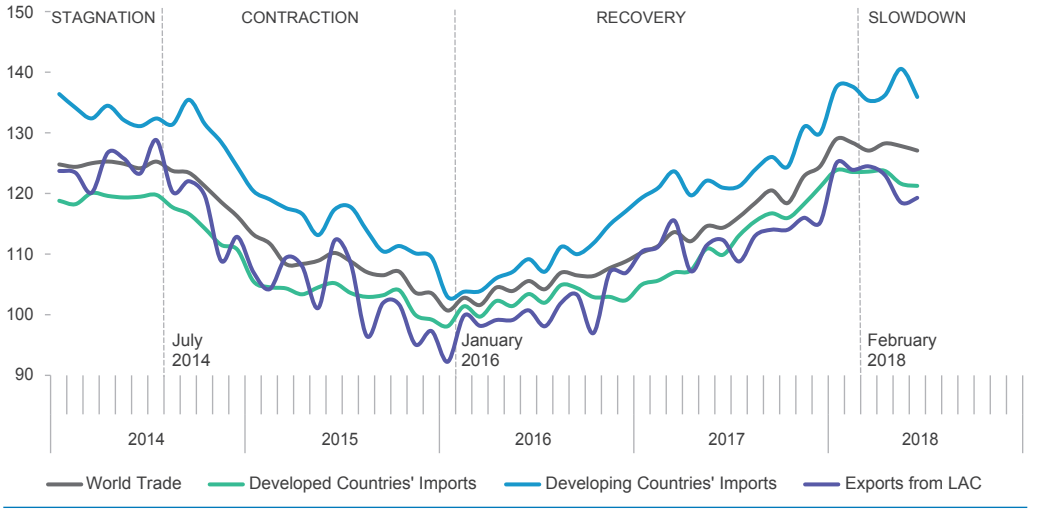
regarding the stability of the global trade regulatory architecture started to build up.[2] In this context, the year-on-year growth in prices in the first half of 2018 was higher than the previous year (9.2%) while growth in volumes slowed down (to 4.0%). The turning point in real flows came at the start of 2018, when other outlook indicators for global trade also began to deteriorate (Box 2).[3]

In terms of value, in 2017, imports from developing countries and developed countries made a similar contribution (50.1% and 49.9%, respectively) to the trade recovery (Figure 2). These contributions were the result of two-digit growth in both segments

[2] For more information, see Box 4 in Chapter 2.

[3] As described in detail in Box 2, the trade outlook indicator published quarterly by the World Trade Organization (WTO), and other indicators of trade operators' perceptions point to lower growth in the volume of global trade in the second part of 2018. See WTO (2018).

FIGURE 2 • VALUE OF WORLD TRADE IN GOODS
(Index, 2010 = 100, 2014-2018)



Source: IDB Integration and Trade Sector with data from the CPB and own estimates.
Note: The value of world trade corresponds to the average of world imports and exports. The value of exports from Latin America is based on own calculations and does not include the Caribbean (see Methodological Annexes 1 and 2).

Developed countries drove the increase in demand.

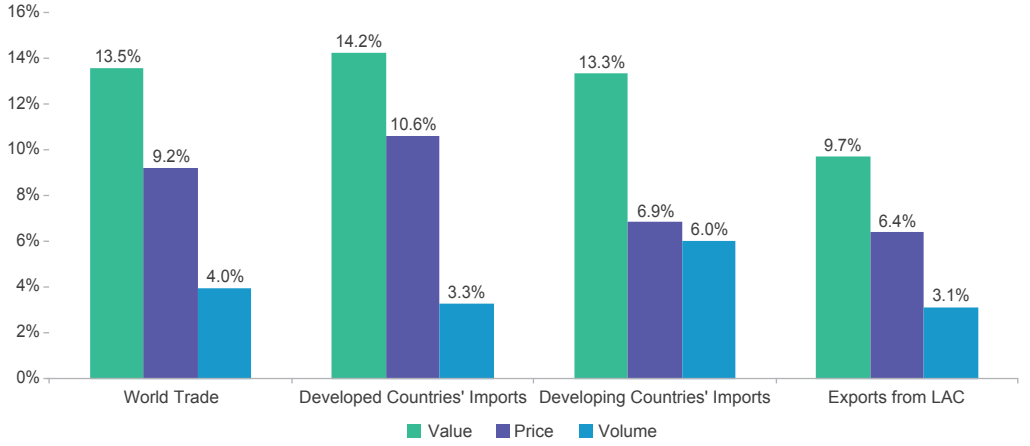
of global demand (13.7% for developing countries and 9.8% for developed countries). Such a strong synchronized increase had not been seen since 2011. In the first half of 2018, developed countries played a more significant role, coming to account for 58.6% of the total year-on-year growth. The increase in imports for both groups outstripped that of 2017, reaching year-on-year rates of 14.2% and 13.3% in developed and developing countries, respectively.

A disaggregated analysis of these variations shows that, in 2017, the prices of imports from developed and developing countries grew at similar rates (6.1% and 6.5%, respectively), while volumes increased more in developing countries (6.8%) than developed ones (3.5%). The beginning of 2018 brought an acceleration in the price component of developed countries' purchases (10.6%) while, as mentioned above, the growth in import volumes tailed off (to 6.0% in developing and 3.3% in developed countries) (Figure 3).

Prices were the driving force behind the recovery.

In this context, exports from Latin America (LA) kept up with the growth in global trade in 2017, increasing by 12.1%, although they followed a more volatile pattern. The increase in the value of exports was marginally greater than that of global trade, with the price component playing a more significant role (6.8%) than changes

FIGURE 3 • VOLUMES AND PRICES OF WORLD TRADE IN GOODS
(Year-on-year growth rate, percentage, accumulated January–June 2018)



Source: IDB Integration and Trade Sector with data from the CPB and own estimates.
Note: The value of world trade corresponds to the average of world imports and exports. The value of exports from Latin America is based on own calculations and does not include the Caribbean (see Methodological Annexes 1 and 2).

The growth in LAC goods exports slowed down.

in volumes (4.9%). In the first half of 2018, exports from the region grew 9.7% year-on-year, which was lower than both the global rate and the 2017 increase. The increase in prices (6.4%) and volumes (3.1%) was lower than the previous year. The slowdown in export volumes was higher in LAC (1.8 p.p.) than in global trade (0.6 p.p.).[4]

Services exports did not follow the global trend.

In 2017, the value of global trade in services grew by 7.3%, continuing the upturn that began in early 2016 (Figure 4). However, this increase was lower than that of trade in goods. Developing countries' service imports grew by 8.4%, overcoming the drop in 2016 (–0.4%), while those of developed countries grew 6.5%, 4.5 p.p. more than the previous year. Preliminary estimates for the first quarter of 2018 point to an acceleration of global trade in services, with year-on-year growth of 13.3% resulting from similar import rates for developing and developed countries (14.2% and 12.9%, respectively). In this context, LAC services exports grew 6.3% in 2017—below the global average but far higher than in 2016 (1.9%). However, preliminary estimates for the first quarter of 2018 point to a slowdown (6.0%), which contrasts with the global trend.

[4] See Box 4 in Chapter 2. The prospects of a slowdown in growth in real export flows from the region in 2018 have recently been confirmed by ECLAC (2018).

BOX 2: THE LOSS OF MOMENTUM IN TRADE GROWTH

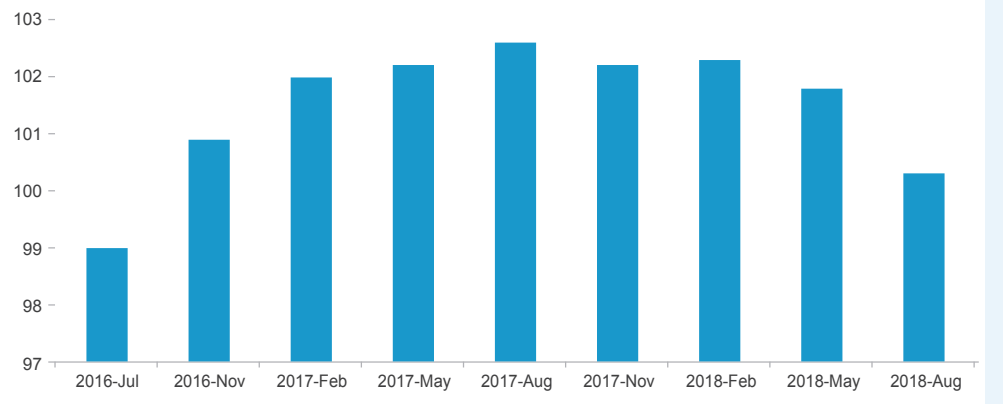
A set of indicators of foreign trade transactions and of the perceptions of trade operators, which provide insight into prospective levels of real trade activity, point to a slowdown for the remainder of 2018.

Among the transaction indicators, the World Trade Outlook Indicator (WTOI) published by the World Trade Organization (WTO) synthesizes various indexes of trend and direction in global flows. Given that these variables are captured in real-time, the WTOI allows to anticipate turning points in trade flows.[a] The WTOI has been on a downward path since February 2018, and in August it came close to the base value of 100, which represents the medium-term trend. At 97.5, the export orders component index has fallen the most and signals a slowing trend.

Likewise, the international transportation components of the index point to a cooling down of global trade flows. The container throughput index in the world's 88 main ports[b] has stagnated since January 2018, when it peaked following uninterrupted growth since January 2016. Monthly growth in the volume of international air freight slowed in July 2018 (1.9% year-on-year) to reach the lowest point in the last 26 months, after experiencing two-digit growth in 2017.[c]

Among the indicators of operators' perceptions, the Purchasing Managers' Index (PMI) for the manufacturing sector stood at 52.5 for the global aggregate in August.[d] Although a value of over 50 points to expansion, this indicator has been falling since January 2018 (with the exception of April) and is at its lowest point in the last 21 months. Likewise, confidence regarding the next

WTO WORLD TRADE OUTLOOK INDICATOR
(Index, July 2016–August 2018)



Source: IDB Integration and Trade Sector with data from the WTO.
Note: The index and its components measure the deviation in the medium-term trend, which is standardized at 100.

[a] The WTOI combines indicators for export orders, international air freight, container traffic, sales and production of automobiles, electronics, and agricultural raw materials. The data used to calculate it is expressed in real terms or physical units. For more information, see WTO (2018).
[b] RWI/SLI Index compiled by the Institute of Shipping Economics and Logistics.
[c] Volume according to data from the International Air Transport Association (IATA).
[d] Compiled by J.P. Morgan and IHS Markit, in association with ISM and IFPSM.

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BOX 2: THE LOSS OF MOMENTUM IN TRADE GROWTH *(continued)*

12 months is at a two-year low. The U.S. manufacturing PMI has remained high (54.7) although it is below the peak reached January and is, indeed, at its lowest point in the last nine months. The situation is similar in the Eurozone, where the level of the indicator, while still above the positive threshold (54.6), remains below the recent peak of December 2017 and is at the lowest point since November 2016. In August, China's manufacturing PMI fell for the third consecutive month to 50.6, a 14-month low.[e]

The decreasing value in all these indicators is in line with slowing real trade flows in the first half of 2018. One common characteristic of these perception indicators, except in the U.S., is the downward trend in the business community's confidence and expectations. One of the main reasons cited by those who were polled is the increase in global trade tensions and the increased risk of tariff imposition.

[e] Indexes for the U.S. and the Eurozone compiled by IHS Markit; the index for China is the Caixin China General Manufacturing Index as reported by IHS Markit.

Volatility in External Demand

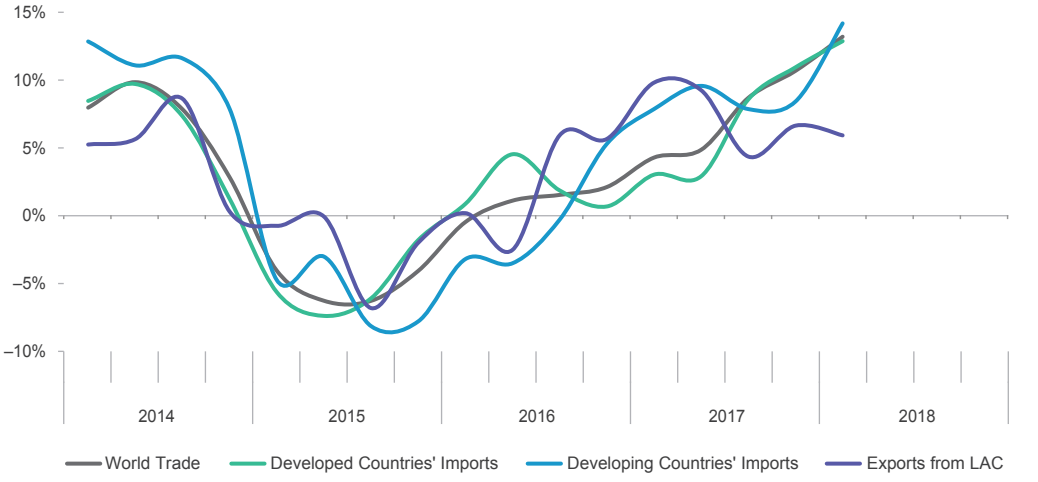
The synchronization of activity boosted global trade.

The upturn in trade in 2017 was linked to synchronized activity and more stable growth in the main economies. This alignment contributed to reversing the deflationary pressure of 2014–2016, which was marked by pronounced fluctuations in their economic activity (Figure 5). The pace of activity accelerated before the trade recovery, beginning in the second half of 2016. The annualized quarterly growth rate for the largest three developed economies (U.S., Eurozone, and Japan), which account for 31.1% of global GDP, increased steadily from the second quarter of 2016 (1.6%) to the third quarter of 2017, when it reached a peak of 2.7%. The high growth of the two largest developing countries, China and India, which account for 25.7% of global GDP, continued unabated. After a long contraction, Latin American countries also experienced growth during this period, although it was lower and more fragile. The relative stability and synchronization of these processes boosted real trade flows in 2017.

A comparison of the growth in GDP and the volumes of imports of the largest world economies between 2014–2016 and 2017 reveals that the global growth pattern had a limited impact on trade (Figure 6). The acceleration of growth in 2017 was due to GDP growth in the Eurozone and Japan converging to the annual growth that the U.S. had already achieved (around

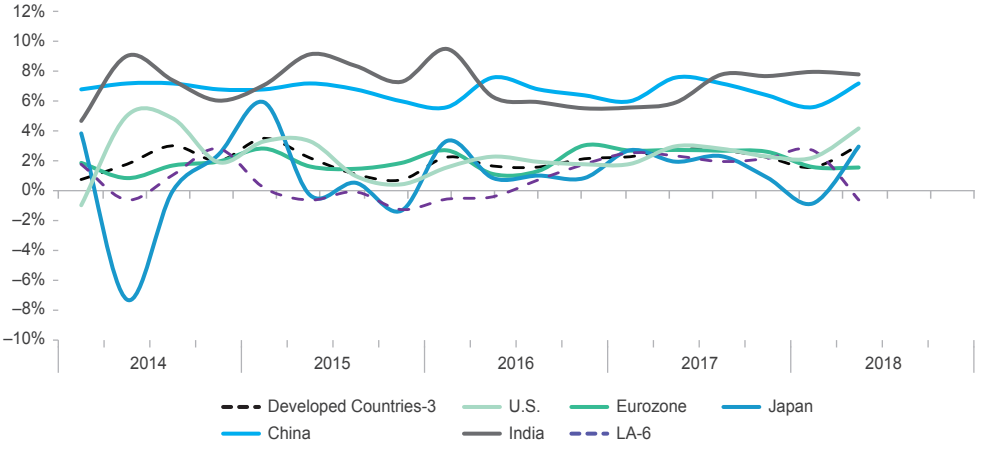
The scope of the trade recovery was limited.

FIGURE 4 • VALUE OF WORLD TRADE IN SERVICES
(Year-on-year growth rate, percentage, 2014–2018)



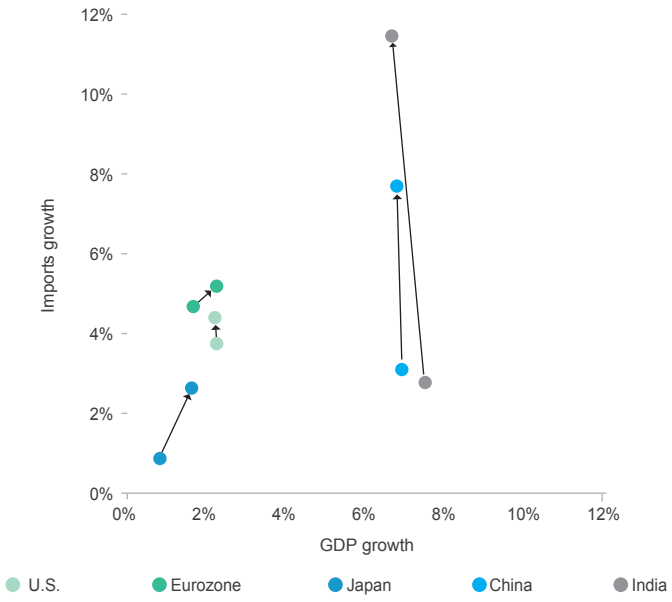
Source: IDB Integration and Trade Sector with data from the International Monetary Fund (IMF) and the WTO.
Note: The value of world trade is the average of world imports and exports. LAC does not include Bahamas, Barbados, Guyana, Haiti, Jamaica, Trinidad and Tobago, and Venezuela due to the lack of quarterly data. Included are the services account components of the balance of payments (except construction services, government services, and manufacturing, maintenance, and repair of goods services). Data for the first quarter of 2018 are estimates.

FIGURE 5 • GDP GROWTH IN SELECTED ECONOMIES
(Annualized quarterly growth rate, percentage, 2014–2018)



Source: IDB Integration and Trade Sector with data from the IMF, the U.S. Bureau of Economic Analysis (BEA), the Organisation for Economic Co-operation and Development (OECD), Japan's Institute for Economic and Social Research, and other official sources.
Note: Quarterly seasonally adjusted GDP growth at constant prices over the immediately preceding quarter, expressed in annualized terms. Developed countries-3 is the average rate of the U.S., the Eurozone, and Japan, weighted with their GDPs at purchasing power parity in 2017. LA-6 is a weighted average estimated in a similar fashion for Argentina, Brazil, Chile, Colombia, Mexico, and Peru.

FIGURE 6 • GDP AND VOLUME OF IMPORTS IN SELECTED ECONOMIES
(Growth rates, percentage, average 2014–2016 and 2017)



Source: IDB Integration and Trade Sector with data from the IMF.
Note: The coordinates for each point correspond to variation in GDP (x-axis) and in imports (y-axis) measured at constant prices. The initial point for each country vector is the average annual variation for 2014–2016 and the terminal point is the variation for 2017.

2%). However, growth in these three economies did not go beyond the frontier (a rightward shift of the curve along the x-axis), and the same was true for China and India. Meanwhile, the latter two countries were the only ones experiencing a marked acceleration in the growth of import volumes (expressed as upward movement on the y-axis). Since the increase in activity and import demand did not spread, the scope of the global trade recovery was limited, and remained in line with the new normal of low growth experienced in the post-crisis period.

Global growth began to show signs of instability and divergence.

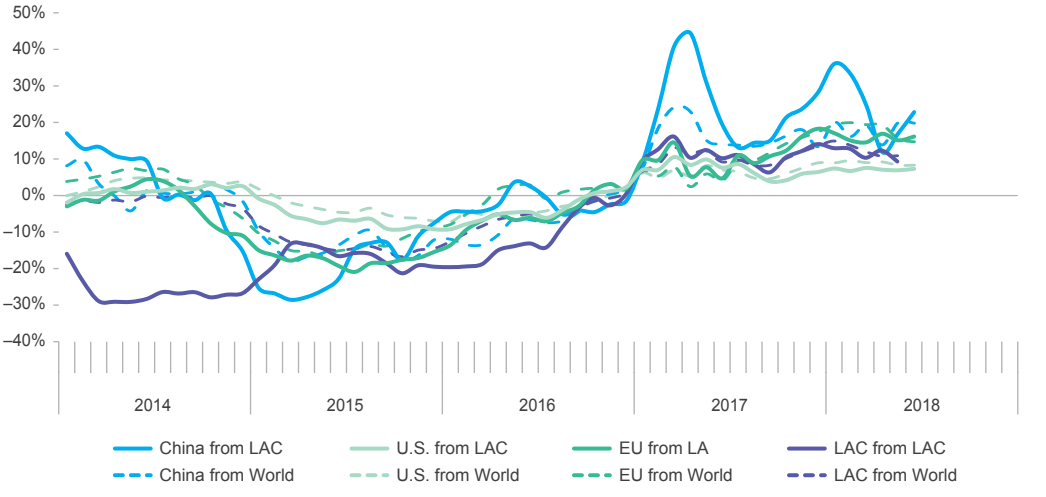
In marked contrast with the previous period, in the first half of 2018 the three largest developed economies returned to an unstable and diverging growth path against a backdrop of normalization of monetary policy in the U.S. and the Eurozone, sudden changes in global capital flows partly induced by tax reform in the U.S., stock market fluctuations, and pronounced currency shocks. Whereas the dollar depreciated throughout 2017, this trend was reverted in the first months of 2018. These developments affected the pace of activity in different ways. In the first quarter, growth in the three largest developed economies (1.5%) slowed substantially in comparison with the previous year, going from 2.7% to 1.6% in the

Eurozone and from 2.4% to 2.2% in the U.S., while Japan's GDP fell by 0.9% after increasing 2.0% in 2017. Similarly, China's GDP grew 5.6%, nearly 1 p.p. below the 2017 average, but India's high growth showed no signs of waning (8.0%). In the second quarter, the GDP of the three largest developed economies grew 3%, driven by the exceptional growth of Japan (3.0%) and the U.S. (4.2%), while growth in the Eurozone began to falter (1.5%). After seven consecutive quarters of growth, the LA-6's GDP experienced an annualized contraction of 0.7%.

The expansion of the world economy in 2017 triggered a sharp increase in demand for LAC imports measured at current prices. U.S. imports increased 7.1%, EU imports 11.8%, Chinese imports 24.1%, and intraregional imports 10.6%. In all cases, the increases were equal to or greater than total imports of these economies (Figure 7). In the first half of 2018 this dynamism was largely maintained due to the price factor. The year-on-year import growth rates were similar or even higher than those of the previous year: EU 15.1%, U.S. 7.4%, and LAC 10.6%. The exception to this trend was China, where growth cooled slightly (22.6%). However, in the first part of the year, these increases were lower than the growth of total imports of the U.S., the EU, and LAC itself, which suggests that LAC countries were gradually losing global market share.

The price effect supported the region's external demand.

FIGURE 7 • IMPORTS OF SELECTED ECONOMIES
(Quarterly moving average of the year-on-year growth rate, percentage, 2014–2018)



Source: IDB Integration and Trade Sector with data from the United States International Trade Commission (USITC), EuroStat, China Customs, the IMF, and national sources.
Note: For China, the U.S., and LAC, imports reported correspond to the aggregate for Latin America and the Caribbean, while for the EU they correspond only to Latin America.

The region lost market share.

The share of LAC in its main trading partners' total imports has shrunk markedly since the peak of 2012. For the U.S., the high point was observed in March of that year, when LAC represented 20.0% of its import basket, 1.7 p.p. above the 18.3% in June 2018. The EU went from importing 2.5% of its total from LAC in July 2012 to 1.9% in June 2018 (–0.6 p.p.). Within China's total imports, LAC's share fell from 7.2% to 6.9% (–0.3 p.p.) in June 2018. The most notorious shift has occurred within LAC itself, as in July 2012 intraregional imports amounted to 18.4% of the total but fell to just 15.9% in June 2018 (–2.5 p.p.).

LAC did not take advantage of the momentum in world trade.

An analysis of global export flows measured at constant prices in the first half of 2018 confirms the deepening of this trend (Table 1). The center of demand for imports was Asia, which accounted for nearly half of the variation in global trade. LAC's external sales were unable to take advantage of this momentum, and grew just 2.9%, well below the 6.8% increase in total Asian imports. The dynamism of imports from LAC by both the North American and intraregional markets was also well below the

TABLE 1 • DYNAMICS OF THE VOLUME OF WORLD TRADE IN GOODS
(Year-on-year growth rate and contribution, percentage and percentage points, January–June 2018)

		Importers					
		Africa	LAC	Asia	Europe	North America	**Total**
		Variation					
Exporters	Africa	6.4	8.5	6.9	2.8	–3.3	**5.1**
	LAC	6.5	3.7	2.9	8.6	1.3	**3.1**
	Asia	0.1	8.6	7.9	1.7	9.1	**6.5**
	Europe	–2.8	2.9	2.7	2.5	3.1	**3.1**
	North America	–7.1	6.0	8.1	12.0	1.9	**5.8**
	Total	**0.1**	**5.8**	**6.8**	**2.3**	**4.5**	**4.5**
		Contribution					
Exporters	Africa	1.7	0.1	4.3	0.8	–0.3	**6.6**
	LAC	0.2	0.7	0.8	1.3	0.8	**3.7**
	Asia	0.1	2.5	33.5	2.1	10.6	**48.8**
	Europe	–0.9	0.7	4.0	20.2	2.6	**26.5**
	North America	–0.7	3.0	5.1	5.6	1.4	**14.3**
	Total	**0.3**	**7.0**	**47.6**	**30.0**	**15.1**	**100.0**

Source: IDB Integration and Trade Sector with data from the IMF and national sources.
Note: Africa includes the Middle East; North America corresponds to the U.S. and Canada. Due to the methodology applied, growth in world trade differs from the CPB 4.0% estimate (see Methodological Annex 2).

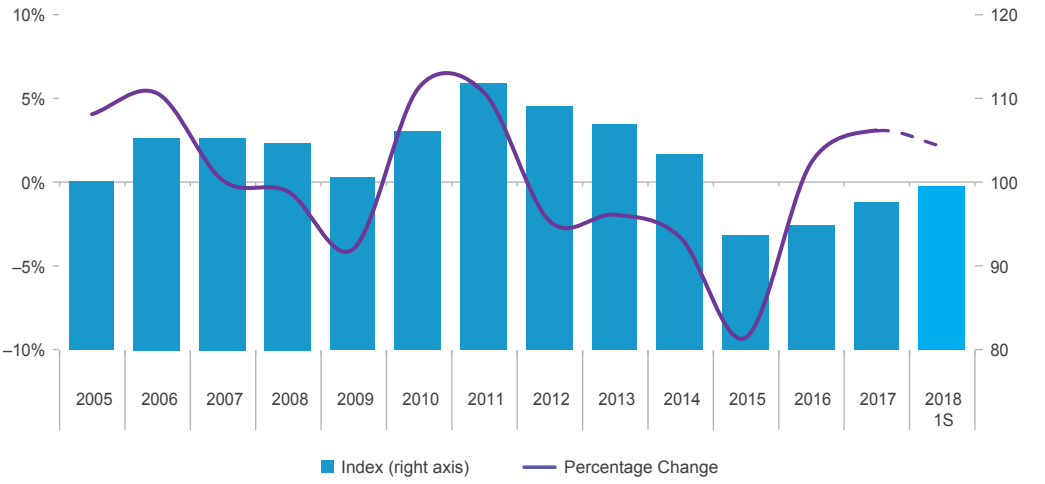
growth in their total imports. Although LAC's performance was better in Europe and Africa and the Middle East,[5] the region's total exports grew 3.1%, below the 4.5% increase in global trade. In contrast, the dynamism of LAC's total real imports outstripped the global average. Imports from Asia and North America made a significant contribution.

The Terms of Trade Bonanza

LAC experienced an improvement in the terms of trade.

From a macroeconomic perspective, the expansion in the world economy favored the performance of LAC's export sector. In 2017 and the first part of 2018, the terms of trade for LA countries improved 3.0% and 2.1%, respectively (Figure 8). In both cases, this variation reflected greater increases in the price of exports than in those of imports. In 2017, the average price of exports grew 6.8% while that of imports went up by 3.7%. The gains in terms of trade in the first part of 2018 resulted from a slightly lower increase in the export price index than in 2017 (6.4%) and a slightly higher import price index (4.2%).

FIGURE 8 • TERMS OF TRADE IN LATIN AMERICA
(Index 2005 = 100 and annual growth rate, percentage, 2005–2018)



Source: IDB Integration and Trade Sector with data from INTrade, the Bank of Mexico (Banxico), BLS, OPEC, and national sources.
Note: Countries included are Argentina, Bolivia, Brazil, Chile, Colombia, Costa Rica, Dominican Republic, Ecuador, El Salvador, Guatemala, Honduras, Mexico, Nicaragua, Panama, Paraguay, Peru, Uruguay, and Venezuela. The observation for the first half of 2018 is an estimate (see Methodological Annex 2).

[5] The 6.5% growth in exports to Africa and the Middle East is explained exclusively by a strong increase in sales of Venezuelan oil to the United Arab Emirates during this period.

The cumulative loss since the peak remains substantial.

Since 2011, LAC's terms of trade have followed the cycle of world trade prices. The prevalence of deflationary pressures between 2012 and 2016 was reflected in a steady drop in the relative prices of the regional aggregate indicator until 2015. Symmetrically, the reversal of this trend, which began in mid-2016, was gradually accompanied by gains in the terms of trade. Consequently, in the first period, the net result of changes in import and export prices markedly reduced the foreign purchasing power of LAC as a whole,[6] and the recent reversal in this trend did not make up for the losses that had built up during the deflationary phase of the cycle. In 2017, the terms-of-trade index was still 12.6% below the 2011 peak and at a level similar to that of 2005, at the start of the commodity supercycle.

The boom mainly took place in South America.

The improvement in LAC's terms of trade in 2017 and 2018 was driven by very dissimilar performances within the region, determined by the countries' distinct international integration patterns (Figure 9).[7] In 2017, the gains were only relevant in two groups of countries: 27.1% in the group of exporters intensive in Fuels and Energy (Bolivia, Ecuador, and Venezuela) and 12.8% in the Rest of the Pacific Alliance (Colombia, Chile, and Peru). These two groups accounted for nearly all the region's gains that year. In contrast, other countries experienced only modest improvements (0.7% in Central America and 0.3% in Brazil) or mild losses (–0.4% in Mexico and –0.6% in the Rest of MERCOSUR). This pattern is explained by the significance of the recovery in energy prices[8] and the solid performance of some metals. In the first part of 2018, improvements in relative prices continued to favor countries specializing in Fuels and Energy, the Rest of the Pacific Alliance, and the Rest of MERCOSUR. Mexico, Central America, and Brazil saw greater increases in the prices of imports than of exports.

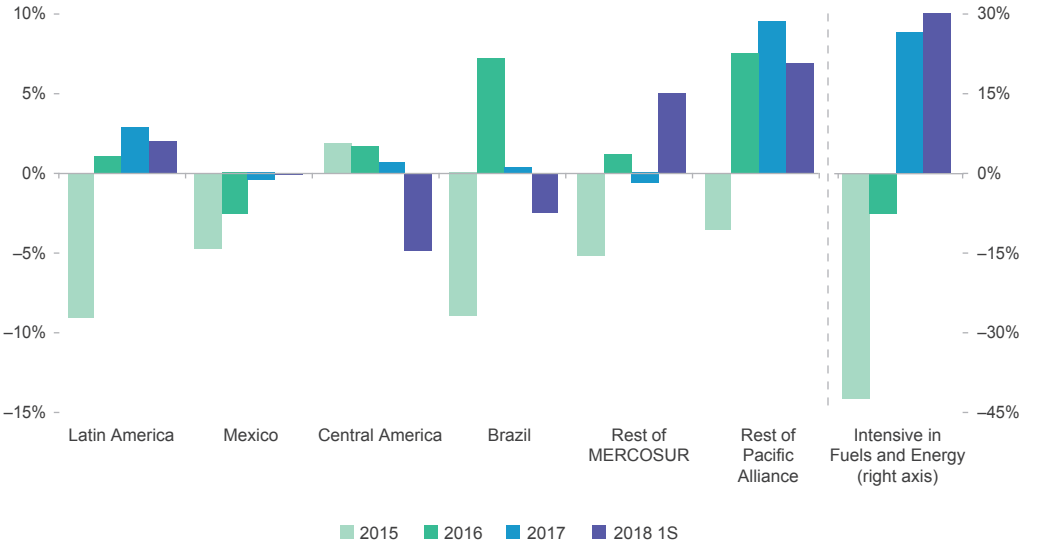
Due to the increase in external sales and gains in terms of trade, in 2017 the current account of the balance of payments improved noticeably in most of the region (Figure 10). The balance of goods improved due to increased surpluses in most South American countries and reduced deficits in Mexico and most Central American

[6] The exception to this were the Central American countries, whose terms of trade improved during this period, largely due to the drop in the price of energy goods, which play a major role in their imports.

[7] Throughout the report, the analysis of the export performance of Brazil and Mexico is undertaken separately, and the remaining economies in the region are grouped as follows: Central America (Costa Rica, Dominican Republic, El Salvador, Guatemala, Honduras, Nicaragua, and Panama); Rest of MERCOSUR (Argentina, Paraguay, and Uruguay); Rest of the Pacific Alliance (Colombia, Chile, and Peru); Intensive in Fuels and Energy (Bolivia, Ecuador, and Venezuela); and the Caribbean (Bahamas, Barbados, Belize, Guyana, Haiti, Jamaica, Suriname, and Trinidad and Tobago).

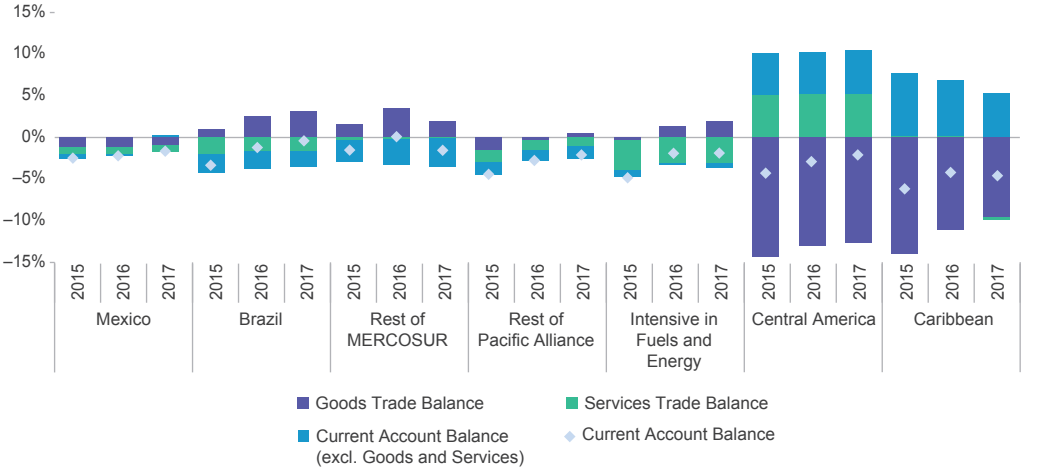
[8] See Box 1.

FIGURE 9 • TERMS OF TRADE BY GROUPS OF LATIN AMERICAN COUNTRIES
(Annual growth rate, percentage, 2015–2018)



Source: IDB Integration and Trade Sector with data from INTrade, Banxico, BLS, OPEC, and national sources.
Note: Country classifications are listed in footnote 7. Data for the first half of 2018 are estimates (see Methodological Annex 2).

FIGURE 10 • CURRENT ACCOUNT BALANCE BY GROUPS OF LATIN AMERICAN AND CARIBBEAN COUNTRIES
(Balance as a percentage of GDP, 2015–2017)



Source: IDB Integration and Trade Sector with data from IDB Latin Macro Watch, the IMF, and official sources.
Note: Country classifications are listed in footnote 7. The Caribbean does not include Barbados due to lack of data. The figures for Venezuela are estimates. The values for subregions are the simple average of the balances as a percentage of GDP of the countries in the group. This provides an indication external resilience regardless of the different economic weights of the balances of the countries within each group.

Current account balances improved.

and Caribbean economies. This prompted improvements in the current account, except in the Rest of MERCOSUR, where the balance of goods deteriorated in Argentina and Paraguay. In Mexico and Brazil, increases in exports outstripped growth in external purchases which had a positive impact on the current account. Brazil's deficit was reduced by 0.8 p.p. (from 1.3% of GDP in 2016 to 0.5% in 2017) and Mexico's by 0.5 p.p. (from 2.2% of GDP to 1.7%). In the Rest of the Pacific Alliance, with the exception of Colombia, surpluses in the trade balance of goods mitigated current account deficits. Similarly, Venezuela helped bring down the deficit in the balance of the current account for the group of countries specializing in fuels and energy. Central America's deficit in the balance of goods was offset by solid increases in exports from Costa Rica, Honduras, and Nicaragua, while in El Salvador, Guatemala, and Panama, increases in exports were tempered by the surge in external purchases. Changes in the balance of services and other categories, including migrant remittances, made a marginal contribution to improving Central America's current account balance. The aggregate average for the Caribbean shows that the deficit remains at 4.5% of GDP. The export recovery brought about a substantial improvement in the balance of goods in Suriname and Trinidad and Tobago and a slight easing of Belize's deficit. However, in several countries, the growth in imports was also significant while the balance of services and other categories deteriorated.

In sum, in 2017 world trade expanded significantly, bringing an end to the previous period of contraction, which had been marked by severe deflationary trends and low growth in volumes. The dynamism of the world economy was sustained by the acceleration and synchronization of economic activity in developed countries and the stabilization of the oil market. In turn, these dynamics stimulated global trade flows. Most countries in LAC took advantage of this trend and were able to improve the performance of their external sectors and current account balances.

Although the expansive forces of the previous year continued into the first part of 2018, some of them began to lose momentum. The strong performance of several developed countries hastened the normalization of monetary policies, prompting financial and currency turbulences that brought volatility to some of LAC's key commodity markets. These changes also led to divergences in the pace of economic activity that were compounded by growing uncertainty regarding the stability of the global trade architecture. These trends have started to have specific effects on LAC countries' external sectors, which are analyzed in the next chapter.

The Export Slowdown

2

The expansion of the exports of goods of Latin America and the Caribbean in 2017 ended four years of contraction. The rise was due as much to increases in prices as in volumes and varied in intensity among subregions and countries. Growth was recorded in all export categories, particularly in the case of crude oil due to the recovery in its price. Exports further consolidated in the first half of 2018 driven by price increases, while growth in volumes started to slow down. Exports of services surged in 2017 and the first quarter of 2018, with more consistent increases across subregions. Whereas 2017 brought a combination of favorable factors, the outlook for 2018 includes growing risks of a downward trend in view of the instability of external demand, the appreciation of the dollar, and the effects of global trade tensions.

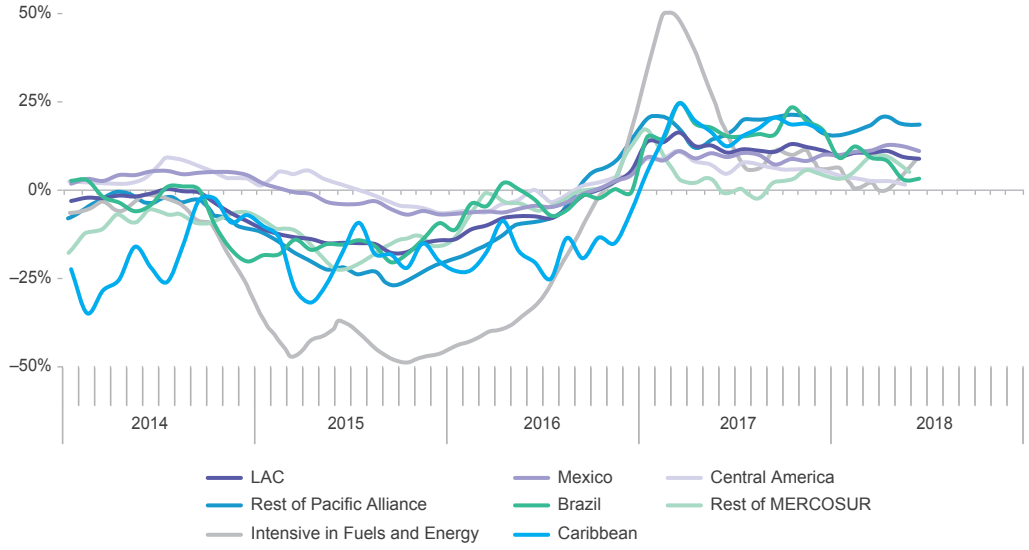
Softening Export Recovery

Export values recovered.

In 2017, the value of goods exported by Latin America and the Caribbean (LAC) increased 12.2% year-on-year, reaching US$981.8 billion and ending four years of contraction. The recovery began in late 2016, when exports fell by 3.3%. Nonetheless, the 2017 level was 10.5% below the record high of 2012. LAC's export performance in 2017 was due to the recovery in both prices (6.8%) and volumes (4.9%), with marked differences between subregions and countries. The Caribbean and South America saw the greatest increase in exports (18.4% and 15.0%, respectively), followed by Mexico and Central America (9.5% and 5.8%, respectively) (Figure 11). The growth trend continued in the first half of 2018 (9.7%), albeit with lower intensity, as a result of continued growth in export prices (6.4%) and a slowdown in volumes (3.1%).

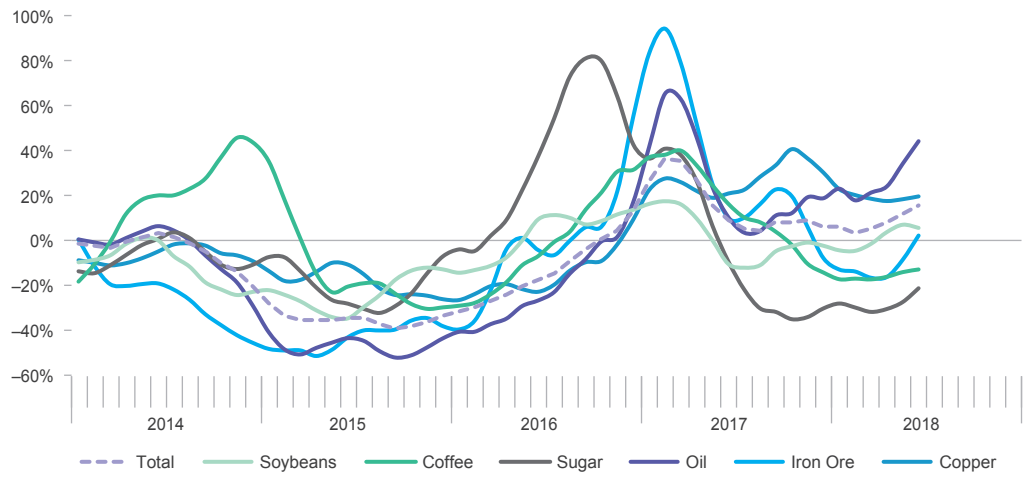
After stabilizing in 2016, commodity prices experienced a significant year-on-year increase in early 2017 (Figure 12). The average commodity price index increased by 13.5% in 2017 and decelerated slightly (10.5%) in the first half of 2018. This improvement was due primarily to oil, as its price rose 22.7% and 32.4%, respectively. In contrast, price variations

FIGURE 11 • TRENDS IN GOODS EXPORTS OF LATIN AMERICA AND THE CARIBBEAN
(Quarterly moving average of the annual growth rate, percentage, 2014–2018)



Source: IDB Integration and Trade Sector with data from INTrade and official sources.
Note: Country classifications are listed in footnote 7. The Caribbean does not include Trinidad and Tobago due to lack of data. From January 2018 onward, data from LAC excludes the Caribbean.

FIGURE 12 • PRICES OF MAIN EXPORT PRODUCTS OF LATIN AMERICA AND THE CARIBBEAN
(Quarterly moving average of the annual growth rate, percentage, 2014–2018)



Source: IDB Integration and Trade Sector with data from Bloomberg, the IMF, and the World Bank.
Note: Product prices are from Bloomberg and the total index was constructed with monthly information from the World Bank, preserving the weighting structure of the IMF index.

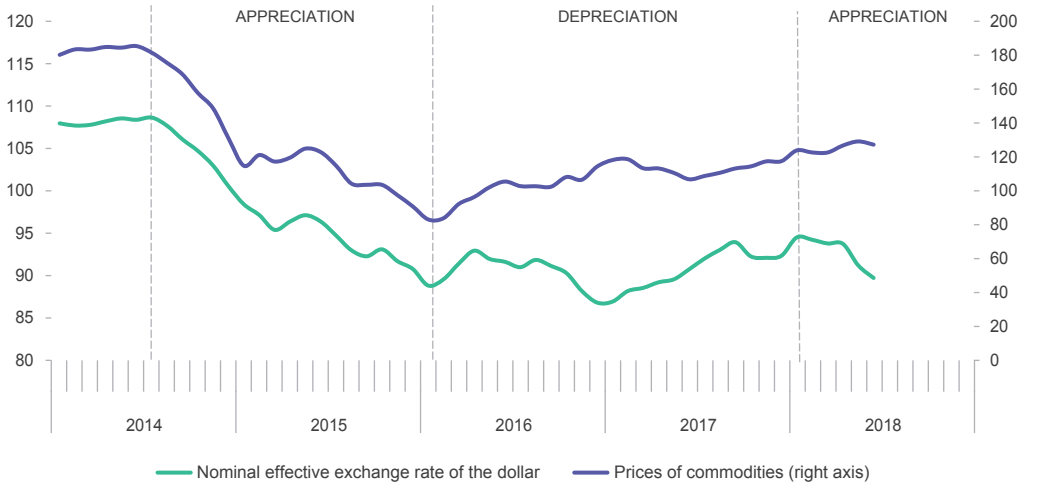
Commodity prices sustained the recovery.

for the aggregate of non-energy goods were positive but lower, at 5.4% and 6.1%, respectively. Nonetheless, by mid-2018 the average commodity price index was still 40.0% below the peak of April 2011.

The increase in commodity prices from 2017 onward can be accounted for by higher economic activity and world trade growth rates, the specific dynamics of the energy goods market, and the evolution of the dollar (Figure 13). Downward pressure on this currency in 2017 contributed to increasing commodity prices, a trend that continued up to the first quarter of 2018.[9] Since then, adjustments to U.S. monetary policy, stock market corrections, and, in general, greater financial and exchangerate uncertainty have begun to strengthen the dollar's international value. These changes in the economic environment have also been affected by growing trade tensions among the major players in the world economy (Box 3). Consequently, in the first half of 2018, commodity markets started to display higher risks of a downturn.

Risks of price contractions resurfaced.

FIGURE 13 • NOMINAL EFFECTIVE EXCHANGE RATE OF THE U.S. DOLLAR AND COMMODITY PRICES
(Index, 2005 = 100, 2014–2018)



Source: IDB Integration and Trade Sector with data from the IMF, World Bank, and U.S. Federal Reserve.
Note: Exchange rate with respect to a broad basket of currencies. A negative/positive slope indicates an appreciation/depreciation of the dollar.

[9] A major factor in the link between dollar depreciation/appreciation and commodity price increases/decreases is that the dollar acts as the "numeraire" in these markets. All else being equal, a depreciation in the dollar thus means that prices in local currencies are expressed in a higher dollar amount. However, this impact can be more than compensated by specific factors in certain product markets. For example, in 2016, prices increased in a context of irregular and moderate dollar appreciation over the course of the year (Giordano, 2017).

BOX 3: TRADE TENSIONS AND COMMODITY PRICES

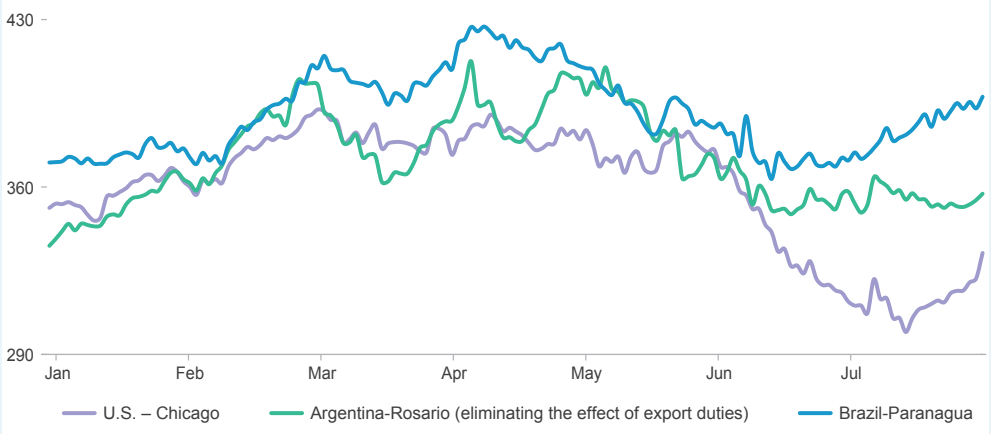
In the early months of 2018, the implementation of restrictive trade measures affected the markets of some commodities that play an important role in LAC's exports. In late March 2018, the U.S. imposed a tariff of 25% on certain steel products and 10% on some aluminum products. In retaliation, China placed a 25% tariff on soybean and other U.S. goods in July. Likewise, the European Union placed tariffs on a list of U.S. products. These policies created a climate of global trade tension as they involved the main world economies.

In the case of soybean, both the U.S. and China are key players in the market, in addition to several South American countries. The U.S. is the world's second largest soybean exporter after Brazil, while China is the leading importer. According to the U.S. Department of Agriculture data, in the 2016–17 harvest, 40.0% of global soybean exports came from the U.S. (Brazil 42.9%) while China accounted for 64.8% of total imports. Argentina is the largest exporter of processed soybean, accounting for 48.6% of global soybean meal exports. Soybean also plays a major role in the exports of Paraguay, Uruguay, and Bolivia.

Unlike other recent episodes of trade friction with more limited effects, China's tariff had a negative impact on this market that is key for a number of South American economies. The price of soybean on the Chicago stock exchange fell 20% between early June and mid-July 2018. This came in addition to other factors, such as the rise in U.S. interest rates, the appreciation of the dollar, and expectations of a large harvest in the northern hemisphere.

One new feature was the increase in the price differential between Chicago and local markets in South American ports. China's tariff has thus affected the price of soybean differently, with the impact on U.S. export prices being greater.

SOYBEAN PRICES ON THE INTERNATIONAL MARKET AND IN SOUTH AMERICAN PORTS
(US$ per ton, 2018)



Source: IDB Integration and Trade Sector based on CME Group, Rosario Stock Exchange, and CEPEA (Center for Advanced Studies on Applied Economics) University of São Paulo.
Note: In the Rosario-Argentina market price series, Argentinian customs duties on soy are deducted to ensure comparability with the other two series.

(*continued on next page*)

BOX 3: TRADE TENSIONS AND COMMODITY PRICES *(continued)*

Although China's tariff could represent an opportunity for South America, in the short term it has undoubtedly brought greater volatility and uncertainty to the international soybean market. Furthermore, as the U.S. is a major global soybean producer, the trade diversion to markets other than China could have a negative net impact on price. In any case, the new tariffs have contributed to fragmenting the global soybean market.

Oil prices increased by an average 22.7% in 2017, after collapsing between mid-2014 and early 2016. Factors such as dynamic demand, adjustment in the supply of nonconventional crude, and production restrictions implemented by the OPEC-led agreement partially reversed the earlier downward trend. Prices continued to increase in 2018, registering a 32.4% year-on-year rise in the first half of the year. Nonetheless, by June 2018 oil prices were still 33% below the previous peak registered in June 2014.[10] Metal prices were boosted in 2017 by a more dynamic global demand and supply cuts, only to then be disrupted by global trade frictions. The price of iron ore increased an average 21.5% year-on-year in 2017 due to demand from greater steel production in China. However, the market entered a volatile downward phase in November that lasted until the first half of 2018, prompted by fears of lower demand from China owing to restrictive trade measures. In June 2018, the price was still 52% below the relative peak of 2014. Copper prices rose 27.7% in 2017 and 19.3% year-on-year in the first half of 2018. However, the climate of trade conflict also had a negative effect on its price, which dropped around 15% between June and July. Looking to the future, the market is expected to be better supplied than in the first half of the year due to new projects starting up and existing mines being expanded.

Global trade frictions exerted downward pressure on the price of certain commodities.

Agricultural prices lacked the dynamism of the energy and metal markets. The aggregate index for agricultural prices decreased 0.7% on average in 2017 before increasing 1.9% year-on-year in the first half of 2018. The price of soybean—a key product for various South American countries—fell 1.1% on average in 2017. Although soybean prices briefly rallied in the first half of 2018 due mainly to a fall in production in Argentina because of drought, the market subsequently suffered a significant disruption as a result of trade frictions between the U.S. and China. Expectations that China would apply a 25% tariff on U.S. soybean, which effectively occurred on

Agricultural prices remained stable.

[10] For a more detailed analysis, see Box 1 in Chapter 1.

July 6th, brought about a 9.5% drop in soybean prices in June compared to the price in May (Box 3). Coffee prices, in turn, fell from mid-2017 due to higher than expected sales by leading exporters and an increase in global production that outstripped consumption. Consequently, coffee prices were 15.1% lower in the first half of 2018 than in the same period in 2017. Sugar prices fell 12.8% on average in 2017 and 27.1% year-on-year in the first half of 2018, again in the context of a production surplus.

Reflecting these trends, LAC's average export prices increased 6.8% in 2017, while volumes rose 4.9% (in 2016 they had changed by –4.3% and 1.3%, respectively) (Figure 14). From a medium-term perspective, the growth of real flows attained in 2017 was, after 2011, the second-highest in the post-crisis period (Box 4). The increase in volume was led by Brazil and Mexico (10.7% and 7.2%, respectively). In Central America, real export flows increased by 1.6%, while they decreased in most South American countries—those in the Intensive in Fuels and Energy group, and in some countries in the Rest of MERCOSUR and in the Rest of the Pacific Alliance.

Exports prices and volumes increased in 2017.

In the first half of 2018, LA's exports by value increased 9.7% compared to the same period in the previous year, a slowdown compared to the 12.1% attained in 2017. Export prices continued to expand (6.4%) while real flows slowed down (3.1%), with uneven performances among the groups of countries.[11] Export volumes increased in Mexico (7.6%), the Rest of the Pacific Alliance (4.3%), Central America (2.3%), and Brazil (1.9%). In contrast, real flows continued to fall in the countries Intensive in Fuels and Energy (–23.3%, mainly because of Venezuela) and in the Rest of MERCOSUR (–1.9%). The analysis of long-term trends suggests that it is very likely that the region's export volumes will slow down in the rest of 2018 (Box 4).

Exports lost momentum in the most recent period.

Export Performance by Country, Product, and Destination

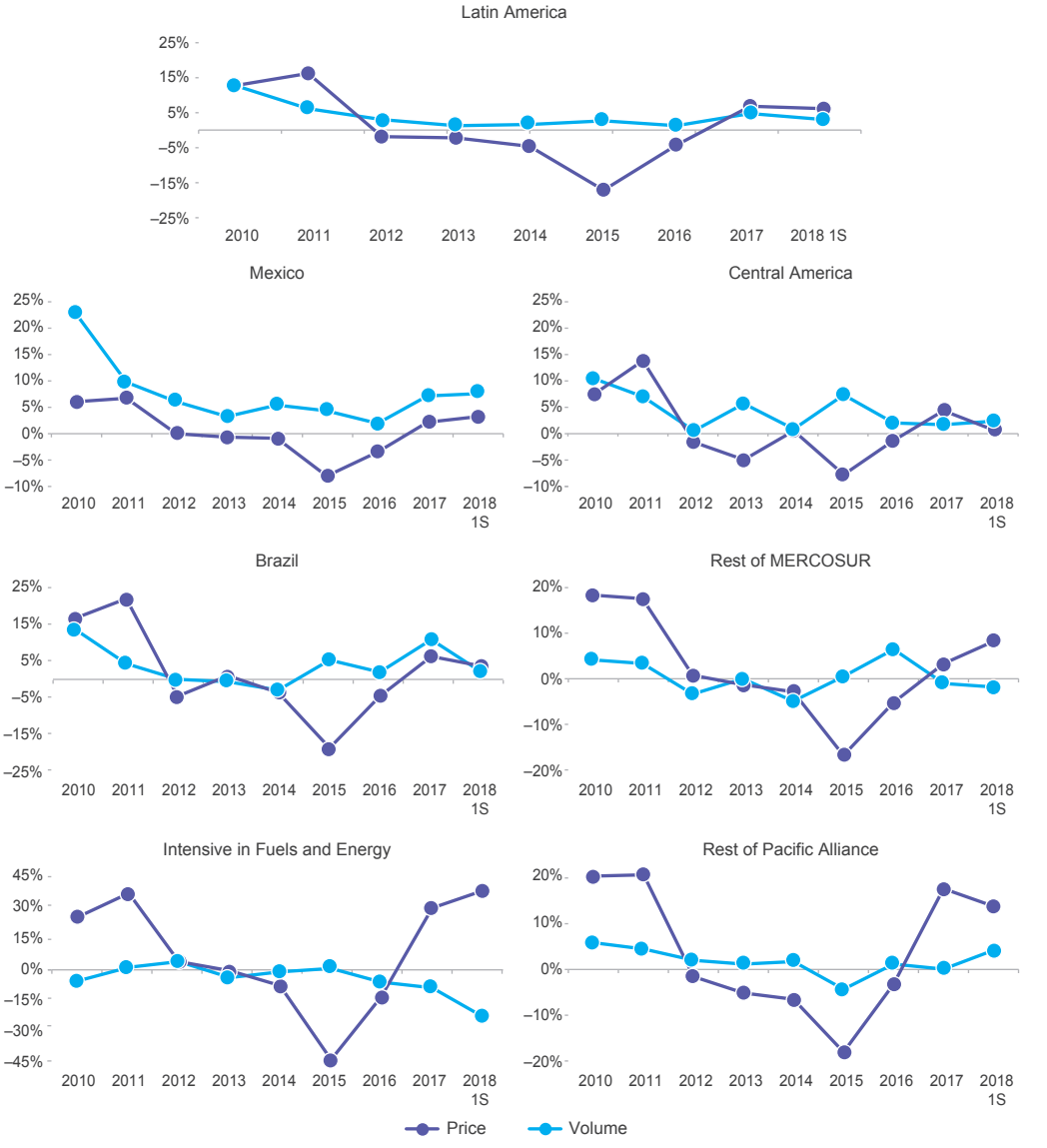
The 12.2% increase in the value of LAC goods exports in 2017 included the entire region. The Caribbean (18.4%) and South America[12] (15.0%) saw the greatest increases, followed by Mesoamerica (9.1%), where exports from both Mexico (9.5%) and

Growth was widespread in 2017.

[11] The analysis of prices and quantities in the first half of 2018 is based on a sample of 11 countries in the region: Argentina, Bolivia, Brazil, Chile, Colombia, El Salvador, Mexico, Paraguay, Peru, Uruguay, and Venezuela. See Methodological Annex 3.

[12] South America includes all the countries in the subcontinent, except Guyana and Suriname, which are classified as part of the Caribbean.

FIGURE 14 • PRICES AND VOLUMES OF LATIN AMERICAN EXPORTS
(Annual growth rate, percentage, 2010–2018)



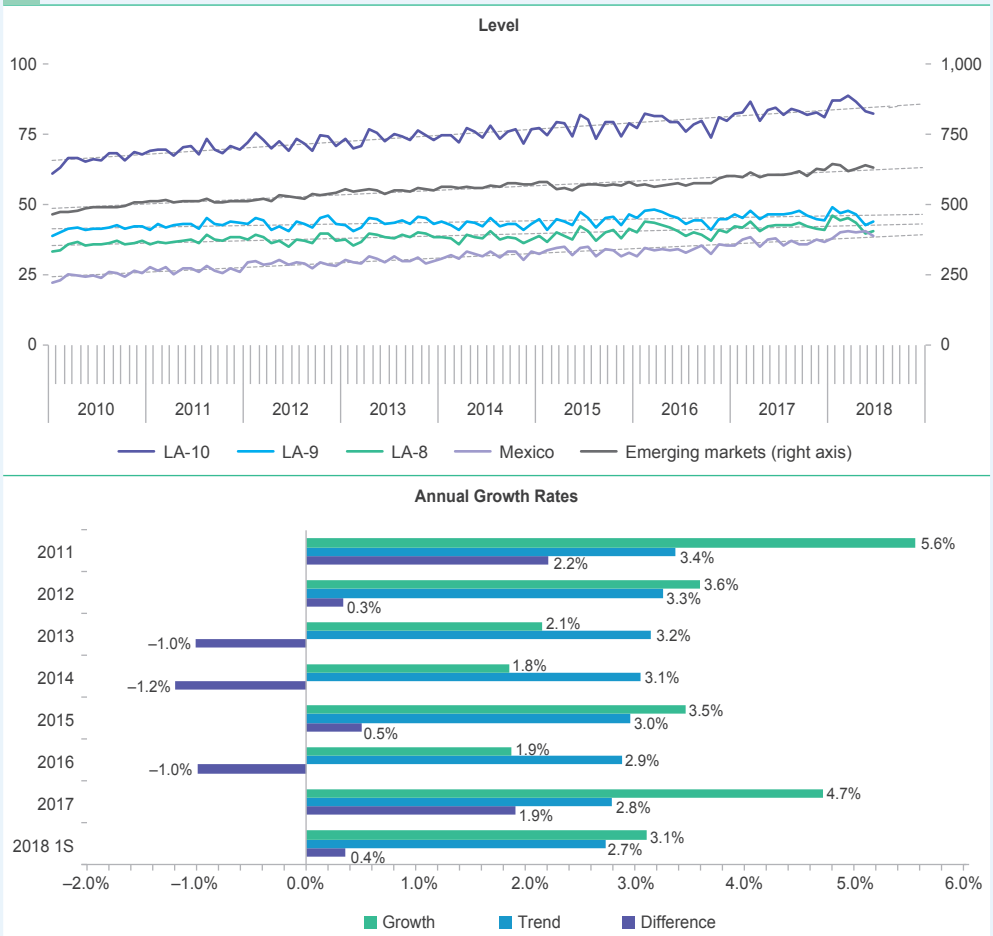
Source: IDB Integration and Trade Sector with data from INTrade, BLS, BCV, and OPEC.
Note: The base year for the corresponding indexes is 2005. Country classifications are listed in footnote 7. Methodological Annex 3 details the estimation procedures for the series at constant prices.

Central America (5.8%) increased (Table 2). Individually, all 26 countries registered increased export values, except for Barbados. There was a notable recovery in the value of external sales from countries that are major fuel and energy exporters due to price increases: Suriname (41.0%), Belize (26.8%), Venezuela (21.7%), Trinidad and Tobago (20.8%), and Bolivia (10.7%).

BOX 4: TRENDS IN LATIN AMERICAN EXPORT VOLUMES

Between January 2010 and June 2018, Latin America's (LA) export volumes increased on average at an annualized rate of 3.0%, equivalent to that of emerging countries and slightly higher than the global 2.5%.[a] During this post-crisis period, the lower dynamism was reflected in linear growth patterns, in contrast to the exponential growth witnessed before the crisis.[b] The similarity between the performance of LA-10 and the average for emerging countries is due to Mexico's outstanding performance, as its real external sales showed an annual trend increase of 5.5% in the period analyzed. If Mexico is excluded from the calculation (LA-9), the average drops to

GROWTH AND TRENDS IN EXPORT VOLUMES
(Billions of US$ at constant 2010 prices and growth rates in percentage, 2010–2018)



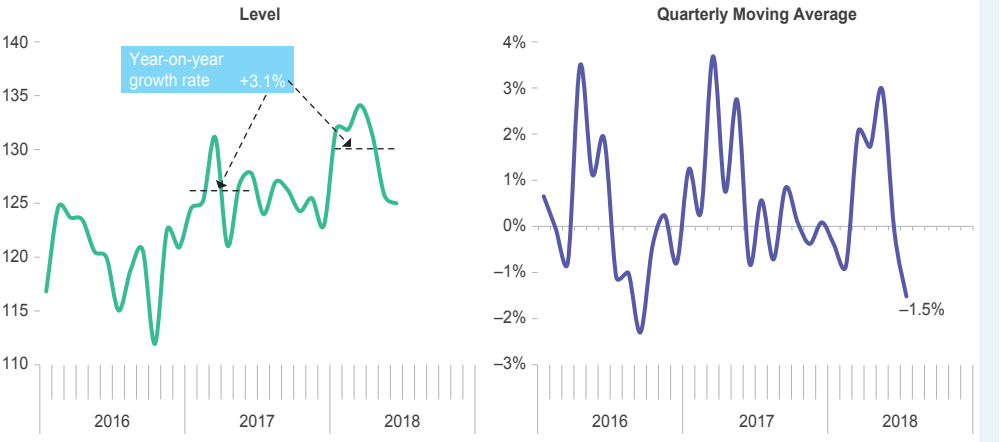
Source: IDB Integration and Trade Sector based on official sources, BLS, and OPEC.
Note: The value of Mexico's exports was deflated using BLS indexes, and the volume of Venezuela's exports was estimated using OPEC data. The aggregates for LA-10, LA-9, and LA-8 are the averages of national indexes weighted by the value of each country's exports in 2010. Linear trends are adjusted with least squares.

(*continued on next page*)

BOX 4: TRENDS IN LATIN AMERICAN EXPORT VOLUMES *(continued)*

LEVEL AND GROWTH OF EXPORT VOLUMES

(Index, 2010 = 100 and quarterly moving average of the year-on-year growth rate, January 2016–June 2018)



Source: IDB Integration and Trade Sector based on official sources, BLS, and OPEC.
Note: The seasonally adjusted series reveal that the average volume of exports grew by 3.1% year-on-year in the first half of 2018.

just 1.3%, a figure in turn influenced by the evolution of Venezuelan exports. If Venezuela is also excluded (LA-8), the rate increases to 2.2%, below both the global average and the aggregate for emerging countries.

The difference between observed and trend growth is an indicator of the performance of export volumes. During the post-crisis period, real external sales from LA-10 rose markedly above trend only in 2011 and 2017. Between 2012 and 2016, the increase in external sales was below or very close to the trend, indicating the relative weakness of export flows in the region.

After the firm recovery of 2017, in the first half of 2018 there was a notable reduction in the difference between recorded growth and the trend. In fact, although real sales increased by 3.1% in the year-on-year comparison—in line with the trend—the level of flows peaked in March. In the second quarter, the earlier momentum decreased markedly, with a contraction in the quarterly moving average of 1.5% in June. Given that the year-on-year comparison base for the second half of 2018 is high, only a vigorous new boost would allow real annual export growth to be sustained above the post-crisis trend.

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[a] The indicator includes ten countries that publish monthly indicators of export volumes and which represented 93% of the value of the region's external sales in 2017. LA-10 includes Argentina, Brazil, Chile, Colombia, El Salvador, Mexico, Paraguay, Peru, Uruguay, and Venezuela; LA-9 excludes Mexico; and LA-8 excludes Mexico and Venezuela. Estimates are based on official sources, BLS, OPEC, and CPB.

[b] World trade followed an exponential pattern during 2002–2007; see Giordano (2016).

TABLE 2 • GOODS EXPORTS OF LATIN AMERICA AND THE CARIBBEAN
(Annual growth rate and billions of US$, 2015-2018)

	US$ Billions			Growth Rates (%)			
	2015	2016	2017	2015	2016	2017	Accum. June 2018
LATIN AMERICA AND THE CARIBBEAN	**904.5**	**874.5**	**981.0**	**–14.8**	**–3.3**	**12.2**	**n.a.**
LATIN AMERICA	**887.4**	**860.4**	**964.4**	**–14.7**	**–3.0**	**12.1**	**9.7**
MESOAMERICA	**428.1**	**421.8**	**460.1**	**–3.8**	**–1.5**	**9.1**	**10.1**
Mexico	380.5	373.9	409.4	–4.1	–1.7	9.5	11.0
Central America	**47.6**	**47.9**	**50.7**	**–0.9**	**0.6**	**5.8**	**3.0**
Costa Rica	9.2	9.9	10.6	0.7	7.8	7.0	6.0
Dominican Republic	8.3	8.7	8.8	–2.0	5.0	1.0	9.0
El Salvador	5.5	5.4	5.8	4.0	–1.2	6.3	5.6
Guatemala	10.7	10.4	11.0	–1.2	–2.1	5.1	–2.7
Honduras	8.2	7.9	8.6	1.0	–3.4	9.7	0.3
Nicaragua	5.1	4.8	5.2	–6.8	–4.3	7.2	0.1
Panama	0.7	0.6	0.7	–14.9	–8.5	3.8	11.1
SOUTH AMERICA	**459.3**	**438.6**	**504.3**	**–22.8**	**–4.5**	**15.0**	**9.4**
Argentina	56.8	57.9	58.4	–17.0	1.9	0.9	5.5
Bolivia	8.7	7.1	7.9	–32.2	–18.8	10.7	23.4
Brazil	191.1	185.2	217.7	–15.1	–3.1	17.5	5.5
Chile	62.2	60.7	69.2	–17.0	–2.3	14.0	21.0
Colombia	36.0	31.8	37.9	–34.4	–11.7	19.3	14.7
Ecuador	18.3	16.8	19.1	–28.8	–8.4	13.8	13.3
Paraguay	8.3	8.5	8.7	–13.6	2.1	2.1	13.3
Peru	34.4	37.1	45.3	–12.9	7.8	22.1	18.0
Uruguay	7.7	7.0	7.9	–15.9	–8.9	12.3	3.2
Venezuela	35.7	26.5	32.2	–52.2	–25.9	21.7	–2.2
CARIBBEAN	**17.0**	**14.1**	**16.7**	**–21.6**	**–17.3**	**18.4**	**n.a.**
Bahamas	0.4	0.4	0.5	–35.8	–9.0	17.5	n.a.
Barbados	0.5	0.3	0.2	2.5	–48.1	–1.1	5.0
Belize	0.3	0.2	0.3	–12.8	–24.2	26.8	–19.0
Guyana	1.1	1.4	1.4	–1.8	25.3	0.2	n.a.
Haiti	1.0	1.0	1.0	3.5	–6.3	4.9	n.a.
Jamaica	1.3	1.2	1.3	–13.4	–5.0	10.2	22.6
Suriname	1.7	1.4	2.0	–23.0	–12.6	41.0	12.3
Trinidad and Tobago	10.8	8.2	9.9	–25.7	–23.8	20.8	n.a.

Source: IDB Integration and Trade Sector with data from INTrade and national sources.
Note: n.a.: data not available. Methodological Annex 4 details the geographical and temporal coverage of goods exports.

Diverging trends emerged in 2018.

Although the positive momentum of exports from Latin America continued in the first half of 2018, growth began to cool. The price trend for energy products and metals continued to benefit countries whose export baskets include these products. The greatest increases occurred in Bolivia (23.4%), Chile (21.0%), Peru (18.0%), Colombia (14.7%), and Ecuador (13.3%). While Mexican exports increased (11.0%), Brazil's rose less (5.5%) than during 2017. All countries in Central America experienced slowdowns in 2018, with the exception of Panama and the Dominican Republic. The Rest of MERCOSUR members saw more limited increases, partly reflecting the structure of their export baskets, which include a large share of agricultural products. According to own estimates, Venezuela's exports fell 2.2%.

Primary and energy products underpinned the recovery.

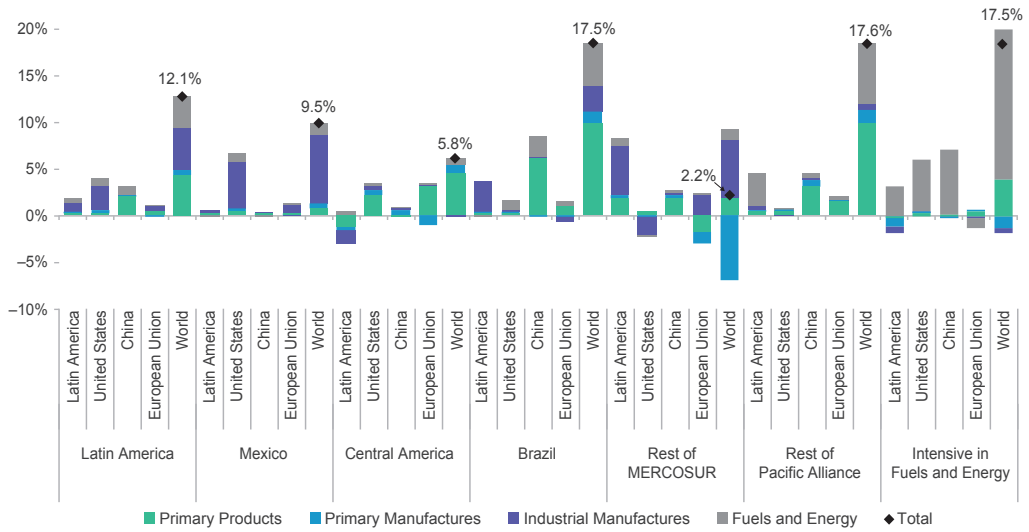
A breakdown of the increase in the total value exported by LA in 2017 shows a similar distribution among the three major product categories (Figure 15).[13] Industrial manufactures (IM) accounted for 4.2 p.p., primary products (PP) for 4.1 p.p., and fuels and energy (F&E) for 3.2 p.p., driven by the price recovery mentioned above, especially in oil prices. In contrast, primary manufactures (PM) made a smaller contribution to growth (just 0.6 p.p.), largely due to the contraction of sales of these goods in the Rest of MERCOSUR. It is worth noting that PP and F&E as a whole accounted for 7.3 p.p. of the total increase, meaning that 60% of the positive variation was in categories where the price factor was relevant.

Energy goods made a substantial and widespread contribution.

The PP category mainly contributed to the exports of Central American countries, Brazil, and the Rest of the Pacific Alliance. The EU market contributed significantly to Central America's performance, as did China to the other two regions. F&E contributed not only to the growth of exports of the economies specializing in these goods, but also to that of Brazil, Mexico, and the Rest of the Pacific Alliance. IM contributed most to Mexican exports, mainly directed to the U.S. market. This category was also significant for the sales of the Rest of MERCOSUR to LA. The contraction of PM exports from the Rest of MERCOSUR was partially compensated by increases from the Rest of the Pacific Alliance, Brazil, and Central America.

[13] The analysis is based on the following categories: PP: Primary Products, which includes AP (Agricultural Primary Products) and MP (Mineral Primary Products); PM: Primary Manufactures, which include AM (Agricultural Manufactures) and MM (Mineral Manufactures); IM: Industrial Manufactures; and F&E (Fuels and Energy).

FIGURE 15 • CONTRIBUTION TO LATIN AMERICAN EXPORT GROWTH BY SELECTED PRODUCTS AND DESTINATION MARKETS
(Annual growth rate, percentage and percentage points, 2017)



Source: IDB Integration and Trade Sector with data from INTrade and national sources.
Note: Methodological Annex 6 details the classification by categories. Growth rates are decomposed according to the contribution of partners and products to the total change in exports in 2017. Country classifications are listed in footnote 7. Data for Central America only includes Costa Rica, Guatemala, El Salvador, and Panama. The Caribbean is not included since disaggregated data is not available. The figure does not include all partners and, therefore, the sum of the contributions is not equal to the total.

The U.S. and China were the most dynamic destinations.

Although all the destinations contributed to the increase in the value of LA exports in 2017, exports to the U.S. (3.8 p.p.) and China (2.9 p.p.) were the most noteworthy. Growing exports to the U.S. can be accounted for by the positive contribution of IM, mainly from Mexico. Whereas the main category of exports to China were PP from South American countries: Brazil, the Rest of MERCOSUR, and the Rest of the Pacific Alliance. Intraregional exports were driven by exports of IM from Brazil and F&E from the Rest of the Pacific Alliance.

Growth in Imports

In 2017, LAC's goods imports grew 9.3%, ending three years of contraction, and reached US$988.9 billion (Table 3). In 2016, imports had fallen 8.3% in a context of economic downturn in several countries. The dynamism of imports in 2017 had an effect on all subregions and was most significant in South America (10.7%).

Imports accelerated in 2018.

TABLE 3 • GOODS IMPORTS OF LATIN AMERICA AND THE CARIBBEAN
(Annual growth rate and billions of US$, 2015-2018)

	US$ Billions			Growth Rates (%)			
	2015	2016	2017	2015	2016	2017	Accum. June 2018
LATIN AMERICA AND THE CARIBBEAN	**986.3**	**904.7**	**988.9**	**–10.8**	**–8.3**	**9.3**	**n.a.**
LATIN AMERICA	**959.2**	**879.0**	**960.8**	**–10.7**	**–8.4**	**9.3**	**12.1**
MESOAMERICA	**488.7**	**477.5**	**516.2**	**–1.0**	**–2.3**	**8.1**	**11.1**
Mexico	395.2	387.1	420.4	–1.2	–2.1	8.6	11.6
Central America	**93.5**	**90.5**	**95.8**	**–0.3**	**–3.2**	**5.9**	**9.1**
Costa Rica	15.0	15.3	15.9	–3.6	1.8	4.2	5.4
Dominican Republic	17.3	17.7	18.0	–2.0	2.4	1.8	13.3
El Salvador	10.4	9.8	10.6	–0.9	–5.6	7.8	12.4
Guatemala	17.6	17.0	18.4	–3.5	–3.6	8.2	9.1
Honduras	12.1	11.5	12.4	30.1	–5.4	8.2	10.2
Nicaragua	8.9	7.5	7.7	2.1	–15.6	3.2	1.7
Panama	12.1	11.7	12.7	–11.5	–3.6	8.8	8.2
SOUTH AMERICA	**470.5**	**401.5**	**444.6**	**–19.0**	**–14.7**	**10.7**	**13.3**
Argentina	59.8	55.9	66.9	–8.4	–6.4	19.7	13.0
Bolivia	9.8	8.5	9.3	–6.8	–13.5	9.3	4.5
Brazil	171.4	137.6	150.7	–25.1	–19.8	9.6	17.2
Chile	62.5	58.8	65.1	–14.2	–5.9	10.7	15.9
Colombia	51.6	42.8	44.0	–15.5	–17.0	2.6	7.0
Ecuador	21.5	16.3	20.0	–22.4	–24.1	22.6	19.1
Paraguay	8.8	9.0	11.0	–15.9	3.1	22.0	18.9
Peru	37.3	35.1	38.7	–9.0	–5.9	10.2	12.8
Uruguay	9.5	8.1	8.5	–17.4	–14.3	3.9	10.7
Venezuela	38.2	29.2	30.4	–25.6	–23.6	4.1	–1.3
CARIBBEAN	**27.1**	**25.7**	**28.1**	**–12.6**	**–5.2**	**9.5**	**n.a.**
Bahamas	3.2	2.9	3.5	–16.6	–7.3	18.6	n.a.
Barbados	1.6	1.6	1.5	–7.0	0.2	–6.6	–3.2
Belize	1.0	1.0	0.9	2.7	–6.5	–5.1	3.2
Guyana	1.5	1.4	1.6	–16.7	–2.9	12.7	n.a.
Haiti	3.3	3.2	4.0	–6.9	–0.9	23.3	n.a.
Jamaica	5.0	4.9	5.9	–14.9	–2.2	19.2	12.8
Suriname	2.0	1.2	1.4	0.8	–38.5	9.3	47.1
Trinidad and Tobago	9.5	9.3	9.3	–15.7	–1.7	0.4	n.a.

Source: IDB Integration and Trade Sector with data from INTrade and national sources.
Note: n.a.: data not available.

In the first half of 2018, imports accelerated to 12.1% year-on-year. Although imports increased in almost all countries, Central America experienced a higher growth rate, driven above all by the Dominican Republic. In South America, the acceleration was due mainly to the increase in Brazil's imports, whose rate of growth almost doubled. While in 2017 the increase in exports from the region outstripped that of imports, in the first half of 2018 imports grew faster than exports. A consolidation of this trend could negatively affect the improvements in current account balances noted above.

Consolidation of Services Exports

Growth in services exports strengthened.

In 2017, higher growth of the main players in the world economy and in the region boosted LAC services exports, which increased 6.3% to reach US$155.2 billion. This was substantially higher than in 2016 when export growth attained 1.9% in the region as a whole. All three subregions contributed to this trend (Table 4). As in the previous year, Mexico registered the greatest increase in LAC services exports. Exports from South America increased by 5.8%, reversing the 1.6% drop of 2016, Central American services exports increased by 5.7%, while in the Caribbean growth remained subdued (2.8%), albeit higher than the previous year. In the first quarter of 2018, services exports slowed slightly in the region as a whole (6.0%).

Mesoamerica led regional growth.

Services exports from Mesoamerica accounted for 41% of the region's total, mainly driven by Mexico's contribution, which represented 17% of LAC exports. In 2017, services exports grew more than the previous year in most cases. Nicaragua was the country with the highest growth (21.8%), followed by Mexico (10.5%). Exports from Panama and El Salvador increased 7.2% and 6.7%, respectively, 2.9 p.p. and 5.5 p.p. more than in 2016. Exports from Honduras (4.5%), Costa Rica (2.3%) and Guatemala (1.8%) grew at a more moderate rate than the remaining countries, although Guatemala moved past the contraction of 2016. In the first quarter of 2018, services exports from Mesoamerica continued to grow at rates similar to the previous year (7.4%).

Growth was more fragile in South America.

South America's services exports accounted for 52% of the regional total and increased 5.8% in 2017. All countries in the subregion registered an improvement compared to 2016. The most notable performances were those of Peru (17.5%) and Uruguay (15.3%): Peru's services exports were over 16 p.p. higher than the 2016 rate (1.2%), and Uruguay overcame the negative performance of the previous year (–7.6%). The rates

TABLE 4 • SERVICES EXPORTS OF LATIN AMERICA AND THE CARIBBEAN
(Annual growth rate and billions of US$, 2015–2018)

	US$ Billions			Growth Rates (%)		
	2015	2016	2017	2016	2017	1Q 2018
LATIN AMERICA AND THE CARIBBEAN	**143.2**	**146.0**	**155.2**	**1.9**	**6.3**	**n.a.**
LATIN AMERICA	**133.3**	**136.0**	**145.0**	**2.0**	**6.6**	**6.0**
MESOAMERICA	**55.4**	**59.3**	**63.9**	**7.1**	**7.7**	**7.4**
Mexico	22.7	24.4	27.0	7.5	10.5	9.5
Central America	**32.7**	**34.9**	**36.9**	**6.9**	**5.7**	**5.8**
Costa Rica	7.4	8.3	8.5	11.1	2.3	5.1
El Salvador	1.7	1.7	1.8	1.2	6.7	11.3
Guatemala	2.7	2.7	2.7	–0.8	1.8	2.1
Honduras	1.2	1.2	1.3	4.0	4.5	2.8
Nicaragua	0.8	0.9	1.1	18.8	21.8	31.9
Panama	11.8	12.3	13.2	4.3	7.2	5.6
Dominican Republic	7.2	7.9	8.4	10.1	6.4	4.7
SOUTH AMERICA	**77.9**	**76.7**	**81.1**	**–1.6**	**5.8**	**4.7**
Argentina	12.9	12.5	13.9	–3.2	10.9	7.7
Bolivia	1.1	1.1	1.3	1.6	9.9	n.a.
Brazil	32.5	32.2	33.2	–1.0	3.2	0.8
Chile	9.1	9.1	9.8	–0.4	7.2	–0.8
Colombia	7.3	7.6	8.2	4.3	7.4	21.5
Ecuador	2.3	2.0	2.2	–11.2	8.3	36.1
Paraguay	0.7	0.7	0.8	2.7	7.1	–5.6
Peru	6.1	6.2	7.2	1.2	17.5	n.a.
Uruguay	4.4	4.0	4.7	–7.6	15.3	0.5
Venezuela	1.5	1.2	n.a.	–19.0	n.a.	n.a.
CARIBBEAN	**9.9**	**10.0**	**10.2**	**0.6**	**2.8**	**n.a.**
Bahamas[a]	2.9	2.9	2.8	1.5	–2.0	n.a.
Barbados[a]	1.4	1.5	1.5	6.5	1.9	n.a.
Belize	0.5	0.5	0.5	8.2	7.4	n.a.
Guyana[a]	0.1	0.2	0.1	14.5	–19.3	n.a.
Haiti[a]	0.7	0.6	0.6	–17.2	2.5	n.a.
Jamaica[a]	3.0	3.2	3.4	5.3	7.7	n.a.
Suriname	0.2	0.2	0.2	–3.5	–12.3	6.4
Trinidad and Tobago[a]	1.2	1.0	1.1	–14.1	6.1	n.a.

Source: IDB Integration and Trade Sector with data from the IMF and the WTO.
Note: n.a.: data not available.
[a] WTO commercial services exports.
The data in this table is not exactly the same as that in Figure 4 in Chapter 1, because in this table for some Caribbean countries information comes from the annual WTO data (see Methodological Annex 4).

for Bolivia (9.9%), Colombia (7.4%) and Paraguay (7.1%) were higher than in 2016. After contracting in 2016, exports also grew in Argentina (10.9%), Ecuador (8.3%), Chile (7.2%), and Brazil (3.2%). In the first quarter of 2018 South American services exports continued to grow, but at a slightly lower rate than the previous year (4.7%).

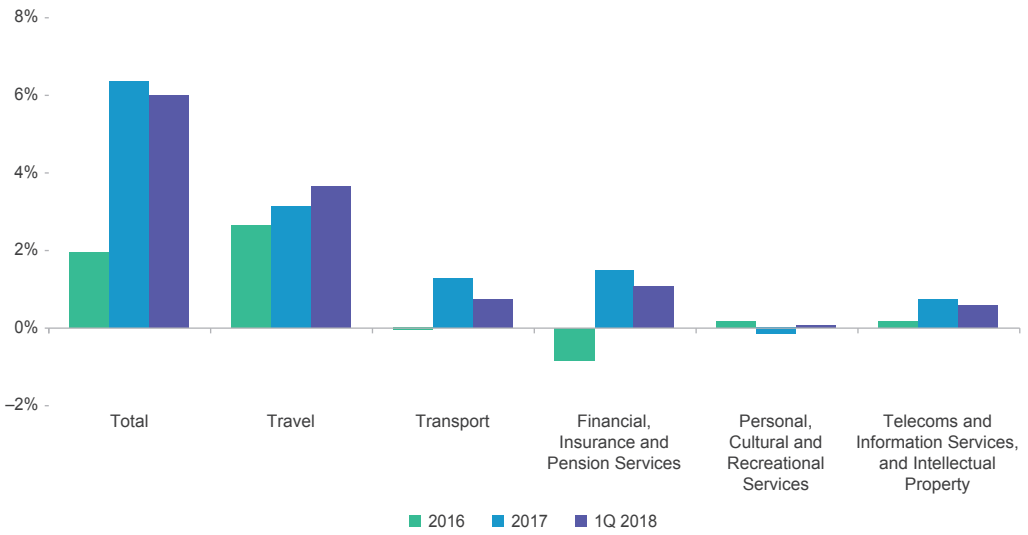
The Caribbean's dynamism was modest.

The 2.8% increase in services exports from the Caribbean was an improvement on the virtual stagnation of the previous year (0.6%) and was due to the performances of Jamaica, Belize, Trinidad and Tobago, and Haiti. Jamaica (7.7%) and Belize (7.4%) saw the highest growth, while Trinidad and Tobago (6.1%) and Haiti (2.5%) reversed the major falls of the previous year. Guyana, Suriname, and Bahamas had negative growth rates.

With the exception of personal, cultural, and leisure services, all sectors contributed to the growth of LAC services exports (Figure 16). Travel explained almost half of the total increase (3.1 p.p.), while transportation reversed the fall of 2016 and contributed 1.2 p.p. to growth. IT services contributed positively for the second consecutive year. In the first quarter of 2018, the sector's contributions were similar to 2017.

Travel once again boosted services exports.

FIGURE 16 • CONTRIBUTION TO GROWTH IN SERVICES EXPORTS OF LATIN AMERICA AND THE CARIBBEAN BY CATEGORY
(Percentage points, 2016–2018)



Source: IDB Integration and Trade Sector with data from the IMF.
Note: The breakdown is constructed for a sample of countries that provide disaggregated data by category.

In conclusion, 2017 saw the end of four years of falling exports of goods from Latin America and the Caribbean, giving way to an upward trend that continued during the first half of 2018, although with less intensity due to a slowdown in real flows. The growth of services exports, which had already gained ground, was consolidated. The significant rise in the region's exports of goods was driven by increases in prices and volumes, with heterogeneous patterns among countries and subregions. The marked increase in the prices of some primary goods, such as oil and metals, benefited several South American countries, making up for falls or low growth in volumes. In contrast, in Brazil, Mexico, and the Central American countries, real export flows performed well, in some cases with an additional boost from price gains.

In the first quarter of 2018, export dynamism began to face headwinds related to the normalization of U.S. monetary policy, ongoing trade tensions among the leading world economies, and worsening growth prospects in the region. Slower growth in exported volumes was compounded by the effects of trade restrictions, which influenced the prices of some agricultural goods and metals. The momentum in the export recovery may thus be weakened by growing uncertainty emerging at the global and regional levels. These circumstances make even more essential an analysis of the ways in which LAC countries can sustain their share of global markets, particularly for the more sophisticated products, which are discussed in the following chapters.

3 The Export Quality Gap

Developing a complex, sophisticated external sector is key to the productive transformation and growth of the economy. An analysis of the quality of Latin American and Caribbean merchandise exports suggests that the region's export bundle features a low level of sophistication. Export quality indexes have increased in some primary sectors but, overall, the gap with global competitors is wide and has remained largely unchanged for decades. Although there is considerable heterogeneity throughout the region, most exports of goods are of medium quality. This chapter thus identifies the areas where there are opportunities for product differentiation in terms of quality.

The structural transformation of the economy lies at the core of the development process. For decades, replacing lower-value-added production processes or low-complexity goods has been one of the main concerns of policymakers in LAC. In this spirit, a growing body of academic literature has highlighted the central role of the external sector and has even argued that the sophistication of exports is the only robust determinant for growth. However, the process of identifying the level of sophistication[14] of external sales entails both theoretical and empirical difficulties.[15] One common feature of the measures used to capture sophistication is that they do not to allow the identification of the different factors that determine it.

[14] In the literature, the term sophistication refers to products of a superior quality, in terms of either how complex they are or their relative quality. In particular, sophistication alludes to a set of factors, which includes: (i) the characteristics of export products, such as the sector they originate in, their technological intensity, or their quality; (ii) the competitiveness of the export supply in different markets; and (iii) the efficiency and complexity of production processes. This chapter and chapter 4 analyze different indicators that characterize all these aspects of the region's exports.

[15] See Cherif *et al.* (2018) for a recent discussion of the determinants of growth, the econometric techniques to identify them, and the significance of trade sophistication; Lall *et al.* (2006), Hausmann *et al.* (2007), and Hausmann and Hidalgo (2009) for key definitions and subsequent corrections to the empirical methods used to identify export sophistication; and Flores and Vaillant (2011) for a specific application of this approach to certain Latin American countries.

This chapter and the next seek to illustrate different aspects of the sophistication of the Latin American export basket. They do so by analyzing the qualitative characteristics of export products as well as market complexity and the integration of production processes. This chapter examines the quality of Latin America's export basket to the world, while chapter 4 focuses on an in-depth analysis of the trade relations among partners from the region, considering the prevalence of complex trade relations within the intraregional market.

High-quality exports allow countries to compete in the most profitable markets.

Exporting high-quality products allows for a better integration into global markets and enables higher economic growth.[16] Consolidated empirical evidence suggests that advanced countries tend to import relatively more from trading partners that produce high-quality goods.[17] To characterize the performance and prospects of LAC economies in terms of the quality of their exports, this chapter examines three complementary indicators (Box 5). First, the aggregate quality index allows countries and regions to be positioned in relation to their global competitors. Second, the distribution of exports by quality ranks reveals which specific products determine the aggregate quality index for each country or region. Finally, using product quality ladders—specifically, identifying how long these are and where economies are located on them—allows to identify countries' ability to compete on quality and pinpoint opportunities for progress.[18]

The Quality Lag in Aggregate Exports

The quality of LAC exports is relatively low and stable.

The global leaders in quality are North America (excluding Mexico, which is considered part of LAC) and Europe, where the quality of exported products remained relatively high and stable between 1963 and 2014. The aggregate quality index for LAC exports grew 13% over the same period. In spite of this increase,

[16] In line with Hummels and Klenow (2005), exports can increase along intensive, extensive, or quality margins. The latter refers to product differentiation by the level of quality. This chapter examines the issue of quality and complements the work published in previous editions of this series, which focused on intensive and extensive margins (see Giordano 2015, 2016, and 2017). The relevance lies in the fact that there is a robust correlation between the indicators for export quality and product *per capita*. This is the first analysis to include every country in the region and thus refines and puts into perspective the findings of Lederman and Maloney (2012), who used unit prices as a proxy for quality.

[17] This relationship is described in Schott (2004) for the U.S. and in Hallak (2006) for a sample that includes Latin American countries.

[18] Product quality indexes disaggregated at the 4-digit level of the Standard International Trade Classification (SITC, Revision 1) for the 1963–2014 period were produced by the IMF and are documented in Henn, Papageorgiou, and Spatafora (2013 and 2015). For further details on the adaptation of the methodology, see Methodological Annex 5. For detailed results by country and region, see Statistical Annex 1.

BOX 5: HOW IS THE QUALITY OF EXPORTS MEASURED?

In trade data, quality is an unobservable attribute and thus cannot be quantified directly. The simplest methodology for approximating a quality measure is based on unit price differences: if a country exports a good at a higher-than-average price, it is inferred that the quality of this good is higher.[a] However, this approach is imprecise, as price differences may be due to other factors such as cost structures, specific supply and demand shocks, or exchange rate fluctuations. As a result, more complex methodologies have gradually been developed to estimate the quality of exports, taking into account factors such as the specific cost structures of each industry, tariff preferences, or the ability to gain market share.[b] However, the limitations of these more complex and precise models lie in the need for detailed data on trade flows and production structures. This information in a harmonized form is not available for a number of countries, such as those that are the subject of this report.

To overcome these limitations, the quality indicator of an exported product is estimated through adjusted unit values. This takes into account differences in production costs, captured through the *per capita* income of the exporting country, as well as the existence of a selection bias based on the distance between countries, which reflects the fact that the composition of exports to more distant destinations is biased toward products with higher unit values due to higher shipping costs. This approach allows to characterize the quality of the export supply for 166 countries between 1963 and 2014, while looking at a highly disaggregated group of products.[c]

[a] Aiginger (1997) proposes the use of unit values to discriminate between markets where competition is based on price or quality.
[b] See Khandelwal (2010), Hallak and Schott (2011), and Feenstra and Romalis (2014), among others.
[c] The index is conceptually similar to the one developed by Hallak (2006). See Henn, Papageorgiu, and Spatafora (2013 and 2015) and the accompanying technical note.

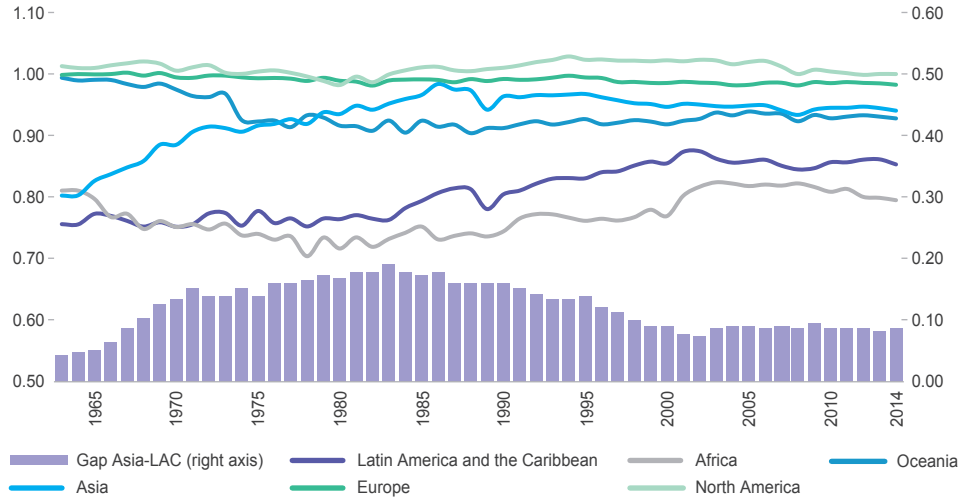
mainly during the 1980s and 1990s, it remains below that of the rest of the world, with the exception of Africa (Figure 17). In contrast, the evolution of this index in Asia has been remarkable: it accelerated sharply between the 1960s and 1980s, bringing it on par with the advanced economies. Consequently, the gap between LAC and Asia grew rapidly up to 1983, was thereafter halved by 2002, and has remained relatively stable ever since. Also noteworthy is the gap between LAC and Oceania, as the latter has a trade specialization structure similar to that of several Latin American countries.

When export baskets are divided into primary products (PP), primary manufactures (PM), and industrial manufactures (IM), it is evident that the category where LAC experienced the greatest growth in quality in the period analyzed was PP (Figure 18).[19] The region was able to differentiate itself markedly from the rest of the developing world in this category, achieving

The quality of primary products exported by the region increased.

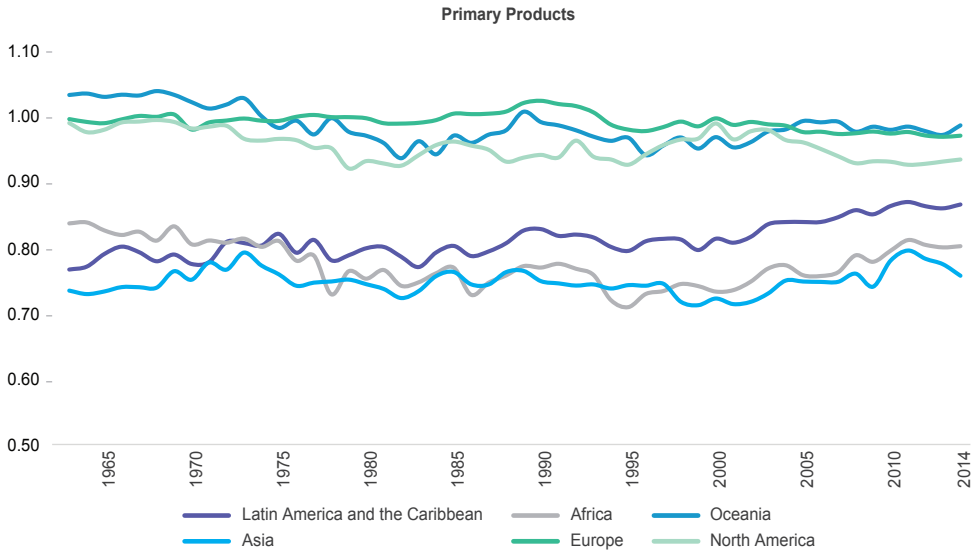
[19] Quality indexes were constructed at the product (SITC 4-digit) level. The indexes for each group of products are the weighted average of the indexes for the products that form the group, normalized at the 90th percentile

FIGURE 17 • AGGREGATE QUALITY OF EXPORTS BY REGION
(Index, 1963–2014)



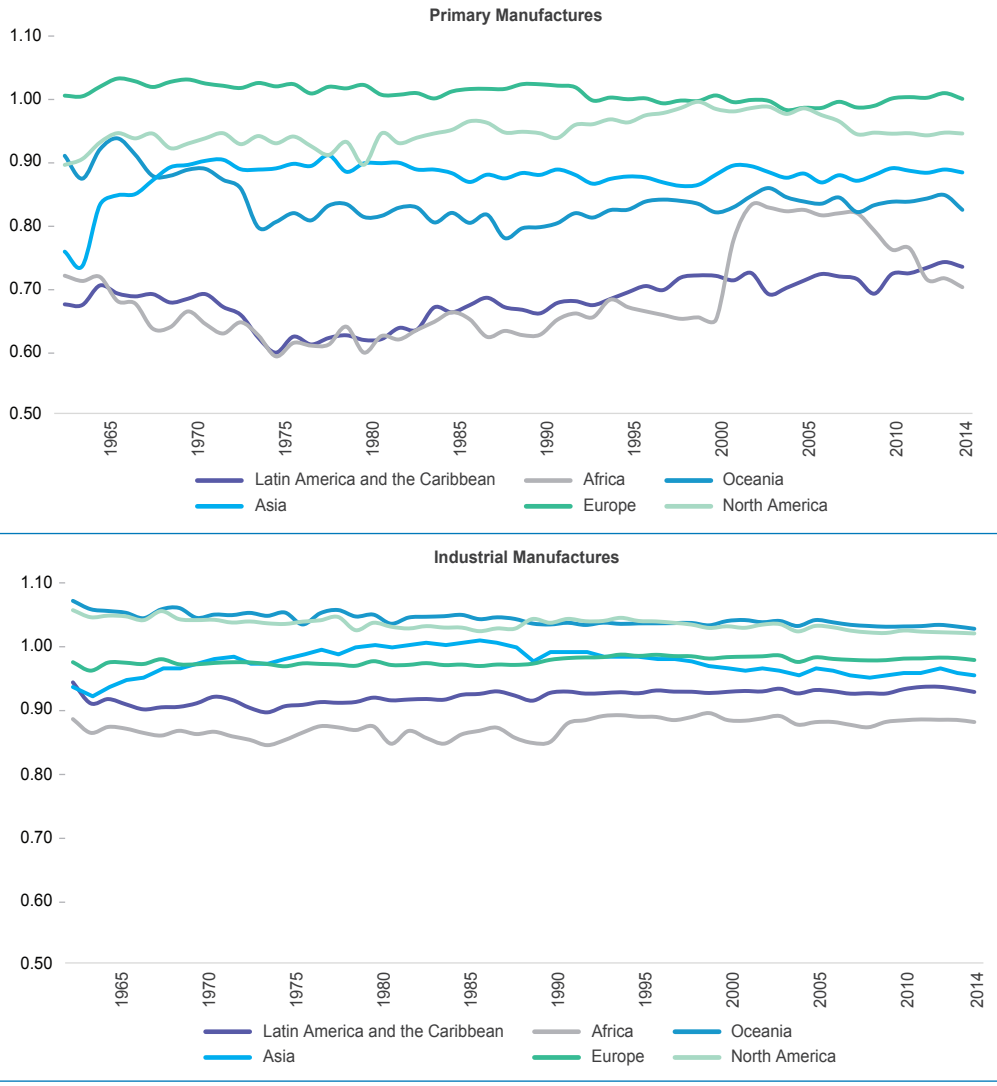
Source: IDB Integration and Trade Sector with data from the IMF.
Note: See Methodological Annex 5 for a detailed explanation of how the aggregate quality indexes were constructed and how the data was used. The gap depicted in bars corresponds to the aggregate quality index for Asia minus the one for LAC. North America does not include Mexico, as it is included in LAC. Guyana is not included in LAC due to lack of data.

FIGURE 18 • EXPORT QUALITY BY REGION AND PRODUCT CATEGORY
(Index, 1963–2014)



(*continued on next page*)

FIGURE 18 • EXPORT QUALITY BY REGION AND PRODUCT CATEGORY *(continued)*
(Index, 1963–2014)



Source: IDB Integration and Trade Sector with data from the IMF.

of the global distribution. Consequently, quality is less dispersed within groups such as IM at the country level, which have higher indexes. However, this result cannot be interpreted as this group being of higher quality than, as an example, primary manufactures. See Methodological Annex 5 for a detailed explanation of how the different indicators were constructed. Note that gold and fuel and energy products were excluded from the analysis since they exhibit relatively homogeneous quality levels and bias the results due to their impact on the region's export pattern. As a result, the aggregate indexes for economies that intensively export these goods are based on incomplete export baskets.

an intermediate position in comparison with the advanced economies. However, regarding PM, which are characterized by higher value-added and greater opportunities for differentiation due to variations in quality from one region to the next, LAC is at the lower end of the distribution, its performance being similar to that of Africa.[20] In the IM category, there is less heterogeneity among regions, greater stability, and the indexes are higher. Although LAC is second to last, it has gradually increased quality in this category, narrowing the gap with Asia in recent years.

The aggregate quality index depends on the composition of the export basket.

The different regions' export baskets have evolved over time, which has contributed to the variation in aggregate quality indexes. In particular, all regions of the world saw an increase in the share of industrial manufactures in their export baskets in detriment of primary products up to around the year 2000, when this trend was reversed.[21] Consequently, the increase in the quality of LAC exports that took place mainly in the 1980s and 1990s was due to an increase in the quality of primary manufactures but also to the higher share of industrial manufactures in the export basket (Box 6).

Within the region, Brazil's progress in terms of quality is noteworthy.

Regardless of the relative weight of the factors determining aggregate quality, the performance of this index varied among LAC subregions (Figure 19). In the distribution, Mexico and the Caribbean[22] stand out in the upper part, Brazil and Central America are close to the average, while the Rest of the Pacific Alliance countries, the Rest of MERCOSUR, and countries Intensive in Fuels and Energy are in the lower part.[23] Furthermore, these trajectories vary over time. While for Brazil the trend was positive during the period in question

[20] The leap in the quality of primary manufactures that Africa experienced in the early 2000s is due to the reconfiguration of its export basket as diamonds—of high value and quality index—came to play a more significant role.

[21] Since in most regions industrial manufactures are characterized by a relatively higher quality index than PP and PM, the change in the composition of the export basket had a positive effect on the aggregate quality index. In 1963, the starting point of the sample, IM represented 4% of exports in LAC. They rose to a high point of 68% in 2002 before falling to 46% in 2014. In contrast, PP went from a peak of 77% in 1963 to 17% in 2002, before climbing back to 29% in 2014. PM evolved more steadily, representing 20% in 1963, 15% in 2002, and 24% in 2014. In other regions, there was a change in the weight of different product groups within the export basket, although their specific magnitude varied.

[22] The high concentration of exports from this region biases the aggregate indicator. 59% of Caribbean exports are concentrated in just three high-quality products: other inorganic bases and metallic oxides, alcohols and phenols, and iron and steel powders, mainly traded by Trinidad and Tobago and Suriname. If these goods are excluded from the calculation, the aggregate quality index for the Caribbean in 2014 would be 0.8, positioning the subregion at the same level as the Rest of the Pacific Alliance.

[23] See footnote 7 for the breakdown of the different regions used in this report.

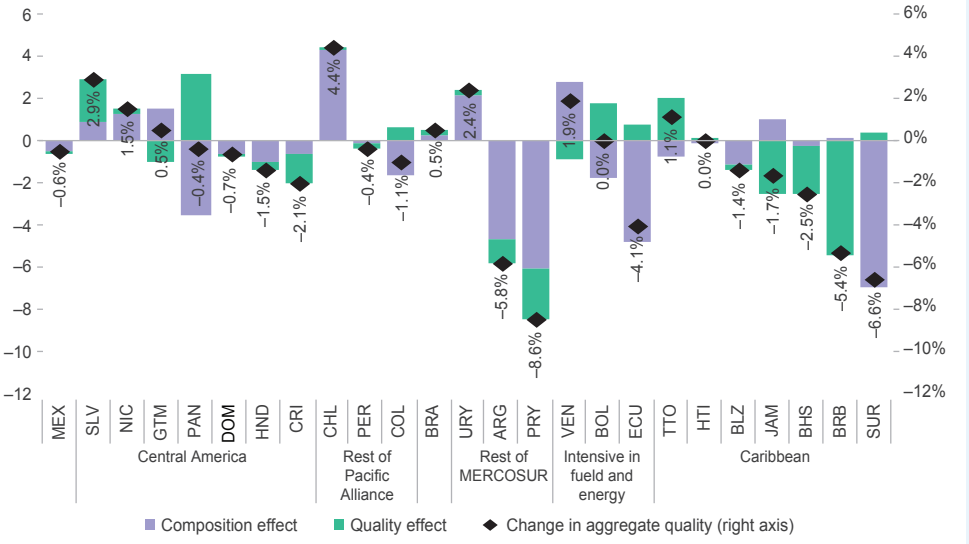
BOX 6: DECOMPOSITION OF VARIATIONS IN THE QUALITY INDEX

The breakdown of the variation in the aggregate quality index for each country due to the effects of changes in the quality index for each product, and the variation due to changes in the composition of the export basket, reveals that in LAC countries the composition effect tends to dominate, although there is heterogeneity.

For example, between 2010 and 2014, the countries that experienced the greatest quality index increases were Chile (4.4%), El Salvador (2.9%), and Uruguay (2.4%). In all three cases both effects had a positive impact. However, while more than 90% of the increase in Chile and Uruguay was due to the composition effect, in El Salvador 71% of the increase was driven by the quality effect. In other cases, the effects were the result of opposing forces. Consequently, although aggregate quality increased for both Venezuela and Trinidad and Tobago (by 2.4% and 1.1%, respectively), in the former, the composition effect offset the decrease in quality at the product level, while in the latter, the increase in quality outstripped the negative composition effect.

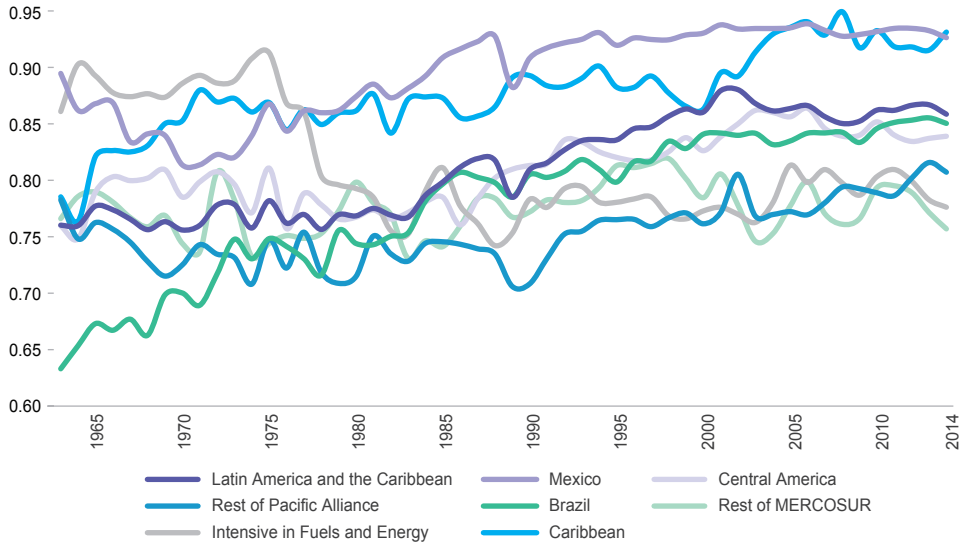
The countries that experienced the greatest decline in the quality index include Paraguay (–8.6%), Suriname (–6.6%), and Argentina (–5.8%). In the cases of Paraguay and Argentina, where both effects were negative, the change in the composition of the export basket contributed 71% and 82%, respectively. In Suriname, the small increase in product quality was not enough to offset the change in the weights of goods in the export basket. Other countries, where the decrease driven by the composition effect outweighed other factors, include Mexico, Dominican Republic, Colombia, Belize, Honduras, and Ecuador. In contrast, the drop in aggregate quality at the product level was particularly significant in Jamaica, Costa Rica, Bahamas, and Barbados.

COMPONENTS OF THE VARIATION IN THE AGGREGATE QUALITY INDEX FOR LATIN AMERICA AND CARIBBEAN EXPORTS BY COUNTRY
(Growth rate, percentage points and percentage, 2010–2014)



Source: IDB Integration and Trade Sector with data from the IMF.
Note: Country classifications are listed in footnote 7.

FIGURE 19 • AGGREGATE QUALITY INDEX BY SUBREGION OF LATIN AMERICA AND THE CARIBBEAN
(Index, 1963–2014)



Source: IDB Integration and Trade Sector with data from the IMF.
Note: Country classifications are listed in footnote 7.

and went from being the country with the lowest quality exports to achieve the third place in 2014, the quality of exports of the group Intensive in Fuels and Energy fell sharply between the mid-1970s and early 1980s.[24]

In sum, the evolution of the aggregate quality index suggests that LAC generally lags behind the rest of the world in terms of export quality. Despite the heterogeneity between the different groups of countries, this result suggests that the region is at disadvantage compared to its competitors. However, as changes in the aggregate indicator were driven mainly by variations in the composition of export baskets, the next section examines the distribution of quality indexes by product and their impact on the export structure of the countries in the region.

Export Distribution by Quality Ranks

An analysis of the relative position of export products on global quality ladders by country or region[25] complements the study of aggregate quality, since it allows to

[24] As energy products were excluded from the quality index calculations, in this case only a fraction of the export basket is considered, representing 21% of the total in 2014.

[25] For each year, quality ladders are defined for each product by ranking the quality indexes for all exporters of that product at the global level. See Methodological Annex 5.

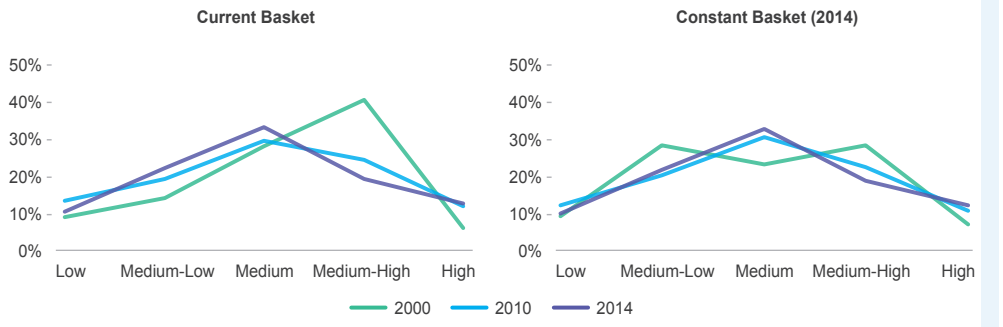
determine the share of exports in each quality rank.[26] Taking 2014 as a benchmark (Box 7), it can be seen that the distribution of LAC's exports is relatively centered on medium-quality products. In contrast, in Africa, 68% of the value of exports is concentrated in the two lowest quality groups, which places that region at the lower end of the distribution. North America and

LAC's exports are mostly concentrated in the medium-quality ranks.

BOX 7: CHANGES IN THE DISTRIBUTION OF THE QUALITY INDEX

The distribution of exports into quality ranks does not reveal drastic variations over the years, as evidenced by the analysis for LAC in the years 2000, 2010, and 2014. Indeed, most of the difference is explained by changes in the structure of the export basket.[a] While the distributions for 2010 and 2014 are very similar, in 2000, medium-high-quality products account for a larger share of exports.

DISTRIBUTION OF LATIN AMERICA AND CARIBBEAN EXPORTS BY QUALITY GROUP
(Percentage)



Source: IDB Integration and Trade Sector with data from the IMF.
Note: The right-hand panel is constructed by maintaining the weight of each product in the 2014 export basket and applying the corresponding quality indexes of the year analyzed.

Specifically, the sum of medium-high- and high-quality goods accounts for 48% of the total in 2000, and this share drops to 37% in 2010 and 33% in 2014. However, if the composition of the export basket is kept constant at the 2014 level, there are fewer differences between these distributions. The share of the group of products described above goes from 37% in 2000 to 34% in 2010, and 33% in 2014. Given that there is almost no difference between the latter two years, this result suggests that LAC's relative quality position has not varied drastically, which serves as a justification for limiting the detailed analysis to the latest available year.

[a] Since trade flows are taken at current values, changes in the structure of the export basket may reflect shifts in the weight of primary products resulting from price increases during the commodity supercycle.

[26] For each 4-digit SITC product, the distribution of each country's exports by quality level is determined and the results are reported in quintiles. The quality ranks are defined as: quintile 1 = low, quintile 2 = medium-low, quintile 3 = medium, quintile 4 = medium-high, quintile 5 = high.

Europe are at the higher end, as more than 90% of their exports are concentrated in the top two groups[27] (Figure 20). The division of goods into three categories (primary products, primary manufactures and industrial manufactures) allows to evaluate the quality profile of the region's export baskets compared to those of its competitors.

In LAC, the quality of bananas and copper ore is noteworthy.

LAC and Africa export a similar proportion of primary products. However, Africa has a more pronounced bias toward low-quality products, while LAC's profile is more balanced and contains a significant share high-quality goods (27% of PP exports). Oceania is highly specialized in these products (which represent 64% of its total PP exports) and is the clear leader, with 80% of their products in the rank of high quality. Iron ore is the most important primary product for all three regions: Oceania's exports are high-quality, LAC's are medium-low, and Africa's are of low quality (iron ore accounts for 55%, 16%, and 15% of PP exports, respectively). In LAC, the quality of copper ore and bananas (high) and fresh fruit (medium-high) are also noteworthy, while it is striking that the region's meat and soybean are only of medium quality.[28]

The quality of primary manufactures is lower.

The distribution of LAC's exports of primary manufactures is similar to Africa's but is more balanced. In both cases, these exports are concentrated in low- and medium-low-quality products (accounting for 66% and 76% of PM exports, respectively) but there are also significant amounts in the high-quality rank (11% and 18%). In both LAC and Africa, the product group with the greatest weight is copper derivatives (16% and 19%, respectively), which are of lower quality than those exported by North America and Europe. Soybean cake and oil also stand out among LAC's exports, although their quality is higher in Europe. High-quality LAC products include wood pulp and wine (6% and 2% of total PM).

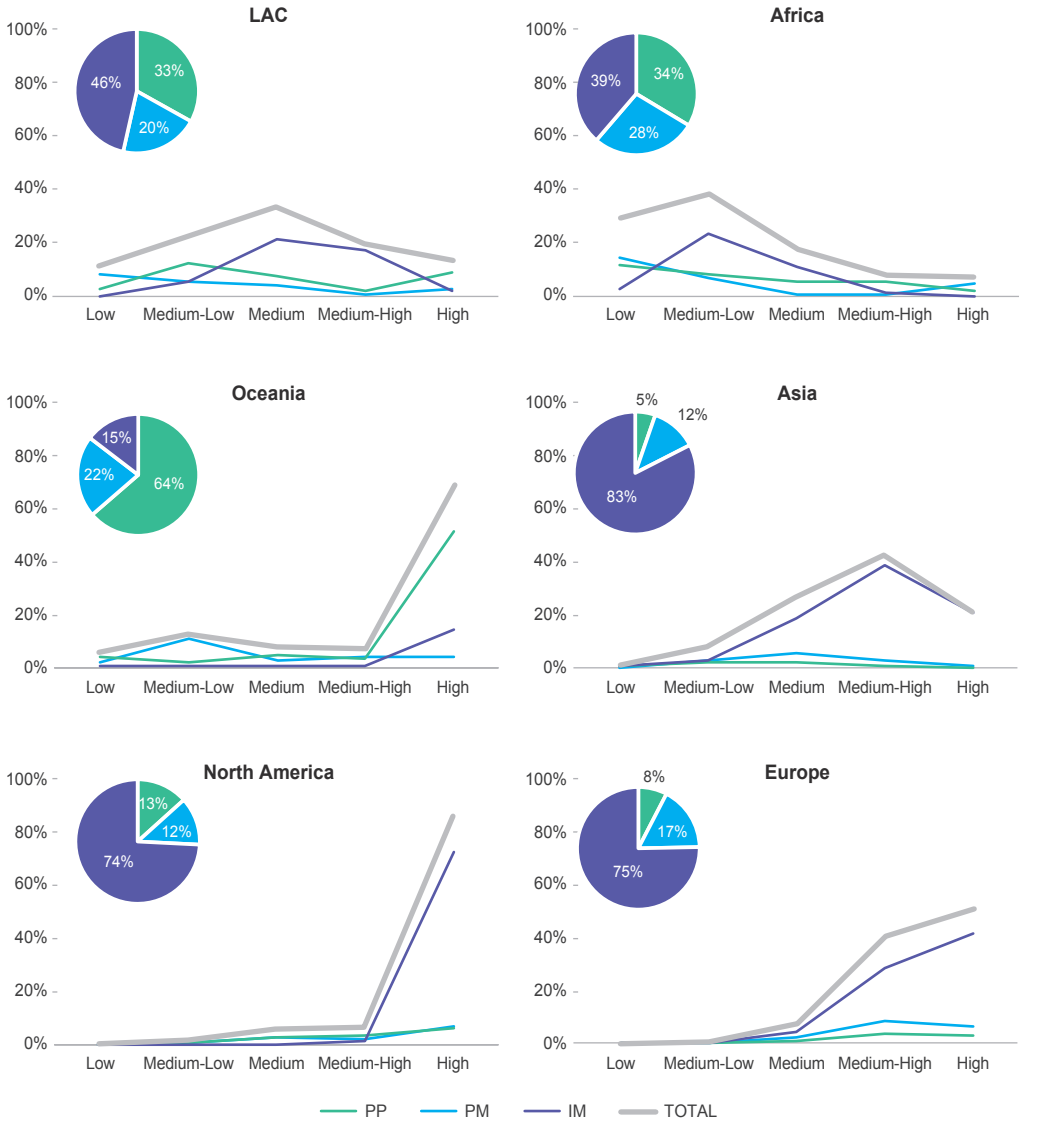
The region lags behind Asia in the quality of industrial manufactures.

In exports of industrial manufactures LAC stands between Africa and Asia, with the bulk of the value in the medium- and medium-low quality ranks (47% and 38% of total IM, respectively). On the one hand, the main products that differentiate Asia from LAC are vehicles (high-quality in Asia and medium-quality in LAC), apparel (medium-quality in Asia and medium-low-quality in LAC), telecommunications equipment (medium-high-quality)

[27] Although the aggregate quality index for 2014 was slightly higher in Asia than in Oceania (0.94 and 0.93 respectively), the proportion of high-quality products is significantly higher in Oceania (69%) than in Asia (21%). This points to the importance of studying how quality is distributed and not only focus on the aggregate index.

[28] The examples described here are purely for illustrative purposes. The products in question represented at least 1% of total exports in 2014. See Statistical Annex 1 for further details.

FIGURE 20 • DISTRIBUTION OF WORLD EXPORTS BY QUALITY RANK AND CATEGORY
(Percentage, 2014)



Source: IDB Integration and Trade Sector with data from the IMF.
Note: The quintiles are determined based on the distribution of the quality index for each SITC 4-digit product. See Methodological Annex 5 for a detailed explanation of how the distributions are constructed.

and data-processing machines (high-quality). Although LAC's exports of the latter two products are of comparable quality, their weight in the region's export basket is much lower than in Asia (1% compared to 11%). On the other hand, LAC stands out from Africa on exports of insulated wires and cables (medium-quality in LAC and medium-low-quality in Africa) and trucks (medium-high in LAC and medium in Africa).

Moreover, medium-high-quality vehicle bodies and parts account for a significant proportion of LAC's exports, while in Africa products of this group are of medium-quality and represent a smaller portion of the export basket.

The distribution of export quality varies greatly.

The distribution of LAC's exports by quality rank varies markedly by subregion. The distributions for Brazil and the Rest of MERCOSUR are similar to the ones for LAC as a whole, although they are slightly biased toward the group of low-quality. Mexico and Central America are biased toward medium-high and medium-low quality products, respectively. In contrast, the distributions for the Rest of the Pacific Alliance and the countries Intensive in Fuels and Energy exports are more polarized. A greater proportion of products falls into the groups of either the high- or medium-low- and low-quality. The Caribbean is noteworthy for its significant concentration of exports in the rank of high-quality[29] (Figure 21).

Most of Brazil's exports are of medium- and medium-low quality.

Most of Brazil's exports fall into the primary products category and are concentrated around medium-quality goods, such as soybean, and medium-low-quality goods, such as iron ore and coffee. Primary manufactures are concentrated in lower quality ranks, with sugar and soybean cake standing out. In contrast, industrial manufactures are divided between medium (passenger vehicles and vehicle bodies and parts) and medium-high-quality (internal combustion engines and electrical power machinery). Lastly, 12% of the country's exports are of high quality (5% of PP, such as leather of bovine and equine, and tobacco; 4% of PM, such as wood pulp; and 3% of IM, such as inorganic chemicals and footwear).

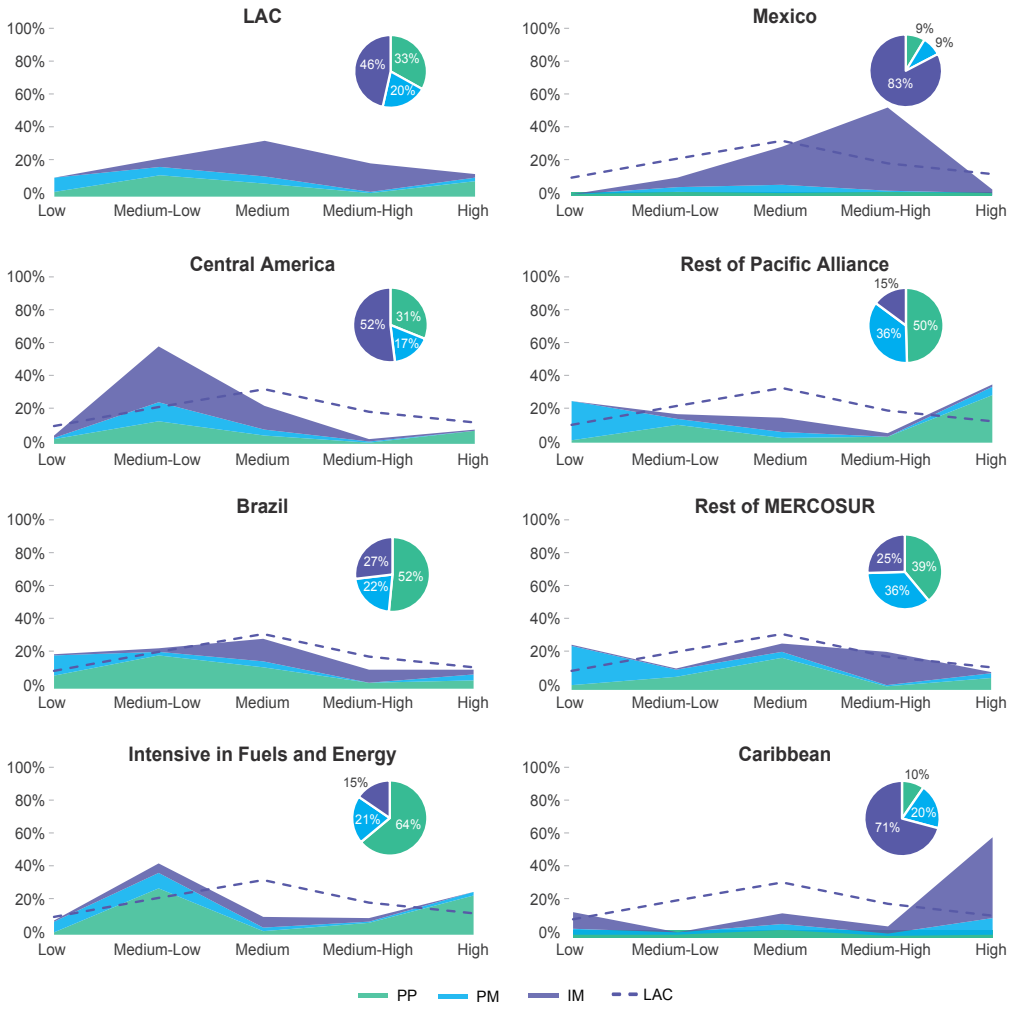
Medium- and medium-high-quality products predominate in Mexico's exports.

Mexico's exports are highly concentrated in industrial manufactures, particularly in the medium-high- and medium-quality ranks. The first group includes passenger transport vehicles, vehicle bodies and parts, and electrical and electronic components. The main products in the second group are insulated wires and cables, furniture, and heating and cooling equipment. Additionally, 4% of Mexico's exports fall into the group of high quality, in which data-processing machines are of particular relevance.

The countries of the Rest of MERCOSUR have a more balanced profile. Medium-quality products, like soybean and bovine meat, and medium-low-quality goods, like maize, dominate the subregion's

[29] See footnote 22.

FIGURE 21 • DISTRIBUTION OF LATIN AMERICAN AND CARIBBEAN EXPORTS BY QUALITY RANK AND CATEGORY
(Percentage, 2014)



Source: IDB Integration and Trade Sector with data from the IMF.
Note: Country classifications are listed in footnote 7.

exports of primary products. Primary manufactures are of low quality, with soybean cake and oil being of particular importance. In contrast, the Rest of MERCOSUR's industrial manufactures are of medium-high quality, with trucks and passenger transport vehicles being the most significant. High-quality products account for a notable 11% of exports, the most significant of which are leather of bovine and equine, wine, and copper ore.

The export portfolio of the Rest of MERCOSUR is more balanced.

Primary products dominate the Rest of the Pacific Alliance's export basket. These are concentrated in the group of high quality and include copper ore, grapes, and bananas. In contrast, the subregion's primary manufactures are at the lower end of the distribution and are mainly composed of copper alloys and meat and fish meals. Within industrial manufactures, medium-quality products such as plastics and apparel and clothing accessories are the most significant. In this category, the group of high quality includes a mere 1.5% of total exports, with chemical elements and rubber tires for vehicles standing out.

Among exports from the Rest of the Pacific Alliance, primary products of high quality stand out.

In Central America 59% of exports fall into the medium-low quality rank. Within this group, the main industrial manufactures are apparel and clothing accessories and insulated wires and cables. The main primary products in the medium-low quality rank is coffee and the main primary manufactures are sugar, cigars, and palm oil. Bananas, however, are in the rank of high quality and account for 8% of total exports. Medium-quality products account for a significant 23% of total exports, the most notable of which are fruits, electrical and electronic components, medical instruments, and medicaments.

Medium-low quality exports predominate in Central America.

Exports of countries Intensive in Fuels and Energy are concentrated in primary products that are mostly of medium-low and high quality.[30] Crustaceans, molluscs, and fish are the most notable products in the medium-low quality rank, while bananas—as in Central America—stand out in the high-quality rank. Primary manufactures are also grouped at either end of the quality spectrum, as illustrated by the main two products in this group: high-quality tin and low-quality wood. Within industrial manufactures, the most significant products are generally medium or medium-low quality.

Exports of Intensive in Fuels and Energy countries are located at the extremes of the distribution.

At first glance, the Caribbean is characterized by a large proportion of high-quality exports, notably industrial manufactures such as inorganic chemicals and alcohols and phenols. Other key products include iron and steel powders (PM) and bananas (PP). These goods represent 60% of external sales, but the remainder of the export basket is largely made up of medium- and low-quality products as: within primary products, medium-quality fish and crustaceans, and low-quality bauxite;

[30] Note that, by excluding energy products from the databases, the analysis does not refer to the main export products of this subregion.

within primary manufactures, medium-quality iron and steel products, and low-quality sugar; and within industrial manufactures, medium-quality fertilizers, and low-quality textiles.

In conclusion, an analysis of the distribution of products by quality category suggests that LAC's exports are relatively concentrated in medium-quality products. However, there is heterogeneity in LAC subregions and, in general, they lag behind their main competitors in terms of quality. Consequently, the question of how much room there is for improving exports by moving up the quality ladders emerges.

The concentration of the Caribbean export basket overestimates its quality performance.

Opportunities for Quality-Based Differentiation

To lay the groundwork for a support strategy aimed at increasing the quality of exports, the analysis of the length of product quality ladders and the relative position of each economy on such ladders provides useful information. It allows the identification of the sectors in which there is room for differentiating exports based on quality.

The quality ladders for each good in the global export basket vary in length.[31] Long ladders show greater dispersion in the indexes of countries' exports and thus entail greater opportunities for quality-based differentiation, while quality levels of products with shorter ladders are more homogeneous. Sectors with long quality ladders and in which an economy is at the bottom of the distribution are the best candidates for strategies based on quality differentiation.

Products with long quality ladders bring opportunities for differentiation.

Aggregating products at the 1-digit level of the Standard International Trade Classification (SITC) reveals that sectors such as machinery and transport equipment, miscellaneous manufactured goods (including textiles and footwear, for example), and chemicals have short ladders, while food, live animals, and animal and vegetable oils and fats have long ladders (Figure 22).

LAC tends to be positioned toward the bottom of the quality ladder for most of the SITC sections with relevant representation in its export basket. The largest product group, accounting

Within industrial sectors opportunities for differentiation are limited.

[31] The length of the quality ladder for a product is defined as the difference between the upper and lower limits of the quality index, which comprises the centered 95% value of global exports. Intuitively, when the quality ladder of a given product is short (long), countries are exporting that product at a similar (very different) quality level.

FIGURE 22 • POSITION OF LATIN AMERICAN AND CARIBBEAN EXPORTS ON SELECTED QUALITY LADDERS

(Index, percentage, 2014)

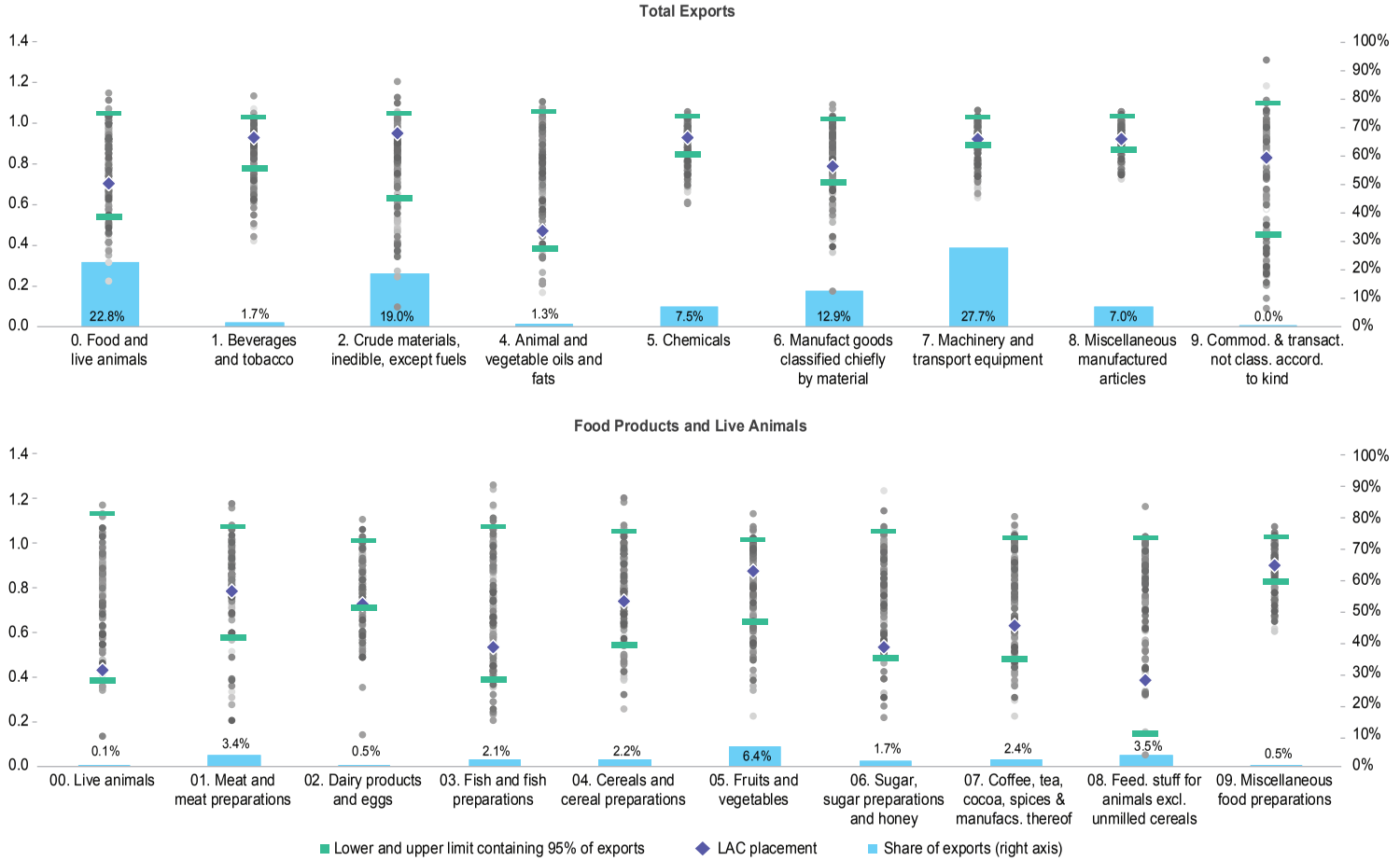


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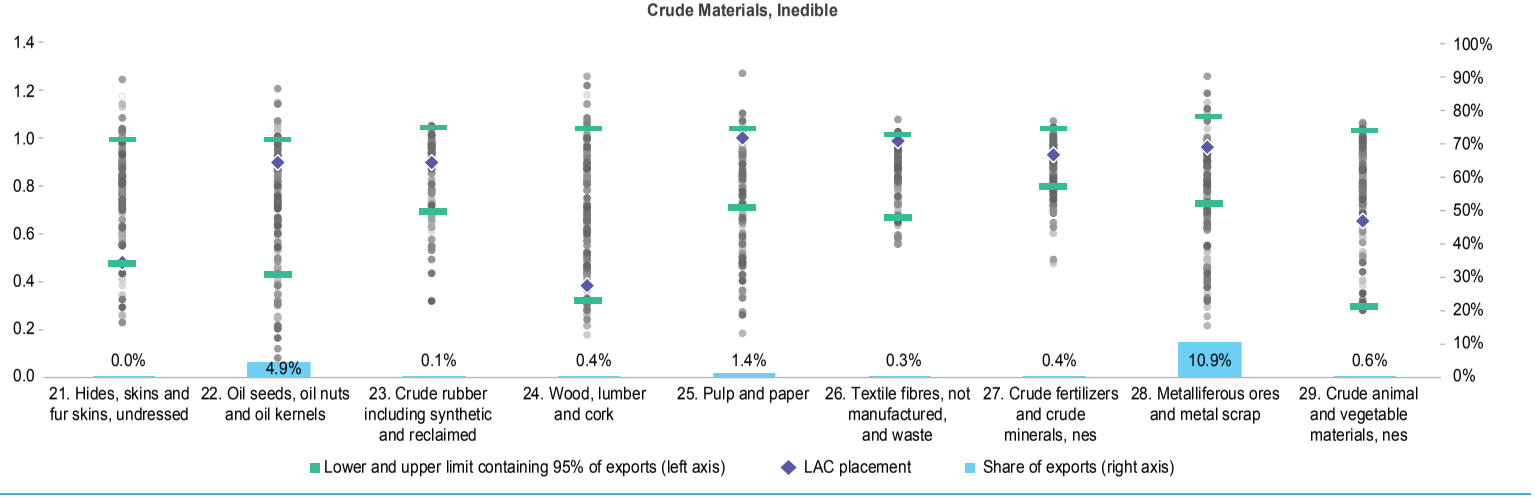
FIGURE 22 • POSITION OF LATIN AMERICAN AND CARIBBEAN EXPORTS ON SELECTED QUALITY LADDERS

(Index, percentage, 2014) *(continued)*



Source: Source: IDB Integration and Trade Sector with data from the IMF.
Note: The horizontal bars represent the lower and upper limits of the quality index, which is the range that contains the centered 95% value of global exports. Each dot represents the quality index for a country. The bars represent the share of each product group in total exports. Quality ladders are reported for total exports and for two specific sections that are examples of the potential for quality increases in LAC. See Statistical Annex 1 for further details.

for 27.7% of exports in 2014, was machinery and transport equipment. However, as the corresponding ladder is short, there is little room for implementing differentiation strategies based on quality increases.[32] This pattern also applies to the rest of the industrial sectors, including manufactures classified by material (notably metals, textiles, paper, and leather), which account for 12.9% of the export basket, chemical products (7.5%), and various other manufactures (such as apparel and footwear) which represent 7.0%.

In contrast, there is potential for a quality increase in the food and live animals section, which accounted for 22.8% of exports in 2014 and in which the region is positioned at the bottom of a long ladder. The divisions that entail specific opportunities for the region to differentiate itself and compete on quality in global markets include animal feed (3.5%), coffee, tea, cocoa and spices (2.4%), fish (2.1%), and sugar and honey (1.7%). An analysis of the growth potential at detailed levels of disaggregation is also necessary. For example, within the food and live animals section, although LAC is better positioned in fruits and vegetables (6.4%) than in other divisions, there is still room for improvement in quality.

There are opportunities for quality improvement in the food and live animals sectors.

The inedible crude materials section is a noteworthy example where LAC is well positioned (19.0% of exports in 2014). The quality of the export supply of oilseeds and paper and pulp are also notable, representing 4.9% and 1.4% of total exports, respectively, as are metal ores and scrap metal, though to a lesser extent (10.9%). However, these success stories coexist with divisions where there is ample room for quality increases, such as hides and skins or wood and cork.

There is potential for quality gains even in successful sectors.

Some countries in the region have managed to climb the quality ladder for certain products and represent success stories, as illustrated for the 2000–2014 period.[33] The quality of Mexico's footwear and bicycles increased significantly. El Salvador is a notable example in Central America as it managed to move electrical machinery and appliances from low to medium-high quality and increased the share of exports from 0.3% to 3.6%. Leather of bovine and equine from

Some products illustrate the benefits of increased export quality.

[32] This section is made up of three divisions, all of which are significant for LAC and defined by short ladders and a low positioning: machinery other than electric (7.2% of exports), electrical machinery (8.3%), and transport equipment (12.3%). The performances of Mexico, Brazil and Argentina all have an influence on this section and the average is therefore not necessarily representative of all the countries in the region.

[33] For each country of LAC, Statistical Annex 1 provides the list of successful products.

Nicaragua and tires from Panama are two other interesting examples. Noteworthy products from the Rest of the Pacific Alliance include bricks from Peru, plywood from Chile (which also improved in Brazil), and tobacco from Colombia. Within the Rest of MERCOSUR, the quality improvement of edible offal from Paraguay, uncombed cotton from Argentina, and synthetic perfumes from Uruguay stands out. The latter went from being a medium-low-quality product with insignificant weight in exports, to a high-quality item accounting for 3.6% of total exports. In the countries Intensive in Fuels and Energy products, Bolivia's copper ore progressed from low to medium quality, while in Ecuador both hats and leather of bovine and equine went from medium to high quality. Finally, in the Caribbean, progress has been made on the quality of rice from Suriname, timber from Barbados and Belize, and beer from Trinidad and Tobago. Although these are very specific examples, they illustrate the potential of investing in differentiation strategies based on quality upgrading.

All in all, this analysis suggests that there are opportunities for LAC to better position itself globally by increasing the quality of its exports. Its aggregate quality index is currently lagging behind the rest of the world and a sizeable share of its exports is of no more than average quality in comparison with the global point of reference. The greatest opportunities are in sectors where quality ladders are long and LAC is currently located at the bottom of the distribution, such as in the food and live animals sector.

However, quality is just one aspect of trade sophistication, which is a driver of economic growth. The next chapter analyzes other factors that relate to the complexity of trade patterns and the complementarity of production processes, which are strongly related to the organization of the regional market.

4 The Competitiveness Lag in the Regional Market

Latin America and Caribbean's intraregional trade structure is markedly different from its extraregional pattern. The intraregional export basket is more diversified, has a higher share of manufactures, greater technological density, and higher levels of quality. However, a medium-term analysis of export performance in the post-crisis period shows that Latin America and the Caribbean has become less competitive and has lost ground as a supplier within its own region, particularly in the sectors that most impact the sophistication of total exports. This highlights the importance of expanding and deepening regional integration, which has enabled other areas of the world to move toward more complex productive schemes and more sophisticated trade patterns.

To build on the analysis of the qualitative characteristics of Latin American trade studied previously, this chapter assesses the region's capacity for positioning itself in the most sophisticated segments of international trade through regional integration.[34] First, it examines the evolution of the export structure to illustrate how the composition of LAC's intraregional and extraregional flows differ. Next, it breaks down the variation in intraregional flows during the post-crisis period to describe the competitive position in the Latin American market, particularly in the most sophisticated segments.[35] Finally, it evaluates the impact of regional integration on the transformation of productive complementarity linkages, and it identifies LAC's shortfalls in promoting integrated value chains. The results reveal the limits of the strategies of international insertion of the last decades and point to an urgent need to

[34] This study complements the perspectives of previous editions of the Trade and Integration Monitor. In particular, it expands on the study of competitive positioning in global markets presented in Giordano (2017) and focuses more closely on the intraregional market. As in previous editions, the publication focuses solely on analyzing the intensive margins of export growth valued at current prices, while Giordano (2016) examines the competitive position of exports at constant prices.

[35] Although this analysis of LAC's trade competitiveness is unprecedented, it does not seek to be an exhaustive discussion of all the determinants of productivity and competitiveness, which are rooted in a set of phenomena that are not exclusively related to the ability to compete in global markets. For a complete discussion of this issue, see Pagés (2010) and Crespi *et al.* (2014), for example.

support firms as they attempt to position themselves competitively in more complex segments of regional and global trade.

The Sophistication of the Intraregional Trade Pattern

The intraregional export basket is more diversified.

LAC's intraregional and extraregional trade patterns differ markedly in terms of sophistication.[36] First, exports within the region are more diversified than exports to the rest of the world. Between 2011 and 2016, the number of products that accounted for 75% of exports was higher in most economies' intraregional exports, except in some Caribbean countries and Bolivia (Figure 23). On average, between 2011 and 2016, this indicator was over twice as high as the one for extraregional trade in 17 out of the 26 countries analyzed. The greatest difference in concentration was in Brazil; 214 products represented 75% of exports to its regional partners, while just 36 accounted for that share of exports to the rest of the world. Even Mexico's exports, which are concentrated outside the region, were more diversified within LAC.

Exports within LAC include a greater number of products.

An analysis of the number of products that make up the basket of LAC's exports by destination, also reveals that intraregional sales include a greater variety of products (Figure 23). Ranking countries according to the average number of products they exported to different regions of the world between 2011 and 2016, it can be seen that the intraregional export basket for half the countries (median) contains at least 1,636 products, more than twice than the export basket to the U.S., the EU, and Asia. Indeed, the country median export basket to Asia contained just 323 products, a fifth of the quantity exported within the region. Likewise, the basket for the third quartile (the value below which 75% of countries are positioned) for the regional market contained 3,000 products, which is notably higher than the 1,382 being exported to the U.S., 1,026 to the EU, and 604 to Asia. The widest LAC export baskets belong to the region's two largest economies, Brazil and Mexico. In both cases, the number

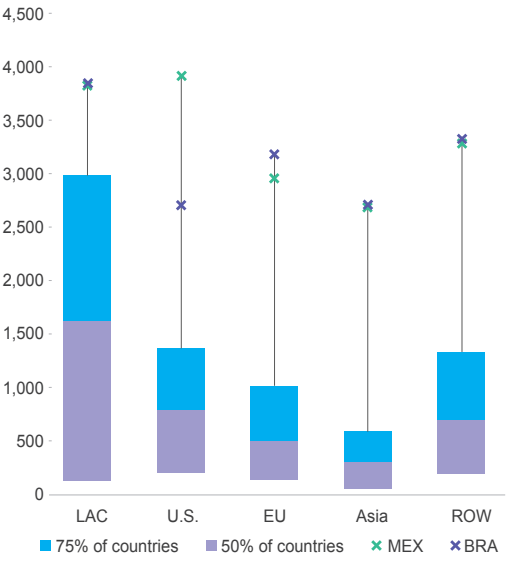
[36] The indicators frequently used to summarize export sophistication were initially conceptualized by Lall *et al.* (2006) and Hausmann *et al.* (2007) and then refined by Hausmann and Hidalgo (2009). They have been statistically associated with economic growth dynamics (Cherif *et al.*, 2018). The assumption underlying these indicators is that the overlap in the structure of a country's export basket with that of the most advanced economies points to the level of sophistication of its exports, without the need for further data which is generally not available. Given that in Latin American countries these indicators tend to entail biases that affect their interpretation, this study opted to characterize sophistication differently, considering the diversification, sector structure, technological density, and quality of the export basket.

FIGURE 23 • DIVERSIFICATION OF EXPORTS FROM LATIN AMERICA AND THE CARIBBEAN BY DESTINATION
(Number of products, average 2011–2016)

Quantity of Products Accounting for 75% of Total Export Value

Country	Intraregional	Extraregional
BRA	214	36
MEX	151	124
GTM	116	22
CHL	115	16
ARG	94	22
PER	93	13
SLV	90	23
COL	74	5
HND	70	22
CRI	68	9
DOM	67	33
URY	44	21
JAM	41	8
NIC	22	16
BRB	15	46
BLZ	15	18
ECU	14	4
GUY	8	4
SUR	6	3
PRY	6	4
VEN	4	1
TTO	3	5
HTI	3	7
BOL	2	7
BHS	1	6

Distribution of Countries by Size of Export Basket



Source: IDB Integration and Trade Sector with data from the Database for the Analysis of International Trade (BACI) of the Center for Prospective Studies and International Information (CEPII).
Note: Panama is not included as its data contains a large share of re-exports. The right-hand panel of the figure indicates the variation in the number of products that make up the export basket to each destination. The lower limit of each bar indicates the minimum size of the basket exported to each trading partner. The purple and light blue segments include the size of the export basket of 50% and 75% of the countries in the region, respectively, in ascending order. The top line represents 100% of the region's exporters. The countries with the largest baskets are indicated at the top of the figure. Export basket products are defined at the 6-digit level of the Harmonized System (1996).

of products exported within the region was higher than to other markets, except in the case of Mexican exports to the U.S., which slightly outperformed exports to LAC.

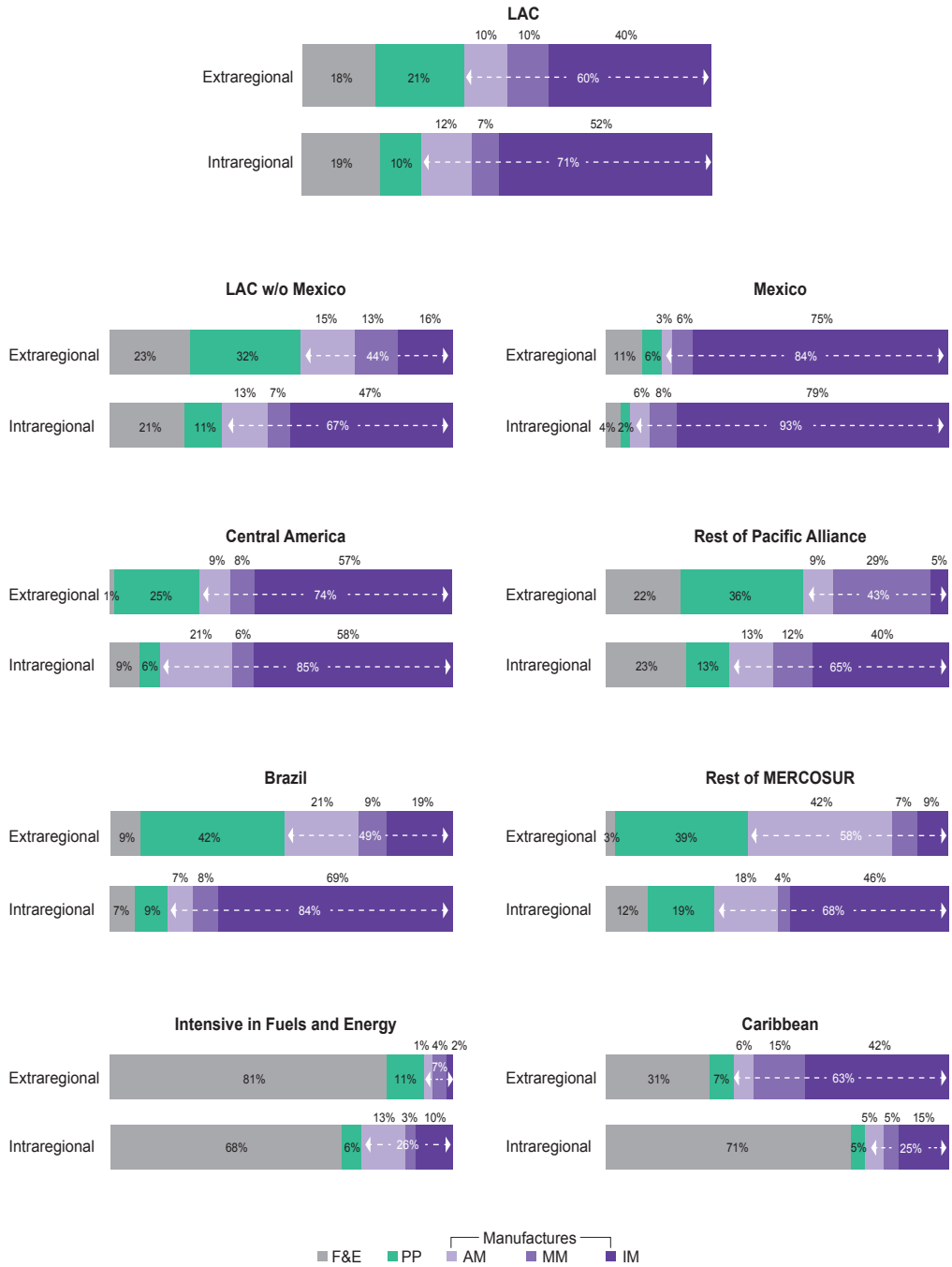
The intraregional export basket is not only broader and more diverse, but it also includes a relatively greater share of manufactures, particularly industrial manufactures (IM).[37] In 2011–2016, an average 71% of exports to LAC were manufactures, 52 p.p. of which were IM, whereas this was true for just 60% of exports to the rest of the world (40 p.p. of which were IM) (Figure 24). Excluding Mexico from the calculations, the pattern is even more differentiated particularly in

Manufactures account for a large share of the intraregional export basket.

[37] The product categories used in the analysis are described in footnote 13. To emphasize the manufacturing sector, PP are presented without disaggregating agricultural products (AP) and mining products (MP). The share of manufactures is significant for several reasons, including the fact that they generally use higher-skilled labor more intensely, have relatively more stable prices, and are more diversified. These factors are associated with lower vulnerability in the external sector, larger shares of small- and medium-sized exporters, and greater value-added.

FIGURE 24 • LATIN AMERICA AND THE CARIBBEAN'S EXPORT BASKET BY CATEGORY

(Percentage and percentage points, average 2011–2016)



Source: IDB Integration and Trade Sector with data from BACI (CEPII).
Note: The list of disaggregated categories is described in footnote 13. Country classifications are liste in footnote 7.

extraregional exports, where the share of manufactures decreased to 44% and IM explained just 16 p.p.. In contrast, primary products were more significant (32%) in almost every LAC subregion, except for the Caribbean. The difference was more pronounced in South American economies,[38] while due to the strong links that Mexico's and Central America's industrial sectors have with the U.S., the share of manufactures in general—and IM in particular—was similar for both intraregional and extraregional sales.

The regional market features more complex trade patterns.

The larger share of manufactures in intraregional trade in comparison with flows to the rest of the world coincides with high levels of intra-industry or two-way trade.[39] This type of trade points to the significance of complex productive complementarity relationships and more sophisticated exchange patterns based on product differentiation and trade in varieties. Although during the period analyzed the share of intra-industrial trade in LAC was lower than in other economic integration areas, horizontal two-way flows were significant, pointing to the importance of the regional market for the specialization in varieties of differentiated products. The largest intra-industry trade flows were the ones between the largest countries, and in areas that have become more integrated. The largest increases in this type of trade in the post-crisis were seen in Central America and in the Pacific Alliance countries (Box 8).

An additional sign of the greater sophistication of intraregional trade is the high density of medium- and high-technology trade flows.[40] Between 2011 and 2016, a third of all LAC's exports (excluding Mexico) was made up of medium- and high-technology products, while these accounted for only 13% of extraregional flows (Figure 25). This was mainly driven by the performance of South American economies.[41] In particular,

[38] In Brazil, manufactures accounted for 83% of sales to regional trading partners (of which 69 p.p. were IM) and for 49% of extraregional sales (of which 19 p.p. were IM). In the Rest of MERCOSUR these shares were 68% (46 p.p. of IM) and 59% (9 p.p. of IM), respectively. In the Rest of the Pacific Alliance, the percentage of manufactures represented 64% of intraregional exports (40 p.p. of IM), and 42% of exports to the rest of the world (5 p.p. of IM).

[39] Intra-industry trade refers to goods from the same industry, branch or group. Fontagné and Freudenberg (1997) and Fontagné, Freudenberg and Gaulier (2005) focus on the product level, rather than branch or industry, and use the concept of two-way trade to refer to simultaneous trade in similar products. See Methodological Annex 6 for details on the construction of the index.

[40] Using Lall's (2000) classification, exports were analyzed in terms of their technological content considering the following five categories: high-technology, medium-technology, low-technology, natural-resource-based manufactures, and primary products. According to the author, low-technology products tend to grow more slowly than high-technology ones, have limited potential for learning, less room for improvement, and limited spillovers on other activities.

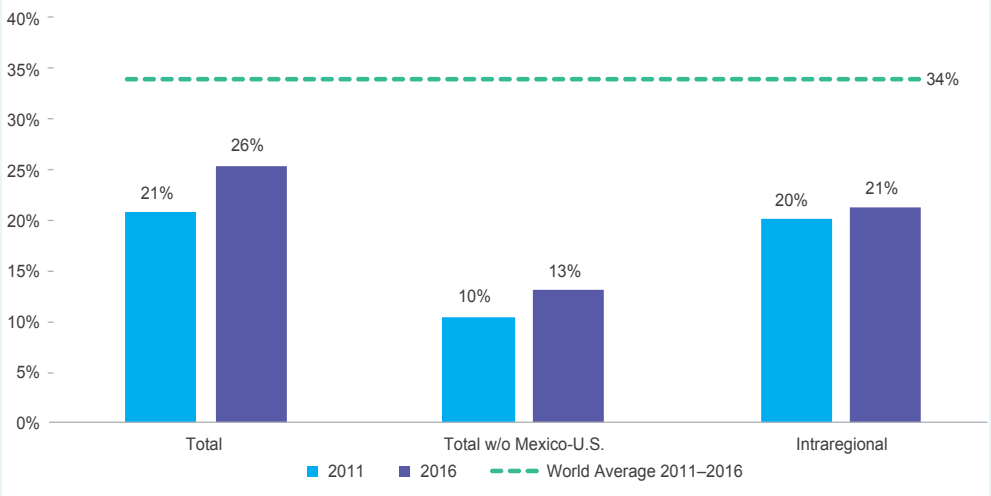
[41] Mexico differs from the rest of the region as the technological density of its intraregional and extraregional flows was similar and was dominated by products with medium- and high-technology content, accounting for

almost 80% of Brazil's shipments to the rest of the world were primary products and natural-resource-based manufactures, while half of its exports to the rest of LAC were medium- and high-technology manufactures. This pattern was also seen in the other

BOX 8: INTRAREGIONAL TWO-WAY TRADE

The literature emphasizes that analyzing trade patterns based on bilateral intra-industry or two-way trade (TWT) within regional blocs is key, as it points to the existence of relationships of productive complementarity and specialization in different qualities and varieties of goods.[a] Between 2011 and 2016, these types of flows represented 34% of global trade, mainly accounting for intraregional trade among countries in North America (including Mexico), the EU, and Asia. The share of TWT in LAC was lower, since it accounted for 26% in 2016. This is highly influenced by the bilateral relationship between Mexico and the U.S., as the share decreases to 13% when excluding the former from the calculation. Restricting the analysis to intraregional trade, the share of TWT reached 21% in 2016. LAC's higher levels of TWT are

TWO-WAY TRADE IN LATIN AMERICA AND THE CARIBBEAN
(Share of TWT in intraregional and total trade, percentage, 2011 and 2016)



Source: IDB Integration and Trade Sector with data from BACI (CEPII).

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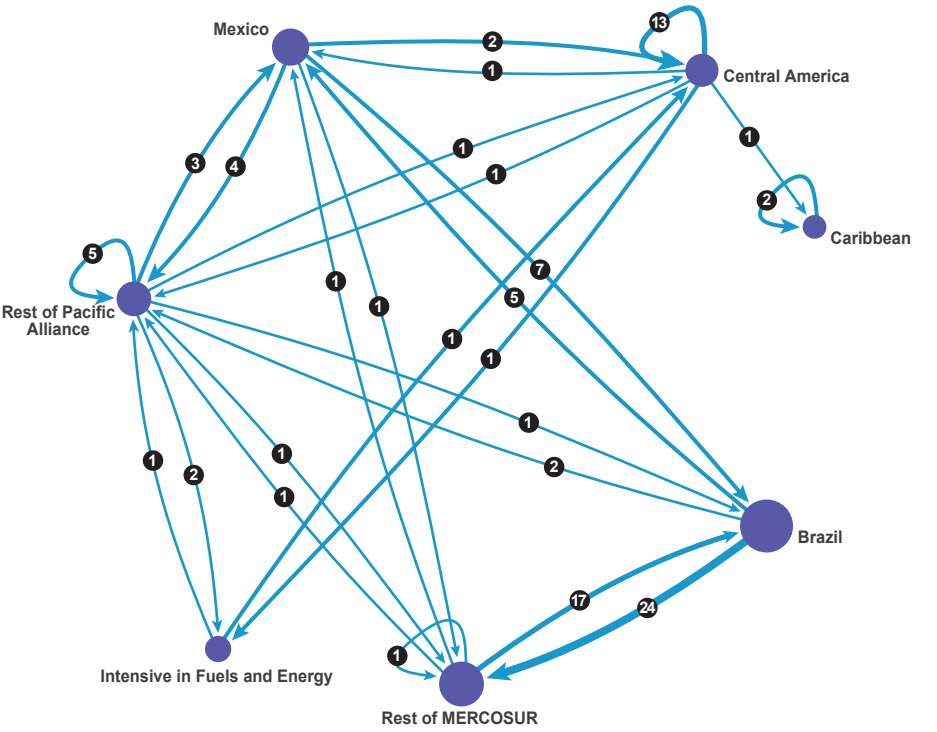
around two thirds of the total in both destinations. Likewise, in Central America the incidence of medium- and high-technology exports within intraregional and extraregional shipments were similar, although they only accounted for one third of the total. The Caribbean showed an opposite pattern with respect to the rest of the region, as categories with higher technology content accounted for a larger share in extraregional exports. However, indicators for the Caribbean are biased by the very high value of methanol exports, some iron manufactures, and platforms for drilling or oil extraction.

BOX 8: INTRAREGIONAL TWO-WAY TRADE *(continued)*

TWO-WAY TRADE IN LATIN AMERICA AND THE CARIBBEAN

(Share of TWT in intraregional and total trade, percentage, 2016)



Source: IDB Integration and Trade Sector with data from BACI (CEPII).
Note: It only shows bilateral relationships that account for at least 1% of total intraregional TWT for 2016 (98% of total TWT).

driven by intraregional trade within MERCOSUR, Central America, and the Pacific Alliance, and between Brazil and Mexico.

Two-way trade may be driven by trade flows of similar products based on quality differentials (vertical TWT) or by trade in varieties of the same quality (horizontal TWT).[b] Horizontal TWT is less common and accounts for only 19% of world TWT. In intra-EU and intra-NAFTA trade, the average share of horizontal TWT for 2011–2016 was above the world average, reaching 26% and 21% of total TWT, respectively, and in Asia it was 18%. The share of horizontal TWT (23%) in intra-LAC trade is above the world average, which reflects the importance of regional markets for complex trade relations of this type.

Taking 2016 as a reference, it can be seen that in certain bilateral relationships there is a high share of TWT, particularly in those involving countries with a larger scale and density of manufacturing. On the one hand, TWT represents nearly half of total Argentina-Brazil and Mexico-Brazil trade, and these two bilateral relationships also account for 51% of the region's total TWT, in which the automotive sector is particularly important. On the other hand, intra-Central American bilateral

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BOX 8: INTRAREGIONAL TWO-WAY TRADE *(continued)*

relations account for 13% of the region's total. TWT intensity is relatively high (33%, on average), driven by textiles, plastics, paper and cardboard, cereal-based preparations, and pharmaceutical products. The countries of the Pacific Alliance also showed high levels of TWT, accounting for 3% of LAC's total, notably in the automotive, fuel, and energy sectors.

Between 2011 and 2016, the share of TWT increased in several country pairs in the region. This trend highlights early signs of qualitative improvements of these flows.[d] This phenomenon

TWO-WAY TRADE IN TOTAL BILATERAL TRADE

Participation in total bilateral trade, percentage, 2016

			Central America								Rest of MERCOSUR			Rest of Pacific Alliance			Intensive in Fuels and Energy		
		MEX	DOM	CRI	GTM	HND	NIC	PAN	SLV	BRA	ARG	PRY	URY	CHL	COL	PER	BOL	ECU	VEN
	MEX		8	18	15	6	1	13	7	46	24	2	3	9	37	8	0	5	2
Central America	DOM			18	14	21	44	29	7	2	1	12	9	6	11	6	0	9	1
	CRI				46	20	13	21	27	6	4	0	2	7	15	18	3	20	4
	GTM					33	12	46	55	1	2	0	1	1	10	4	0	8	0
	HND						11	5	53	3	3	0	0	12	9	37	11	31	0
	NIC							1	6	0	0	0	0	0	0	0	0	0	0
	PAN								31	6	15	1	11	12	6	3	0	41	3
	SLV									0	0	9	0	3	15	1	6	5	0
	BRA										52	4	14	5	13	5	1	3	0
Rest of MERCOSUR	ARG											3	20	14	13	3	1	3	0
	PRY												12	3	6	6	3	14	0
	URY													17	5	2	1	0	0
Rest of Pacific Alliance	CHL														13	31	1	5	0
	COL															30	1	25	7
	PER																5	21	2
Intensive in Fuels and Energy	BOL																	2	1
	ECU																		0
	VEN																		

(continued on next page)

BOX 8: INTRAREGIONAL TWO-WAY TRADE *(continued)*

essentially applies to bilateral linkages between Central America economies and other countries of the region, the most notable of which is the relation Mexico–Costa Rica, and between the Rest of the Pacific Alliance countries (mainly Colombia and Peru) and the Central American economies. Significant increases in the share of TWT among Pacific Alliance countries were also recorded.

TWO-WAY TRADE IN TOTAL BILATERAL TRADE

Change of participation in bilateral trade, percentage points, 2011–2016

		Central America								Rest of MERCOSUR			Rest of Pacific Alliance			Intensive in Fuels and Energy		
		MEX	DOM	CRI	GTM	HND	NIC	PAN	SLV	BRA	ARG	PRY	URY	CHL	COL	PER	BOL	ECU	VEN
	MEX	0	11	7	2	0	6	–1	–7	8	–4	0	4	28	4	–1	1	1
Central America	DOM		10	0	20	43	12	1	–2	0	4	4	1	9	4	0	6	1
	CRI			0	–4	–5	–12	–3	1	2	0	1	0	6	13	1	3	4
	GTM				2	–5	2	5	–2	1	–32	1	1	7	0	0	6	–1
	HND					–1	–15	9	1	1	0	0	10	8	34	5	31	0
	NIC						–9	–4	0	0	0	0	–1	–1	–1	0	0	0
	PAN							5	–7	9	–3	–10	1	–3	0	0	–10	4
	SLV								0	0	0	0	2	14	–1	3	2	0
	BRA									–2	0	0	1	–9	–6	1	–1	–2
Rest of MERCOSUR	ARG										–2	–3	–2	4	–1	0	1	0
	PRY											2	0	–3	6	–9	3	0
	URY												7	–6	1	0	0	0
Rest of Pacific Alliance	CHL													7	10	0	–1	0
	COL														5	1	4	–3
	PER															0	10	1
Intensive in Fuels and Energy	BOL																2	1
	ECU																	–1
	VEN																	

Source: IDB Integration and Trade Sector with data from BACI (CEPII).

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BOX 8: INTRAREGIONAL TWO-WAY TRADE *(continued)*

In short, in a context of relatively weak growth in global and regional trade, the significance of TWT for some pairs of countries and its evolution suggest that the integration instruments of these countries are gradually maturing.

[a] See, for example, Porta (2008), Lucángeli (2008) and Fontagné and Freudenberg (1997).
[b] Vertical TWT is two-way trade in similar products with different unit values, which is deemed to imply differences in quality. Horizontal TWT is simultaneous trade in similar products with similar unit prices, in other words, products of a similar quality but of a different variety (see Methodological Annex 6).
[c] Ecuador–Panama trade is also significant, as it represents 2% of total TWT in the region and TWT accounts for 41% of total bilateral trade. However, in this case TWT is essentially trade in fuels. Although Panama is not an oil-producing country, it has free zones where oil can be stored, refined, transformed, manufactured, exported, and re-exported, among other things.
[d] It should be clarified that as the indicator is based on a share, the increase in the share of TWT may be due to a drop in inter-industry (one-way) trade, combined with a rise in TWT or a smaller drop in the latter. In any case, TWT has been more resilient during the post-crisis period, when its share rose.

Most of LAC's exports with higher technology content are sold to the region itself.

subregions of South America. More than 90% of extraregional exports were primary products and natural-resource-based manufactures, while medium-tech manufactures were only significant in intraregional flows, although of differing intensity.

Finally, the sophistication of intraregional trade flows is reflected in the quality composition of the export basket. Using the quality-based product classification presented in the previous chapter, an analysis of trade flows in the period of study shows that 58% of LAC's exports (excluding Mexico) to the rest of the world were low- or medium-low-quality, while 60% of intraregional shipments were medium- or high-quality (Figure 26).[42] This pattern reflects, to a large extent, the composition of exports from Brazil and the Rest of MERCOSUR, as exports to the rest of the world were visibly biased toward low- and medium-low-quality products and accounted for around half of total flows in both cases. In contrast, most exports within the region were medium- and medium-high-quality (72% in Brazil and 66% in the Rest of MERCOSUR). Furthermore, the composition of exports from Mexico, Central America, and countries Intensive in Fuel

Intraregional export flows are of higher quality than extraregional exports.

[42] Five ranks were used for the analysis of the quality of export flows: low, medium-low, medium, medium-high, high (see footnote 26 for further details). To carry out this analysis, results from Chapter 3 were used and the following assumptions were made: i) since product quality does not vary significantly over time, quality levels for 2014 were assigned to exports for 2011–2016; ii) there are no differences in quality for a given product exported within the region or to the rest of the world. The only products included in the analysis are those with available quality data, which on average account for 93% of total intraregional trade in LAC between 2011 and 2016.

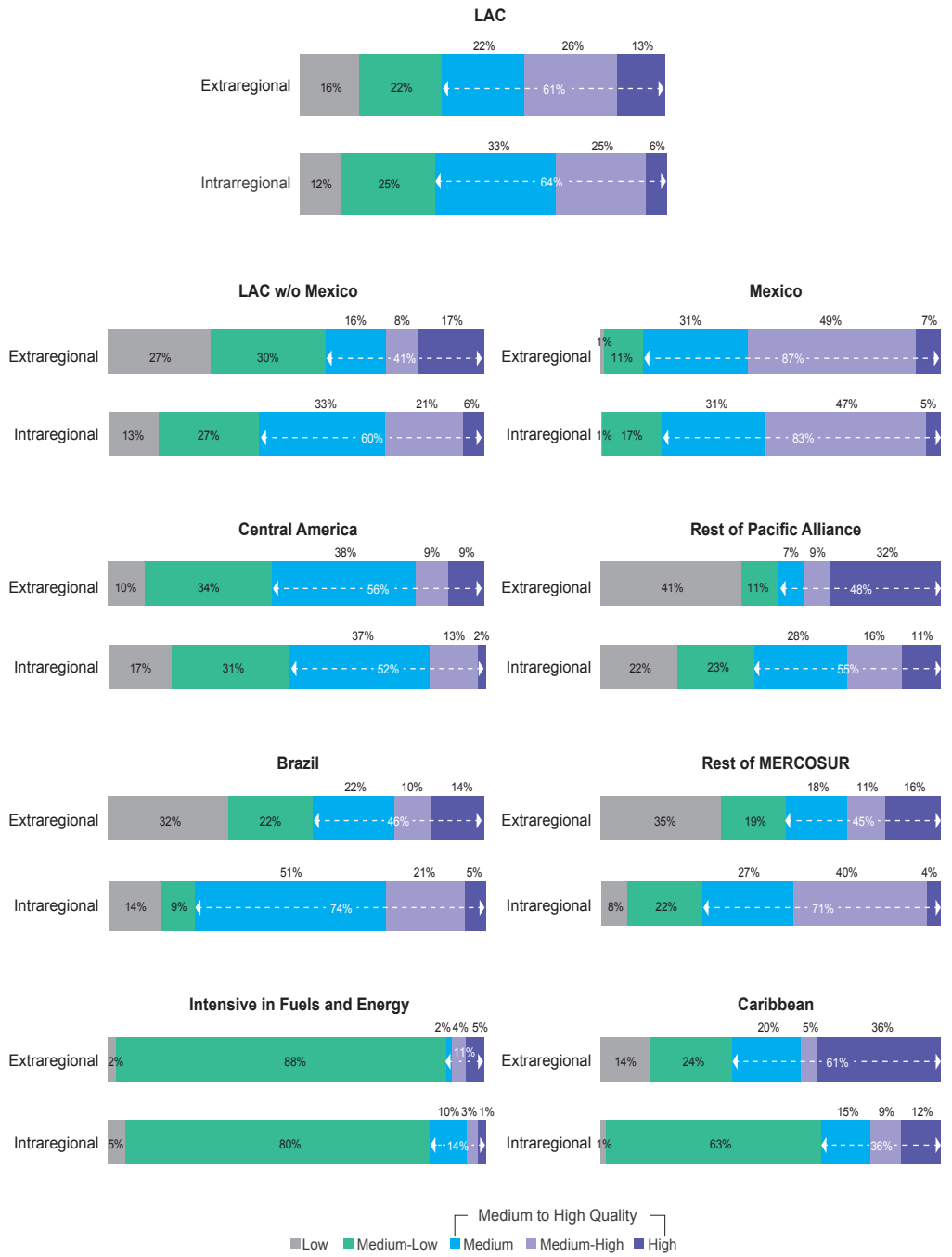
FIGURE 25 • LATIN AMERICA AND THE CARIBBEAN'S EXPORT BASKET BY TECHNOLOGICAL CONTENT

(Percentage, average 2011–2016)

Source: IDB Integration and Trade Sector with data from BACI (CEPII) and Lall (2000).
Note: Exports are disaggregated on the basis of the five technology content categories listed in footnote 40.

FIGURE 26 • LATIN AMERICA AND THE CARIBBEAN'S EXPORT BASKET BY QUALITY RANK

(Percentage, average 2011–2016)



Source: IDB Integration and Trade Sector with data from BACI (CEPII) and the IMF.
Notes: Exports are disaggregated based on the five quality ranks listed in footnote 26. The Caribbean does not include Guyana due to lack of data on quality in the IMF database.

and Energy both within and outside the region was more homogenous, although the quality ranks varied. Medium-low-quality products predominated among Intensive in Fuel and Energy exporters, medium- and medium-high-quality products stood out for Mexico, while medium- and medium-low-quality products did so for Central America, although the significance of medium-high-quality goods in intraregional flows should also be noted. The Rest of the Pacific Alliance showed a different pattern, as it exported products at the two extremes of the quality distribution to the rest of the world,[43] while its exports to the region were primarily medium- or low-quality goods. Unlike the average for the region, high-quality goods predominated in extraregional exports from the Caribbean, while medium-low-quality goods did so in intraregional flows.[44]

In short, it is clear that intraregional flows in LAC are more diversified and sophisticated, as measured through the importance of manufactures, technological density, and quality levels. Likewise, higher complexity of the trade patterns is reflected in the importance of intra-industry trade, which highlights the existence of productive complementarity relationships and trade in differentiated products. However, it is worth considering how the competitive performance of the countries in the region has evolved in recent years within these segments of the intraregional market.

The Competitiveness Lag in the Regional Market

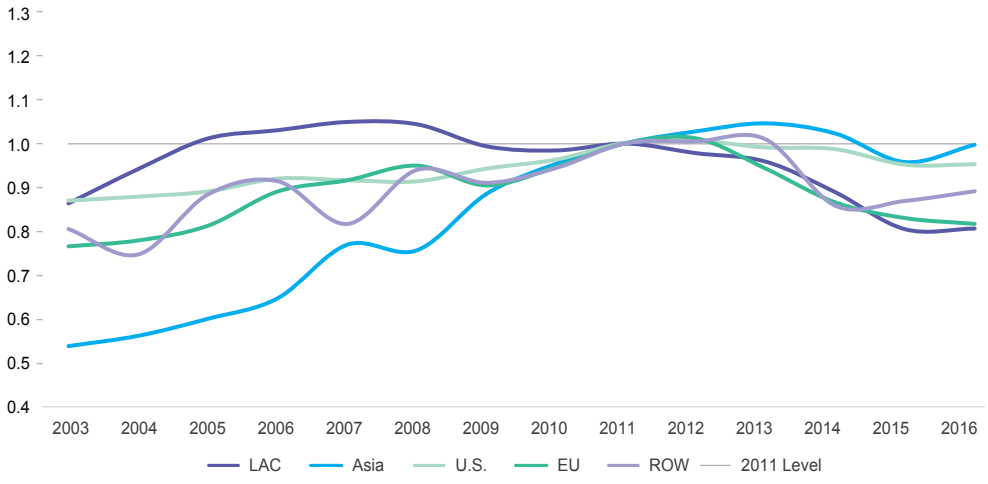
As noted elsewhere, the contraction of LAC's share in global trade during the post-crisis was mainly caused by a decline in competitiveness in the regional market.[45] To describe the trade performance of Latin American economies in the regional market from both a quantitative and qualitative perspective, the next section explores how competitiveness has evolved in the different export categories, broken down by sector, technological content, and quality. This in-depth analysis reveals that in contrast to the expansionary phase preceding the financial crisis, LAC's competitive position within the regional market has weakened. Likewise, the competitiveness lag in the most sophisticated sectors is widening.

LAC's share in the regional market has dropped.

During LAC's most recent trade boom period—between 2003 and 2008—the share of the region's exports to itself increased by 3.7 percentage points (p.p.), from 17.1% to 20.8%, while between 2011 and 2016 the region's market share dropped

[43] Among high-quality products exported by the Rest of the Pacific Alliance to the rest of the world stand out coal and wood pulp, and among low-quality products, copper and unrefined alloys and crude and partially refined oil.
[44] Caribbean extraregional exports are dominated by high-quality organic and inorganic chemicals, while the main intraregional export item is natural gas, a medium-low-quality good. As mentioned earlier, the high value of shipments of a very small number of goods biases the aggregate indicators for the Caribbean.
[45] See the previous edition of the Trade and Integration Monitor (Giordano, 2017).

FIGURE 27 • VARIATION IN LATIN AMERICAN AND CARIBBEAN MARKET SHARE BY PARTNER
(Market share, index 2011 = 1, 2003–2016)



Source: IDB Integration and Trade Sector with data from BACI (CEPII).

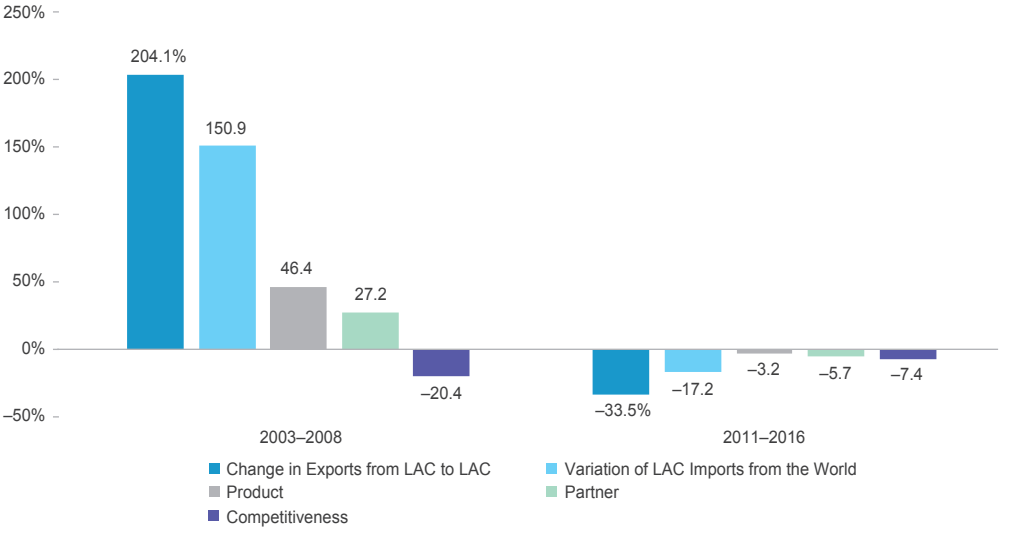
by 3.9 p.p., from 19.9% to 16.0%. Furthermore, a comparison of trade performance in its main destination markets reveals that during the first period, the intraregional market share increased at a higher rate than the shares of other destination markets, except for Asia. In contrast, during the post-crisis contraction, the intraregional market was the one losing the greatest share (Figure 27). It is noteworthy that between 2011 and 2016 LAC maintained its competitive position in the Asian market, marginally reduced it in the U.S., and experienced a 20% drop in its Latin American market share.

The analysis separates the demand and supply effects on export dynamics.

The variation in market share is an indicator determined by both demand factors and the competitiveness of the export supply. It is therefore useful to separate these factors by applying a "shift-share" methodology. Adapting the analysis to the LAC market, three compositional effects (global, product, and partner) that respond to the dynamics and structure of external demand for the region's products, and the effect of export supply performance (competitiveness) can be identified.[46] Of the

[46] The shift-share method has been extensively used in the trade literature due to its simplicity. The most recent contributions have focused on overcoming its main methodological limitation, rooted in the sensitivity of its results to the sequence in which the product and partner effects are calculated. Methods utilized to this end include the econometric techniques described in Cheptea *et al.* (2005) and Gaulier *et al.* (2013). The version used in this report is based on a statistical method similar to that of Piezas-Jerbi and Nee (2009). Given that the focus is on the competitiveness effect, results are not affected by the order of calculation of the product and partner effects. Methodological Annex 7 describes the methodology adopted and the databases used.

FIGURE 28 • DYNAMICS OF THE INTRAREGIONAL EXPORT GROWTH DETERMINANTS FOR LATIN AMERICA AND THE CARIBBEAN
(Growth rate, percentage and percentage points, 2003–2008 and 2011–2016)



Source: IDB Integration and Trade Sector with data from BACI (CEPII).

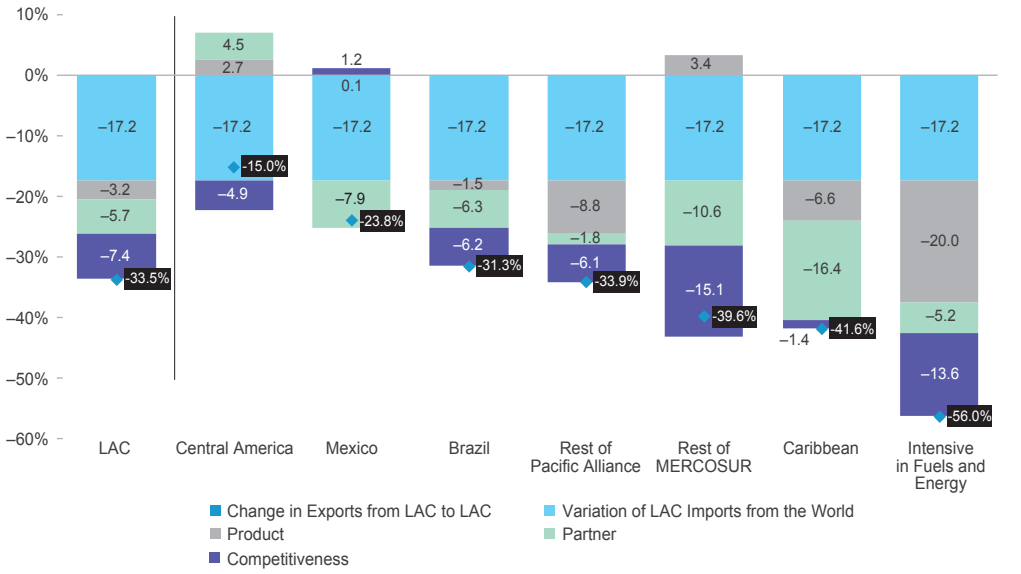
former, the global effect reflects the impact of the overall growth of total LAC imports. The product and partner effects indicate, respectively, changes in the exports growth rate due to the sector-specific and geographical composition of the export basket shipped to LAC. Any residual variation is attributed to a change in competitiveness. Deviations of the compositional or competitiveness effects from the overall trend imply a variation in regional market share.[47]

Applying this decomposition to the growth differential between LAC imports from the world and from within the region itself, reveals the increasing, negative impact of the competitiveness factor (Figure 28). In the first period, which was characterized by a strong increase in LAC's demand (150.9%), the difference in growth in intraregional exports over LAC's global imports (53.2 p.p.) was explained by positive contributions from the product effect (the most dynamic sectors in LAC imports were precisely those where regional partners' exports concentrate) and the market effect (the most dynamic markets for LAC imports were those that absorbed the greatest shares of intraregional imports). In contrast, the competitiveness effect contributed negatively to growth of intraregional exports (–20.4 p.p.). In the

The regional economic crisis was compounded by a loss in competitiveness.

[47] Although repetition is omitted to simplify the exposition, variations in the composition and competitiveness effects should be interpreted as deviations from the variation in the region's total demand.

FIGURE 29 • DETERMINANTS OF INTRAREGIONAL EXPORT GROWTH BY COUNTRY GROUP
(Growth rate, percentage and percentage points, 2011–2016)



Source: IDB Integration and Trade Sector with data from BACI (CEPII).
Notes: Country classifications are listed in footnote 7. The components may not add up to the total due to rounding.

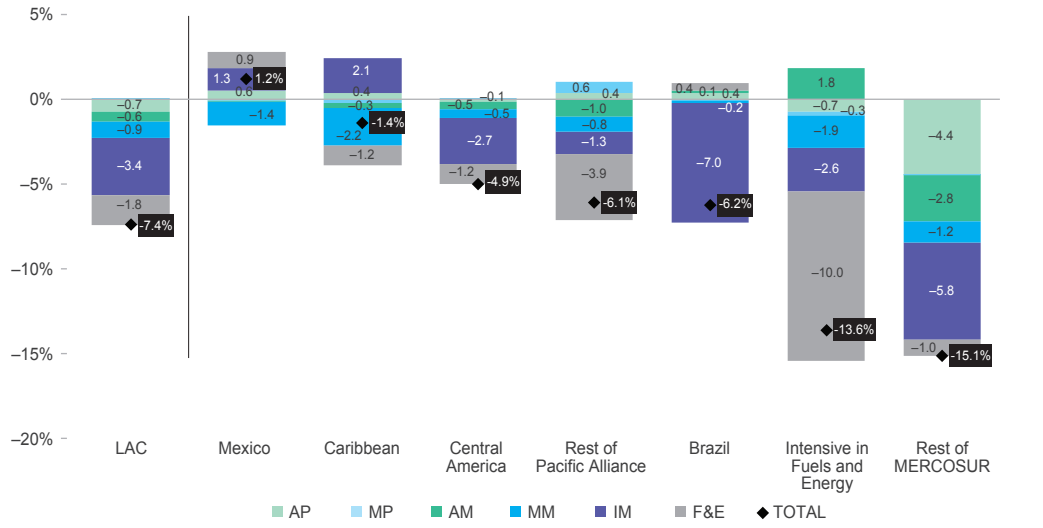
second period, which was characterized by a decrease in demand from within the region (–17.2%), intraregional exports dropped at a rate that outstripped the drop in LAC's total external demand by 16.3 p.p.. Although, due to the economic contraction of some large economies of the region the market effect naturally had a negative impact (5.7 p.p.), the competitiveness effect explained most of the loss in intraregional market share (7.4 p.p.).

During the post-crisis, strong asymmetries emerged in competitiveness performance.

Despite the widespread downward trend in competitiveness in both periods, aggregate data reveals a marked heterogeneity between countries or groups. The following analysis focuses only on the main trends of the post-crisis (2011–2016), contrasting them when necessary with the events of the boom (2003–2008) (Figure 29).[48] Mexico's performance is unique since it is the only country or group whose competitiveness in

[48] This analysis does not contemplate the global component since, by definition, it is the same for all subregions. Although the figures only present data for the post-crisis period, Statistical Annex 2 reports the magnitude of the effects for all countries in the region for both periods. If a product category contributes negatively/positively to the competitiveness effect, it means the region is less/more competitive than the world in exports of that product category. See Methodological Annex 7.

FIGURE 30 • COMPETITIVENESS EFFECT ON INTRAREGIONAL EXPORT GROWTH BY PRODUCT
(Growth rate, percentage and percentage points, 2011–2016)



Source: IDB Integration and Trade Sector with data from BACI (CEPII).
Note: The competitiveness component is disaggregated based on the categories listed in footnote 13. The components may not add up to the total due to rounding.

the intraregional market continuously increased,[49] even though in the post-crisis (1.2 p.p.) it did not compensate for the strong negative impact of the market effect. Central America, whose competitiveness deteriorated as in other countries, benefited from positive product and market effects and was the only group experiencing an increase in its intraregional market share. Among the other countries or groups, all of which were characterized by strong reductions in competitiveness, the Rest of MERCOSUR stands out as the competitiveness effect dominated, whereas in the others the reduction in regional market share was mainly due to product or market effects.

An analysis by sector reveals that LAC's competitiveness in the regional market deteriorated in all product categories (Figure 30). In contrast with the previous period, when the sector of fuel and energy experienced the largest loss of competitiveness, industrial manufactures was the sector that fell most in the post-crisis (–3.4 p.p.). This is particularly evident when Mexico and the Caribbean are excluded from

The drop in the competitiveness of manufactures had a significant impact.

[49] The text only discusses the performance of the countries or groups reported in the figures. See Statistical Annex 2, Table A4 for detailed results for each country in the region and Table A5 for each country's contributions to the competitiveness performance of the subregions reported in the figures.

the calculation,[50] since they were the only ones that increased competitiveness in industrial manufactures (1.3 and 2.1 p.p., respectively). The aggregate result was driven by the impact of the loss in the competitiveness of industrial manufactures in Brazil, the Rest of MERCOSUR, and Central America (–7.0, –5.8, and –2.7 p.p., respectively).[51] The agricultural and mining sectors performance was heterogeneous, although there was a consistently greater loss in competitiveness in manufactures than in primary products. Except for Mexico and Brazil, LAC countries also lost ground as suppliers of fuel and energy to the region.

The competitiveness lag deepened in high-technology sectors.

An alternative sector-based analysis allows isolating the impact of the competitiveness lag in higher technology sectors. For LAC, in the post-crisis there was a clear loss in competitiveness in sectors with the highest relative technological content (Figure 31). Whereas in the previous period competitiveness had increased, there was a downturn in LAC's high-technology sectors (–2.3 p.p.). The impact of the competitiveness lag in the aforementioned sectors was particularly notable in Central America (–7.1 p.p.)[52] and, to a lesser extent, Mexico (–3.6 p.p.), and Brazil (–3.4 p.p.). In the latter, medium-technology sectors also accounted for a significant part of the loss in competitiveness. At the other extreme, for the countries of the Rest of MERCOSUR and the Rest of the Pacific Alliance, the competitiveness lag mainly affected the primary product sectors. However, the Rest of the Pacific Alliance became more competitive in the medium-technology sectors while the Rest of MERCOSUR saw a downturn in all categories.

Finally, including into the analysis the information presented earlier on the quality of exported products it is possible to estimate the distribution of the competitiveness effect in the intraregional market by quality rank (Figure 32).[53] In the post-crisis period, the medium-high- and high-quality sectors accounted for 30% of the loss in

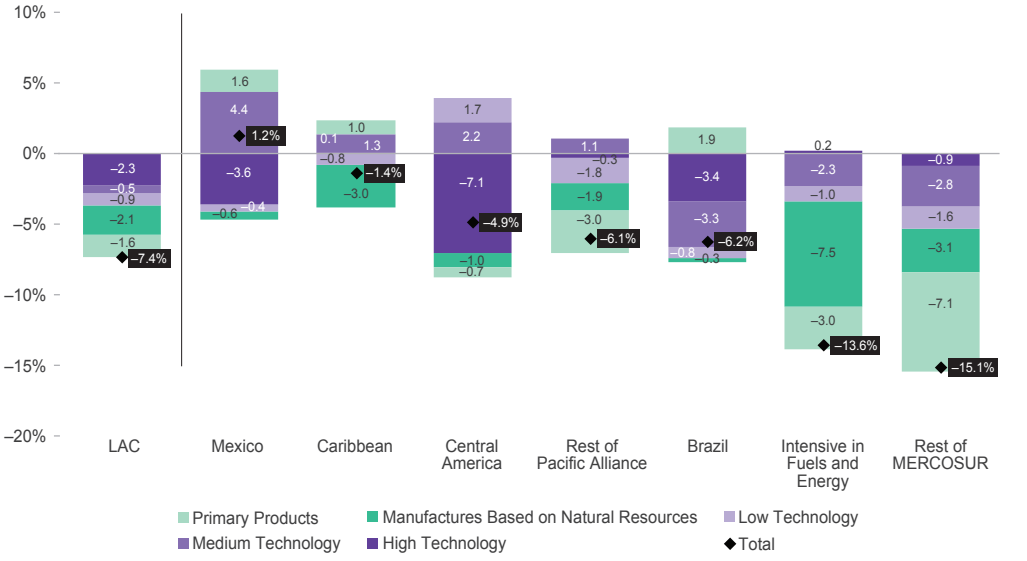
[50] The Caribbean's performance was strongly influenced by Trinidad and Tobago's exports of methanol to Brazil and of drilling rig parts traded with Guyana. These flows contributed the most to the Caribbean's increase in IM competitiveness (2.1 p.p. of the regional value).

[51] Central America's loss of competitiveness in intraregional exports between 2011 and 2016 is explained by Costa Rica's performance. Strictly speaking, Costa Rica substracted 9.9 p.p. to the subregion's export growth, driven by the drop in competitiveness, while in the subregion as a whole, the effect was 4.9 p.p.. This implies that a substantial share of the remaining Central American countries' performances was positive in terms of competitiveness (see Statistical Annex 2.). In particular, IM's negative contribution of 2.7 p.p. to Central America's loss in competitiveness is driven by Costa Rica's –9.4 p.p., which offsets the positive contribution of 6.7 p.p. from the rest of the subregion. Integrated electronic circuits exported to Mexico and Brazil accounted for 85% of the loss in Costa Rica's competitiveness.

[52] Costa Rica accounts for –9.0 p.p. of the –7.1 p.p. total that high-technology products subtracted from the growth in competitiveness of Central American exports, suggesting that the rest of the countries in the subregion improved their performance in high-technology products in the period analyzed.

[53] The categories represent the distribution of intraregional exports in quintiles based on the quality ranks defined in Chapter 3. See Methodological Annex 5. Due to the lack of disaggregated data by destination, the

FIGURE 31 • COMPETITIVENESS EFFECT ON INTRAREGIONAL EXPORT GROWTH BY TECHNOLOGICAL CONTENT
(Growth rate, percentage and percentage points, 2011–2016)



Source: Source IDB Integration and Trade Sector with data from BACI (CEPII) and Lall (2000).
Note: The competitiveness component is disaggregated based on the five technological content categories listed in footnote 40. The sum of the total effect may not coincide with the disaggregation by technological content since products not classified in Lall (2000) are not reported.

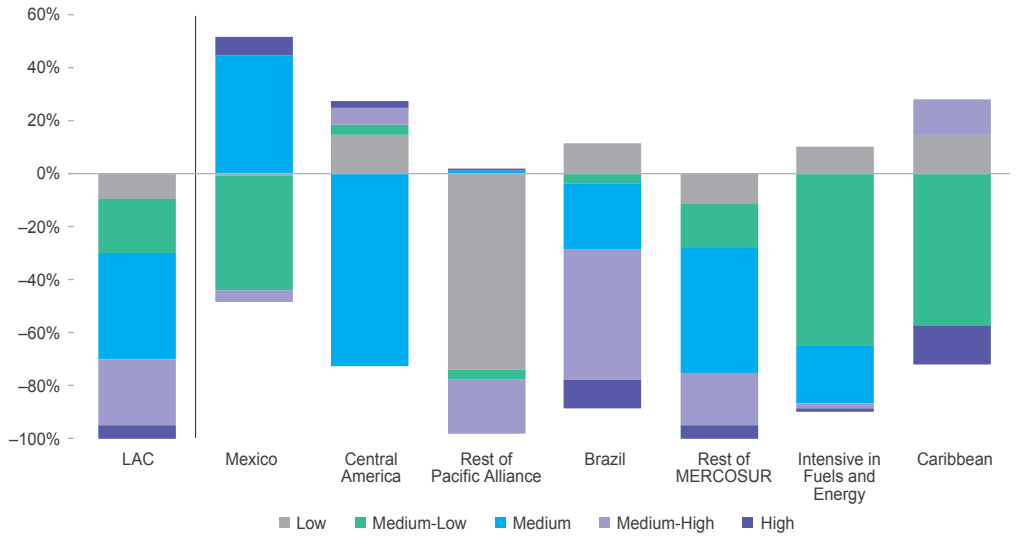
Products of intermediate quality experienced the greatest loss in competitiveness.

LAC's competitiveness, in contrast with the performance in the previous period, where both categories had contributed positively to exports. However, given the significant differences between countries or groups, there are some shared features and some divergences.[54] Improvements in the competitive positioning in the regional market took place exclusively in low-quality products. The main divergences were exhibited by Mexico, where the competitiveness effect had a significant influence in high-quality sectors, and in the countries of the Rest of the Pacific Alliance, Central America, and the Caribbean, where some medium-, medium-high- or high-quality sectors positioned themselves competitively, but with a small impact on overall performance.

quality of exports to the region and to the rest of the world is assumed to be homogenous. The only products included in the analysis are those for which data on quality is available, which on average account for 94% of total intraregional trade in LAC between 2003 and 2016. Consequently, the total competitiveness effect differs from the result reached in the preceding sections and, unlike in the previous figures, the contribution of each product to the total is presented.

[54] Only the results of the countries or groups reported in the figures are mentioned in the text. For detailed data, see Statistical Annex 2.

FIGURE 32 • COMPETITIVENESS EFFECT ON INTRAREGIONAL EXPORT GROWTH BY QUALITY RANK
(Contribution to total variation, percentage, 2011–2016)



Source: IDB Integration and Trade Sector with data from BACI (CEPII) and the IMF.
Note: Competitiveness is disaggregated based on the five quality ranks listed in footnote 26.

In short, an analysis of the evolution of market shares reveals that the most significant decline in competitiveness in the most recent period took place in the regional market. A more detailed analysis suggests that despite the fact that performance varies greatly from one group of countries to another, the competitiveness lag in LAC economies mainly affected the sectors that are relatively more sophisticated, complex, and feature higher value-added. It can thus be inferred, first, that the integration initiatives that have proliferated in the region in recent decades have not contributed to a significant transformation of the export supply and, second, that there is room for rethinking strategies to promote export sophistication through regional integration.

The Impact of Integration on Regional Value Chains

Diversification of trade flows to more sophisticated sectors has been one of the main objectives of LAC's integration policies in recent decades. However, as described in detail in the IDB's latest Special Report on Integration and Trade, although integration policies were somewhat effective in promoting intraregional trade, they did not meet expectations regarding their main objective, boosting

Economic integration was not very effective in promoting competitiveness.

competitiveness.[55] Empirical evidence presented in the previous sections suggests that expectations for a qualitative transformation in intraregional trade patterns were not met either, as a result of the competitiveness lag that built up in the regional market.

To further understand the impact of integration on the qualitative structure of trade flows, an econometric study on the determinants of intraregional goods exports, distinguishing products by its final use, has been carried out.[56] Breaking down trade flows into final consumer goods and productive inputs (primary, intermediate, and capital goods), the effects of the hardware (physical integration) and software (trade integration) components of the regional integration agenda on each type of trade flow are isolated.[57] The main objective of this analysis is to identify the differential effect of these factors on intraregional trade with respect to the rest of the world.[58] Overall, the results point to the limited impact that integration policies had on the development of more sophisticated trade flows, such as in intermediate or capital goods. These goods feed regional value chains and stand out for bringing desirable spillover effects for the economies (Box 9).[59]

This analysis examines the impact of integration on trade in production inputs.

Trade agreements are associated with less complex value chains.

The first specification of the model aims to accurately measure the impact of trade agreements on the development of intraregional trade by categories of goods.[60] In the global sample of over 150 countries, the most significant effect of

[55] See Moreira (2018) for a detailed analysis of the trade effects of Latin American integration policies over the last quarter century.

[56] Goods are categorized as final, intermediate, capital, or primary using a taxonomy that is based on an adaptation of the Broad Economic Categories (BEC) classification. Fuels and products related to the passenger vehicle sector were excluded from the final and intermediate goods categories in the analysis.

[57] Drawing on an analogy that is often used, "integration software" refers to the trade policies and regulatory frameworks defined in free trade agreements, while "integration hardware" indicates complementary policies that seek to reduce the barriers to physical integration. See, for example, Giordano (2012).

[58] The instrument used is an augmented gravity model that includes a trade agreement and bilateral distance variable, as well as controls to distinguish extraregional and intraregional effects. See Methodological Annex 8 for a detailed description of the specification and data. The model builds on the results of one of the specifications included in Moreira (2018). See Head and Mayer (2014) for a review of the empirical literature on gravity models, Limão and Maggi (2015) for applications to preferential trade agreements, and Freeman and Pieknagura (2016) for an estimation of the effects of preferential trade agreements on trade in intermediate goods.

[59] For an overview of the benefits of forming part of global value chains, see Baldwin (2016), for example. In the case of Latin America and the Caribbean, Blyde (2014) provides evidence that regional value chains have not developed as intensely in LAC as in Asia, Europe, or North America.

[60] This specification enables to control for bilateral factors that may bias the estimation of the effect of FTAs, using country-pair fixed effects. However, these fixed effects already control for bilateral factors that are constant over time and therefore do not allow for the distance variable to be included in the specification.

BOX 9: AUGMENTED GRAVITY MODEL WITH INTRAREGIONAL EFFECTS

The gravity equation is an econometric tool used to determine the effect of different structural or policy variables on bilateral trade, such as the implementation of free trade agreements (FTAs).

The econometric specification used in this study focuses on the effect of FTAs and distance on exports by final use (consumption or production input). These two variables are interacted with a dummy variable—which takes the value of 1 when trade is between LAC countries and 0 otherwise—to capture the specific effects within the region. A further interaction contemplates whether trade takes place between a LAC country and a country outside the region. To correctly capture these two effects, two econometric specifications for the determinants of the value of country j's imports from country i, X_{ijt}, are used.

The first specification, which necessarily omits the distance variable, but allows for the country-pair fixed effects, f_{ij}, to be included, is as follows:

$$X_{ijt} = \exp\left(\beta_1 FTA_{ijt} + \beta_2 FTA_{ijt} * LAC_{ij} + f_{it} + f_{jt} + f_{ij}\right) + \in_{ijt}$$

It includes free trade agreements, FTA_{ij}, and interactions with the intraregional dummy. The country-pair fixed effects capture bilateral factors, including distance, which can bias the effect of FTAs. This specification is more suitable for establishing a causality nexus, as fixed effect controls for all bilateral factors, f_{ij}, that might otherwise prevent the effect of trade agreements from being estimated correctly (Baier and Bergstrand, 2007). For example, two countries might sign an FTA because they are already trading significantly with each other and wish to regulate those trade flows. Signing an FTA may appear to have a positive impact, although these countries were already trading more with each other.

The second specification is as follows:

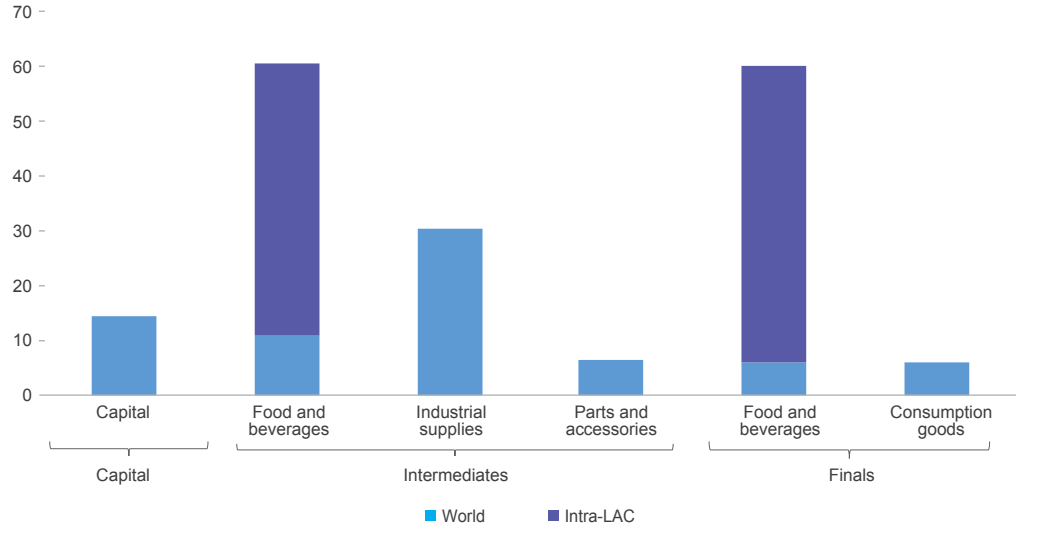
$$X_{ijt} = \exp\left(\beta_1 \log\left(dist_{ij}\right) + \beta_2 \log\left(dist_{ij}\right) * LAC_{ijt} + \beta_3 FTA_{ijt} + \beta_4 FTA_{ijt} * LAC_{ij} + f_{it} + f_{jt}\right) + \in_{ijt}$$

This specification includes bilateral distance, $dist_{ij}$, and geographic and cultural variables that capture natural barriers to trade (a shared border, common language, and colonial ties). Country-of-origin–time fixed effects, f_{it}, and destination-country–time fixed effects, f_{jt}, capture the country of origin's capacity to export to all destination markets and the specific characteristics of the destination market, such as variations in total demand.

Methodological Annex 8 provides additional information on the sources and characteristics of the data panel, the specifications and econometric techniques used for the estimation, and detailed results.

FTAs occurred, in decreasing order, within industrial supplies (intermediate goods), capital goods, and final consumer goods. This suggests that the effect on productive inputs was greater than on final goods. In contrast, within LAC intraregional trade, FTAs gave an extra boost to trade in food and beverages in both the intermediate and final goods categories, outstripping the stimulus to trade in industrial supplies in the intermediate goods category and more complex consumer goods in the final products

FIGURE 33 • EFFECTS OF FREE TRADE AGREEMENTS ON BILATERAL EXPORTS IN THE WORLD AND IN LATIN AMERICA AND THE CARIBBEAN
(Percentage)



Source: IDB Integration and Trade Sector with own estimations.
Note: Results obtained through a log-linear estimation that includes country-pair fixed effects.

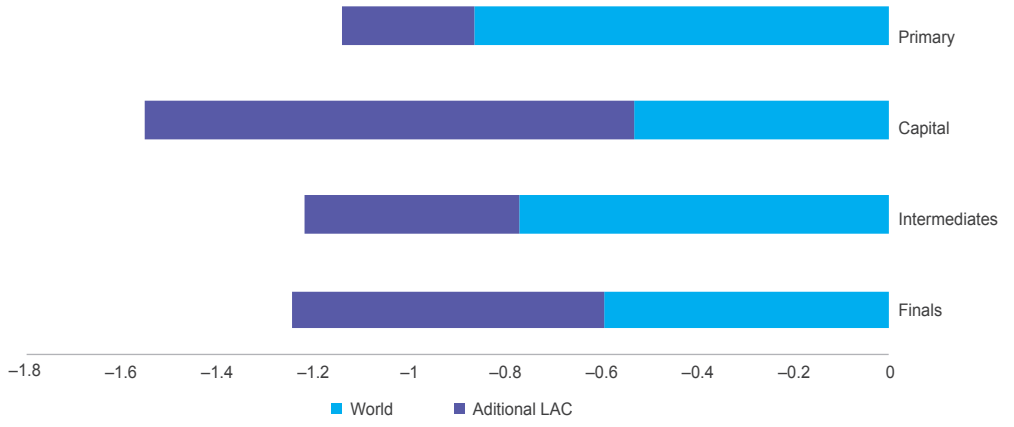
category (Figure 33). Although these results point to the considerable potential for increases in bilateral trade between pairs of countries that do not yet have an FTA, they also highlight the limited role these policies have played to date in developing more sophisticated trade flows and articulating complex regional production chains in industrial sectors.

The second specification aims to assess the trade effects of other integration factors that have an influence on transportation and logistics costs, which are captured through the distance term.[61] Although LAC's lag in integration hardware has been analyzed in detail elsewhere,[62] the results confirm that distance exerts a greater influence in intra-LAC trade than in all other bilateral trade relations in the world (Figure 34). In addition to the strong impact on final goods (–0.648), the productive inputs that were most affected by the additional negative effect of distance in LAC were capital goods (–1.017) and intermediate goods (–0.446). This restrictive effect on regional value chains is more relevant if one considers

Transportation and logistics costs have affected trade in production inputs.

[61] These costs are captured by the distance variable, which also encompasses communication costs, which have been significantly reduced in recent decades.
[62] See Moreira (2008 and 2013) and Giordano (2012), for example.

FIGURE 34 • ELASTICITY OF BILATERAL EXPORTS IN TERMS OF DISTANCE IN THE WORLD AND IN LATIN AMERICA AND THE CARIBBEAN
(Estimated coefficient)



Source: IDB Integration and Trade Sector with own estimations.
Note: Results obtained using a PPML estimator. Elasticities indicate the percentage by which bilateral trade is reduced when the distance between two locations increases by 1%.

that, in general, geographical proximity should favor the creation of regional clusters based on productive complementarity relationships that are intensive in trade in intermediate products.[63] These results confirm that this has not been the case in LAC, where limitations to physical integration have prevented the development of complex networks based on trade in production inputs.

In sum, the breakdown of the trade effects of integration policies considering the final use of products reveals that Latin American regional integration policies were not as effective as expected in promoting a qualitative transformation of intraregional trade flows. Initiatives seeking to complete and rationalize the trade architecture and investment in infrastructure to reduce trade costs would provide significant incentives for developing trade in production inputs. This, in turn, may contribute to close the competitiveness gap and help LAC countries to reclaim a share of the intraregional market of more sophisticated products. Strengthening regional value chains and higher-quality trade flows would not only favor export diversification in LAC countries, it would also help increase their competitiveness in global markets.

[63] Using a similar specification, Freeman and Pieknagura (2016) identify a significant negative effect of the interaction between the distance and trade agreements variables.

Conclusions

Following the downturn that began in 2014, Latin American and Caribbean exports returned to a growth path in 2017. However, this trend reversal was essentially the result of the rallying of certain commodity prices. By mid-2018, this incipient recovery had already been weakened by a slowdown in real trade flows. After emerging from the longest trade recession in its recent history, the region is now facing an outlook that is less favorable than the one that prevailed before the crisis. The instability of external demand, the shortfalls in competitiveness that are eating away regional and global market shares, and the global trade tensions that are making the world trading system less dynamic, all underscore the urgent need for policies that stimulate improvements of the quality of export at the national level, associated to initiatives to deepen regional integration. Together, these policies would help to improve the competitive position of the region's economies and enable them to better integrate into more sophisticated trade flows.

After a decade of subdued trade growth and two episodes of severe contraction, the recovery in Latin American and Caribbean exports is a welcome change of trend. Nevertheless, the fragility of the recovery reveals that the changes currently taking place in the world economy are having a deep impact on the region and that their consequences may affect its international integration prospects. The improvement to the export sector, which largely stemmed from increases in the price of oil and some mining products, should not distract from long-term commodity market trends and the need to diversify the region's export basket.

Regarding price trends, although the world economy has moved beyond the marked deflationary pressures that characterized the previous three years, the current situation is very different from the boom period that bolstered the region's trade performance for over a decade. Despite recent improvement, the region's terms of trade are at a level similar to that before China's disruptive entry into the international trading system. The transformation of the world oil market that followed the adoption of nonconventional extraction techniques in the United States, the precariousness of the geopolitical balance in the Middle East, the growing uncertainty around China's long-term growth rate, and the emergence of new global trade tensions are leading

to expectations that commodity prices will remain stable or may even fall over the next quarters.

In real terms, although the volumes of both world and regional trade were stimulated by a phase of relatively high, synchronized economic growth in both advanced and emerging economies, future prospects are overshadowed by expectations of an imminent slowdown in global demand. Against a backdrop of more restrictive financial conditions and unstable exchange rates, the growth of the region's economies has been tempered and downward risks have increased, which also weakens the foundations on which intraregional demand is built. Regardless of how circumstances develop, the recent period of trade growth laid bare the tenuity of the region's ties to the most dynamic centers of global trade. This points to the vulnerability of export patterns and the urgency to identify new engines for trade expansion.

From a longer-term structural perspective, the analysis of Latin America's trade performance suggests the need for a boost to the sophistication of the export sector. The quality of the export basket is trailing the rest of the world and a sizeable share of its exports are of no more than average quality in comparison with international benchmarks. Although there are some clear opportunities for the region to increase exports by improving the quality margin, despite some exceptions, public policies have not prioritized this objective in their trade promotion initiatives or have not been sufficiently effective. Similarly, the potential for regional integration has not been fully exploited. As a result, in the intraregional market, Latin American economies have lost competitiveness and yielded market share to their competitors, particularly in sectors that contribute the most to the sophistication of the overall export bundle.

Looking to the future, against a backdrop of a fragile recovery and low regional competitiveness, it is necessary to prioritize an ambitious policy agenda that actively supports the incipient, ongoing trade recovery and lays the groundwork for a qualitative transformation of the region's export basket. To cope with the structural forces that are triggering deep transformations in the world economy, a political environment that is less favorable to market openness in developed countries, and the endemic shortfalls in competitiveness that have built up over the last decade, the region clearly needs to renew its strategy of cooperation with the private sector if it hopes to make rapid, incisive headway in the internationalization process.

The policy agenda needed to spur a transformation of this scale is complex and necessarily focused on long-term objectives. In its trade-related dimension, two complementary dimensions stand out.

At the national level, one key priority should be the setting up of quality-building infrastructure systems that are comprehensive, efficient, and clearly oriented toward internationalization. Essential mainstays include governance reforms based on the adoption of modern policies and regulatory frameworks; an integrated, coherent,

and functional architecture of institutions responsible for metrology, standardization, and accreditation; as well as quality promotion and conformity assessment services that are in line with international standards and best practices. All of which should be accompanied by a sound technical assistance program for private sector firms. To capitalize domestic efforts of this kind in international markets, countries in the region should promote synergies between stakeholders involved in developing quality-building systems and institutions responsible for export and foreign direct investment promotion.

At the regional level, it has been argued that there is a potential for making economic integration policies more effective in the promotion of the qualitative transformation of intraregional trade flows. Initiatives that seek to complete and rationalize the existing trade architecture, which, coupled with investment in infrastructure that lower trade costs, would provide incentives for trade in intermediate goods and other production inputs. This, in turn, would help build up the competitiveness of countries in the region and prevent them from further losing share in the intraregional market for more sophisticated products. Strengthening regional value chains and higher-quality trade flows would not only spur export diversification in countries in the region, it would also help increase their competitiveness in world markets.

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Statistical Annex 1

Quality of Exports by Country and Subregion

TABLE A1 • SHARE OF EXPORTS BY QUALITY RANK AND PRODUCT CATEGORY
(Percentage, 2014)

	Quality					
	Low	Medium-Low	Medium	Medium-Low	High	Total
Argentina						
PP	3.0	8.1	11.4	3.4	7.1	33.0
PM	27.4	4.3	3.9	0.5	2.3	38.5
IM	0.0	0.4	4.1	23.4	0.6	28.5
Total	**30.4**	**12.8**	**19.4**	**27.4**	**10.0**	**100.0**
Bahamas						
PP	0.0	0.0	12.6	13.7	0.2	26.5
PM	0.0	2.1	1.4	0.5	3.0	7.0
IM	0.0	0.0	0.1	63.8	2.5	66.4
Total	**0.0**	**2.1**	**14.2**	**78.1**	**5.6**	**100.0**
Barbados						
PP	0.0	0.1	2.4	0.8	0.1	3.4
PM	1.2	4.8	32.9	3.0	2.1	44.0
IM	5.7	6.0	34.9	5.7	0.1	52.6
Total	**7.0**	**11.0**	**70.2**	**9.5**	**2.3**	**100.0**
Belize						
PP	5.3	8.1	17.9	0.0	25.3	56.6
PM	14.2	16.0	1.0	0.2	0.6	31.9
IM	0.4	7.9	0.7	0.3	2.3	11.5
Total	**19.8**	**32.0**	**19.6**	**0.4**	**28.1**	**100.0**

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TABLE A1 • SHARE OF EXPORTS BY QUALITY RANK AND PRODUCT CATEGORY
(Percentage, 2014) (*continued*)

	Quality					
	Low	Medium-Low	Medium	Medium-Low	High	Total
Bolivia						
PP	5.1	5.6	5.4	18.8	9.0	43.9
PM	18.4	19.7	1.0	1.6	9.4	50.1
IM	4.0	1.8	0.2	0.0	0.0	6.0
Total	**27.5**	**27.1**	**6.6**	**20.4**	**18.4**	**100.0**
Brazil						
PP	7.9	20.8	13.4	3.9	5.4	51.6
PM	12.9	1.6	3.2	0.3	3.6	21.6
IM	0.7	2.2	13.8	7.3	2.9	26.9
Total	**21.5**	**24.6**	**30.4**	**11.6**	**11.9**	**100.0**
Chile						
PP	2.0	8.1	3.2	1.5	33.6	48.3
PM	30.9	2.8	1.8	1.4	6.9	43.8
IM	0.0	0.7	0.5	4.4	2.2	7.8
Total	**32.9**	**11.7**	**5.4**	**7.3**	**42.7**	**100.0**
Colombia						
PP	0.7	9.2	16.8	0.3	10.8	37.7
PM	3.7	6.1	3.6	0.0	0.5	13.9
IM	3.7	11.9	32.5	0.1	0.0	48.3
Total	**8.2**	**27.2**	**52.9**	**0.4**	**11.3**	**100.0**
Costa Rica						
PP	0.7	2.9	8.7	14.5	13.2	40.0
PM	0.1	1.7	6.4	1.8	0.0	10.0
IM	0.4	1.2	42.9	2.3	3.2	50.0
Total	**1.2**	**5.8**	**57.9**	**18.6**	**16.5**	**100.0**
Dominican Republic						
PP	0.0	4.8	3.4	4.2	8.3	20.7
PM	2.6	9.9	10.8	2.9	0.8	27.0
IM	2.4	5.9	42.4	0.3	1.3	52.3
Total	**5.0**	**20.6**	**56.6**	**7.4**	**10.4**	**100.0**
Ecuador						
PP	1.4	37.6	2.0	5.5	33.2	79.8
PM	3.6	5.9	2.4	0.0	0.2	12.2
IM	0.7	3.0	3.9	0.3	0.2	8.0
Total	**5.7**	**46.6**	**8.4**	**5.8**	**33.6**	**100.0**

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TABLE A1 • SHARE OF EXPORTS BY QUALITY RANK AND PRODUCT CATEGORY

(Percentage, 2014) *(continued)*

	Quality					
	Low	Medium-Low	Medium	Medium-Low	High	Total
El Salvador						
PP	0.7	6.8	0.6	0.2	0.0	8.3
PM	2.1	12.2	1.9	2.0	0.1	18.3
IM	6.3	62.5	0.2	3.7	0.7	73.4
Total	**9.1**	**81.5**	**2.7**	**5.9**	**0.8**	**100.0**
Guatemala						
PP	6.5	20.2	1.2	12.1	0.9	40.9
PM	8.7	13.2	1.2	0.3	0.1	23.5
IM	5.1	30.2	0.2	0.0	0.1	35.6
Total	**20.4**	**63.6**	**2.6**	**12.4**	**1.1**	**100.0**
Haiti						
PP	1.8	2.0	0.0	0.0	0.0	3.9
PM	3.6	0.0	0.0	0.0	0.0	3.6
IM	92.4	0.0	0.0	0.0	0.0	92.5
Total	**97.8**	**2.0**	**0.1**	**0.1**	**0.0**	**100.0**
Honduras						
PP	4.2	16.4	3.5	4.6	0.5	29.1
PM	4.6	7.7	0.4	0.1	0.0	12.8
IM	17.1	40.7	0.1	0.0	0.1	58.1
Total	**25.9**	**64.7**	**4.0**	**4.7**	**0.6**	**100.0**
Jamaica						
PP	12.4	9.5	0.9	0.3	0.1	23.3
PM	9.2	10.4	0.6	0.1	0.0	20.3
IM	1.2	1.9	53.2	0.2	0.0	56.4
Total	**22.8**	**21.8**	**54.6**	**0.6**	**0.1**	**100.0**
Mexico						
PP	0.9	2.2	1.7	2.3	1.4	8.6
PM	0.1	3.3	4.8	0.5	0.0	8.7
IM	0.3	5.4	23.5	51.1	2.4	82.7
Total	**1.3**	**10.9**	**30.1**	**53.9**	**3.9**	**100.0**
Nicaragua						
PP	9.1	20.1	0.8	0.9	0.0	31.0
PM	9.0	2.1	4.1	0.1	0.1	15.2
IM	21.4	32.2	0.1	0.0	0.0	53.7
Total	**39.5**	**54.4**	**5.0**	**1.0**	**0.1**	**100.0**

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TABLE A1 • SHARE OF EXPORTS BY QUALITY RANK AND PRODUCT CATEGORY

(Percentage, 2014) (*continued*)

	Quality					
	Low	Medium-Low	Medium	Medium-Low	High	Total
Panama						
PP	1.3	0.9	9.3	2.1	14.4	28.0
PM	0.9	6.8	4.0	3.3	0.0	15.1
IM	0.0	0.5	32.6	20.7	3.2	56.9
Total	**2.2**	**8.2**	**45.9**	**26.1**	**17.6**	**100.0**
Paraguay						
PP	3.4	54.1	7.1	1.1	3.0	68.6
PM	22.0	1.8	0.2	0.0	0.3	24.2
IM	0.4	6.5	0.3	0.1	0.0	7.2
Total	**25.7**	**62.3**	**7.6**	**1.2**	**3.2**	**100.0**
Peru						
PP	5.3	11.9	5.7	24.8	12.3	60.0
PM	17.4	7.0	0.5	0.2	2.4	27.5
IM	0.7	3.2	7.9	0.6	0.1	12.5
Total	**23.4**	**22.1**	**14.1**	**25.6**	**14.8**	**100.0**
Suriname						
PP	4.3	6.9	14.0	0.2	11.5	36.9
PM	4.1	2.6	0.2	0.0	0.0	7.0
IM	0.0	0.2	0.9	2.3	52.9	56.2
Total	**8.4**	**9.7**	**15.1**	**2.4**	**64.4**	**100.0**
Trinidad and Tobago						
PP	0.0	0.0	0.0	1.8	0.0	1.9
PM	0.3	0.6	2.7	3.1	16.2	22.9
IM	0.0	0.0	9.0	2.4	63.7	75.2
Total	**0.3**	**0.7**	**11.8**	**7.4**	**79.9**	**100.0**
Uruguay						
PP	2.0	7.4	24.3	0.8	22.6	57.2
PM	2.0	5.2	5.9	0.5	10.8	24.4
IM	0.1	0.2	8.4	6.0	3.7	18.4
Total	**4.1**	**12.8**	**38.7**	**7.3**	**37.1**	**100.0**
Venezuela						
PP	0.4	18.0	1.8	0.1	2.4	22.6
PM	1.6	8.8	1.5	3.5	0.0	15.5
IM	0.0	24.4	5.7	31.3	0.6	62.0
Total	**2.0**	**51.1**	**9.0**	**34.8**	**3.0**	**100.0**

Source: IDB Trade and Integration Sector with IMF data.

TABLE A2 • MAIN HIGH-QUALITY EXPORTS BY COUNTRY AND PRODUCT CATEGORY
(Percentage, 2014)

	Product	Share of exports
Argentina		
PP	2831. Ores and concentrates of copper, incl. Matte	1.71
	6114. Leather of other bovine cattle & equine leather	1.60
	2211. Groundnuts peanuts green, ex.flour and meal	1.09
PM	1121. Wine of fresh grapes including grape must	1.51
	6811. Silver,unworked or partly worked	0.32
	2628. Wool tops	0.20
IM	5511. Essential oils and resinoids	0.17
	5324. Tanning extracts of vegetable origin	0.14
	7353. Ships and boats, other than warships	0.11
Bahamas		
PP	2924. Plants,seeds,flowers used in perfumery/pharmac.	0.17
	0519. Fresh fruit,nes	0.01
PM	1124. Distilled alcoholic beverages	2.97
	1121. Wine of fresh grapes including grape must	0.02
	6782. Tubes and pipes of iron or steel, seamless	0.01
IM	7192. Pumps and centrifuges	1.10
	7299. Electrical machinery and apparatus, nes	0.59
	7222. Apparatus for electrical circuits	0.22
Barbados		
PP	0320. Fish,in airtight containers	0.05
	0536. Fruit,temporarily preserved	0.01
PM	0460. Meal and flour of wheat or of meslin	1.25
	8971. Gold silver plat. Etc jewellery ex watchcases	0.47
	6911. Fin.structural parts & structures of iron steel	0.24
IM	5611. Nitrogenous fertilizers and materials nes	0.08
	6293. Hygienic & pharmaceutical articles of rubber	0.06
Belize		
PP	0513. Bananas including plantains ,fresh	25.11
	6114. Leather of other bovine cattle & equine leather	0.10
	2631. Raw cotton, other than linters	0.05
PM	2820. Iron & steel scrap	0.49
	6312. Plywood, including veneered panels	0.04
	6130. Fur skins,tanned or dressed	0.02
IM	8510. Footwear	2.15
	6521. Cotton fabrics, woven, grey, not mercerized	0.09
	6535. Fabrics, woven, of synthetic fibres	0.02

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TABLE A2 • MAIN HIGH-QUALITY EXPORTS BY COUNTRY AND PRODUCT CATEGORY
(Percentage, 2014) *(continued)*

	Product	Share of exports
Bolivia		
PP	2834. Ores and concentrates of lead	7.68
	2839. Ores & concentrates of non ferrous base met.nes	1.24
	0512. Other citrus fruit	0.08
PM	6871. Tin and tin alloys, unwrought	9.12
	6119. Leather,nes	0.19
	2628. Wool tops	0.04
IM	8960. Works of art,collectors pieces	0.00
Brazil		
PP	6114. Leather of other bovine cattle & equine leather	1.47
	1210. Tobacco,unmanufactured & scrap	1.40
	2831. Ores and concentrates of copper, incl. Matte	1.00
PM	2517. Sulphate wood pulp	2.87
	6312. Plywood, including veneered panels	0.24
	2516. Chemical wood pulp, dissolving grades	0.24
IM	5136. Other inorganic bases and metallic oxides	1.31
	8510. Footwear	0.44
	7341. Aircraft, heavier than air	0.31
Chile		
PP	2831. Ores and concentrates of copper, incl. Matte	23.31
	0519. Fresh fruit,nes	3.23
	0515. Grapes,fresh	2.89
PM	2517. Sulphate wood pulp	3.66
	1121. Wine of fresh grapes including grape must	2.80
	6312. Plywood, including veneered panels	0.46
IM	5132. Chemical elements nes	1.11
	6291. Rubber tyres & tubes for vehicles and aircraft	0.59
	5819. Other artificial resins and plastic materials	0.20
Colombia		
PP	0513. Bananas including plantains ,fresh	9.53
	6114. Leather of other bovine cattle & equine leather	0.82
	1210. Tobacco,unmanufactured & scrap	0.27
PM	6812. Platinum,unworked or partly worked	0.42
	6119. Leather,nes	0.07
	6673. Other precious & semi precious stones not set	0.05

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TABLE A2 • MAIN HIGH-QUALITY EXPORTS BY COUNTRY AND PRODUCT CATEGORY
(Percentage, 2014) *(continued)*

	Product	Share of exports
IM	6513. Cotton yarn & thread, grey, not mercerized	0.01
	8960. Works of art,collectors pieces	0.01
	8420. Fur clothing	0.00
Costa Rica		
PP	0513. Bananas including plantains ,fresh	13.20
	0511. Oranges, tangerines and clementines	0.00
	0515. Grapes,fresh	0.00
PM	8972. Imitation jewellery	0.01
	4223. Coconut copra oil	0.01
IM	7149. Office machines, nes	2.50
	8615. Cine. Cameras, projectors, sound recorders etc.	0.35
	7143. Statistical machines cards or tapes	0.30
Dominican Republic		
PP	0513. Bananas including plantains ,fresh	6.96
	2831. Ores and concentrates of copper, incl. Matte	0.90
	1210. Tobacco,unmanufactured & scrap	0.42
PM	4221. Linseed oil	0.40
	0470. Meal & flour of cereals exc.wheat or meslin	0.30
	0222. Milk & cream in solid form,blocks or powder	0.07
IM	8510. Footwear	1.27
	8942. Childrens toys, indoor games, etc.	0.01
	8614. Photographic cameras and flashlight apparatus	0.00
Ecuador		
PP	0513. Bananas including plantains ,fresh	33.02
	6114. Leather of other bovine cattle & equine leather	0.19
	0116. Edible offals of animals,fresh,chilled,frozen	0.00
PM	6312. Plywood, including veneered panels	0.24
	8972. Imitation jewellery	0.00
	1121. Wine of fresh grapes including grape must	0.00
IM	8995. Small wares and toilet artices, nes	0.09
	8415. Headgear	0.07
	8420. Fur clothing	0.00
El Salvador		
PM	0812. Bran,pollard,sharps & other by products	0.04
	0221. Milk & cream evaporated or condensed	0.03
	0813. Oil seed cake & meal & other veg. Oil residues	0.01

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TABLE A2 • MAIN HIGH-QUALITY EXPORTS BY COUNTRY AND PRODUCT CATEGORY
(Percentage, 2014) (*continued*)

	Product	Share of exports
IM	6513. Cotton yarn & thread, grey, not mercerized	0.64
	5611. Nitrogenous fertilizers and materials nes	0.03
	6511. Thrown silk & silk yarn and thread	0.00
Guatemala		
PP	1210. Tobacco,unmanufactured & scrap	0.83
	2111. Bovine & equine hides excl. Calf & kip skins	0.05
	2839. Ores & concentrates of non ferrous base met.nes	0.01
PM	2432. Lumber, sawn, planed, etc. Conifer	0.09
	8972. Imitation jewellery	0.01
IM	6513. Cotton yarn & thread, grey, not mercerized	0.12
	6575. Carpets, carpeting and rugs, knotted	0.00
Haiti		
PM	6119. Leather,nes	0.03
Honduras		
PP	2834. Ores and concentrates of lead	0.43
	2429. Poles,piling,posts & other wood in the rough.	0.02
	2839. Ores & concentrates of non ferrous base met.nes	0.01
PM	0221. Milk & cream evaporated or condensed	0.01
	0812. Bran,pollard,sharps & other by products	0.00
IM	6513. Cotton yarn & thread, grey, not mercerized	0.14
Jamaica		
PP	0721. Cocoa beans,raw or roasted	0.14
Mexico		
PP	2831. Ores and concentrates of copper, incl. Matte	0.64
	2834. Ores and concentrates of lead	0.35
	2835. Ores and concentrates of zinc	0.22
PM	6812. Platinum,unworked or partly worked	0.01
	2118. Waste & used leather	0.00
	1121. Wine of fresh grapes including grape must	0.00
IM	7143. Statistical machines cards or tapes	1.63
	7296. Electro mechanical hand tools	0.20
	7293. Thermionic valves and tubes, transistors, etc.	0.15
Nicaragua		
PP	0721. Cocoa beans,raw or roasted	0.03
	2111. Bovine & equine hides excl. Calf & kip skins	0.01
PM	0812. Bran,pollard,sharps & other by products	0.06

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TABLE A2 • MAIN HIGH-QUALITY EXPORTS BY COUNTRY AND PRODUCT CATEGORY
(Percentage, 2014) (*continued*)

	Product	Share of exports
Panama		
PP	0513. Bananas including plantains ,fresh	10.32
	0519. Fresh fruit,nes	3.37
	6114. Leather of other bovine cattle & equine leather	0.64
PM	2517. Sulphate wood pulp	0.03
	2118. Waste & used leather	0.00
	6112. Reconstituted and artificial leather	0.00
IM	6291. Rubber tyres & tubes for vehicles and aircraft	2.42
	7358. Ships,boats and other vessels for breaking up	0.69
	8995. Small wares and toilet artices, nes	0.05
Paraguay		
PP	6114. Leather of other bovine cattle & equine leather	2.93
	2625. Horsehair & other coarse hair,not carded/combed	0.01
	2613. Raw silk, not thrown	0.01
PM	6312. Plywood, including veneered panels	0.20
	2431. Railway sleepers ties	0.04
	8992. Basketwork & art. Of plaiting materials, nes	0.01
IM	8999. Other manufactured articles, nes	0.00
Peru		
PP	2835. Ores and concentrates of zinc	4.62
	0515. Grapes,fresh	3.18
	2834. Ores and concentrates of lead	2.80
PM	6871. Tin and tin alloys, unwrought	2.12
	2627. Wool or anim. Hair, carded or combed, ex. Tops	0.22
	6119. Leather,nes	0.02
IM	7322. Buses, including trolleybuses	0.06
	2633. Cotton waste, not carded or combed	0.00
	8960. Works of art,collectors pieces	0.00
Suriname		
PP	0513. Bananas including plantains ,fresh	11.54
IM	5136. Other inorganic bases and metallic oxides	52.79
	8414. Clothing and accessories,knitted or crocheted	0.05
	7250. Domestic electrical equipment	0.02

(*continued on next page*)

TABLE A2 • MAIN HIGH-QUALITY EXPORTS BY COUNTRY AND PRODUCT CATEGORY
(Percentage, 2014) *(continued)*

	Product	Share of exports
Trinidad and Tobago		
PP	0721. Cocoa beans,raw or roasted	0.04
	0138. Other prepared or preserved meat	0.01
	0711. Coffee,green or roasted	0.00
PM	6713. Iron and steel powders,shot and sponge	15.67
	1124. Distilled alcoholic beverages	0.38
	6324. Builders woodwork & prefab. Buildings of wood	0.04
IM	5136. Other inorganic bases and metallic oxides	37.32
	5122. Alcohols,phenols,phenol alcohols,glycerine	26.06
	5512. Synth.perfume & flavour materials and concentr.	0.10
Uruguay		
PP	0111. Meat of bovine animals,fresh,chilled or frozen	14.62
	6114. Leather of other bovine cattle & equine leather	3.10
	0116. Edible offals of animals,fresh,chilled,frozen	1.14
PM	2517. Sulphate wood pulp	7.56
	2628. Wool tops	1.54
	6312. Plywood, including veneered panels	0.86
IM	5512. Synth.perfume & flavour materials and concentr.	2.98
	7325. Road tractors for tractor trailer combinations	0.23
	5999. Chemical products and preparations,nes	0.14
Venezuela		
PP	6114. Leather of other bovine cattle & equine leather	1.46
	0721. Cocoa beans,raw or roasted	0.74
	2119. Hides & skins,nes	0.09
IM	5149. Inorganic chemical products,nes	0.60
	8510. Footwear	0.02
	8960. Works of art,collectors pieces	0.01

Source: IDB Trade and Integration Sector with IMF data.
Note: The products correspond to the SITC 4-digit level (Revision 1).

TABLE A3 • SUCCESSFUL PRODUCTS BY COUNTRY AND PRODUCT CATEGORY
(Percentage, quality rank, 2000 and 2014)

		Share of exports		Quality	
Country	Product	2000	2014	2000	2014
Argentina					
	Raw cotton, other than linters	0.40	0.19	Medium-Low	High
	Sugars & syrups	0.01	0.05	Low	Medium
	Bran,pollard,sharps & other by products	0.07	0.04	Medium	High
	Cotton yarn & thread	0.08	0.03	Medium	High
Bahamas					
	Statistical machines cards or tapes	0.11	0.01	Medium-Low	High
Barbados					
	Lumber, sawn, planed, etc. Non conifer	0.02	0.01	Medium-Low	High
Belize					
	Plywood, including veneered panels	0.99	0.04	Medium-Low	High
Bolivia					
	Ores and concentrates of copper, incl. Matte	0.02	1.08	Low	Medium
	Leather,nes	0.29	0.21	Medium	High
Brazil					
	Ores and concentrates of copper, incl. Matte	0.00	1.00	Medium-Low	High
	Plywood, including veneered panels	0.75	0.24	Medium-Low	High
	Other chassis with engines mounted	0.04	0.20	Medium	High
Chile					
	Plywood, including veneered panels	0.18	0.46	Medium-Low	High
	Iron and steel forgings in the rough state	0.00	0.15	Medium-Low	Medium-High
Colombia					
	Tobacco	0.22	0.28	Medium	High
	Buses	0.11	0.04	Medium-Low	Medium-High
Costa Rica					
	Statistical machines cards or tapes	0.19	0.31	Medium	High
	Cereal grains	0.06	0.06	Medium-Low	Medium-High
	Internal combustion engines	0.00	0.06	Medium-Low	Medium-High
Dominican Republic					
	Footwear	2.05	1.54	Medium	High
	Meal & flour of cereals exc.wheat or meslin	0.02	0.36	Medium-Low	High
	Wire rod of iron or steel	0.00	0.33	Medium-Low	Medium-High
	Fin.structural parts & structures of iron steel	0.00	0.10	Low	Medium-High
	Preparations of cereals,flour & starch for food	0.00	0.06	Medium-Low	Medium-High
	Bran,pollard,sharps & other by products	0.01	0.04	Medium-Low	High
	Cotton yarn & thread	0.01	0.03	Low	Medium

(*continued on next page*)

TABLE A3 • SUCCESSFUL PRODUCTS BY COUNTRY AND PRODUCT CATEGORY

(Percentage, quality rank, 2000 and 2014) *(continued)*

		Share of exports		Quality	
Country	**Product**	**2000**	**2014**	**2000**	**2014**
Ecuador					
	Leather of other bovine cattle & equine leather	0.01	0.19	Medium	High
	Headgear	0.06	0.07	Medium	High
El Salvador					
	Electrical machinery and apparatus	0.34	3.60	Low	Medium-High
	Cereal grains	0.85	0.83	Medium-Low	Medium-High
	Cotton yarn & thread	0.42	0.65	Medium-Low	High
	Plates etc of iron or steel uncoated under 3 mm	1.14	0.44	Low	Medium
	Fertilizers	0.12	0.34	Low	Medium
	Margarine	0.44	0.18	Low	Medium
	Hydrogenated oils and fats	0.21	0.16	Medium-Low	Medium-High
	Cotton fabrics	0.01	0.12	Low	Medium-High
	Rubber tyres & tubes for vehicles and aircraft	0.01	0.09	Low	Medium-High
	Plates etc of iron or steel uncoated under 3 mm	0.09	0.08	Low	Medium
Guatemala					
	Lumber, sawn, planed, etc. Conifer	0.02	0.09	Medium-Low	High
Haiti					
	—	—	—	—	—
Honduras					
	Cotton fabrics	0.01	0.07	Low	Medium
Jamaica					
	Rubber tyres & tubes for vehicles and aircraft	0.03	0.18	Medium-Low	Medium-High
Mexico					
	Footwear	0.35	0.04	Medium	High
	Bicycles	0.07	0.03	Low	Medium-High
Nicaragua					
	Leather of other bovine cattle & equine leather	0.28	0.81	Low	Medium-High
	Meal and flour of wheat or of meslin	0.06	0.21	Low	Medium
Panama					
	Rubber tyres & tubes for vehicles and aircraft	0.22	2.57	Medium-Low	High
	Non alcoholic beverages	0.02	0.12	Low	Medium-High
	Small wares and toilet artices	0.01	0.05	Medium-Low	High
	Non refractory ceramic bricks,tiles,pipes etc.	0.01	0.01	Medium-Low	High

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TABLE A3 • SUCCESSFUL PRODUCTS BY COUNTRY AND PRODUCT CATEGORY

(Percentage, quality rank, 2000 and 2014) *(continued)*

		Share of exports		Quality	
Country	**Product**	**2000**	**2014**	**2000**	**2014**
Paraguay					
	Leather of other bovine cattle & equine leather	8.62	3.43	Medium	High
	Edible offals of animals,fresh,chilled,frozen	0.29	1.09	Medium-Low	Medium-High
	Plywood, including veneered panels	1.40	0.24	Medium-Low	High
Peru					
	Non refractory ceramic bricks,tiles,pipes etc.	0.02	0.38	Medium-Low	Medium-High
	Buses	0.00	0.06	Medium-Low	High
	Clay & other refractory minerals,nes	0.01	0.06	Medium-Low	Medium-High
	Synthetic organic dyestuffs	0.01	0.03	Medium-Low	Medium-High
Suriname					
	Rice	0.52	4.38	Low	Medium
Trinidad and Tobago					
	Beer	0.40	0.17	Medium-Low	Medium-High
	Prods of condensation, polycond. & polyaddition	0.06	0.07	Medium	High
Uruguay					
	Synth.perfume & flavour materials and concentr.	0.00	3.56	Medium-Low	High
	Chemical products and preparations	0.03	0.17	Medium	High
	Apparel & clothing acces.,gloves,of rubber	0.00	0.13	Medium-Low	Medium-High
	Rubber tyres & tubes for vehicles and aircraft	0.29	0.12	Medium-Low	High
	Nuts, bolts, screws, rivets, washers, etc.	0.00	0.11	Medium-Low	High
	Essential oils and resinoids	0.02	0.05	Medium-Low	High
	Measuring,controlling & scientific instruments	0.02	0.03	Medium	High
Venezuela					
	Inorganic chemical products	0.59	0.63	Medium	High
	Mechanical handling equipment	0.01	0.23	Medium-Low	Medium-High
	Lead and lead alloys, unwrought	0.16	0.22	Low	Medium

Source: IDB Trade and Integration Sector with IMF data.

Statistical Annex 2

Competitiveness in the Regional Market by Country and Subregion

TABLE A4 • DISAGGREGATION OF THE INTRAREGIONAL EXPORTS GROWTH RATE

(Growth rate, percentage and percentage points, 2003–2008 and 2011–2016)

	2003–2008					2011–2016				
	Contribution to Exports Change				Rate of Change (%)	Contribution to Exports Change				Rate of Change (%)
Exporter	Global	Product	Destination	Competitiveness		Global	Product	Destination	Competitiveness	
Latin America and the Caribbean	150.9	46.4	27.2	–20.4	204.1	–17.2	–3.2	–5.7	–7.4	–33.5
LAC without Mexico	150.9	49.8	29.6	–32.2	198.2	–17.2	–3.7	–5.3	–8.7	–35.0
Mexico	150.9	13.6	4.0	91.3	259.9	–17.2	0.1	–7.9	1.2	–23.8
Central America	150.9	–6.3	–21.6	36.7	159.8	–17.2	2.7	4.5	–4.9	–15.0
Costa Rica	150.9	–67.4	–19.1	9.6	74.0	–17.2	18.3	11.4	–45.3	–32.8
Dominican Republic	150.9	–1.3	14.4	172.2	336.2	–17.2	–8.1	–9.2	11.9	–22.6
Guatemala	150.9	–8.1	–4.9	16.3	154.2	–17.2	2.6	14.9	–0.7	–0.4
Honduras	150.9	–20.3	–30.1	92.4	192.9	–17.2	6.5	9.3	11.0	9.6
Nicaragua	150.9	218.7	–252.1	59.6	177.2	–17.2	2.7	–2.1	41.6	25.0
Panama	150.9	31.7	18.5	66.5	267.7	–17.2	–10.4	–8.8	5.8	–30.6
El Salvador	150.9	1.2	–41.6	9.0	119.5	–17.2	10.2	15.3	–1.1	7.1
Rest of Pacific Alliance	150.9	59.1	40.6	4.7	255.4	–17.2	–8.8	–1.8	–6.1	–33.9
Chile	150.9	73.3	5.8	–7.3	222.7	–17.2	–0.7	–4.3	–6.7	–28.9
Colombia	150.9	24.7	68.1	27.5	271.2	–17.2	–15.3	3.8	–11.9	–40.6
Peru	150.9	101.2	68.7	–16.0	304.9	–17.2	–10.0	–8.3	6.1	–29.5
Brazil	150.9	39.8	43.8	–29.9	204.6	–17.2	–1.5	–6.3	–6.2	–31.3
Rest of MERCOSUR	150.9	42.1	61.6	–102.0	152.6	–17.2	3.4	–10.6	–15.1	–39.6
Argentina	150.9	52.0	69.0	–127.3	144.6	–17.2	2.2	–14.7	–18.0	–47.7
Paraguay	150.9	–14.8	9.4	67.8	213.4	–17.2	4.6	20.3	3.7	11.4

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TABLE A4 • DISAGGREGATION OF THE INTRAREGIONAL EXPORTS GROWTH RATE
(Growth rate, percentage and percentage points, 2003-2008 and 2011-2016) (*continued*)

	2003–2008					2011–2016				
	Contribution to Exports Change				Rate of Change (%)	Contribution to Exports Change				Rate of Change (%)
Exporter	Global	Product	Destination	Competitiveness		Global	Product	Destination	Competitiveness	
Uruguay	150.9	–8.9	35.6	–2.3	175.3	–17.2	12.6	–9.4	–10.5	–24.6
Intensive in Fuels and Energy	150.9	87.1	–0.7	–3.8	233.5	–17.2	–20.0	–5.2	–13.6	–56.0
Bolivia	150.9	37.3	217.6	–101.3	304.6	–17.2	0.6	–21.4	4.3	–33.6
Ecuador	150.9	84.9	–18.6	38.8	256.1	–17.2	–22.9	–1.2	1.0	–40.4
Venezuela	150.9	101.3	–49.9	1.5	203.8	–17.2	–30.5	1.4	–39.5	–85.8
Caribbean	150.9	171.9	–73.7	–66.2	183.0	–17.2	–6.6	–16.4	–1.4	–41.6
Bahamas	150.9	194.8	–12.7	–382.9	–49.8	–17.2	–22.5	–1.0	–3.5	–44.2
Belize	150.9	131.2	–152.4	–90.2	39.5	–17.2	–0.4	–5.5	–17.6	–40.7
Barbados	150.9	211.3	–211.7	–161.2	–10.6	–17.2	–7.8	–3.1	–4.1	–32.3
Guyana	150.9	15.9	–36.2	–94.7	36.0	–17.2	1.4	–2.5	40.3	22.0
Haiti	150.9	–28.3	–57.7	1292.9	1357.8	–17.2	12.1	–5.0	253.6	243.4
Jamaica	150.9	24.8	–66.0	–16.2	93.6	–17.2	510.0	–485.6	–22.3	–15.1
Suriname	150.9	148.5	–106.5	510.5	703.4	–17.2	–11.2	–8.6	0.2	–36.7
Trinidad and Tobago	150.9	182.9	–62.1	–6.3	265.3	–17.2	–15.5	–10.3	–3.5	–46.5

Source: IDB Trade and Integration Sector with BACI data (CEPII).
Note: The components may not add up to the total due to rounding.

TABLE A5 • CONTRIBUTION TO THE SUBREGIONAL COMPETITIVENESS EFFECT BY COUNTRY

(Percentage and percentage points, 2003–2008 and 2011–2016)

		Contribution to the Competitiveness of the Region	
Exporter	**Country**	**2003–2008**	**2011–2016**
Mexico		**91.3**	**1.2**
Central America	**Total**	**36.7**	**–4.9**
	Costa Rica	2.7	–9.9
	Dominican Republic	7.3	1.0
	Guatemala	3.7	–0.1
	Honduras	6.2	0.8
	Nicaragua	2.7	1.9
	Panama	12.9	1.6
	El Salvador	1.3	–0.1
Rest of Pacific Alliance	**Total**	**4.7**	**–6.1**
	Chile	–3.2	–2.4
	Colombia	10.7	–5.0
	Peru	–2.7	1.3
Brazil		–29.9	–6.2
Rest of MERCOSUR	**Total**	**–102.0**	**–15.1**
	Argentina	–107.5	–14.6
	Paraguay	5.7	0.4
	Uruguay	–0.2	–0.9
Intensive in Fuels and Energy	**Total**	**–3.8**	**–13.6**
	Bolivia	–15.4	1.1
	Ecuador	10.7	0.4
	Venezuela	0.8	–15.1
Caribbean	**Total**	**–66.2**	**–1.4**
	Bahamas	–45.8	–0.2
	Belize	–2.2	–0.2
	Barbados	–17.1	–0.1
	Guyana	–4.5	1.4
	Haiti	2.9	0.8
	Jamaica	–0.6	–0.3
	Suriname	5.2	0.0
	Trinidad and Tobago	–4.2	–2.8

Source: IDB Trade and Integration Sector with BACI data (CEPII). The components may not add up to the total due to rounding.

TABLE A6 • COMPETITIVENESS EFFECT IN THE VARIATION OF EXPORTS BY PRODUCT
(Percentage and percentage points, 2003-2008 and 2011-2016)

	2003–2008							2011–2016						
	Contribution to the Competitiveness Effect						Contribution to Exports Change (%)	Contribution to the Competitiveness Effect						Contribution to Exports Change (%)
Exporter	AP	MP	AM	MM	IM	F&E	TOTAL	AP	MP	AM	MM	IM	F&E	TOTAL
Latin America and the Caribbean	0.7	0.2	1.6	–4.9	–2.0	–16.1	–20.4	–0.7	0.1	–0.6	–0.9	–3.4	–1.8	–7.4
LAC without Mexico	0.7	0.1	1.7	–7.2	–9.3	–18.2	–32.2	–0.9	0.1	–0.7	–0.9	–4.1	–2.2	–8.7
Mexico	0.9	1.1	0.8	17.4	67.1	4.1	91.3	0.6	–0.1	0.0	–1.4	1.3	0.9	1.2
Central America	1.8	2.6	6.1	4.4	27.7	–5.8	36.7	–0.1	0.1	–0.5	–0.5	–2.7	–1.2	–4.9
Costa Rica	1.2	0.1	1.5	1.2	7.1	–1.6	9.6	–0.7	0.1	–0.7	–0.9	–43.0	0.0	–45.3
Dominican Republic	–6.1	1.3	34.7	52.2	73.6	16.4	172.2	0.9	0.0	0.6	–4.5	17.2	–2.3	11.9
Guatemala	6.3	8.7	13.8	6.9	–17.9	–1.7	16.3	–1.0	0.0	0.9	–1.1	–1.4	1.9	–0.7
Honduras	–1.9	8.5	–0.3	–7.1	59.8	33.4	92.4	3.3	0.8	–2.0	2.8	9.6	–3.6	11.0
Nicaragua	14.2	0.3	17.6	–1.7	33.7	–4.4	59.6	1.7	0.0	–5.5	0.1	45.4	–0.1	41.6
Panama	–0.1	0.1	2.5	2.4	97.1	–35.4	66.5	–0.4	0.0	0.6	0.2	9.5	–4.2	5.8
El Salvador	–1.6	0.0	–1.5	2.4	16.1	–6.3	9.0	–0.5	0.0	–3.2	–0.1	2.0	0.7	–1.1
Rest of Pacific Alliance	0.7	2.3	1.6	0.5	2.3	–2.7	4.7	0.4	0.6	–1.0	–0.8	–1.3	–3.9	–6.1
Chile	0.3	0.1	8.7	6.5	–14.1	–8.8	–7.3	0.4	–1.3	–1.9	–0.5	–3.6	0.2	–6.7
Colombia	–1.8	1.7	–7.7	–2.0	11.2	26.2	27.5	0.1	–0.1	–0.5	–0.8	0.3	–10.8	–11.9
Peru	7.4	9.2	4.8	–9.5	24.9	–52.8	–16.0	1.0	5.2	–0.4	–1.5	–0.6	2.3	6.1

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TABLE A6 • COMPETITIVENESS EFFECT IN THE VARIATION OF EXPORTS BY PRODUCT *(continued)*
(Percentage and percentage points, 2003-2008 and 2011-2016)

	2003–2008							2011–2016						
	Contribution to the Competitiveness Effect						Contribution to Exports Change (%)	Contribution to the Competitiveness Effect						Contribution to Exports Change (%)
Exporter	AP	MP	AM	MM	IM	F&E	TOTAL	AP	MP	AM	MM	IM	F&E	TOTAL
Brazil	1.4	0.2	2.9	–11.9	–28.3	5.8	–29.9	0.4	–0.1	0.1	–0.2	–7.0	0.4	–6.2
Rest of MERCOSUR	3.4	–1.8	7.2	–6.9	–12.5	–91.5	–102.0	–4.4	0.0	–2.8	–1.2	–5.8	–1.0	–15.1
Argentina	–2.2	–2.2	5.8	–7.7	–14.0	–107.0	–127.3	–4.8	0.0	–3.2	–1.5	–6.7	–1.7	–18.0
Paraguay	55.5	0.0	14.9	–4.0	6.5	–5.1	67.8	–2.1	0.0	–3.3	–0.2	5.8	3.7	3.7
Uruguay	8.1	0.0	15.5	–0.4	–17.0	–8.6	–2.3	–2.5	0.0	1.9	0.3	–10.6	0.4	–10.5
Intensive in Fuels and Energy	–3.1	–0.4	–13.0	–18.7	–16.6	48.0	–3.8	–0.7	–0.3	1.8	–1.9	–2.6	–10.0	–13.6
Bolivia	–14.2	–1.0	–64.2	0.8	–13.3	–9.4	–101.3	0.3	–0.6	6.5	–0.2	–0.6	–1.1	4.3
Ecuador	0.2	0.2	–2.1	1.6	3.6	35.4	38.8	–2.2	0.0	0.6	0.2	–1.9	4.4	1.0
Venezuela	–1.7	–0.6	–4.7	–33.6	–27.2	69.2	1.5	0.1	–0.3	0.0	–5.1	–4.5	–29.7	–39.5
Caribbean	–11.4	–2.8	–6.1	–8.6	6.4	–43.8	–66.2	0.4	–0.2	–0.3	–2.2	2.1	–1.2	–1.4
Bahamas	–0.4	–33.7	4.7	–1.6	–8.8	–343.1	–382.9	0.0	–0.1	0.1	–0.2	–5.0	1.6	–3.5
Belize	–26.1	0.0	–13.4	1.8	–14.0	–38.5	–90.2	–14.1	0.0	–9.0	0.1	6.6	–1.2	–17.6
Barbados	–0.1	0.4	–5.0	1.1	–2.8	–154.7	–161.2	–0.1	–0.2	0.7	4.1	–2.4	–6.2	–4.1
Guyana	–13.5	7.1	–77.0	–1.1	–10.1	0.0	–94.7	7.1	–1.2	–1.2	7.1	28.5	0.1	40.3
Haiti	–1.8	0.0	1.1	22.4	1272.8	–1.7	1292.9	–0.8	0.3	0.3	–0.1	253.8	0.1	253.6
Jamaica	–1.3	0.3	–24.7	4.0	43.2	–37.5	–16.2	–2.3	–1.2	–6.5	2.6	–15.2	0.2	–22.3
Suriname	18.6	0.4	13.7	0.0	123.5	354.3	510.5	6.7	0.6	–5.0	–2.5	–9.6	10.0	0.2
Trinidad and Tobago	–15.5	1.3	–2.2	–13.3	4.6	18.8	–6.3	0.1	–0.2	0.2	–3.1	1.5	–1.9	–3.5

Source: IDB Trade and Integration Sector with BACI data (CEPII).
Note: The competitiveness component is disaggregated based on six product categories: Agricultural Primary Products (AP), Mineral Primary Products (MP), Agricultural Manufactures (AM), Mineral Manufactures (MM), Industrial Manufactures (IM), and Fuels and Energy (F&E). See Methodological Annex 6 for the composition of each category. The components may not add up to the total due to rounding.

TABLE A7 • COMPETITIVENESS EFFECT IN THE VARIATION OF EXPORTS BY PRODUCT AND TECHNOLOGICAL CONTENT

(Percentage points, 2003-2008 and 2011-2016)

	2003–2008						2011–2016					
	Contribution to the Competitiveness Effect					Contribution to Exports Change (%)	Contribution to the Competitiveness Effect					Contribution to Exports Change (%)
Exporter	LT	MT	HT	PP	MNR		LT	MT	HT	PP	MNR	
Latin America and the Caribbean	–2.9	–2.6	1.1	–2.8	–13.5	–20.4	–0.9	–0.5	–2.3	–1.6	–2.1	–7.4
LAC without Mexico	–3.7	–9.4	0.1	–3.6	–16.0	–32.2	–0.9	–1.3	–2.1	–2.1	–2.3	–8.7
Mexico	4.7	61.6	10.4	4.3	10.2	91.3	–0.4	4.4	–3.6	1.6	–0.6	1.2
Central America	16.2	8.4	7.5	9.1	–7.1	36.7	1.7	2.2	–7.1	–0.7	–1.0	–4.9
Costa Rica	1.8	–1.9	9.4	–1.6	1.9	9.6	–0.5	–1.7	–41.2	–0.7	–1.2	–45.3
Dominican Republic	71.3	21.3	14.0	10.4	53.9	172.2	8.5	2.9	0.8	0.4	–0.8	11.9
Guatemala	–3.6	2.0	–4.1	7.5	5.8	16.3	–3.1	–0.1	1.0	0.1	1.3	–0.7
Honduras	49.1	5.5	–0.9	30.1	6.9	92.4	6.8	3.3	0.6	2.3	–0.9	11.0
Nicaragua	8.3	16.8	0.7	30.9	2.7	59.6	3.2	41.6	–0.2	0.9	–3.8	41.6
Panama	29.3	38.1	31.0	22.5	–55.2	66.5	3.3	1.0	5.4	–3.0	–0.9	5.8
El Salvador	28.9	–6.1	–5.3	–2.2	–7.9	9.0	1.6	–0.5	1.2	0.4	–3.8	–1.1
Rest of Pacific Alliance	9.1	1.1	–2.9	5.8	–9.2	4.7	–1.8	1.1	–0.3	–3.0	–1.9	–6.1
Chile	–2.2	–3.5	–2.5	1.0	–0.5	–7.3	–1.1	–1.0	–0.4	0.9	–5.0	–6.7
Colombia	19.3	2.3	–3.5	25.5	–16.2	27.5	–2.8	3.6	–0.3	–7.3	–4.9	–11.9
Peru	15.3	10.3	–2.2	–27.1	–15.5	–16.0	–1.3	–0.3	0.0	–1.3	9.0	6.1
Brazil	–14.0	–28.1	5.2	7.9	–1.8	–29.9	–0.8	–3.3	–3.4	1.9	–0.3	–6.2

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TABLE A7 • COMPETITIVENESS EFFECT IN THE VARIATION OF EXPORTS BY PRODUCT AND TECHNOLOGICAL CONTENT (*continued*)

(Percentage points, 2003-2008 and 2011-2016)

	2003–2008						2011–2016					
	Contribution to the Competitiveness Effect					Contribution to Exports Change (%)	Contribution to the Competitiveness Effect					Contribution to Exports Change (%)
Exporter	LT	MT	HT	PP	MNR		LT	MT	HT	PP	MNR	
Rest of MERCOSUR	–7.1	–3.9	–4.8	–44.9	–40.7	–102.0	–1.6	–2.8	–0.9	–7.1	–3.1	–15.1
Argentina	–7.8	–3.3	–6.3	–60.7	–49.1	–127.3	–2.0	–3.7	–0.9	–8.2	–3.2	–18.0
Paraguay	1.4	–0.4	4.0	62.6	5.8	67.8	1.4	4.5	–0.1	–4.3	–0.8	3.7
Uruguay	–9.0	–14.7	1.7	16.6	4.1	–2.3	–2.2	–3.4	–1.8	0.6	–4.8	–10.5
Intensive in Fuels and Energy	–9.8	–12.0	–3.7	21.1	0.9	–3.8	–1.0	–2.3	0.2	–3.0	–7.5	–13.6
Bolivia	4.8	–15.2	–4.0	–57.0	–29.8	–101.3	–0.3	–0.1	–0.1	3.5	1.4	4.3
Ecuador	0.0	6.6	–1.9	22.6	11.7	38.8	0.1	–3.4	1.0	3.7	–0.8	1.0
Venezuela	–18.5	–20.0	–4.5	41.1	3.9	1.5	–2.6	–2.8	–0.5	–13.7	–19.7	–39.5
Caribbean	–6.4	–4.0	–0.4	17.7	–72.8	–66.2	–0.8	1.3	0.1	1.0	–3.0	–1.4
Bahamas	–0.5	–8.3	–1.2	–74.6	–298.1	–382.9	–0.2	–6.4	1.5	13.4	–11.8	–3.5
Belize	0.0	–12.1	–2.2	44.5	–120.4	–90.2	3.3	3.3	0.1	–13.1	–11.0	–17.6
Barbados	–2.6	–2.4	1.4	12.2	–170.8	–161.2	1.5	–2.6	–1.4	–1.7	–0.5	–4.1
Guyana	–3.9	–7.5	0.5	–14.3	–68.4	–94.7	2.0	28.6	1.4	7.8	–1.3	40.3
Haiti	1.155.0	–38.4	71.7	–0.3	106.1	1.292.9	259.1	0.4	0.3	–0.5	–6.1	253.6
Jamaica	–10.8	–9.5	2.6	–9.9	12.2	–16.2	0.7	–7.8	0.3	0.1	–15.7	–22.3
Suriname	0.5	–1.8	0.9	20.8	490.2	510.5	–1.1	–10.3	0.6	7.2	3.9	0.2
Trinidad and Tobago	–12.5	–2.5	–1.0	38.2	–28.2	–6.3	–2.2	1.6	–0.1	–0.3	–2.5	–3.5

Source: IDB Trade and Integration Sector with BACI data (CEPII) and Lall (2000).

Nota: The competitiveness component is disaggregated based on the following five categories: High Technology (HT), Low Technology (LT), Manufactures Based on Natural Resources (MNR), and Primary Products (PP). See Annex 6 for the composition of each category. The sum of the total effect may not coincide with the disaggregation by technological content since products without classification in Lall (2000) are not reported.

TABLE A8 • COMPETITIVENESS EFFECT IN THE VARIATION OF EXPORTS BY PRODUCT AND QUALITY RANK

(Contribution in percent, 2003-2008 and 2011-2016)

	2003–2008						2011–2016					
	Contribution to the Competitiveness Effect						Contribution to the Competitiveness Effect					
Exporter	Low	Medium-Low	Medium	Medium-High	High	Total	Low	Medium-Low	Medium	Medium-High	High	Total
Latin America and the Caribbean	–244	349	–396	175	16	100	–9	–20	–40	–25	–5	100
LAC without Mexico	–60	67	–107	–9	8	100	–9	–17	–44	–25	–6	100
Mexico	1	22	15	67	–6	100	–24	–1.512	1571	–161	226	100
Central America	23	23	33	20	1	100	32	9	–161	14	6	100
Costa Rica	0	–25	–39	–25	–11	100	0	–3	–95	0	–1	100
Dominican Republic	17	16	60	8	–1	100	4	317	–350	–181	110	100
Guatemala	13	67	11	12	–2	100	–20	121	–11	23	–13	100
Honduras	36	16	37	0	11	100	50	22	–6	2	32	100
Nicaragua	48	33	19	–1	1	100	94	6	–2	3	0	100
Panama	18	6	36	40	0	100	–30	–14	43	92	9	100
El Salvador	4	100	–4	–6	7	100	82	–386	64	48	92	100
Rest of Pacific Alliance	29	14	29	8	21	100	–77	–3	1	–21	1	100
Chile	255	334	–445	–11	–33	100	–37	11	17	–66	–24	100
Colombia	31	9	33	–2	29	100	–87	–2	–15	–8	12	100
Peru	–23	–31	105	49	0	100	–281	–222	121	363	118	100
Brazil	22	–19	–92	–9	–3	100	15	–5	–32	–64	–14	100
Rest of MERCOSUR	–65	4	–28	–9	–1	100	–12	–16	–47	–20	–5	100
Argentina	–61	–2	–25	–9	–3	100	–10	–27	–42	–17	–4	100

(*continued on next page*)

TABLE A8 • COMPETITIVENESS EFFECT IN THE VARIATION OF EXPORTS BY PRODUCT AND QUALITY RANK *(continued)*
(Contribution in percent, 2003–2008 and 2011–2016)

	2003–2008						2011–2016					
	Contribution to the Competitiveness Effect						Contribution to the Competitiveness Effect					
Exporter	Low	Medium-Low	Medium	Medium-High	High	Total	Low	Medium-Low	Medium	Medium-High	High	Total
Paraguay	26	73	0	1	0	100	–75	335	–166	2	4	100
Uruguay	5	9	–56	41	100	100	–1	11	–40	–44	–27	100
Intensive in Fuels and Energy	–44	390	–233	–15	2	100	13	–82	–27	–3	–1	100
Bolivia	–112	162	–166	7	9	100	61	62	–8	–11	–4	100
Ecuador	–15	96	13	2	4	100	16	73	3	6	2	100
Venezuela	–5	398	–265	–25	–3	100	–1	–78	–18	–2	–1	100
Caribbean	2	111	–24	–19	30	100	33	–130	0	30	–34	100
Bahamas	–38	–67	0	2	3	100	189	–280	–4	32	–37	100
Belize	–125	–55	269	0	10	100	–3	–52	–45	0	0	100
Barbados	53	–14	–64	–5	–71	100	141	–34	–193	24	–38	100
Haiti	101	0	0	–1	0	100	100	0	0	0	0	100
Jamaica	515	–585	144	26	0	100	39	–112	–23	–4	0	100
Suriname	4	–3.174	383	–28	2.914	100	–56	27	–68	8	–11	100
Trinidad and Tobago	0	119	–25	–16	21	100	0	–107	10	30	–32	100

Source: IDB Trade and Integration Sector with BACI (CEPII) and IMF data.
Note: The competitiveness component is disaggregated based on five quality ranks, as defined in Methodological Annex 5. The components may not add up to the total due to rounding.

Methodological Annex 1
Trade Estimates

This annex explains the adjustments made to the world trade series published by the Netherlands Bureau for Economic Policy Analysis (CPB).

CPB World Trade Monitor

The CPB compiles monthly series on trade flows by country utilizing sources that publish information online. Once collected, the data are standardized in terms of frequency and currency (dollars). This allows for the construction of consistent series of values, prices, and volumes. Additionally, different techniques are used to estimate the missing observations at the country level for the most recent months. For several countries, secondary sources are used to complement primary sources. The data by country are aggregated regionally, which requires completing missing data for some countries using regional growth rates. The CPB World Trade Monitor covers 96 countries and the Sub-Saharan Africa region, which is treated as a single economy. The series are generally obtained seasonally adjusted, and when not, the adjustment is made.[64]

Adjustments to the trade estimates for Latin America and the Caribbean

For Latin America, the following countries are included in the sample: Argentina, Bolivia, Brazil, Chile, Colombia, Costa Rica, Dominican Republic, Ecuador, Guatemala, Mexico, Paraguay, Peru, and Uruguay.

The CPB provides estimates at current and constant prices based on a sample that does not include El Salvador, Honduras, Nicaragua, Panama, and Venezuela. Since the composition of this sample has a significant impact on the estimates, it has been replaced by series obtained according to the methods explained in Methodological Annex 3.

[64] For more detail, see the CPB Ebregt (2016) publication.

Methodological Annex 2
Estimation of the Volume of World Exports

Table 1 of Chapter 1 presents the year-on-year growth rates of world export volumes for the first half of 2018, disaggregated geographically in bilateral flows among Africa, Latin America and the Caribbean, Asia, Europe, and North America.

The composition of the regions follows the location of countries by continent, with the countries of the Middle East included in the Africa region.

The matrix of monthly bilateral exports at current prices was obtained from the Direction of Trade Statistics (DOTS) of the IMF. The deflation of the series was undertaken using official and estimated price indices, as follows:

- Exports from Europe to other regions/Exports of other regions to Europe: flows deflated using price indices from EuroStat for the EU, disaggregated at the 1-digit SITC level. The indices were weighted by the European export/import basket with each particular region. Exports to North America correspond to a North America imports index from Europe
- Exports of North America to other regions/Exports of other regions to North America: flows deflated using the indices reported by the U.S. as published by the BLS, disaggregated at the 2-digit level of the Harmonized System, and weighted by the export/import basket of the U.S. and Canada with each region. Exports to North America were deflated using the indices published by the BLS at the partner level. For Asia, the aggregate price index for the Pacific Basin was used (China, Japan, Australia, Brunei, Indonesia, Macao, Malaysia, New Zealand, Papua New Guinea, the Philippines, Hong Kong SAR, Singapore, Republic of Korea, and Taiwan). For Africa, the Middle East index was used (Bahrain, Iran, Iraq, Israel, Jordan, Kuwait, Lebanon, Oman, Qatar, Saudi Arabia, Syria, United Arab Emirates, and Yemen). Exports from LAC and Europe were deflated using the index published for imports from the region, and for North America the index published for imports originating in Canada was used.

- Exports from Asia to the other regions: flows deflated using a simple average of the manufacturing price index published by the WTO for China-Taipei, Japan, the Republic of Korea, and Singapore. Exports to LAC were deflated with the import price index of total LAC imports estimated with data from 8 countries (Argentina, Brazil, Chile, Colombia, El Salvador, Mexico, Peru, and Uruguay). The intra-Asian flows deflator was obtained as the difference between the change of total exports and the weighted price changes of the remaining regions.
- Exports from LAC to other regions: flows deflated with the LAC export price index estimated with data from 10 countries (Argentina, Brazil, Chile, Colombia, El Salvador, Mexico, Paraguay, Peru, Uruguay, and Venezuela). Exports to Europe and North America were obtained with the respective import indices of the regions previously explained. Since during the period the change in nominal exports to Africa (and the Middle East) corresponded almost entirely to oil sales to the United Arab Emirates, this flow was deflated with a price index for that product. The index for exports to Asia was obtained from the difference in the total estimated change in prices and the change in prices of the remaining regions.
- Exports from Africa to the other regions: for Europe and North America, they were deflated with the corresponding import indices from that region. The latter deflator was applied to African sales to LAC and Asia. For intra-African sales, the total exports index of LAC was used.

The CPB estimates for the change in volume of world trade and for U.S. and Europe foreign trade flows were taken as control values. For the latter two, the respective values of exports and imports of goods at constant prices reported in the national accounts were also considered.

Methodological Annex 3
Indices of Price, Volume and Terms of Trade

This annex summarizes the methodology used to estimate the price and volume indices of exports and imports, and the terms of trade indices used in Chapters 1 and 2 in aggregate form.

Formulas

Price indices

The price indices correspond to Laspeyres estimates for imports and exports:

$$P_t = \frac{\sum_i p_t^i * q_0^i}{\sum_i p_0^i * q_0^i}$$

Where $P_t^i = \frac{v_t^i}{q_t^i}$, the unit value of item *i* at time *t,*

- Value, v_t^i, (thousands of US$)
- Volume, q_t^i, (thousands of kg)

The Laspeyres price index compares the value of a basket of products in the base year with the value of the same basket in period *t*. When $P_t = 1$, the basket costs the same as in the base year.

Volume Indices

The Paasche volume indices are estimated for imports and exports:

$$Q_t = \frac{\sum_i p_t^i * q_t^i}{\sum_i p_t^i * q_0^i}$$

Where $P_t^i = \frac{v_t^i}{q_t^i}$, the unit value of item *i* at time *t*,

- Value, v_t^i, (thousands of US$)
- Volume, q_t^i, (thousands of kg)

The Paasche volume index compares the value of a basket of goods in period *t* valued at the prices of period *t* (current), against the value of a basket in the base year valued at the prices of period *t*. When $Q_t = 1$, the current basket is composed of the same quantities as in the base year.

Terms of Trade

Based on the following formula:

$$TT_t = \frac{P_{x,t}}{P_{m,t}} * 100$$

Where $P_{x,t}$ and $P_{m,t}$ correspond, respectively, to the export and import price indices of the country in year *t*.

Specific methodologies and data sources

To estimate the price and volume indices, two methodologies were employed according to the availability and quality of the disaggregated data. The first made use of the primary microdata available in INTrade/DataINTAL, used to estimate import and export deflators for the countries of South America and the imports of Central America. The second used deflators elaborated by the Bureau of Labor Statistics (BLS) and applied to the exports of Mexico and Central America. The indicators corresponding to imports of Mexico come from the series published by the Bank of Mexico (Banxico). All data were homogenized according to the 1996 revision of the Harmonized System (HS).

Methodology 1: Trade flows of South America and imports of Central American countries

For exports and imports of Argentina, Bolivia, Brazil, Chile, Colombia, Ecuador, El Salvador, Paraguay, Peru, and Uruguay, and for imports of Costa Rica, Guatemala, and Venezuela, Laspeyres price indices were calculated at the subheading level of the HS (6 digits) with 2005 as the base year. The calculations were based on data at current values and physical volumes reported by national sources to INTrade/DataINTAL

as of July of 2018, and from COMTRADE for imports from Venezuela, which were obtained according to the value of exports reported by other countries to Venezuela.

Methodology 2: Exports of Mexico and Central American countries

This group includes Costa Rica, Guatemala, and Mexico. Problems detected in the data, particularly in the volume data for manufactures, made it advisable to proceed with estimates at constant prices at the chapter level of the HS (2 digits), employing the price indices of U.S imports obtained from the BLS. The disaggregation is composed of 35 chapters of the HS: 02, 03, 07, 08, 09, 20, 22, 27, 28, 29, 30, 39, 40, 42, 48, 61, 62, 63, 64, 69, 70, 72, 73, 74, 76, 82, 83, 84, 85, 87, 90, 91, 94, 95, 96. Calculations were computed using the current values data reported by official national sources to INTrade/DataINTAL as of July 2018.

Methodology 3: Venezuela's exports

Price indices were estimated using OPEC data regarding Merey crude oil, and from the same source, volume indices were estimated taking primary and secondary data on production volume.

Additional Notes

At the time of publication complete data were not available for Caribbean countries.

Indicators for the region and group of countries presented in Figures 8 and 9 (Chapter 1) and 12 (Chapter 2) were obtained from the weighted averages of the price and volume indices of the trade flows corresponding to each country. The relative values of exports or imports of the countries within each group in each year were used as weights.

Data for the most recent years are subject to revision by the respective sources and do not necessarily coincide with figures updated and published subsequently. Therefore, these estimates should be considered preliminary.

Price estimates for the first semester of 2017 were computed based on preliminary data on the export and import price indices published by national sources in Argentina, Bolivia, Brazil, Chile, Colombia, El Salvador, Mexico, Paraguay, Peru, Uruguay, and IDB estimates for Venezuela.

Methodological Annex 4
Statistics for Goods and Services Exports

The figures from 2015 to 2018 provided in Tables 2, ,3 and 4 (Chapter 2) are preliminary and subject to change by national sources.

Table 2

Goods exports are expressed in Free on Board (FOB) values. For Venezuela, the total was estimated based on price and volume data reported by the OPEC. Data for El Salvador, Guatemala, and the Dominican Republic include Special Trade Regimes (STR). Data for Costa Rica, Honduras, and Nicaragua excludes STR and it was collected from alternative sources to INTrade/DataINTAL. Data for Panama refer only to national exports and imports. The growth of goods exports through June 2018 is an estimate of the year-on-year change based on monthly data through that month.

Table 4

The definition of services exports corresponds to the sixth version of the Balance of Payments Manual. For all years, the series exclude construction, government, manufacturing, maintenance and repair of goods services. The services data for Bahamas, Barbados, Guyana, Haiti, Jamaica, and Trinidad and Tobago are estimated based on figures from the WTO. The value of services exports for the first semester of 2018 is an estimate that excludes some countries for which no data were available at the time of publication.

Methodological Annex 5
Estimation of Export Quality Index

Database

The index of quality of exports used in this report is the one estimated by the IMF and is available on its website.[65] It has been built and documented by Henn, Papageorgiu, Spatafora (2013, 2015). Data is available for 166 countries on an annual basis from 1963 to 2014. In this analysis, the export value series and their corresponding quality indices are used at the 4-digit SITC (Revision 1) product-level.

Estimation strategy

The IMF's estimation strategy is a modified version of the Hallak (2006)'s methodology and is briefly presented here.[66] It is assumed that the unit price of a traded good is determined by:

$$ln\ p_{mxt} = \zeta_1 ln\theta_{mxt} + \zeta_2 lny_{xt} + \zeta_2 lnDist_{mx} + \xi_{mxt}\ , \qquad (1)$$

where the subscripts *m, x and t* denote the importer, the exporter and the year, *p* the prices, θ the quality, *y* the per capita income and *Dist* the distance between the exporter and the importer. Given that quality is not observable, to be able to estimate this regression, an augmented gravity equation with quality (specified for each product separately) is introduced, which serves to obtain an algebraic expression for quality that can be substituted in the previous equation. In this equation, imports are determined as follows:

[65] http://data.imf.org/?sk=A093DF7D-E0B8-4913-80E0-A07CF90B44DB.

[66] The main difference is that the IMF uses 4-digit SITC unit values and Hallak (2006) uses 10-digit unit values of the Harmonized Commodity Description and Coding System and aggregates them into 2-digit sectors price indices. The limitation of working with a 4-digit disaggregation is the heterogeneity between the goods at that level. However, we choose to use the IMF index because of its extensive temporal and geographic coverage. For more details on the construction of the IMF quality index see the technical note accompanying Henn, Papageorgiu, Spatafora (2015).Esta limitación es estándar en la literatura.

$$ln(imports)_{mxt} = lmFE + ExFE + \alpha Dist_{mx} + \beta I_{mxt} + \delta_1 ln\theta_{mxt} lny_{mt} + \varepsilon_{mxt}, \qquad (2)$$

where *lmFE* and *ExFE* denote importer and exporter fixed effects, and *I* is a set of variables commonly used in gravity models. The next step is to solve for quality in equation (1) and substitute it in equation (2), obtaining:

$$ln(imports)_{mxt} = lmFE + ExFE + \alpha Dist_{mx} + \beta I_{mxt} + \zeta_1' lnp_{mxt} lny_{mt} + \zeta_2' lny_{xt} lny_{mt} + \zeta_3' lnDist_{mx} lny_{mt} + \xi_{mxt}' \qquad (3)$$

where,

$$\zeta_1' = \frac{\delta}{\zeta_1}, \zeta_2' = \frac{\delta\zeta_2}{\zeta_1}, \zeta_3' = \frac{\delta\zeta_3}{\zeta_1}, and\ \xi_{mxt}' = -\frac{\delta\zeta_0' + \delta\zeta_{mxt}}{\zeta_1} lny_{mt} + \varepsilon_{mxt}$$

Next, equation (3) is estimated for each 4-digit SITC product and the coefficients are used to calculate the quality index using the following expression:

$$Quality\ Estimate_{mxt} = \delta ln\theta_{mxt} = \zeta_1' lnp_{mxt} + \zeta_2' lny_{xt} + \zeta_3' \ln Dist_{mx}$$

Note δ that denotes the preference for quality and cannot be disentangled from quality itself.[67] Finally, the indices are normalized for each product-year with the 90th percentile of the distribution at the country level being equal to one.

Aggregated quality index

To show a region aggregated index, a country aggregate index is first created as the weighted average (by value) of the products that form the exported basket. The distribution is then normalized to the 90th percentile. Finally, the region index is constructed as the weighted average (by value) of the countries that comprise it.

Aggregated index by country

$$q_t^i = \sum_k s_{kt}^i q_{kt}^i$$

where for country *i*, s_{kt}^i is the share of product *k* exports value in total exports, that is, $S_{kt}^i = \frac{x_{kt}^i}{\sum_k x_{kt}^i}$.

[67] This limitation is standard in the literature.

Normalized index

$$\tilde{q}_t^i = \frac{q_t^i}{P_{90t}}$$

where P_{90t} is the 90th percentile of the distribution normalized by country.

Index by region

$$q_t^r \sum_i s_t^i \tilde{q}_t^i$$

where s_t^i is the share of country *i*'s exports value in region *r*'s total exports, that is, $S_{kt}^i = \frac{x_{kt}^i}{\sum_k x_{kt}^i}$.

To build the aggregated indices by product group, we proceed in the same way, but in each case only the products corresponding to each group are added.

Products related to fuel and energy, and gold are eliminated from all calculations. They are not of great relevance for the study of quality since they depend mainly on natural resources from which quality cannot be modified.

Decomposition of the quality index change into the composition and level effects

The aggregated quality index for each country is constructed as the average of the indexes of the 4-digit SITC products weighted by their share in total exports. Therefore, this can vary by two factors: changes in the weight of the products, that is, the composition of the basket exported, or by changes in the index of the products, that is, in the quality. In order to differentiate the two effects, the following decomposition method is used:

$$\tilde{q}_t^i - \tilde{q}_{t-1}^i = \overbrace{\sum_k \left(\frac{q_{kt}^i}{P_{90t}} - \frac{q_{kt-1}^i}{P_{90t-1}} \right) \left(\frac{s_{kt}^i + s_{kt-1}^i}{2} \right)}^{\text{Quality effect}} + \overbrace{\sum_k \left(s_{kt}^i - s_{kt-1}^i \right) \frac{1}{2} \left(\frac{q_{kt}^i - q_t^i}{P_{90t}} + \frac{q_{kt-1}^i - q_{t-1}^i}{P_{90t-1}} \right)}^{\text{Composition effect}},$$

These elements are defined in the previous section.

The quality distribution

To study the relative position of the regions/subregions in quality, five quality levels are constructed based on the distribution of the index at the country level. These

quality groups are defined as follows: low, first quintile; medium-low, second quintile; average, third quintile; medium-high, fourth quintile; high, fifth quintile. The value of exports is divided into these five groups and the share of exports that a country or group of countries *i* has in quality group *n* is given by:

$$s_{nt}^{i} = \frac{\sum_{k \in k_{nt}^{i}} x_{kt}^{i}}{\sum_{k} x_{kt}^{i}}$$

where K_{nt}^{i} represents the set of goods that in country (or group of countries) *i* belongs to quality group *n*.

Quality ladders

Quality ladders for each product or group of products are defined as the distribution of the quality indices at the country level. Its length is defined as the difference between the upper and lower limits defined by the rank of quality index that centers 95% of global exports value of the corresponding product or group of products. Its usefulness lies in the fact that it allows to find opportunities for differentiation. Thus, relevant products for the exports of a particular country or region that have long ladders and in which the country analyzed is located in the lower part of the distribution, are ideal candidates to implement quality development policies.

Methodological Annex 6
Data Management in the Intraregional Trade Analysis

Database

Trade data used in chapter four come from the Database for International Trade Analysis (BACI, by its initials in French) of the Center for International Prospective Studies (CEPII). BACI provides trade value in current dollars by origin and destination, disaggregated at the 6-digit level of the Harmonized System (HS 1996). This database provides comparable data for all countries.

Groups of countries

Latin America and the Caribbean – Brazil and Mexico are reported individually. The other countries are grouped as follows: Central America (Costa Rica, El Salvador, the Dominican Republic, Guatemala, Honduras, Nicaragua, and Panama); Caribbean (Bahamas, Barbados, Belize, Guyana, Haiti, Jamaica, Suriname, and Trinidad and Tobago); Rest of MERCOSUR (Argentina, Paraguay, and Uruguay), Intensive in Fuels and Energy (Bolivia, Ecuador, and Venezuela), and Rest of the Pacific Alliance (Chile, Colombia, and Peru).

Main destination markets – Latin America and the Caribbean (LAC); United States (U.S.); European Union (EU); Asia, which includes China, India, ASEAN, Japan and the Republic of Korea (Asia); and Rest of the World (ROW).

Classifications

Quality

Taking the trade flows classification by quality ranges defined in Methodological Annex 5, the high quality taxonomy is assigned to the fifth quintile of the quality index, medium-high quality to the fourth quintile, average quality to the third quintile,

average-low quality to the second quintile, and low quality to the first quintile. It is assumed that if a product (at the 4-digit level of SITC) is exported by a country to the world in a certain quality range, it will export it to all destinations in that same quality range.

Categories

This classification is a variant of the one used by the Institute of Statistics and Censuses (INDEC) of Argentina and its purpose is to specify the degree of elaboration of the products, in particular of commodities and their derivatives. A fifth item was added to the classification categories of the INDEC, called mineral manufactures (MM). The original classification contains primary products (PP), manufactures of agricultural origin (AM), industrial manufactures (IM) and fuels and energy (F&E). MM incorporates products that the original version includes as IM and that correspond to mineral derivatives located in the initial phases of the development of this activity and whose prices are heavily influenced by those of the respective primary products. Likewise, PP was separated according to the origin: primary agricultural products (AP) and primary mining products (MP). To illustrate the use of the classification by items, below some paradigmatic cases for the region are exemplified, using as basis the subcategories of HS92.

Subheading	Category	Subheading	Category	Subheading	Category
Soybeans and Derivatives		**Coffee**		**Wood, Cardboard, Paper and Furniture**	
120100	AP	90111	AP	380400	AM
120810	AM	90112	AM	380700	AM
150710	AM	90121	AM	440110	AP
150790	AM	90122	AM	440121	AP
210310	AM	90130	AP	440310	AP
230400	AM	90140	AM	440320	AP
Fish, Crustaceans and Molluscs		**Viticulture**		440910	AM
30613	AP	200920	AM	440910	AM
30623	AP	200960	AM	440920	AM
160520	AM	80540	AP	441010	AM
Hydrocarbons and Electricity		80610	AP	441090	AM
270900	F&E	80620	AP	**Iron**	
271000	F&E	**Copper**		250200	MP

(*continued on next page*)

(*continued*)

Subheading	Category	Subheading	Category	Subheading	Category
271111	F&E	260300	PP	253040	MP
271112	F&E	262030	MM	260111	MP
271113	F&E	282550	IM	260112	MP
271114	F&E	283325	IM	260120	MM
271119	F&E	284810	IM	720110	MM
271121	F&E	740110	MM	720120	MM
271129	F&E	740120	MM	720130	MM
271210	F&E	740200	MM	720299	MM
271220	F&E	740311	MM	722820	MM
271290	F&E	**Cocoa**		730110	MM
271311	F&E	180100	AP	730120	MM
271312	F&E	180200	AP	730240	MM
271320	F&E	180310	AM	730290	MM
271390	F&E	**Salmon**		730300	MM
271410	F&E	30541	AM	730410	MM
271490	F&E	30219	AP		
271500	F&E	30310	AP		
271600	F&E	30322	AP		
		30329	AP		

Technological content

This classification corresponds to that of Lall (2000) and incorporates the following sectors of the Standard International Trade Classification (Revision 3, at 3 digits):

Primary Products		Manufactures Based on Natural Resources		Low Technology		Medium Technology		High Technology	Not Classified
001	244	016	635	611	666	781	721	716	351
011	245	017	641	612	673	782	722	718	883
012	246	023	281	613	674	783	723	751	892
022	261	024	282	651	675	784	724	752	896
025	263	035	283	652	676	785	725	759	961
034	268	037	284	654	677	266	726	761	971
036	272	046	285	655	678	267	727	764	
041	273	047	286	656	691	512	728	771	
042	274	048	287	657	692	513	731	774	

(*continued on next page*)

(*continued*)

Primary Products		Manufactures Based on Natural Resources		Low Technology		Medium Technology		High Technology	Not Classified
043	277	056	288	658	693	533	733	776	
044	278	058	289	659	694	553	735	778	
045	291	059	322	831	695	554	737	525	
054	292	061	325	841	696	562	741	541	
057	321	062	334	842	697	571	742	542	
071	333	073	335	843	699	572	743	712	
072	342	098	411	844	821	573	744	792	
074	343	111	511	845	893	574	745	871	
075	344	112	514	846	894	575	746	874	
081	345	122	515	848	895	579	747	881	
091	681	232	516	851	897	581	748		
121	682	247	522	642	898	582	749		
211	683	248	523	665	899	583	762		
212	684	251	524			591	763		
222	685	264	531			593	772		
223	686	265	532			597	773		
231	687	269	551			598	775		
		421	592			653	793		
		422	661			671	811		
		431	662			672	812		
		621	663			679	813		
		625	664			786	872		
		629	667			791	873		
		633	689			882	884		
		634				711	885		
						713	891		
						714			

Intra-industrial or two-way trade

The level of intra-industry or two-way trade (TWT) was estimated according to CEPII 's BACI database based on the methodology of Fontagné *et al.* (1997). According to the authors' recommendations, geographical and sectoral biases should be avoided. Given that intra-industry trade falls with disaggregation, when more aggregated indices are used, higher TWT levels are obtained, generating an aggregation bias. On the other hand, the geographic bias is defined as the overestimation of the TWT

index due to the grouping of business partners. Consequently, the calculations were made for country pairs at the product level (6 digits of the Harmonized System, 1996).

In order to perform the calculations, Fontagné *et al.* (1997) applies two criteria: the trade overlap and the similarity of unit values. According to the methodology, if there is a significant overlap of trade flows at the product level, TWT occurs. The overlap is determined according to the following condition:

$$\frac{Min\left(X_{kk'it}, M_{kk'it}\right)}{Max\left(X_{kk'it}, M_{kk'it}\right)} > 10\%$$

where:
X is the value of exports,
M is the value of imports,
k is the country declaring the trade flow,
k' is the partner country,
i is the product,
t is the year in which the trade flow occurs.

There is overlap, and therefore TWT, if the smallest flow (either of import or export) represents at least 10% of the largest flow. Otherwise, there is no significant overlap and it is considered as one-way trade. If the overlap is significant, the calculations follow a similarity condition, for which an α value of 15% is taken as reference and the export unit values are calculated (the quotient between the exports value in current US $ and exported kilograms) and import unit values (the quotient between the value of imports in current US $ and the imported kilograms). If trade unit values differ by more than 15%, traded products are different among each other, which is interpreted as an indicator of quality.[68] If they do not, products are considered to be similar or horizontally differentiated (by variety).

The following condition is analyzed:

$$\frac{1}{1.15} \leq \frac{UVX_{kk'it}}{UVM_{kk'it}} \leq 1.15$$

where:
UVX is the unit value of exports,
UVM is the unit value of imports.

[68] This is approximated with export or import unit values, assuming that these imply a difference in quality (Fontagné *et al.*, 1997 and 2005).

Methodological Annex 7
Derivation of the Competitiveness Effect of Intraregional Exports

The method used to disaggregate the export growth rate is known as shift-share. Specifically, the rate can be decomposed into three composition effects (global, product, and partner) and a performance effect (competitiveness), that is,

$$\Delta exports = \Delta global + \Delta product + \Delta partner + \Delta competitiveness.$$

As a starting point, exports x of country i in year t can be disaggregated as the sum of exports to each destination j of each good k,

$$x_i^t = \sum_j \sum_k x_{ijk}^t,$$

and the growth rate of exports between the periods t and $t + 1$ for country i, g, is expressed as

$$g_i = \frac{x_i^{t+1}}{x_i^t} - 1.$$

For simplicity, the time superscript is omitted for the growth rate. The difference between exports in t and $t + 1$ for country i, after algebraic manipulation, can be disaggregated and represented as follows:

$$x_i^{t+1} - x_i^t = \overbrace{g x_i^t}^{\text{Global}} + \overbrace{\sum_k (g_k - g) x_{ik}^t}^{\text{Product}} + \overbrace{\sum_j \sum_k (g_{jk} - g_k) x_{ijk}^t}^{\text{Partner}} + \overbrace{\sum_j \sum_k \left(x_{ijk}^{t+1} - x_{ijk}^t - g_{ijk} X_{ijk}^t\right)}^{\text{Competitiveness}},$$

where g represents the growth rate of global exports to LAC, g_k the growth rate of exports of good k and g_{jk} the growth rate of that good to the specific market j. The first term on the right side of the equation corresponds to the global effect, that is, how the exports of country i would have changed if they had grown at the same

rate as the global average. The second component represents the product effect, given by the difference between the growth rate of exports of product *k* and global growth, which is linked to the product composition of the export basket. The third component is the partner effect, representing the difference between the growth of exports of product *k* in market *j* and the mean growth of exports of *k*, which is linked to the distribution of exports across destinations. The last term is a residual and can be interpreted as the difference between growth of exports of country *i*, equivalent to the basket of exported products to each trade partner, and the growth of global exports of those products in those specific markets. If the country exports more or less than the increase in global demand, its competitiveness is higher or lower.

Dividing both sides of the previous equation by x_i^t produces the disaggregation of the export growth rate into the global, product, partner, and competitiveness effects. Note that the competitiveness effect can also be disaggregated into product and partner components.

Additionally, the market share of country *i* is measured as the fraction that its exports represent in global exports, that is:

$$s_i^t = \frac{x_i^t}{\sum_i x_i^t} \cdot$$

If the exports of country *i* grow at a rate greater than that of global exports, the country increases its market share. Note that the market share in the market for a particular good *k*, in partner country *j*, or a market share for a product-partner combination, can also be calculated in a similar fashion.

The *shift-share* method used in this analysis is similar to the one described in Piezas-Jerbi and Nee (2009). One of the limitations of this methodology is that the magnitudes of the product and partner effects depend on the order in which they are subtracted from the growth of world trade. However, the magnitudes of the global and competitiveness effects remain constant. Given that the bulk of the analysis in this report is centered on the competitiveness effect, this limitation is less relevant since it does not affect the main results of the analysis.

Methodological Annex 8
Augmented Gravity Model with Intraregional Effects

The econometric specifications of the gravity model aim to identify the impact of economic integration, specifically the effect of free trade agreements (FTA) and distance on trade flows, differentiating them by their final use (consumer goods or productive inputs). To isolate the effect on intra-regional trade, these two variables of interest are interacted with a "dummy" variable, which takes the value of 1 when trade is between LAC countries and zero otherwise, and another interaction is included to capture when trade occurs between a country in LAC and a partner from outside the region. Two econometric specifications of the determinants of the value of exports from country i to country j, X_{ijt}, are used, depending on the possibility of including the FTA variable and the distance at the same time, making sure that the estimates are robust.

Specification to estimate the effects of free trade

The first specification focuses on estimating the effect of FTAs on exports. Given that trade policy is not an exogenous variable independent of trade flows, it is necessary to consider the potential endogeneity issues in the estimates (Baier and Bergstrand, 2007). For example, two countries can sign an FTA because they are already trading at an important level and want to regulate these trade flows. The endogeneity of FTAs can be addressed by including country-pair fixed effects, f_{ij}, to control the bilateral factors that can bias the effect of free trade agreements. This specification is considered more appropriate to establish a causal link (Baier and Bergstrand, 2007). Since the country-pair fixed effects already control for variables such as distance, the distance variable must necessarily be omitted in the following specification:

$$X_{ijt} = \exp\left(\beta_1 FTA_{ijt} + \beta_2 FTA_{ijt} * LAC_{ij} + f_{it} + f_{jt} + f_{ij}\right) + \in_{ijt}$$

This estimation is carried out with a log-OLS regression instead of a Poisson Pseudo Maximum Likelihood (PPML), as suggested by Silva and Tenreyro (2006), because the convergence of the procedure is not achieved in the case of intermediate and capital products. The specification includes the free trade agreements, FTA_{ij}, and the interactions with the intraregional dummy, in addition to all the corresponding fixed effects (origin-time, destination-time and country-pair).

Specification to estimate the distance elasticity

The second specification focuses on estimating the distance elasticity of bilateral trade. This variable captures the transport, information and logistics costs of bilateral trade. To include this variable, it is necessary to omit the country-pair effects. The free trade agreement variable is included as a control, but its coefficient is less robust. The specification is as follows:

$$X_{ijt} = \exp\left(\beta_1 \log\left(dist_{ij}\right) + \beta_2 \log\left(dist_{ij}\right) * LAC_{ij} + \beta_3 FTA_{ijt} + \beta_4 FTA_{ijt} * LAC_{ij} + \beta_5 Z_{ijt} + f_{it} + f_{jt}\right) + \in_{ijt}$$

This specification includes the bilateral distance, $dist_{ij}$, and its coefficient β_1 indicates its elasticity, which informs in what percentage trade flows change when the distance increases by 1%. The coefficient β_2 indicates the additional elasticity within the LAC region. In addition, geographic and cultural variables are included, capturing natural factors of trade (common border, common language, colonial ties), Z_{ij}, which must necessarily be included when excluding the country-pair fixed effects. The origin-time fixed effects, f_{it}, and destination-time, f_{jt}, capture the capacity of the country of origin to export to all destinations and the specific characteristics of the destination market, such as variations in the total demand in each destination country.

In this case, a PPML estimator is used, ensuring more robust estimates. In presence of heteroskedasticity, the parameters of the log-linearized models and estimated by ordinary least squares can lead to biased estimates due to Jensen's inequality: in general, the expectation of the logarithm of a random variable is not equal to the logarithm of the expectation of that variable. Therefore, if possible, the gravity equation should be estimated without the use of logarithms (Silva and Tenreyro, 2006).

Database and classification

Regarding the data, the estimates are based on the trade data of the COMTRADE, differentiating final, intermediate, capital and primary goods. To make this distinction we use the Broad Economic Categories classification (BEC) with some modifications.

In all specifications, fuels are excluded. The specification to identify the effects of distance is followed by Lemoine and Kesenci (2002) and a category of primary goods that includes the BEC subcategories of primary industrial supplies not included in other categories and the primary food and beverage supplies for industry are separated from the rest. A more disaggregated version is used in the specification to identify the effects of free trade agreements. The category of final goods includes: food and beverages (primary and processed for household consumption) and consumer goods (durable, semi-durable and non-durable). The intermediate goods include food and beverages (primary and processed for use in industry), industrial supplies (primary and processed), parts and accessories (capital goods and transport equipment). Capital goods includes capital goods and industrial transportation equipment. An ad hoc category for the automotive sector includes passenger vehicles and non-industrial transportation equipment.

On the other hand, regarding the trade policy variables, the FTAs included in the Baier and Bergstrand (2017)'s database are considered, which are complemented with information for Latin America and the Caribbean included in the Integration and Trade Information System of the IDB (INTrade). The sample covers the years 1996 to 2012.

Table A9 presents the results of the estimation of the effect of free trade agreements and Table A10 the results of the estimation of the distance elasticity. These results are presented in figures 33 and 34 of chapter 4. Only significant coefficients of interest are reported. The figures show the exponential transformations (minus 1) of the estimated coefficients, in such a way that they can be interpreted as the percentage impact of FTA on export flows.

TABLE A9 • FREE TRADE AGREEMENTS EFFECT ON BILATERAL TRADE IN THE WORLD AND LATIN AMERICA AND THE CARIBBEAN

		Intermediate goods			Final goods	
	Capital	Food and beverages	Industrial supplies	Parts and accessories of capital and transport equipment	Food and beverages	Consumption goods
FTA	0.134***	0.104***	0.264***	0.0641**	0.0599**	0.0578**
	–4.24	–2.58	–9.02	–2.14	–2.09	–2.21
FTA * LAC-LAC	–0.0179	0.367***	–0.0767	0.0648	0.408***	0.093
	(–0.18)	–3.07	(–0.83)	–0.7	–4.61	–1.13
FTA * LAC-ROW	–0.0838	–0.193**	–0.0294	0.0617	0.0201	–0.00391
	(–1.04)	(–2.01)	(–0.39)	–0.82	–0.28	(–0.06)
Number of observations	204,588	132,467	249,166	205,593	195,740	236,605

Source: IDB Integration and Trade Sector own estimates with COMTRADE data.
Note: t statistic in parenthesis, * p<0.10, ** p<0.05, *** p<0.01. Regressions include country-pair, exporter-time and importer-time fixed effects.

TABLE A10 • DISTANCE ELASTICITY IN BILATERAL TRADE IN THE WORLD AND LATIN AMERICA AND THE CARIBBEAN

	Final	Intermediate	Capital	Primary
Distance	–0.593***	–0.770***	–0.527***	–0.860***
	(–47.54)	(–72.20)	(–38.76)	(–37.71)
Distance * LAC-LAC	–0.648***	–0.446***	–1.017***	–0.277***
	(–17.81)	(–9.83)	(–16.43)	(–3.75)
Distance * LAC-ROW	–0.315***	–0.202***	–0.504***	–0.0790**
	(–0.18.93)	(–9.74)	(–18.05)	(–2.22)
FTA	0.597***	0.446***	0.498***	0.237***
	(21.84)	(18.58)	(18.03)	(5.47)
FTA * LAC-LAC	0.0111	0.0586	0.0545	0.575***
	(0.17)	(1.03)	(0.58)	(4.64)
FTA * LAC-ROW	0.0383	–0.101	–0.282***	0.11
	(0.80)	(–1.37)	(–3.22)	(1.17)
Common border	0.404***	0.267***	0.283***	0.602***
	(18.58)	(14.74)	(11.20)	(19.88)
Common language	0.276***	0.204***	0.196***	–0.174***
	(11.84)	(9.92)	(8.58)	(–3.95)
Colony of the same country post 1945	0.0088	0.0714***	–0.0665***	0.475***
	(0.29)	(2.85)	(–2.67)	(8.27)
Colonial relation post 1945	0.808***	0.204***	0.428***	0.773***
	(18.51)	(3.71)	(7.35)	(9.18)
Number of observations	256,977	249,784	200,846	172,177

Source: IDB Integration and Trade Sector own estimates with COMTRADE data.
Note: t statistic in parenthesis, * p<0.10, ** p<0.05, *** p<0.01. Regressions include country-pair, exporter-time and importer-time fixed effects.

The Trade and Integration Monitor 2018 identifies the factors underlying the recent recovery in exports, examines risks for its sustainability, and looking to the future, maps the sophistication of the region's exports and the main challenges it faces in strengthening its position in the most profitable segments of global trade. The report argues that to move beyond the current environment marked by increasing external risks, Latin American and Caribbean countries should resolutely aim to develop national systems of quality infrastructure and take better advantage of the potential for regional integration.