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INFORMATION SYSTEM ON TRADE AND INTEGRATION

Trade and Integration Monitor 2016

Downshifting

Latin America and the Caribbean
in the New Normal of Global Trade

Coordinated by
Paolo Giordano

Integration and Trade Sector

IDB

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November 2016

IDB
Inter-American
Development Bank

Contents

Prologue

World trade in goods, which had been stagnant since the middle of 2011, entered into a recessive phase in the second half of 2014. Since then the value of global merchandise exports has been contracting, leading to a more prolonged slowdown in trade than the one triggered by the financial crisis of 2008–2009. Likewise, trade in services fell for the first time since the crisis.

In lockstep with world trade, the value of exports from Latin America and the Caribbean (LAC) also began to decline in the second half of 2014, and the fall has been accelerating since. This double-dip resulted from two factors: first, weak growth in the region's main trading partners, which affected demand for its exports; second, a historic correction in the region's terms of trade due to reductions in the prices of key export goods.

The *Trade and Integration Monitor 2016* analyzes the different aspects of this downshift of world trade, as well as its effects on the region. This is the most recent edition of a series of reports elaborated by the Integration and Trade Sector of the Inter-American Development Bank (IDB) that study the evolution of LAC's insertion into the world trading system, making use of data available in INTrade, the Information System on Trade and Integration of the IDB.

The present study explains how deteriorations in the terms of trade and fluctuations in the already weak growth of trade volumes have depressed the value of regional exports and generated deficits in the current account of the balance of payments of most countries. Subsequently, these trends are disaggregated by country, sub-region, product, and export destination, and the regional trade outlook is analyzed for the short and the long terms, taking into account the impact of recent exchange rate realignments and of structural transformations that have affected the world trading system in the last two decades.

Given the magnitude of the challenges and the fragility of the global economic context, we hope that this edition of the *Trade and Integration Monitor* supplies the countries of the region with useful information for the design and implementation of policies that may facilitate the diversification of exports and reignite growth based on a greater and more competitive integration into the world economy.

Antoni Estevadeordal
Manager, Integration and Trade Sector

List of Abbreviations

AM	Agricultural Manufactures
AP	Agricultural Primary (Products)
C&D	Commodities and Derivatives
CPI	Consumer Price Index
EU	European Union
F&E	Fuels and Energy
GDP	Gross Domestic Product
HS	Harmonized Commodity Description and Coding System
IM	Industrial Manufactures
LA	Latin America
LAC	Latin America and the Caribbean
MM	Mineral Manufactures
MP	Mineral Primary (Products)
NAFTA	North America Free Trade Agreement
PM	Primary Manufactures
PP	Primary Products
STR	Special Trade Regimes
U.S.	United States

Executive Summary

In the middle of 2014 world trade entered into a second phase of contraction following the collapse triggered by the global financial crisis of 2008–2009. Against this background, two concurrent factors added to the slowdown of Latin American and Caribbean exports, which was even stronger than the world average: a historic terms of trade shock and the most severe regional recession in recent decades. As a consequence, most countries experienced a worsening of their current account imbalances at a time when international financing conditions are expected to harden. Looking forward, the realignment of exchange rate parities paints an adverse picture for intra-regional trade growth, reinforcing the long-standing trend towards specialization in commodity production. In this context, it becomes even more urgent to implement policies to promote the diversification of exports in order to compensate the downshift of world trade.

The *Trade and Integration Monitor 2016* analyzes trends in the region's external sector with the objective of contributing to the design of policies that may improve its long-term trade performance. It employs indicators related to trade and the region's trade agreements systematized by the Integration and Trade Sector of the Inter-American Development Bank, and publicly available through INTrade (www.intradebid.org), to point to the following findings:

The decline of global and regional exports resulted from reductions in the value of imports of both developed and developing countries, and from intense deflationary pressures that affected the prices of foreign sales.

Unlike in the aftermath of the global financial crisis of 2008–2009, in the current scenario variations in the external demand of developed and developing countries have reinforced instead of compensating one another. The latest source of fragility in world trade thus emerged from the declining demand of emerging markets, particularly China. The dominant explanatory factor of the trade contraction, however, was the reduction in the prices of traded goods, mainly commodities and oil. At the same time, global trade in services, which was stagnant in 2014, entered into recession in

2015. In Latin America and the Caribbean, the contraction in the value of merchandise exports was even stronger, while services exports also suffered a downturn, though of lesser magnitude than the world average. The deflationary dynamics of world trade resulted in a historic contraction of the region's terms of trade, reflected in generalized and growing deficits in the current account of the balance of payments.

Regional exports continued to contract, albeit at a slower rate, as the decline in commodity prices decelerated in the first half of 2016. At the same time, however, growth in the volume of goods exports continued to falter, while trade in services fell for the first time since the global financial crisis.

The value of regional merchandise exports has been falling since the middle of 2014. With 23 consecutive months of contraction since August of that year, this denotes the worst performance since the global financial crisis, and resulted from a severe decline in export prices and a weak growth in volumes. The price decline was nonetheless attenuated in the first seven months of 2016, cushioning the fall in the value of Latin American goods exports (–8.5% in the year-on-year measurement versus –14.8% in 2015), but the growth in volumes weakened (0.2% in the first semester of 2016 versus 2.0% in 2015). Although in previous years the international sale of services managed to partially compensate the decline in goods exports, in 2015, according to the latest available data, the region experienced a contraction in this sector (–2.4%). Despite this reduction, the exports of services continued to be more resistant to the general trade decline than those of goods.

The exchange rates of most countries of the region suffered marked depreciations stemming from the correction in the terms of trade. Although depreciations can stimulate the growth of foreign sales, the current configuration of real exchange rates is unfavorable to export expansion and diversification through the intra-regional channel.

The majority of countries in the region experienced real depreciations, which should be reflected in an improvement of the price competitiveness of their exports. Estimates of the elasticity of exports to the real exchange rate indicate that, although the effect has diminished in recent years, depreciations continue to stimulate the growth of foreign sales, particularly of manufactures. However, contrary to what was observed with respect to extra-regional partners, there were notable appreciations among countries of the region, mostly due to the strong depreciation of the Brazilian currency. Furthermore, the volatility of exchange rates has increased, with potential negative repercussions on the growth of exports. The substantial realignments of real

exchange rate parities that occurred in recent years thus conspire against the growth of exports through the intra-regional channel. Likewise, they delineate an adverse outlook for diversification of the export basket, as intra-regional trade is the one with the greatest share of manufactures.

From a longer-term perspective, the vulnerability of the region's pattern of insertion into the global trading system becomes noticeable. The recent export boom was essentially the product of a price effect, and the regional export supply did not adjust to the most dynamic sources of global demand. The growing specialization in commodities and their derivatives has furthermore been characterized by an increasing concentration in the lower segments of value chains.

A groundbreaking analysis of exports at constant prices reveals that the boom that preceded the crisis was essentially due to a price effect. The region's share in world trade has been effectively stagnant. With few exceptions, trade performance has suffered from a growing specialization in commodities and their derivatives. The presence of these products in the regional export basket has grown, while the global market shares commanded by the region have either been reduced or became concentrated in the least dynamic segments of world demand. Furthermore, the region has become increasingly specialized in commodities with low value added in detriment of products that are more elaborated and positioned at higher levels in value chains.

The end of the commodity price supercycle thus exposed some vulnerable features of the region's trade performance, which had gone unnoticed during the boom period. The mismatch between the evolution of global demand and the region's export supply not only helps explain the weak trade performance of most countries, but also underscores the need for an agenda aimed at diversification, especially for those economies with a large share of commodities in their export baskets.

Introduction

In the last two years Latin America and the Caribbean (LAC) countries have been facing headwinds from the global economy, compounding the effects of a deep regional recession. The volume of merchandise exports practically stagnated in the first half of 2016, tampering the exports of services, which no longer serve as a counter-cyclical engine of regional trade performance. Almost ten years since the beginning of the trade contraction on the eve of the global financial crisis of 2008–2009, LAC countries underwent considerable adjustments in their terms of trade that, although currently stabilized, point to a downshifting and a new normal in global trade to which regional economies must adapt.

This document provides a detailed analysis of the main characteristics of the slowdown of LAC goods and services exports in recent years. Although the trade contraction resulted mainly from deflationary pressures that caused a historic correction in commodity prices and export values, it has also been influenced by changes in international trade relations that do not seem transitory. Lower demand from China caused by the country's transition to a new development model, weak and unstable growth patterns in the United States (U.S.), progressively less intensive in imports from LAC, and a new matrix of intra-regional exchange rate parities outline an adverse scenario for the expansion and the diversification of regional exports. In this context, incentives for the adoption of restrictive trade policies are starting to emerge.

The first chapter of the report examines the main features of the downturn in world and regional trade since the middle of 2014, documenting whether signs of stabilization have appeared in 2016. The second chapter provides a detailed account of the region's recent trade performance, highlighting the singularities of each sub-region and country, and differentiating the effects of changes in prices and in volumes. The third chapter empirically analyzes the impacts on trade flows of changes in real exchange rates, and explains how adjustments in exchange rate parities produced an environment that is not conducive to trade growth and diversification in the short run. The last chapter takes a longer-term view and makes use of an innovative database of regional exports, estimated at constant prices, to analyze the region's positioning

vis-à-vis the transformations that have affected the world trading system in the last two decades. This analysis presents a LAC perspective in the debate on the global trade slowdown. Furthermore, it underlines the most fragile features of LAC trade competitiveness, with the goal of deriving policy recommendations that may help boost the region's export potential.

The Global Trade Slowdown

Since the middle of 2014 world merchandise trade has been contracting. The present decline, although not as deep as the trade collapse of 2008–2009, has been more persistent and characterized by a strong reduction in prices and a weak growth in volumes. At the same time, world trade in services, which was stagnant in 2014, entered into recession in 2015. In Latin America and the Caribbean, the contraction in the value of goods exports was even sharper. The region's services exports also suffered a setback, although smaller in magnitude than the world average. Finally, a majority of countries experienced a historic deterioration of their terms of trade, reflected in growing and generalized deficits in the current account of the balance of payments.

The Persistently Recessive Scenario

The value of world merchandise trade has been contracting since July of 2014, when it reached the most recent relative peak. In June of 2016, the value was 16.1% below that point of reference, following 23 months in a downward trajectory with weak rebounds that have not been sustained (Figure 1).[1] The recent period has been characterized by a decline in world trade less deep but more prolonged than the trade

The decline in world trade has lasted almost two years.

collapse triggered by the global financial crisis of 2008–2009 (Box 1). In the latter case, trade rebounded eight months after the interruption in growth, while the current contraction has persisted for almost two years. Two factors explain the recent performance: first, goods prices have been declining since July of 2014,

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[1] The estimates provided in this report point to a trade scenario that may imply a reduction in the value of regional exports greater than the 3% forecast by the United Nations Economic Commission for Latin America and the Caribbean (ECLAC, 2016), and a growth in volumes lower than the 1.9% projected by the World Trade Organization (WTO, 2016).

FIGURE 1 • WORLD TRADE IN GOODS TRENDS
(Quarterly moving average of the year-on-year growth rate, percentage, 2008–2016)
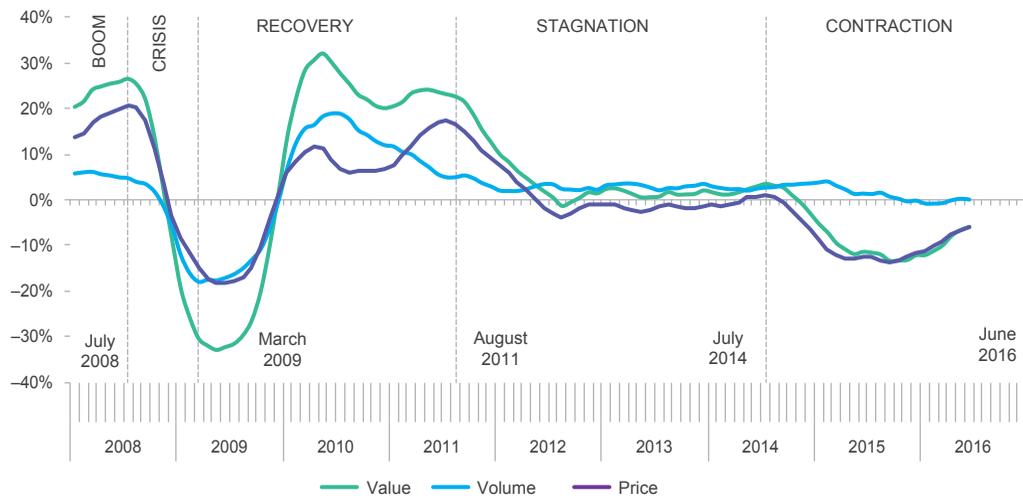
Source: IDB Integration and Trade Sector with data from the Netherlands Bureau of Economic Policy Analysis (CPB), Eurostat, U.S. Bureau of Labor Statistics (BLS), Organization of the Petroleum Exporting Countries (OPEC), and Central Bank of Venezuela (BCV).
Notes: World trade is calculated as the average of world exports and imports. Trade flows between Euro Zone countries are excluded (see Methodological Annex 1).

> The demand of developing countries decreased.

although the reduction began to slow down in the middle of 2015; second, growth in trade volumes has been decelerating since the second quarter of 2015.

The global trade recession was caused by variations in the value of imports of both developed and developing countries, which had accumulated reductions of 13.9% and 16.9%, respectively, by June of 2016, compared to the maximum of July 2014 (Figure 2). Both segments of global demand contributed to the decline, although the foreign purchases of developing countries contracted more intensely: the reduction in imports of developed countries explained 46.8% of the overall change, while those of developing countries accounted for 53.2%. Contrary to what was observed in the aftermath of the global financial crisis of 2008–2009, in the current scenario variations in the demand of developed and developing countries have reinforced instead of compensating one another. In particular, the demand of developing countries, which contributed positively to the post-crisis recovery, has been slowing down since the middle of 2014. Thus, the latest source of fragility in global trade arose from the deceleration of the demand of developing countries, particularly China.

Although weaker demand of developed and developing countries contributed to the trade slowdown, the intense deflationary pressures on goods prices constituted its

BOX 1: THE GREAT CONTRACTION AND THE DOUBLE-DIP OF WORLD TRADE

During the trade collapse triggered by the global financial crisis of 2008–2009 (i.e. the *great contraction*) the value of world trade remained below the previous peak during 32 months,[a] with a steep decline for eight months (August 2008-March 2009) and a gradual recovery over 24 months (March 2009–March 2011). In contrast, the current recession of world trade (i.e. the *double-dip*) has not shown signs of recovery in the last 23 months. During the *great contraction*, 66.3% of the accumulated trade gap corresponded to lower prices and 33.7% to reduced volumes. In the *double-dip*, the contraction in prices of 113.2% was partially compensated by an increase in volumes of 13.2%.

The recovery from the *great contraction* was sustained by the demand of China and other emerging Asian economies, whose imports reached their previous maximum levels before total world imports did so. Meanwhile, purchases by the U.S. and extra-regional imports by the Euro Zone did not reach their previous peaks in the 32 months that the phenomenon lasted. In contrast, in the *double-dip*, the imports of China and other Asian economies have contributed more to the fall, in a scenario where the demand of none of the countries considered has reached the previous peaks.

WORLD TRADE: DECOMPOSITION OF THE CHANGES IN PRICES AND VOLUMES
(Billions of US$)

Great Contraction (August 2008-March 2011)   Double-dip (August 2014-April 2016)

Value   Price   Volume
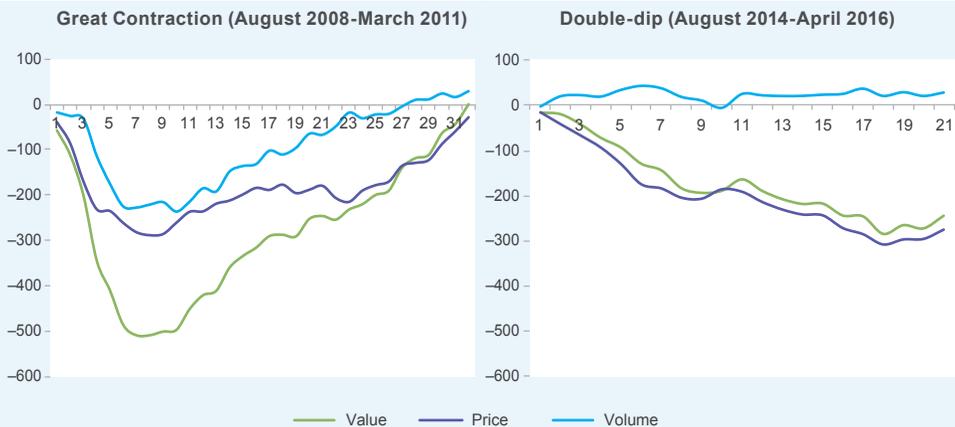
Source: IDB Integration and Trade Sector with data from the CPB.
Notes: World trade is calculated as the average of world exports and imports. Trade flows between Euro Zone countries are included in world trade. The value curve shows the difference between the maximum values of trade prior to the declines (July of 2008 and July of 2014) and the effective monthly values of trade in the intervals in which they remained below the respective peaks. The decomposition of price and volume effects is calculated based on the logarithmic variations of the respective indices for each month with respect to the peaks, and the resulting differences are applied to the original value series.

[a] To contrast the effects of the great contraction (August 2008-March 2009) and the current double-dip (August 2014-June 2016) of world trade, the maximum trade levels (peaks) prior to the fall are used as references (July of 2008 and July of 2014, respectively). Subsequently the sum of the differences between that maximum levels and the effective levels of trade in the respective periods in which trade remained below the peak is calculated. Finally, in that sum one distinguishes: (a) the proportions attributable to changes in prices and volumes, and (b) the contribution of the different sources of demand to the contraction.

BOX 1: THE GREAT CONTRACTION AND THE DOUBLE-DIP OF WORLD TRADE

WORLD TRADE: CONTRIBUTION OF SELECTED IMPORTERS
(Billions of US$)
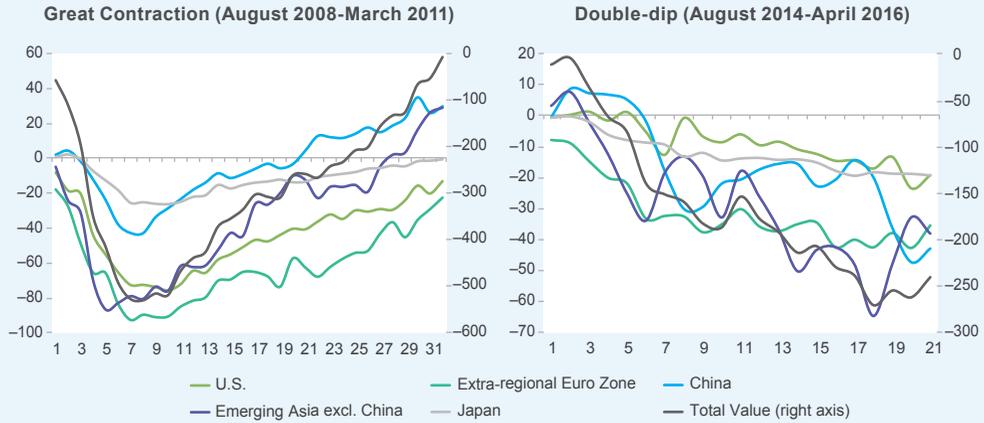
Source: IDB Integration and Trade Sector with data from the CPB, Chinese customs and Eurostat.
Notes: Total value corresponds to world imports. Only the extra-regional imports of Euro Zone countries are included. The curves show the difference between the value of each economy's imports in the months in which world trade reached its maximum values (July 2008 and July 2014) and the effective monthly imported value during the contraction intervals.

FIGURE 2 • VALUE OF GLOBAL TRADE IN GOODS
(Index, 2005 = 100, 2008–2016)
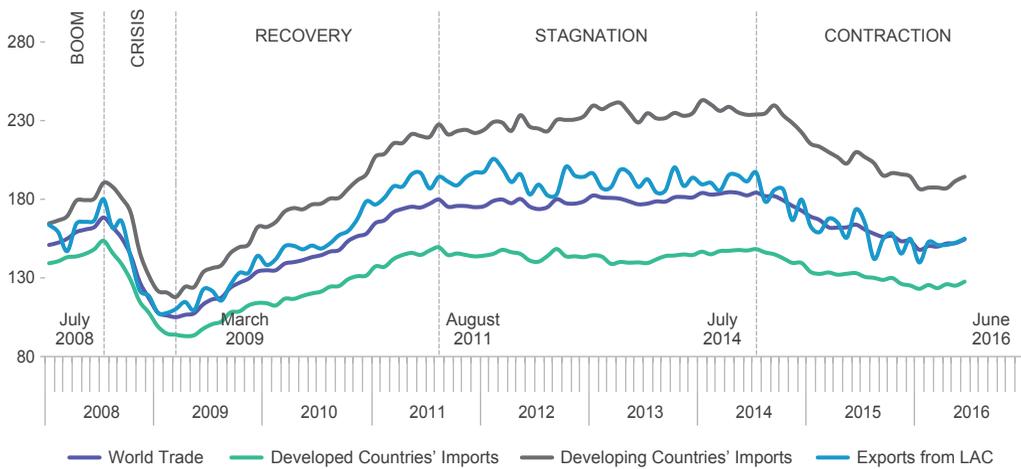
Source: IDB Integration and Trade Sector with data from the CPB, Eurostat, OPEC, and BCV.
Notes: World trade is calculated as the average of world exports and imports. Trade flows between Euro Zone countries are excluded from both world trade and imports of developed countries. The authors estimate LAC exports using data from the listed sources (see Methodological Annex 1).

FIGURE 3 • VOLUMES AND PRICES OF WORLD TRADE IN GOODS
(Growth rate, percentage, July 2014–June 2016)

	World Trade	Developed Countries' Imports	Developing Countries' Imports	Exports from LAC
Value	−16.1%	−13.9%	−16.9%	−21.1%
Price	−17.1%	−18.4%	−15.4%	−18.6%
Volume	0.9%	4.7%	−1.8%	−2.6%
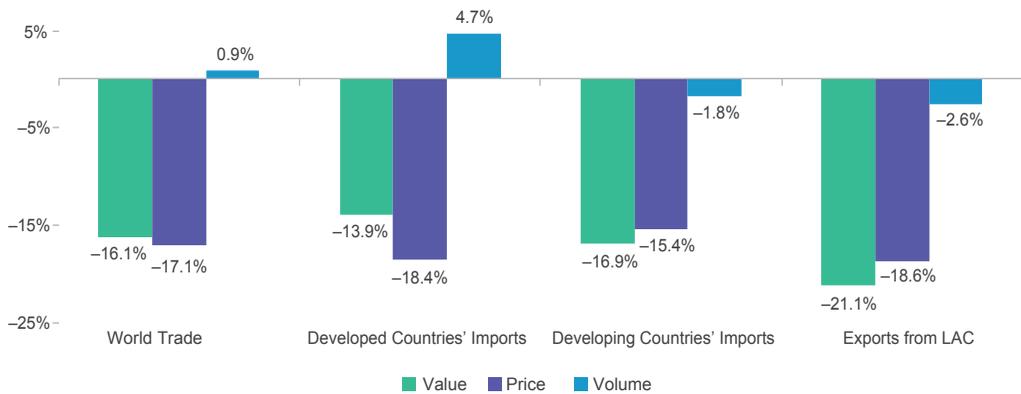
*Source*: IDB Integration and Trade Sector with data from the CPB, Eurostat, BLS, OPEC, and BCV.
Notes: World trade is calculated as the average of world exports and imports. Trade flows between Euro Zone countries are excluded from both world trade and imports of developed countries. The authors estimate LAC exports using data from the listed sources (see Methodological Annex 1).

dominant direct explanatory factor. Specifically, the reduction of 16.1% in the value of world merchandise trade between July of 2014 and June of 2016 was the result of a contraction of 17.1% in prices and an increase of 0.9% in volumes (Figure 3). The prices of imports of both developed and developing countries

> Trade deflation eased but did not reverse.

suffered deflationary pressures, with drops of 18.4% and 15.4%, respectively. In contrast, the volumes imported increased 4.7% in the case of developed countries, and fell 1.8% in the case of developing countries. For its part, the reduction in the value of exports from LAC was more intense than the world average: in June of 2016 the level was 21.1% below the previous maximum of July of 2014. This decline is explained by a reduction of 18.6% in prices and of 2.6% in volumes. In annual terms, the value of LAC goods exports registered a reduction of 2.9% in 2014, 15.0% in 2015, and 8.5% through July of 2016.[2]

> Trade in services entered into a recessive phase.

World trade in services has followed the declining trend of trade in goods. Indeed the fall in the exports of services has been strongly affected by reductions in those categories related to merchandise trade, such as transportation. Specifically, in the last quarter of 2014, world trade in services was stagnant, and in the first half of 2015 it fell 7.0% with respect to the previous year. Although the decline decelerated

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[2] Only Latin America is considered in 2016, as data for Caribbean countries are not yet available.

FIGURE 4 • VALUE OF WORLD TRADE IN SERVICES
(Annual growth rate, percentage, 2003–2015)
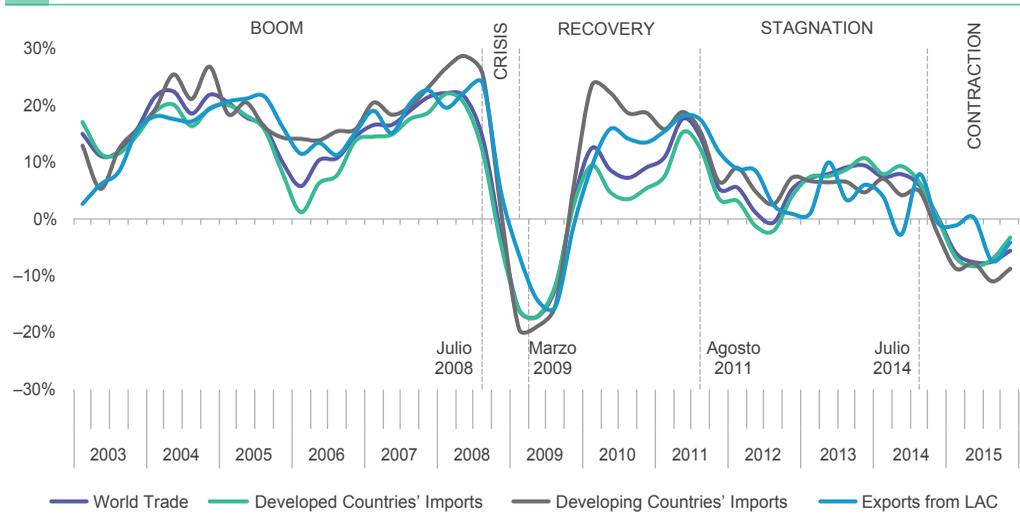
Source: IDB Integration and Trade Sector with data from the International Monetary Fund (IMF) and the WTO.
Notes: World trade is calculated as the average of world exports and imports. The components of the services account of the balance of payments are included, except construction and government services for the entire series, and manufacturing, maintenance and repair services between 2005 and 2015.

in the second half of 2015, the index remained negative. As in the case of trade in goods, an explanatory factor in the downturn of services in 2015 was the weaker demand of developing countries (–9.2%), accompanied by a smaller reduction of 6.3% in the imports of developed countries. This recessive outlook affected the exports of services from LAC, which suffered a reduction of 2.4% in 2015, still smaller than the world average (Figure 4).

The Weakening of Foreign Demand

Between 2014 and 2015, the variation in the value of merchandise imports was negative in practically all of the main centers of global demand (Figure 5). For its part, demand for LAC exports suffered a second fall in 2014–2015, in addition to the one that occurred in 2011–2014 with respect to the 2002–2008 period. Between 2011 and 2014, the value of imports from LAC by its main trading partners displayed an average annual rate of growth of –0.9%, equivalent to a reduction of 17.1 percentage points (p.p.) with respect to the 16.2% rate at which it grew in the boom period of 2002–2008. Between 2014 and 2015 it reduced even further, as demand of the region's main trading partners contracted 12.4%, equivalent to a difference of 11.5 p.p. with respect to the pace of the immediately preceding

The reduction of external demand spread.

FIGURE 5 • TOTAL IMPORTS OF SELECTED ECONOMIES
(Average annual growth rate, percentage, 2003–2008, 2011–2014 and 2014–2015)

Legend:
- 2011–2014
- 2014–2015
- - - - 2003–2008 Average of LAC as exporter
- — · 2011–2014 Average of LAC as exporter
- — · 2014–2015 Average of LAC as exporter
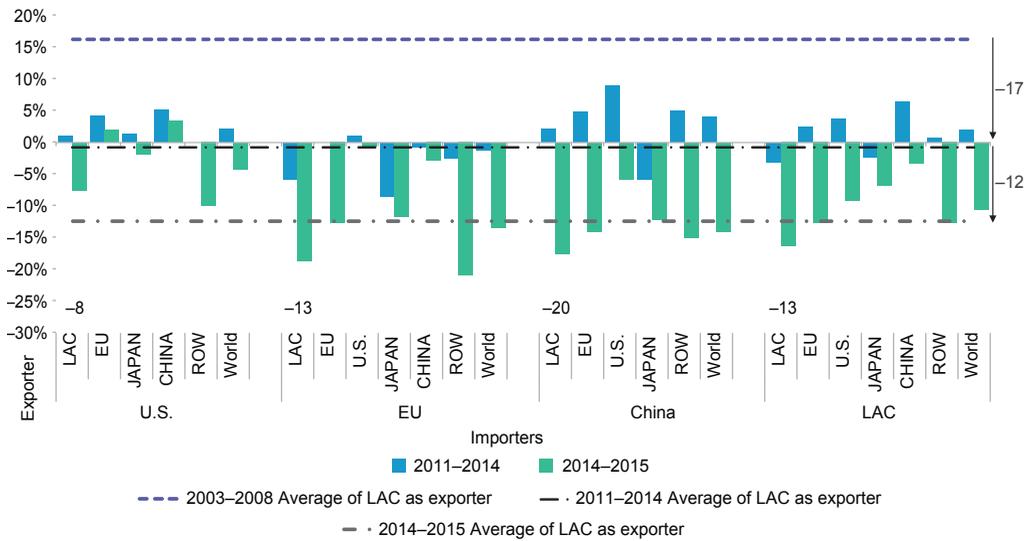
Source: IDB Integration and Trade Sector with data from official sources.
Notes: ROW: rest of the world. The graph shows the imports of LAC's main trading partners (i.e. the U.S., the EU, China and the region itself) by point of origin of those purchases. The values reported in each quadrant (below the bars corresponding to LAC as the point of origin of imports) refer to the difference, in percentage points, between the growth rates in the specified time periods. The growth corresponds to the geometric mean of the selected intervals, with 2002, 2010 and 2014 used as reference years. The average for LAC as the point of origin is weighted by the imports of the trading partners considered in the analysis.

period. Although in this last phase all of the variations in demand growth rates were significant, most noteworthy were the reductions of 19.5 p.p. of China, 13.3 p.p. of intra-regional purchases, and 12.8 p.p. of the European Union (EU).

> External demand fell along with the world economy.

The weakness of foreign demand reflected the low growth rates of the main economies that slowed down in the first half of 2016, having accelerated lightly in 2015 (Figure 6). The most notable retreat was that of the U.S., whose GDP grew 1.4% in the first half of 2016, having grown 2.6% in 2015. For their part, Japan and the Euro Zone registered growth rates marginally below those of the previous year: 0.5% and 1.7%, respectively, in the first half of 2016, compared to 0.6% and 1.9%, respectively, in 2015. China displayed a sustained loss of dynamism that led to a 6.7% growth rate in the first quarter of 2016, lower than the average of 8.1% observed between 2011 and 2014. This last development is associated with structural modifications of the Chinese economy, aimed at reducing the contribution of investment and exports to growth. The growth rate of Latin American economies turned negative in the first quarter of 2016 (–0.9%), after stagnating in 2015 (–0.1%). This result was driven by recessions

FIGURE 6 • GROWTH OF GDP IN SELECTED ECONOMIES
(Annual growth rate, percentage, 2011–2016)
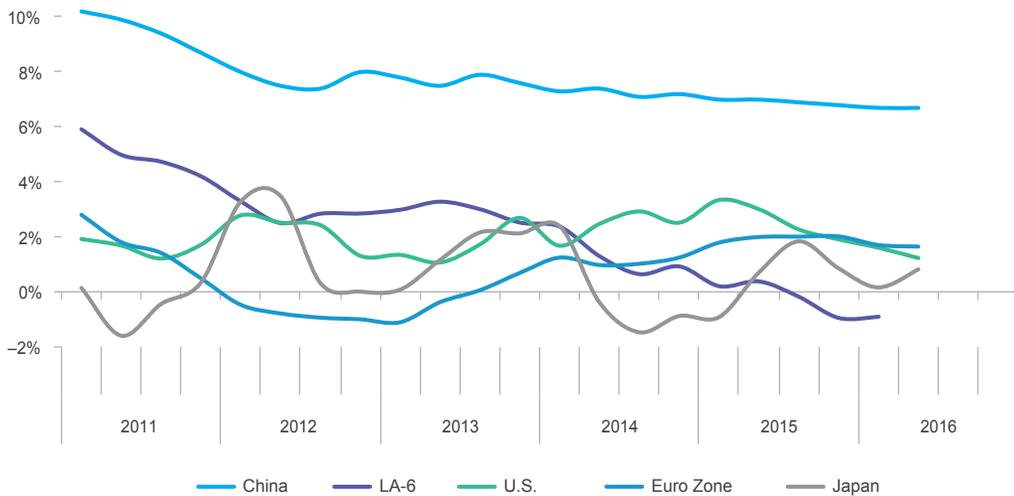
Source: IDB Integration and Trade Sector with data from the IMF, U.S. Bureau of Economic Analysis (BEA), the Organization for Economic Cooperation and Development (OECD), the Institute of Social and Economic Research of Japan, and other official sources.
Notes: LA-6 correspond to the weighted average of the percentage changes in GDP of Argentina, Brazil, Chile, Colombia, Mexico and Peru. Weights are based on GDP in terms of purchasing power parity.

in Brazil and Venezuela, and can be placed in the context of slower activity in most countries, which had already shown low average growth in 2014 (1.3%).[3]

The Terms of Trade Shock

Although growth in the volume of goods traded internationally has been weak over the past five years, the present contraction in the value of global trade can be attributed essentially to persistent deflationary tensions that emerged in the post-crisis. Starting in 2011 there was a moderate downward trend in prices, which intensified in August of 2014 (Figure 7). At that point, the average level of unit prices of internationally traded goods

The value of world trade suffered from deflationary tensions.

began to show negative annual changes, rapidly reaching two-digit figures. Although the pace of the deflation slowed down in the final months of 2015, prices continued to fall in the first part of 2016, with the quarterly moving average reaching –6.0% in June.

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[3] See the most recent editions of the *World Economic Outlook* (IMF, 2016a) and the *Regional Economic Outlook* (IMF, 2016b) for an evaluation of the growth prospects of LAC and its trading partners in the next quarters.

FIGURE 7 • DETERMINANTS OF THE DYNAMICS OF WORLD TRADE PRICES
(Quarterly moving average of the annual growth rate, percentage, 2011–2016)
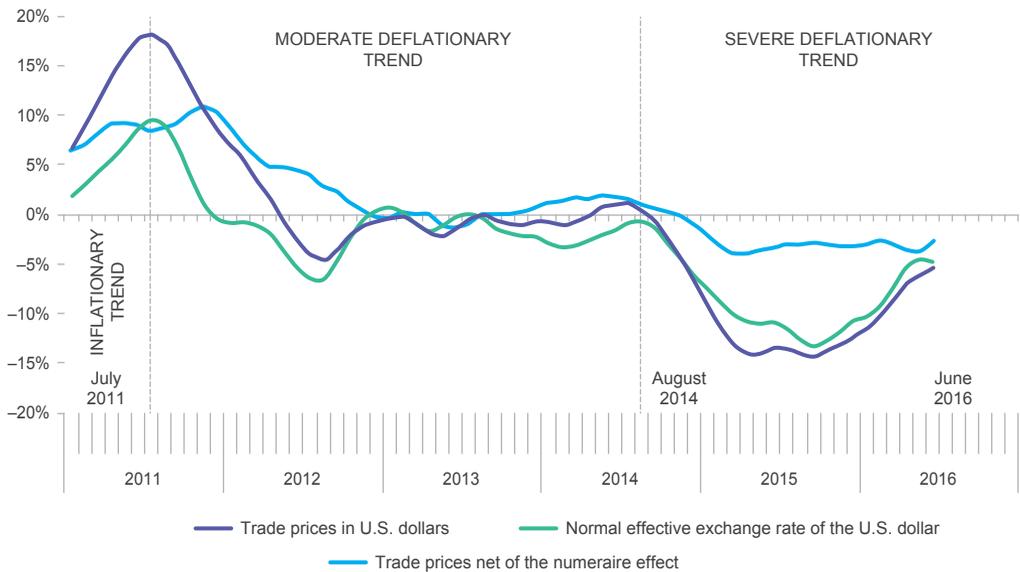
Source: IDB Integration and Trade Sector with data from the CPB, U.S. International Trade Commission (USITC), U.S. Federal Reserve, Eurostat, BLS, OPEC and BCV.
Notes: Prices correspond to an average of world exports and imports. Trade flows between Euro Zone countries are excluded. The effective nominal exchange rate of the dollar corresponds to the average of a broad basket of currencies. A negative/positive slope indicates appreciation/depreciation of the dollar. Prices net of the "*numeraire* effect" are estimated based on a constant dollar exchange rate (2005 = 100).

Price fluctuations are driven by two determinants (Figure 7). The first one accounts for changes in the value of the dollar, the currency in which trade flows are denominated. All else constant, an appreciation of the U.S. currency drives the prices of goods down, as fewer dollars are needed to purchase them.[4] To isolate this "*numeraire* effect", prices can be denominated at a constant dollar exchange rate.[5] The second determinant thus accounts for price fluctuations

The fall in prices resulted from exchange rate and specific market factors.

induced by factors other than changes in the value of the dollar, and related to the dynamics of specific markets. In the beginning of the period under consideration, the "*numeraire* effect" predominated. However, since August of 2014, price variations net of the "*numeraire* effect" also entered into negative territory. Between that month and June of 2016 there was an average year-on-year decline in this variable of 2.1%,

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[4] This analysis follows the convention of expressing the exchange rate as number of dollars per local currency unit. Thus, appreciations/depreciations of the dollar are reflected as negative/positive changes in the exchange rate.
[5] See IMF (2008).

indicating the emergence of deflationary pressures derived from market-specific factors.

Regarding the first effect, the dollar sustained an intense trajectory of appreciation between July of 2014 and January of 2016, when it reached a level practically equal to that of 2003 (Figure 8). In this interval, the dollar appreciated 18.4% with respect to a broad basket of currencies. However, an outbreak of market and exchange rate instability in China in January of 2016, along with unfavorable indicators with respect to the solidity of the U.S. economic recovery, led to an accumulated depreciation of the dollar of 4.8% between February and April of 2016. The path of appreciation, in a more moderate form, continued in May of 2016, when expectations arose about of a hardening of the U.S. monetary policy. This trend was reinforced by the results of the referendum on the United Kingdom's membership in the EU (Brexit).

Fluctuations of the dollar exchange rate were reflected in the prices of commodities that make up a relevant proportion of the region's export supply. In January of 2016 the average price level reached a relative minimum at 54.2% below the level of July of 2014, when the phase of decline in world trade began. The depreciation of the dollar between February and April of 2016, together with other factors that stabilized the prices of key commodities such

FIGURE 8 • NOMINAL EFFECTIVE EXCHANGE RATE OF THE DOLLAR AND COMMODITY PRICES
(Index, 2005 = 100, 2003–2016)
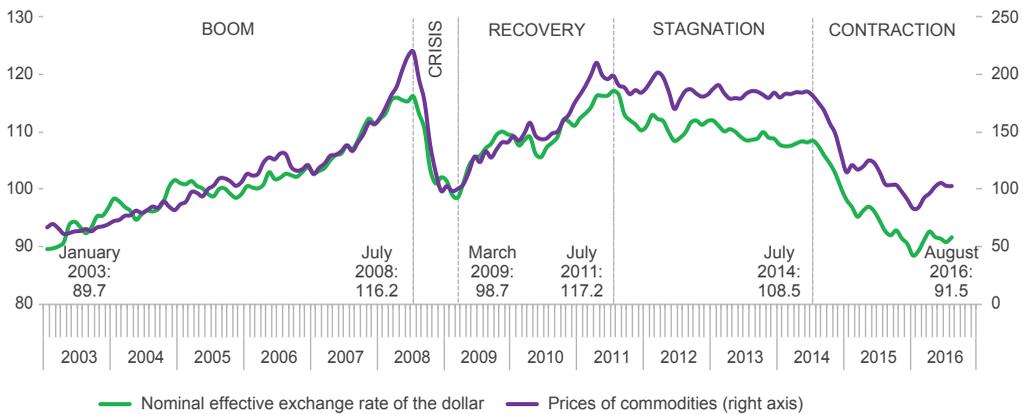
Source: IDB Integration and Trade Sector with data from the U.S. Federal Reserve and IMF.
Notes: The dollar exchange rate corresponds to the average effective nominal rate with respect to a broad basket of currencies. A negative/positive slope indicates an appreciation/depreciation of the dollar. The figures under the months correspond to the levels of the exchange rate.

as oil, was reflected in the rebound of prices that extended until June, when they surpassed their January levels by 26.8%. These phenomena contributed to easing the deflationary pressures on world trade observed at the beginning of 2016.

The Adjustment of the Balance of Payments

The deflationary dynamics of world trade were reflected in a historic contraction in the average terms of trade in Latin America, with a reduction of 9.9% in 2015 with respect to the previous year (Figure 9). After four consecutive years of decline, the accumulated loss with respect to 2011 was 20.5%, taking the terms of trade to a level similar to that of 2004, and 10.5%

> The region's terms of trade deteriorated sharply.

below the minimum reached during the global financial crisis in 2009. Despite the fall in prices impacting exports (–16.5%) as well as imports (–7.4%), the greater relative concentration of the former in commodities, whose prices suffered the most substantial declines, explain the net result.

> The reduction in terms of trade had different effects across the region.

The deterioration in the terms of trade affected countries and country grouping differently depending on the composition

FIGURE 9 • TERMS OF TRADE OF SELECTED LATIN AMERICAN COUNTRIES
(Index, 2005 = 100 and annual growth rate, percentage, 2002–2015)

Percentage change ■ Index (right axis)
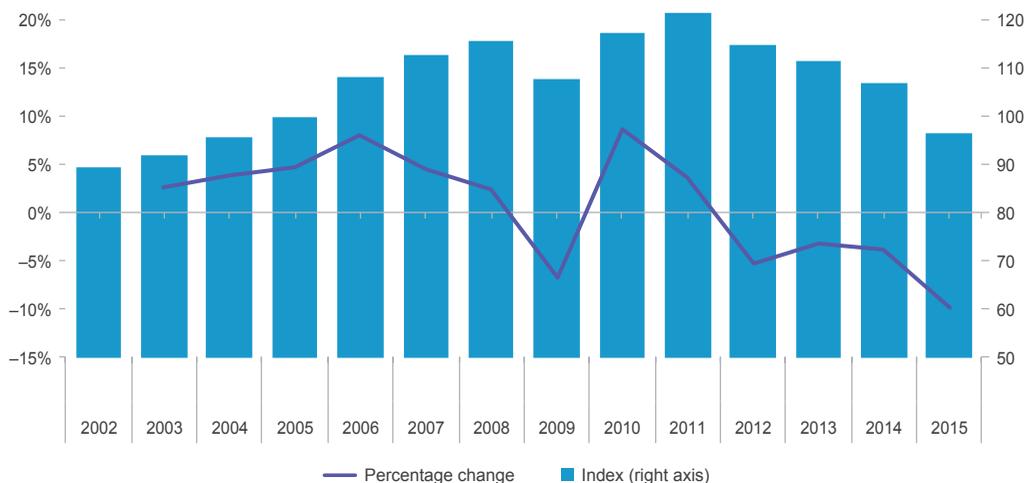
Source: IDB Integration and Trade Sector with data from INTrade/DataINTAL, Bank of Mexico (Banxico), BLS and other national sources.
Notes: The countries included are Argentina, Bolivia, Brazil, Chile, Colombia, Costa Rica, Ecuador, El Salvador, Guatemala, Honduras, Mexico, Nicaragua, Panama, Paraguay, Peru, the Dominican Republic, Uruguay and Venezuela. The Methodological Annex 2 details the procedures adopted to estimate the price indices and the terms of trade.

FIGURE 10 • TERMS OF TRADE BY GROUPS OF LATIN AMERICAN COUNTRIES
(Average annual growth rate, percentage, selected periods, 2003–2015)
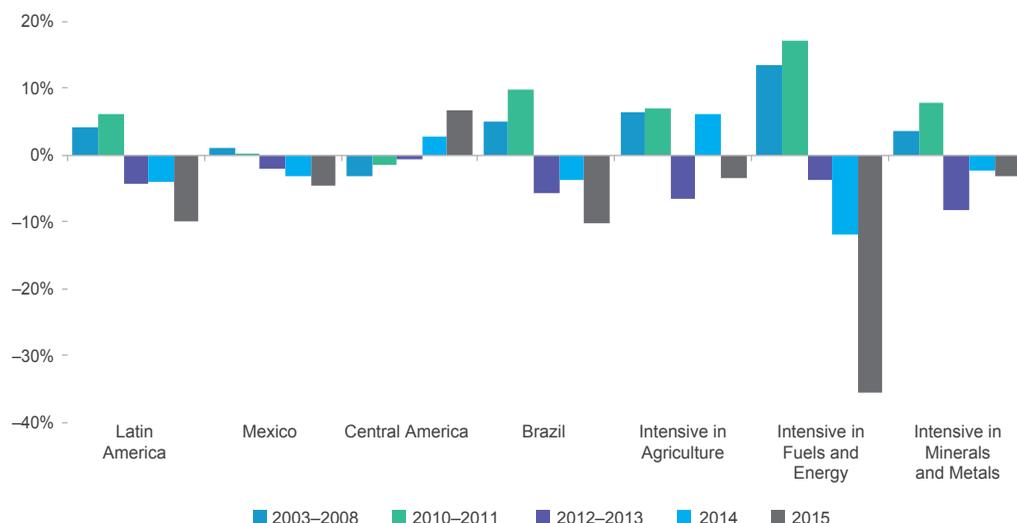
Source: IDB Integration and Trade Sector with data from INTrade/DataINTAL, Banxico, BLS and other national sources.
Notes: Latin America includes the 18 countries listed in footnote 6. The Methodological Annex 2 details the procedures adopted to estimate the price indices and the terms of trade.

of their export baskets (Figure 10).[6] On one side, the group of Central American countries had an improvement of 6.9% in their terms of trade in 2015, explained by the fall of commodity prices, particularly of oil, which constitute a large share of their imports. On the other side, the greatest losses were observed in countries with exports intensive in fuels and energy, whose index contracted 35.5% in 2015, driven by the fall in oil prices. This was also a major factor in the contraction of the indices of Mexico (–4.4%) and Brazil (–10.0%). Finally, countries with exports intensive in minerals and metals, and in agricultural products experienced more moderate declines (–3.1% and –3.4%, respectively) because although the prices of the goods that compose their export baskets suffered considerable declines (especially copper and soybeans), they fell by less than the price of oil, which represents a significant share of these countries' imports.

The impact of the terms of trade deterioration on the current account of the balance of payments was also not homogeneous across countries. In 2015, for the

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[6] To analyze export performance, in this report Brazil and Mexico are separated, and the rest of the countries are grouped as follows: Central America (Costa Rica, El Salvador, Guatemala, Honduras, Nicaragua, Panama and the Dominican Republic), countries with exports intensive in agricultural products (Argentina, Paraguay and Uruguay), countries with exports intensive in fuels and energy (Bolivia, Colombia, Ecuador and Venezuela), and countries with exports intensive in minerals and metals (Chile and Peru).

FIGURE 11 • CURRENT ACCOUNT BALANCE OF SELECTED COUNTRIES
(Balance as a percentage of GDP, 2011–2015)
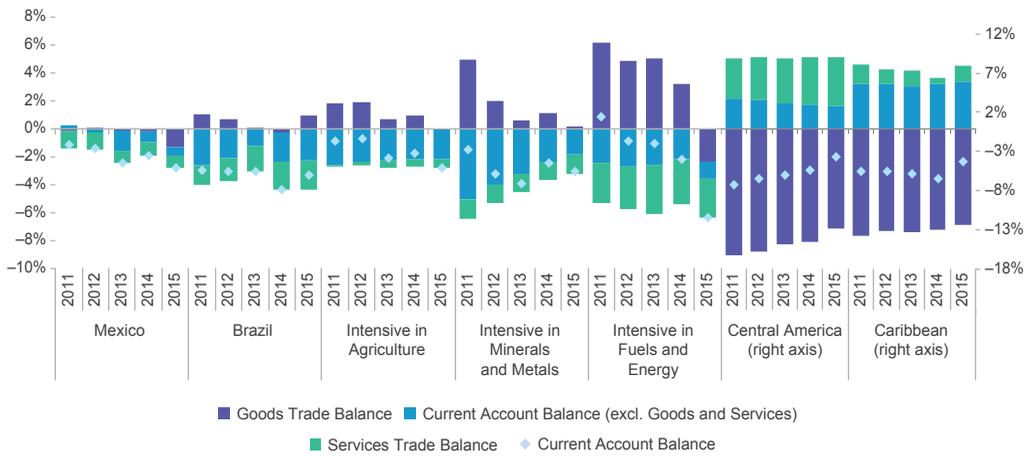
Source: IDB Integration and Trade Sector with data from the IMF and national sources.
Notes: Latin America includes the 18 countries listed in footnote 6. The values of the sub-regions are a simple average of the balances of the countries in the group as a percentage of GDP. This indicates the degree of external soundness, regardless of the differing economic weights of the balances of the countries involved.

In general, the negative balance in the current account worsened.

fourth consecutive year, the balance continued to be negative for all country groupings (Figure 11). While the dominant trend for countries specialized in the exports of commodities, as well as for Mexico, was a deterioration in the balance of goods, in Central America and in the Caribbean, importers of these products, and especially of oil (except for Trinidad and Tobago), there were improvements that contributed to attenuating their current account deficits.

In all countries of the region, except El Salvador, there was a contraction in merchandise exports in 2015, and except Honduras, there was also a reduction in imports. In relation to the previous year, the balance of goods of Mexico worsened to reach a deficit equal to 1.3% of the GDP, which deepened the current account deficit from –1.9% to –2.8% of GDP. In the other direction, the negative current account balance of Brazil

The impact was not uniform across countries.

improved by an amount equivalent to 1.0 p.p. of the GDP, from –4.3% in 2014 to –3.3% in 2015, due to the fact that imports contracted more than exports (–25.1% and –15.1%, respectively). Unlike in Brazil, countries specialized in the export of agricultural products, minerals and metals, and fuels and energy experienced deteriorations both in the balance of goods and in the overall current account balance. In most cases, the contraction of imports in 2015 was of lesser magnitude than the contraction of

exports, with the exception of Paraguay and Uruguay. In Central America and the Caribbean, where the dominant factor was the reduction in oil prices, the improvement in the balance of goods was due to reductions in imports.

In summary, the value of world trade in goods and services started contracting in the middle of 2014 and continued displaying negative growth rates throughout 2015 and early 2016 as result of a marked decline in goods prices, not compensated by a marginal increase in volumes. The contraction in LAC trade was even more significant, as the reduction in prices was greater, and occasional negative rates were observed with respect to the growth in volumes in 2015 and in the first half of 2016. In this context, the region suffered the impact of a historic decline in its terms of trade, reflected in growing deficits in the current account of the balance of payments, and in pressures on exchange rate parities, but with significant variations across countries. In the next chapter these trends in foreign sales are disaggregated, underlining the singularities of each country and sub-region.

The Impact on Regional Exports

2

In 2015, low growth in the main global economies and the consequent contraction of world merchandise trade had a strong and negative effect on the value of exports from Latin America and the Caribbean. The primary factor in the decline was the drop in export prices, not compensated by the weak increase in volumes. At the beginning of 2016, the fall in export prices slowed down, which eased the negative trend, but the growth rate of volumes continued to decelerate. Likewise, services exports fell for the first time since the financial crisis, partially driven by the deceleration of trade in goods.

The Contraction of Foreign Sales

The value of regional exports began to fall rapidly in the second half of 2014 (Figure 12). In 2015, LAC goods exports totaled US$ 900 billion, equivalent to a contraction of 15.0% compared to the previous year. This outcome denotes the worst export performance since the global financial crisis, following three consecutive years of uninterrupted decline, as result of a strong

> The export decline slowed in 2016.

drop in prices and a weak growth in export volumes. The contraction was relatively more severe for the countries of the Caribbean, whose exports fell 22.8%, while those of Latin America fell 14.8%. At the beginning of 2016 the rate of decline in prices slowed down, moderating the fall in the value of exports from Latin American (–8.5% in January–July),[7] but the growth of volumes further weakened.

The negative price dynamics that began in 2014 continued in 2015, but eased in 2016. In 2015, the average price index[8] fell 35.3%, in large part due to the historic fall in oil prices (Figure 13). Excluding that product, the decline halved (17.5%), although it remained significant. The deflationary pressures on commodity markets reached a maximum in the third quarter of 2015, with an average reduction of 38.6% for the basket of regional export products. This negative trend lessened in early 2016, though

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[7] Only Latin America is considered in 2016, as data for Caribbean countries are not yet available.

[8] The total corresponds to the weighted average of the commodity price indices included in the IMF estimation.

FIGURE 12 • LATIN AMERICAN EXPORT TRENDS
(Quarterly moving average of the annual growth rate, percentage, 2014–2016)
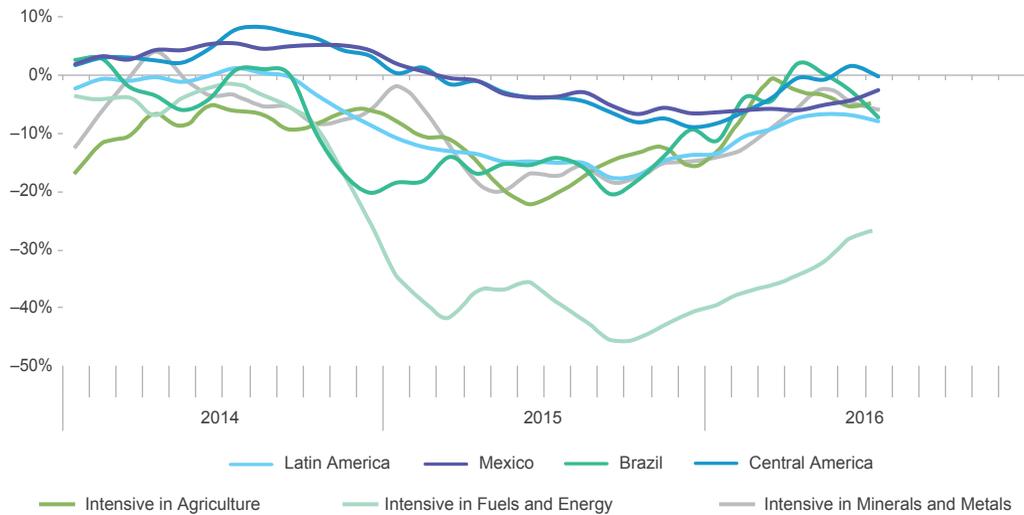
Source: IDB Integration and Trade Sector with data from INTrade/DataINTAL and official sources.
Notes: Latin America includes the 18 countries listed in footnote 6.

The contraction in prices slowed down.

still with a year-on-year drop of 8.2% in the first half of 2016, but of only 0.1% if oil is excluded.

The reversion in the appreciation of the dollar between February and April of 2016, and various factors related to specific destination markets, contributed to the easing of the negative trend observed in most commodity prices. For example, a reduction in inventories in the U.S. associated with the closing of extractive projects slowed the decline in oil prices in the early months of 2016 from –47.2% in 2015 to –26.5% in the year-on-year measure from January to August of 2016. In the same period, the downward pressure on the price of iron ore went from –43.0% to –8.9%, driven by interruptions in production in Australia and Brazil, the main global suppliers, and an increase in Chinese demand for steel. Even more significant were the improvements in agricultural markets: in 2015 the price of soybeans fell 24.1%, while in the first part of 2016 it recovered slightly (0.7%) due to climatic factors that affected Argentina and Brazil. There are indications, however, of a possible trend reversal due to a better harvest in the U.S. Climatic phenomena also affected the coffee harvest in Brazil, easing the fall in prices from –17.4% to –5.8%. The price of sugar registered a drop in January-August of 2016 similar to the one in 2015 (–3.6% and –3.8%, respectively). It is nonetheless worth

Some commodity markets stabilized.

FIGURE 13 • PRICES OF MAIN EXPORT PRODUCTS OF LATIN AMERICA AND THE CARIBBEAN
(Quarterly moving average of the annual growth rate, percentage, 2014–2016)
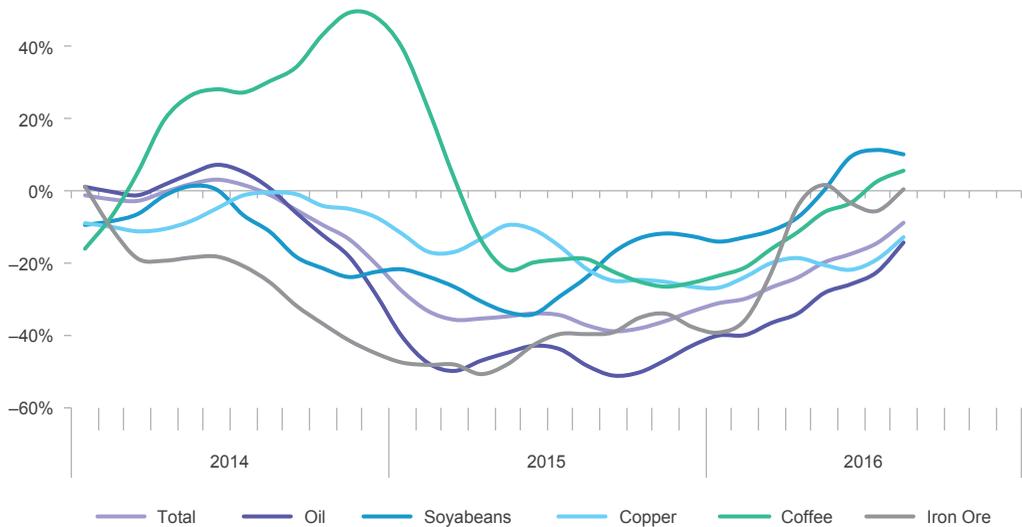
Source: IDB Integration and Trade Sector with data from the IMF.
Notes: The total corresponds to the weighted average of the commodity price indices included in the IMF estimation.

noting that, in some cases, the increase in prices resulted from negative shocks to regional export supply and, therefore, barely compensated the reduction in volumes. Finally, unlike the above-mentioned products, the price of copper fell 19.7% in 2015 and presented a similar downward trend in early 2016 (–18.2%), which continued to affect regional exporters such as Chile and Peru.

With an expansion of 2.0% in 2015, the volumes exported by Latin America attenuated part of the decline of 16.5% in prices, which was the determining factor in the contraction of the value of exports (Figure 14). This increase in quantities was similar to previous years: in 2013–2014 the average increase was 2.1%. However, the relatively good performance of the aggregate volume of foreign

Export volumes stagnated.

sales in 2015 reflected the behavior of exports from Brazil and, to a lesser extent, from Mexico, which grew 7.0% and 3.8%, respectively. All of the other economies showed declines in exports measured at constant prices: in Central America there was an average decline of 3.6%; in Argentina, Paraguay, and Uruguay, countries with exports intensive in agricultural products, the decline was 2.1%; and in Chile and Peru, with exports intensive in minerals and metals, the drop was 0.8%. Finally, the average change in export volumes of Bolivia, Colombia, Ecuador, and Venezuela, intensive in fuels and energy, was –6.1%, the greatest reduction in the region. Furthermore, the growth in export volumes in Latin America weakened even further in the first

FIGURE 14 • LATIN AMERICAN EXPORT PRICES AND VOLUMES
(Annual growth rate, percentage, 2003-2016)
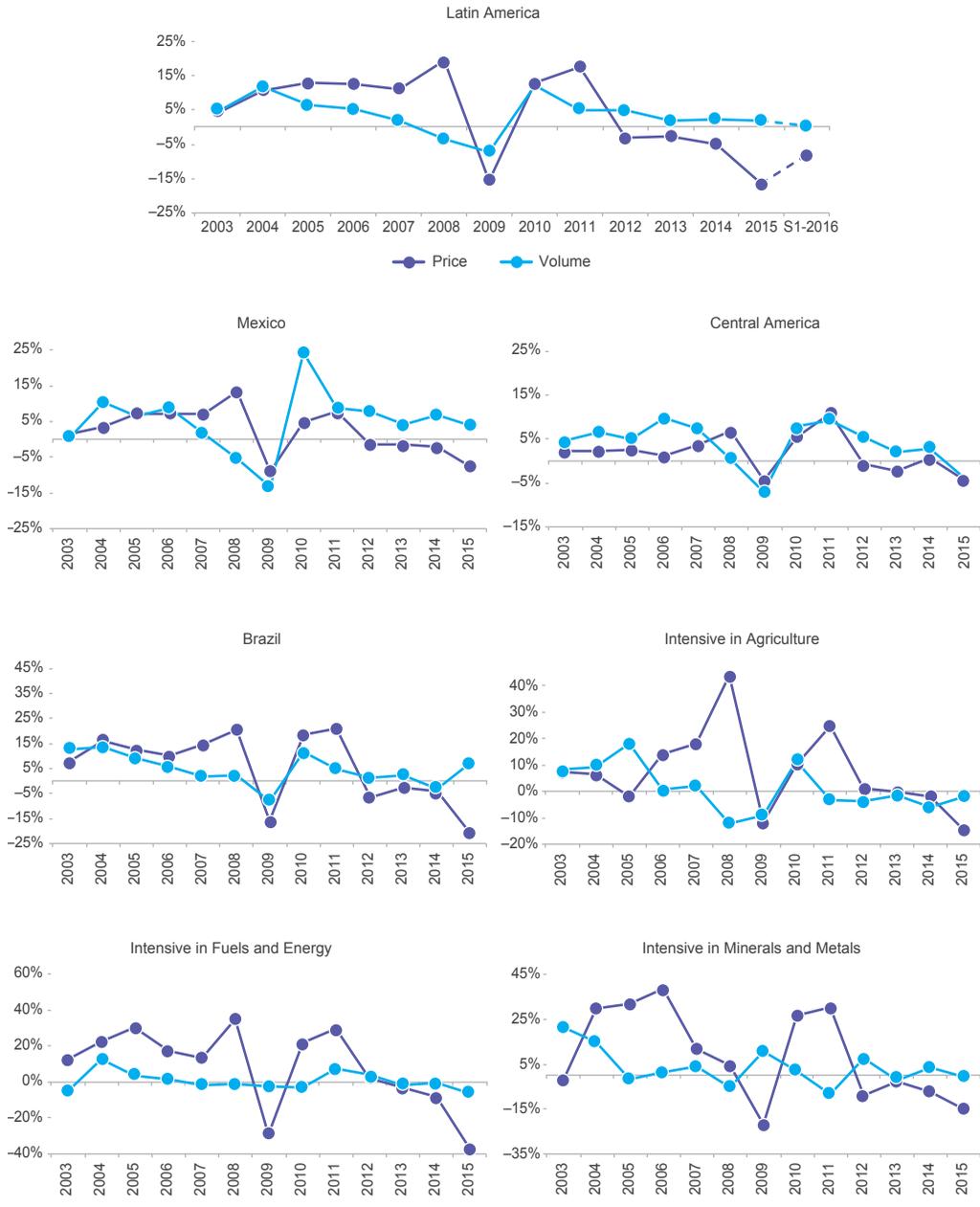
Source: IDB Integration and Trade Sector with data from INTrade/DataINTAL, BLS, BCV and OPEC.
*Notes*: Latin America includes the 18 countries listed in footnote 6. The Methodological Annex 2 details the procedures adopted to estimate the series in constant prices. The base year for the corresponding indices is 2005.

half of 2016, when the observed rate was barely 0.2% on average in the first quarter, compared to the first quarter of the previous year.

Export Performance by Country and Sub-Region

The contraction in the value of regional exports in 2015 (–15.0%) was the result of declines in the external sales of practically all countries and sub-regions, although of different intensities (Table 1). Both South America[9] and the Caribbean registered reductions of 22.8%, while the rate for Mesoamerica was –4.2%, driven by a reduction of 5.0% in Central America and of 4.1% in Mexico. As concerns individual countries, all

> The export recession became more generalized in 2015.

showed negative growth rates in the value of exports, except El Salvador, whose exports grew 4.0%, and Costa Rica, whose sales stagnated. El Salvador (4.0%) and Guyana (–4.8%) were the only countries that showed improvements over 2014. The greatest declines were observed in Venezuela (–51.3%), Colombia (-34.9%), Bolivia (–32.3%), the Bahamas (–29.1%), Ecuador (–28.8%), and Trinidad and Tobago (–26.6%), nearly all of which have a high share of fuels and energy in their exports. Chile, Argentina, Uruguay, the Dominican Republic, Panama, Peru, Paraguay, Belize, Jamaica, and Nicaragua suffered sharp reductions of between 10% and 20%. It is also worth highlighting the 15.1% contraction in Brazil's exports, which deepened the deterioration that started in 2012 and had a negative impact on its own intra-regional import demand (Box 2).

The remaining countries showed negative growth rates, but more moderate and of less than 10%.

> The decline eased in 2016, but only in some economies.

In the first seven months of 2016 the rate of contraction in the value of Latin American exports was attenuated,[10] remaining, however, in negative territory (–8.5%). This deceleration in the decline was principally due to the previously mentioned recovery in the prices of commodities that compose the export baskets of some countries. In Paraguay, the Dominican Republic and Argentina the pace of decline was substantially reduced, which resulted in year-on-year growth rates through July of 2.4%, –0.2%, and –3.9%, respectively. El Salvador, Honduras, Guatemala, and Mexico, on the contrary, observed significant erosions in their exports (–4.7, –8.3, –5.2% and –5.7%, respectively). Finally, economies with exports intensive in fuels and energy continued to show the highest

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[9] This grouping includes all countries of the subcontinent, except Guyana and Suriname, which are included in the Caribbean.
[10] No data are available for the Caribbean for the first half of 2016.

TABLE 1 • GOODS EXPORTS OF LATIN AMERICA AND THE CARIBBEAN
(Annual growth rate and billions of US$, selected periods)

	US$ Billion			Growth Rates (%)			
	2013	2014	2015	2003–2008	2014	2015	Accum. July 2016
LATIN AMERICA AND THE CARIBBEAN	1090.3	1058.8	900.0	16.8	−2.9	−15.0	n.a.
LATIN AMERICA	1063.9	1037.3	883.3	16.6	−2.5	−14.8	−8.5
MESOAMERICA	423.5	442.4	423.8	10.3	4.5	−4.2	−5.2
Mexico	380.0	396.9	380.6	10.4	4.4	−4.1	−5.7
Central America	43.5	45.5	43.2	9.6	4.6	−5.0	−1.7
Costa Rica	8.6	9.2	9.2	10.3	6.8	0.0	6.2
El Salvador	5.5	5.3	5.5	7.6	−4.0	4.0	−4.7
Guatemala	10.0	10.8	10.7	10.9	7.8	−1.2	−5.2
Honduras	3.9	4.1	3.9	13.6	4.7	−3.6	−8.3
Nicaragua	5.2	5.4	4.8	28.7	4.4	−10.8	−1.6
Panama	0.8	0.8	0.7	7.3	−3.2	−14.9	−7.3
Dominican Republic	9.4	9.9	8.4	4.1	5.0	−15.3	−0.2
SOUTH AMERICA	640.4	594.9	459.5	22.1	−7.1	−22.8	−11.5
Argentina	76.0	68.4	56.8	18.2	−9.9	−17.0	−3.9
Bolivia	12.3	12.9	8.7	31.7	5.2	−32.3	−25.7
Brazil	242.0	225.1	191.1	21.9	−7.0	−15.1	−5.6
Chile	76.4	74.9	62.2	23.5	−1.9	−16.9	−9.0
Colombia	58.8	54.8	35.7	21.1	−6.8	−34.9	−25.9
Ecuador	24.8	25.7	18.3	24.6	3.6	−28.8	−17.4
Paraguay	9.5	9.6	8.3	18.4	1.9	−13.6	2.4
Peru	42.9	39.5	34.2	26.1	−7.8	−13.4	−3.1
Uruguay	9.1	9.1	7.7	21.3	0.7	−15.8	−10.9
Venezuela	88.8	74.7	36.4	23.7	−15.8	−51.3	−44.2
CARIBBEAN	26.4	21.5	16.6	24.4	−18.3	−22.8	n.a.
Bahamas	0.8	0.7	0.5	10.3	−15.1	−29.1	n.a.
Barbados	0.3	0.3	0.3	8.1	6.6	−9.4	n.a.
Belize	0.3	0.3	0.3	9.7	−8.1	−12.9	n.a.
Guyana	1.4	1.2	1.1	7.0	−15.2	−4.8	n.a.
Haiti	0.9	1.0	0.9	12.9	7.0	−5.7	n.a.
Jamaica	1.6	1.4	1.3	16.1	−8.3	−12.6	n.a.
Suriname	2.4	2.1	1.7	29.5	−11.2	−23.0	n.a.
Trinidad and Tobago	18.7	14.5	10.7	29.8	−22.3	−26.6	n.a.

Source: IDB Integration and Trade Sector with data from INTrade/DataINTAL and national sources.
Notes: n.a.: data not available. The Methodological Annex 3 details the conceptual, geographic and temporal coverage of goods exports.

rates of contraction, though slightly less than those for the previous year: Venezuela (–44.2%), Colombia (–25.9%), Bolivia (–25.7%), and Ecuador (–17.4%). Exports from Costa Rica grew 6.2%, having been stagnant in 2015.

Export Dynamics by Destination and Product

External demand for exports from Latin America fell in 2015, and continued in negative territory in 2016, though with a less intense rate of decline in the most recent period and with variation among partners (Figure 15). The most notable reduction in the rate of

Weak demand from China still sustained export performance.

BOX 2: INTRA-REGIONAL TRADE AND BRAZILIAN IMPORTS

In 2015, the slowdown of economic activity in some countries in Latin America, including a severe recession in Brazil, had a strong negative impact on intra-regional trade. While total exports from Latin America contracted 14.8%, intra-regional flows decreased by 19.1%. For the group of South American economies, the contraction reached 22.4%, while the sales of Mexico and Central America to the region suffered smaller declines of 12.1% and 2.2%, respectively.

As a destination, i.e. as a source of demand from the rest of the region, Brazil observed a contraction that was larger than the intra-regional average. In 2015, Latin American exports to Brazil fell 26.1%. In comparison, in 2009 Brazil's purchases from the region declined 19.9%, and in 1999, during a recession and a strong devaluation of the Brazilian currency, the reduction was of 23.3%. Argentina explained 10.6 p.p. of the reduction in Latin American sales to Brazil, a bilateral relation-ship in which manufactures, especially those from the automotive sector, are relevant. Bolivia, whose sales of gas are an important component of the bilateral trade with Brazil, added another 3.9 p.p. to the fall. The role played by the Brazilian market in this setting illustrates the weight of a contraction in intra-regional trade in determining Latin America's overall trade performance.

INTRA-REGIONAL EXPORTS BY SELECTED DESTINATIONS
(Annual rate of change and contributions, percentage, 2014–2015)
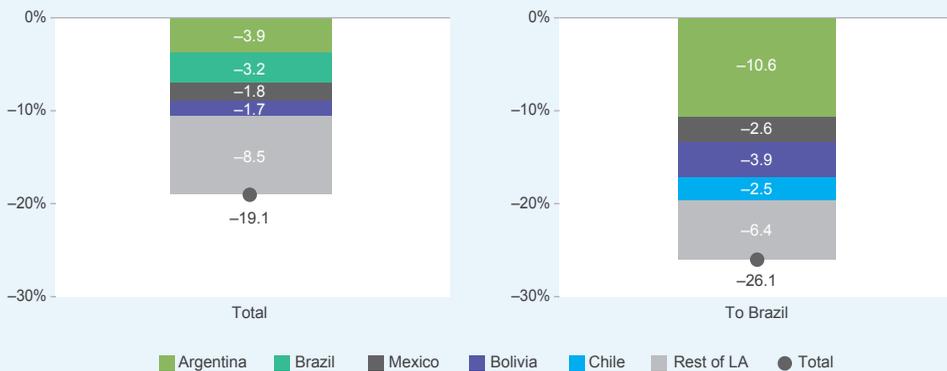
Source: IDB Integration and Trade Sector with data from INTrade/DataINTAL.
Notes: Latin America includes the 18 countries listed in footnote 6.

FIGURE 15 • IMPORTS OF SELECTED ECONOMIES
(Quarterly moving average of the annual rate of change, percentage, 2014–2016)
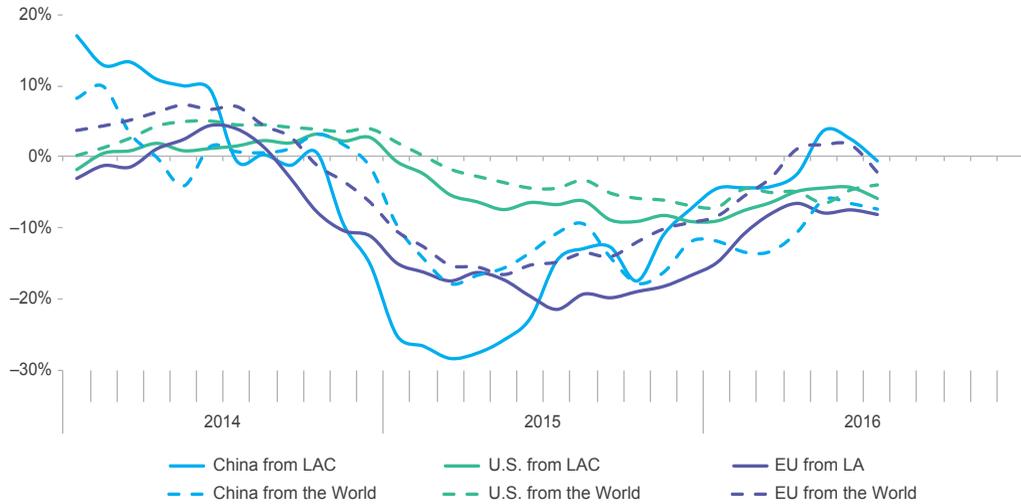
Source: IDB Integration and Trade Sector with data from the USITC, Eurostat, Chinese customs and national sources.
Notes: In the case of China and the U.S., imports correspond to those from Latin America and the Caribbean, while in the case of the EU they only include those from Latin America.

decline was observed in Chinese purchases from the region, which fell 18.0% in 2015, but only 3.5% year-on-year in January-July of 2016, benefiting particularly exporters in South America. It should be noted that the contraction of Chinese imports from the world has been greater than that of imports from Latin America since the end of 2015. In the case of imports from the region by the U.S. and the EU, there is also evidence of a less intense contraction in the first months of 2016 (–6.0% and –8.6%, respectively in January–July) than in 2015 (–7.6% and –18.6%, respectively). In both cases, however, in 2016 the rate of decline continued to be greater than that of imports from the world (–5.0% for the U.S. and –1.4% for the EU).

> Primary products explained a large part of the trade recession.

In terms of sectors, the decline of 14.8% in exports from Latin America in 2015 resulted from contractions in practically all product categories (Figure 16). Primary products (PP) accounted for the largest share of the reduction (12.0 p.p.); primary manufactures (PM) explained about 2.1 p.p.; the remaining 0.7 p.p. were due to industrial manufactures (IM). The structure of the contraction in foreign sales was replicated in all sub-regions, except for Central America, where IM were the largest contributor (–2.4 p.p. of –5.0%), especially those destined to China and the U.S., while those destined for the sub-region itself grew. Chile and Peru, with exports intensive in minerals and metals, were affected by the price dynamics of those products and

FIGURE 16 • CONTRIBUTIONS TO THE CHANGE IN LATIN AMERICAN EXPORTS BY SECTOR AND SELECTED DESTINATIONS
(Annual growth rate, percentage, 2014–2015)
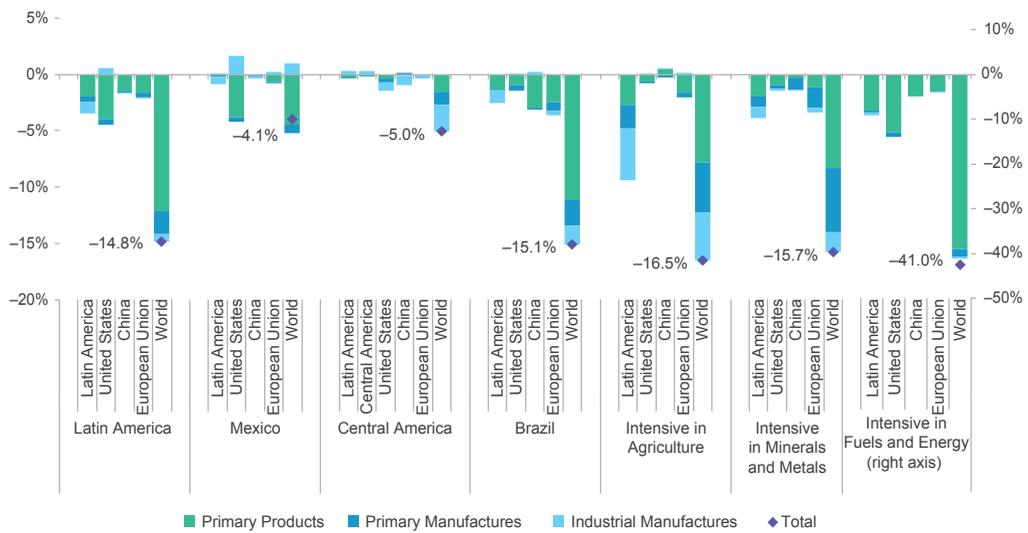
Source: IDB Integration and Trade Sector, with data from INTrade/DataINTAL and national sources.
Notes: The primary products aggregate (PP) includes the category of fuels and energy. The Methodological Annex 6 details the classification by category. Growth rates are decomposed according to the share contributed by the principal partners and categories to the total rate of change of exports in 2015. The figure does not include all partners and, therefore, the sum of the contributions may not equal to 100%.

their derivatives, reflected in a strong negative contribution of PP and PM to the change in foreign sales (14.0 p.p. of a fall of 15.7%). Similar behavior was exhibited by the economies with exports intensive in fuels and energy where, as mentioned, the collapse in the price of oil sank the value of exports.

Jointly analyzing destinations and product categories in 2015, exports of IM to the U.S. were the only ones that contributed positively, and were explained by a moderate growth of Mexican sales. Despite their large share in Mexico's foreign supply, the growth of IM exports was small, such that it did not compensate for the drop in PP provoked by the fall in oil sales. The U.S., destination of around 80% of Mexican exports, was responsible for the country's expansion of IM and reduction of PP sales. For their part, sales of PP and PM from Brazil fell to all destinations, although China and the EU explained most of the decline. Exports of IM expanded to China and, to a lesser extent, to the U.S., although they did not compensate the significant reduction in sales to the region itself, which is Brazil's main destination market in this category. The foreign sales of all categories fell in the countries with

> The contraction was observed in most products and destinations.

exports intensive in agricultural products, particularly the exports of IM to the rest of the region. It is worth noting that China, which has become a destination of great importance for these countries, continued to contribute positively to LAC trade performance through its imports of PP.

The Breakdown in Services Exports

In 2015, for the first time since the global financial crisis, LAC services exports contracted (–2.4%). Although in previous years the foreign sales of services managed to compensate in part the reduction in merchandise trade, most countries in the region experienced a deceleration in this area, including those whose growth remained positive (Table 2). Despite this reduction, trade in services continued to be more resistant to the overall decline than trade in goods: in 2009, during the great contraction, exports of goods fell 22.5%, while those of services fell 9.0%, slightly less than half as much. In turn, in 2015, the fall in services exports (–2.4%) was one sixth of the fall in goods exports (–15.0%).

> Services exports fell for the first time since 2009.

The contraction of trade in services in 2015 was driven in large measure by the reduction in exports of those related to trade in goods (Figure 17). Transportation, and within this category freight services, contributed 1.5 p.p. to the overall drop of 2.4%. Likewise, more than half of other business services, which is the heading that fell the most in 2015, is composed of technical services related to trade in goods.[11] Lastly, travel, which includes tourism, grew less than in 2014, but partially compensated the reductions in the other categories.

> Services related to trade in goods explained most of the contraction.

Brazil, the largest regional supplier of services, accounts for about a quarter of the total exported by LAC. Having grown 5.4% in 2014, its sales registered a drop of 15.4% in 2015, with a substantial negative impact on regional performance. In fact, excluding Brazil, LAC had positive growth of 2.4% in 2015. The component that explained most of the fall in Brazilian exports was

> The largest contributor to regional performance was Brazil.

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[11] It is worth noting, however, that the component of this heading that covers services to firms such as management consulting, or technical services such as engineering, architecture, and information technology has grown 19.0% per year on average over the last 10 years and has more than quintupled in that period to reach a total of US$ 9.4 billion in 2015. Although this is still a small fraction of the total, these services have high value added and can play an important role in the diversification of the regional export supply.

TABLE 2 • SERVICES EXPORTS OF LATIN AMERICA AND THE CARIBBEAN
(Annual rate of change and billions of US$, selected periods)

	US$ Billion			Growth Rates (%)		
	2013	2014	2015	2003–2008	2014	2015
LATIN AMERICA AND THE CARIBBEAN	**140.5**	**143.8**	**140.4**	**14.3**	**2.4**	**−2.4**
LATIN AMERICA	**132.5**	**135.5**	**131.9**	**15.0**	**2.2**	**−2.6**
MESOAMERICA	**48.0**	**51.0**	**54.1**	**8.8**	**6.3**	**6.0**
Mexico	20.2	21.1	22.6	6.3	4.4	7.2
Central America	**27.8**	**29.9**	**31.5**	**11.7**	**7.7**	**5.2**
Costa Rica	6.3	6.5	7.1	14.0	3.7	8.2
El Salvador	1.4	1.7	1.7	5.4	15.8	−0.4
Guatemala	2.4	2.7	2.6	11.5	11.6	−1.3
Honduras	1.0	1.0	1.1	9.8	7.6	1.5
Nicaragua	0.6	0.7	0.8	15.7	5.3	14.2
Panama	10.0	10.7	11.2	15.2	6.9	4.2
Dominican Republic	6.0	6.6	7.1	8.6	9.8	7.4
SOUTH AMERICA	**84.5**	**84.5**	**77.9**	**19.9**	**−0.1**	**−7.8**
Argentina	14.4	13.5	13.7	23.2	−5.8	1.5
Bolivia	1.1	1.2	1.4	12.1	12.6	15.0
Brazil	36.4	38.4	32.5	22.9	5.4	−15.4
Chile	12.4	11.0	9.8	16.4	−10.9	−11.2
Colombia	6.7	6.8	7.0	16.4	1.1	3.5
Ecuador	1.9	2.2	2.2	8.7	15.8	−0.1
Paraguay	0.7	0.7	0.7	12.1	4.7	−5.2
Peru	5.7	5.7	6.1	17.4	1.0	6.1
Uruguay	3.4	3.3	3.0	19.8	−3.9	−10.4
Venezuela	1.8	1.6	1.5	13.6	−15.6	−4.6
CARIBBEAN	**8.0**	**8.3**	**8.5**	**7.4**	**4.5**	**1.8**
Bahamas	2.6	2.7	2.7	3.4	1.5	0.8
Barbados	1.4	1.4	1.4	11.2	−0.3	4.9
Belice	0.4	0.5	0.5	14.1	10.4	0.7
Guyana	0.2	0.2	0.1	3.5	9.8	−21.0
Haiti	0.6	0.6	0.7	20.0	8.1	5.2
Jamaica	2.6	2.8	2.9	6.6	7.1	3.0
Suriname	0.2	0.2	0.2	41.6	16.0	−11.2
Trinidad and Tobago	n.a.	n.a.	n.a.	6.6	n.a.	n.a.

Source: IDB Integration and Trade Sector with data from the IMF and the WTO.
Notes: n.a.: data not available. Trade in services excludes construction, manufacturing, maintenance and repair, and government services (see Methodological Annex 3).

FIGURE 17 • CONTRIBUTIONS TO THE DECLINE IN SERVICES EXPORTS
(Percentage points, 2014–2015)
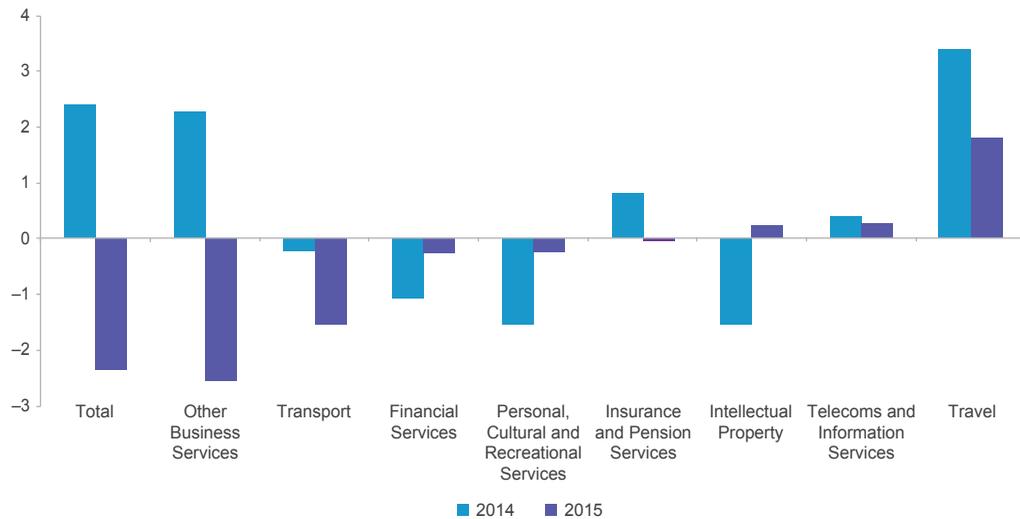
Source: IDB Integration and Trade Sector with data from the IMF.

In South America services exports fell in most countries.

the reduction in technical and trade-related services, although the transportation and travel categories also experienced appreciable contractions.

In South America, responsible for 55% of total LAC services exports, over half of the economies registered contractions, with an aggregate fall of 7.8% (–1.5% excluding Brazil). Three economies registered reductions for the second consecutive year: Chile (-11.2%), Uruguay (–10.4%) and Venezuela (–4.6%). Paraguay switched to a negative growth rate by falling 5.2%, having grown the previous year, while Argentina switched to a positive growth rate of 1.5%, following a fall of 5.8% in 2014. In Ecuador exports were practically stagnant, and in only three countries there were relevant increases: 15.0% in Bolivia, 6.1% in Peru, and 3.5% in Colombia.

Representing 40% of the region's foreign sales of services, Mesoamerica increased its exports by 6.0% in 2015. Only Guatemala (–1.3%) and El Salvador (–0.4%) suffered declines, though slight, while the rest of the economies experienced expansions. Mexico, the country with the largest share in the sub-region, increased its exports by 7.2%. Costa Rica and the Dominican Republic, where services constitute between 40% and 50% of total exports, also showed significant growth rates

Mesoamerica and the Caribbean grew their services exports.

(8.2% and 7.4%, respectively). Honduras (1.5%) and Panama (4.2%) had moderate growth, while in Nicaragua services exports grew 14.2%. Finally, the Caribbean saw positive but small growth in most countries, which resulted in an aggregate rate of 1.8%. Barbados and Haiti observed growth of around 5.0%, while the Bahamas, Belize, and Jamaica registered rates between 0.7% and 3.0%. The exceptions were the declines in the continental countries of Guyana (–21.0%) and Suriname (–11.2%).

In conclusion, the contractive dynamics of LAC trade in goods that begun in 2014 and were aggravated in 2015 moderated somewhat in 2016, without leaving negative territory. This reduction in goods exports had a ripple effect on services trade, which fell for the first time since the financial crisis. On the one hand, in 2015, the small increase in export volumes did not compensate for the marked reduction in the prices of the region's main export goods. On the other hand, in 2016, the slight improvement caused by a reduction in the rate of price decline was not accompanied by stronger growth in volumes. In this context, it is useful to analyze in which ways cyclical exchange rate factors and structural changes that have affected the global trading system in the last two decades have influenced LAC trade performance, and how they might change the region's trade outlook going forward. These subjects will be addressed in chapters 3 and 4, respectively.

The Realignment of Exchange Rates

The exchange rates of most countries in Latin America underwent marked depreciations during the recent world trade contraction. As a consequence, the price competitiveness of the regional economies shifted markedly. Estimates of the real exchange rate elasticity of exports show that, although the effect has diminished in recent years, depreciations can stimulate growth in foreign sales, particularly of manufactures. However, in the case of intra-regional flows, the current configuration of real exchange rates does not favor prospects for export expansion and diversification. Furthermore, the volatility of exchange rates represents an additional risk in the current context of macroeconomic uncertainty.

The Recent Exchange Rate Movements

In most countries of Latin America the nominal exchange rate with respect to the dollar suffered increases[12] during the recent phase of contraction of world trade between July of 2014 and May of 2016. The only exceptions were Guatemala and Costa Rica, while the largest depreciations were observed in Argentina (73.9%), Colombia (59.6%), Brazil (59.3%), Mexico (39.1%), Paraguay (31.7%) and Uruguay (36.6%). The nominal realignments varied depending on the exchange rate regime adopted by each country, i.e. flexible, intermediate, or fixed.[13] Of the subgroup of countries that experienced nominal depreciations, only Honduras, the Dominican Republic and Argentina maintain intermediate exchange rate regimes; the others maintain flexible ones.

> Exchange rate depreciations were observed in most countries.

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[12] A positive/negative rate indicates a depreciation/appreciation.

[13] This analysis follows the classification of Powell (2015) for the exchange rate regimes of LAC. Flexible regime: Brazil, Chile, Colombia, Guatemala, Mexico, Paraguay, Peru and Uruguay; intermediate regime: Argentina, Bolivia, Costa Rica, Dominican Republic, Haiti, Honduras, Nicaragua, Jamaica, Suriname, Trinidad and Tobago and Venezuela; the remaining countries in the analysis have fixed exchange rates.

FIGURE 18 • EXCHANGE RATES IN SELECTED LATIN AMERICAN COUNTRIES
(Rate of variation, percentage, July 2014–May 2016)
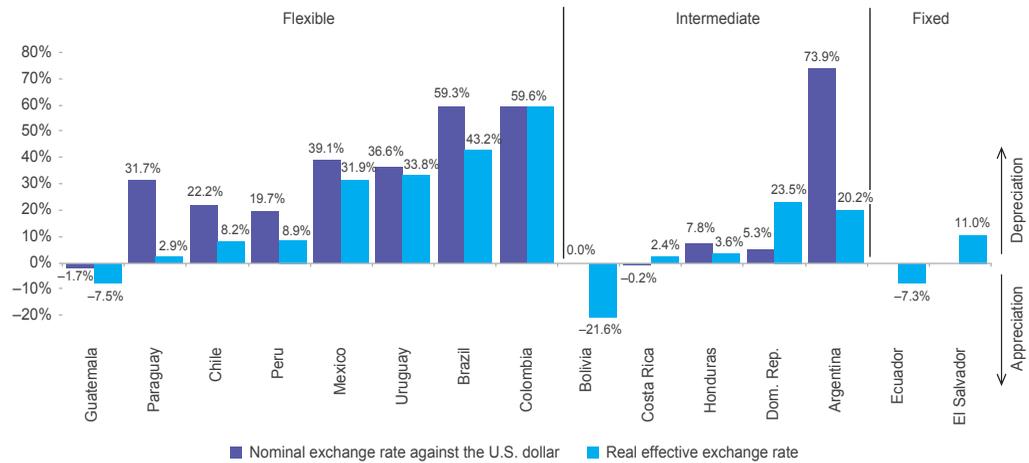
Source: IDB Integration and Trade Sector with data from INTrade/DataINTAL, the IMF and national sources.
Notes: Correspond to the variation in the indices that consider 2005 as a base year. Countries are grouped by flexible, intermediate or fixed exchange rate regime. The purple bars indicate the rate of variation of the nominal exchange rate with respect to the dollar between July of 2014 and May of 2016. The blue bars indicate the rate of variation of the real effective exchange rate for the same time period. A positive/negative rate indicates depreciation/appreciation. For those countries with fixed exchange rate regimes, the bars corresponding to the variation of the nominal exchange rate with respect to the dollar are not included, as the rate is constant. In the calculation of the real effective exchange rate, the consumer price index (CPI) is used as the price indicator, except in Argentina where the implicit GDP deflator, converted to a monthly series, is used. The weighing uses trade data of the 49 main partners that represent at least 80% of the total flows.

> Real depreciations were smaller than nominal ones.

The combination of movements in the nominal exchange rates and the inflation dynamics of each country relative to that of its trading partners determine the variation in the real effective exchange rate.[14] In the recent phase of contraction, all countries with a flexible exchange rate regime, except Guatemala, registered real depreciations (Figure 18). The most significant corrections were observed in Colombia (59.6%), Brazil (43.2%), and Uruguay (33.8%). In countries with intermediate exchange rate regimes, Argentina and the Dominican Republic displayed a notable increase in the real effective exchange rate. The rest were of lesser magnitude, and in Bolivia there was even a considerable appreciation of 21.6%. Ecuador, with a fixed exchange rate with respect to the dollar, showed a slight real appreciation (–7.3%), and El Salvador, with a similar regime, had a real depreciation of 11.0%. With the exception of Colombia

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[14] The real effective exchange rate measures the international value of a country's currency with respect to the set of currencies of its main trading partners, taking into consideration the relative variations of national price levels. It is thus an indicator of the price competitiveness of national exports in the country's principal destination markets, as depreciations in the real effective exchange rate cause the prices of the country's goods in foreign markets to decrease relative to those of other countries.

and the Dominican Republic, the real depreciations were less than the nominal ones, indicating potentially smaller benefits for export competitiveness. In Guatemala and Bolivia, where there were both nominal and real appreciations, the real movements were larger than the nominal ones.[15]

These movements altered key bilateral exchange rates for countries in the region. In nine of the 15 countries considered in the analysis there were real depreciations with respect to the currency of their main trading partner (Figure 19).[16] In

Real depreciations occurred mainly with respect to extra-regional partners.

FIGURE 19 • BILATERAL REAL EXCHANGE RATES OF SELECTED COUNTRIES WITH THEIR MAIN TRADING PARTNERS
(Rate of variation, percentage and index 2005 = 100, July 2014–May 2016)
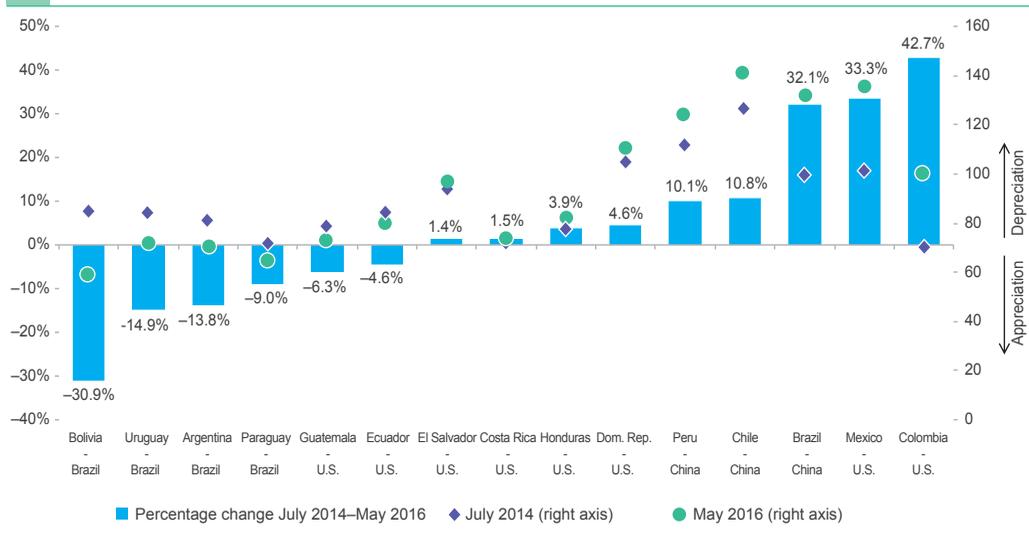
Source: IDB Integration and Trade Sector with data from INTrade/DataINTAL, IMF and national sources.
Notes: For each pair of countries the exchange rate corresponds to the currency of the first relative to that of the second. Bars indicate the rate of variation of the exchange rate between July of 2014 (diamond) and May of 2016 (circle). A positive/negative rate indicates real depreciation/appreciation.

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[15] Apart from the differences in the bilateral cost structures among countries, to precisely evaluate the real effective exchange rate it is necessary to consider competition with third countries in the destination markets, as well as similarities with the competitors' export baskets. Nonetheless, the traditional measures of real effective exchange rates, including those used in this analysis, are limited to considering bilateral relationships and do not incorporate the adjustment for competition in third markets. See Stein *et al.* (2016) for an example of the estimation of the adjusted real effective exchange rate that takes into account these additional factors.

[16] The U.S. is the principal destination of exports for Mexico (81%), the Dominican Republic (49%), El Salvador (47%), Honduras (43%), Costa Rica (39%), Ecuador (39%), Guatemala (5%) and Colombia (27%). China is the principal destination of exports for Chile (26%), Peru (22%) and Brazil (19%). Brazil is the principal destination of exports for Paraguay (31%), Bolivia (28%), Argentina (18%) and Uruguay (15%). The share of exports to the principal destination in total exports is that of 2015 and is obtained from INTrade/DataINTAL. Data for El Salvador, the Dominican Republic, Guatemala and Costa Rica include exports under special trade regimes (STR), while those for Honduras and Mexico do not.

general, the countries that have the U.S. as the main export destination experienced real bilateral depreciations with respect to the dollar. Largest among these were those of Colombia (42.7%) and Mexico (33.3%) and, to a lesser degree, those of the Dominican Republic (4.6%), Honduras (3.9%), Costa Rica (1.5%) and El Salvador (1.4%). In contrast, Guatemala and Ecuador, which also have the U.S. as their main trading partner, suffered real appreciations of 6.3% and 4.6%, respectively, due to the inflation differential. For their part, Brazil, Chile, and Peru, which share China as the primary destination of their exports, observed real exchange rate depreciations with respect to the renmimbi of 32.1%, 10.8%, and 10.1%, respectively. Finally, the countries that have Brazil as their main trading partner registered significant real appreciations with respect to the real: Bolivia (–30.9%), Uruguay (–14.9%), Argentina (–13.8%) and Paraguay (–9.0%).

The regional competitiveness matrix has shifted.

The scenario is thus one in which most countries of Latin America have experienced increases in their price competitiveness, measured in terms of the real exchange rate, both at the multilateral level and with their main trading partners, with the notable exception of those countries strongly oriented towards Brazil and the intra-regional market. In this context, it is worth determining empirically what was the impact of these potential gains in price competitiveness on exports in the past years, and to what degree this opportunity can be leveraged in the future.

The Impact of Depreciations on Exports

In general, one expects real depreciations to stimulate export growth. Recent studies, however, have not reached a consensus regarding the persistence and magnitude of this impact: some conclude that the positive impact of depreciations seems to have been diluted, while others find that there is still a strong correlation between real exchange rates and trade.[17]

Depreciations may stimulate exports.

In fact, factors associated with the composition of the export basket, the origin and destination markets, and other characteristics of the exporting firms can affect

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[17] The Financial Times (2015) shed light on the debate by arguing that the benefits of depreciations for exports have been lost, particularly in emerging markets. Leigh *et al.* (2015) show that depreciations continue to have an effect on trade. Ahmed *et al.* (2015) find a positive but declining effect due to participation in global value chains. Eichengreen and Gupta (2012) find evidence of a greater effect for modern services exports compared to goods exports. Berthou (2008) shows that the effect depends on the characteristics of the destination market, while Berman *et al.* (2015) find that a firm's size and productivity are key determinants of the magnitude of the impact.

the relationship.[18] To measure the impact on the region, the elasticity of exports with respect to the real exchange rate was estimated empirically. The estimation considered bilateral data on both variables between 15 countries of Latin America and 49 trading partners for the period 2003–2015.[19] The present empirical analysis represents the first for Latin American countries, which have not been specifically considered in recent global studies.

The results indicate that, on average, between 2003 and 2015, a real depreciation of 1.0% generated an increase of 0.9% in total Latin American exports (Figure 20).[20] In the specific case of manufactures,[21] a real depreciation of 1.0% generated and average increase of 1.2% in exports, more substantial than for total exports. However, the effect was different according to the type of specialization: exports of

> Exports of manufactures are more sensitive to exchange rate variations.

FIGURE 20 • ELASTICITY OF EXPORTS TO THE REAL EXCHANGE RATE BY SECTOR
(Estimated coefficients, 2003–2015)
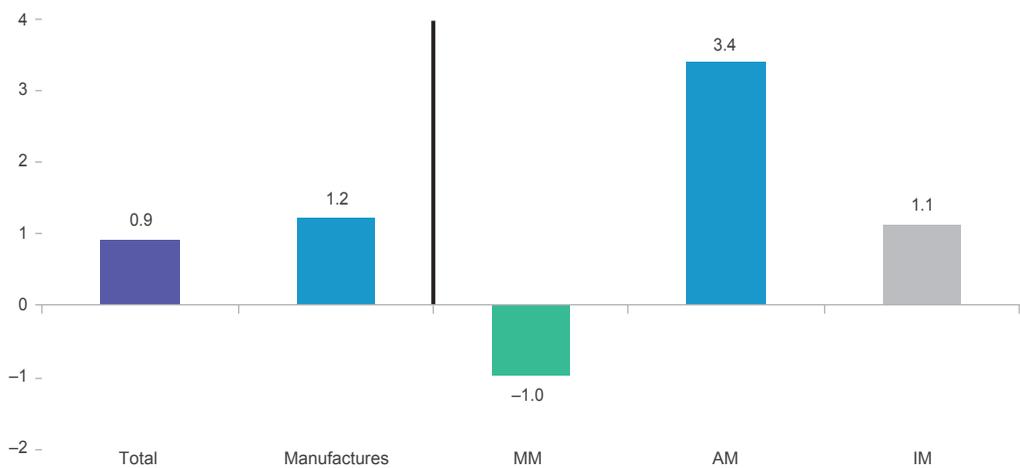
Source: IDB Integration and Trade Sector, own estimates with data from INTrade/DataINTAL, IMF and national sources.
Notes: Bars indicate the elasticity of exports to the real exchange rate. The reported coefficients are statistically significant at the 1% level. The Methodological Annex 6 details the classification by categories.

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[18] For example, there are several reasons for which firms may not respond immediately to changes in the real exchange rate. Among them are the costs associated with changing the scale of production, the fixed time of cultivation or production of certain primary or intermediate products, rigidities imposed by existing contracts with set prices, as well as the denomination of said prices. Additionally, uncertainty about whether the changes are permanent or transitory may also influence exporter behavior.

[19] The estimation used the Poisson pseudo maximum likelihood (PPML) method (see Methodological Annex 4).

[20] All reported coefficients are statistically significant at the 10% level or higher.

[21] In this chapter, manufactures refer to the combined set of industrial, agricultural, and mineral manufactures.

agricultural manufactures (AM) and of industrial manufactures (IM) exhibited positive elasticities, with increases of 3.4% and 1.1%, respectively. The negative effect (–1.0%) on mineral manufactures (MM) can be associated with long-term investments common in the sector, which may result in a more inelastic supply response. For example, in the face of losses of competitiveness experienced in periods of appreciation, which should induce lower foreign sales, firms continue to export in order to cover high fixed costs.[22]

Taking destinations into account, the results indicate that the elasticity of exports to the real exchange rate was also greater in the case of intra-regional trade, as compared to trade with the rest of the world (Figure 21).[23] In particular, a real depreciation of 1.0% translated into an average increase of 0.5% for total intra-regional exports, compared to a statistically insignificant impact for exports to extra-regional partners. Similarly, a real depreciation of 1.0% caused an average increase of 0.9% in intra-regional manufactures exports, compared to an impact of 0.6%

Intra-regional trade may be affected by the new exchange rate alignments.

FIGURE 21 • ELASTICITY OF EXPORTS TO THE REAL EXCHANGE RATE BY TRADING PARTNER
(Estimated coefficients, 2003–2015)
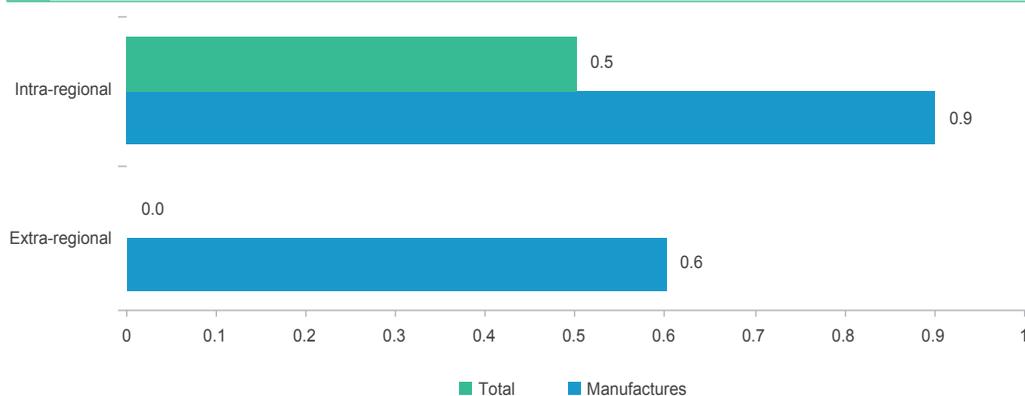
Source: IDB Integration and Trade Sector, own estimates with data from INTrade/DataINTAL, IMF and national sources.
Notes: Bars indicate the elasticity of exports to the real exchange rate. The reported coefficients are statistically significant at the 10% level or higher. If the coefficient is not statistically significant, it is reported as zero in the figure.

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[22] In addition to long-term investments, note 18 lists other possible explanations for this result.

[23] These elasticities were calculated employing a different specification that, in addition to the real exchange rate, includes an interaction term between the real exchange rate and a binary variable equal to 1 when the partner is intra-regional (i.e. from Latin America). Thus, the coefficient on the real exchange rate variable measures the average effect for extra-regional partners, while the sum of this coefficient and the one on the interaction term measures the average effect for intra-regional partners (see Methodological Annex 4).

for those directed to extra-regional partners. Like the results for the regional average, the elasticity of manufactures exports was greater than that for total exports, for both extra- and intra-regional trade. In intra-regional trade the existence of long-term relationships, lower costs of entry, and common borders and languages are factors that can increase the capacity of exporters to react to exchange rate variations. In the specific case of Latin America, the larger elasticity of intra-regional compared to extra-regional trade is also due to the composition of the former, which has a higher share of manufactures that, as shown earlier, are more elastic than total exports to exchange rate movements.

Finally, estimations by periods indicate that the effect of real depreciations on exports has diminished and, in some cases, disappeared in recent years (Figure 22). In trade with extra-regional partners, between 2003 and 2008, depreciations of 1.0% led total exports to expand by 2.5%, and exports of manufactures to expand by 3.0%, while between 2009 and 2015 the effect on total exports vanished and the effect on

> The effect of depreciations has diminished in recent years.

manufactures fell to 0.9%. The same decreasing trend was observed in the case of intra-regional partners: between 2003 and 2008, depreciations of 1.0% led total intra-regional exports to increase by 3.0% and intra-regional exports of manufactures to grow by 3.4%, while between 2009 and 2015 the effect on total intra-regional exports fell to 0.4% and that on intra-regional manufactures fell to 1.2%. Despite the decline,

FIGURE 22 • ELASTICITY OF EXPORTS TO THE REAL EXCHANGE RATE BY PERIOD AND TRADING PARTNER
(Estimated coefficients, 2003–2008 and 2009–2015)
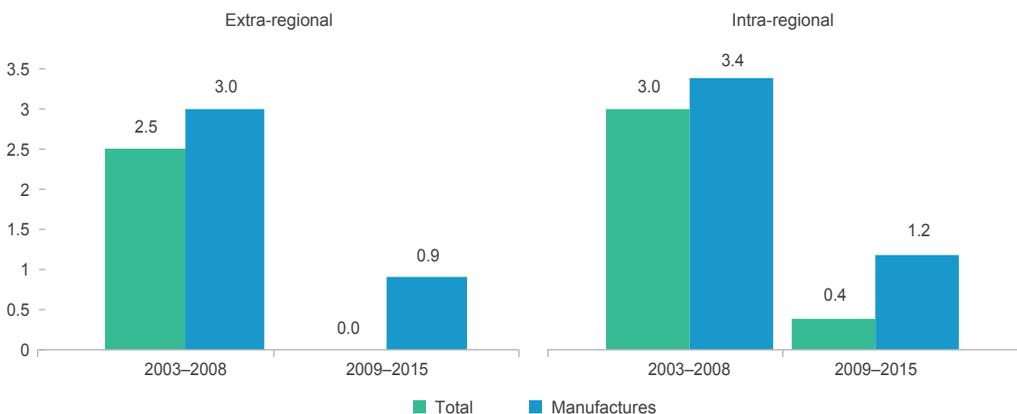
Source: IDB Integration and Trade Sector, own estimates with data from INTrade/DataINTAL, IMF and national sources.
Notes: Bars indicate the elasticity of exports to the real exchange rate. The reported coefficients are statistically significant at the 10% level or higher. If the coefficient is not statistically significant, it is reported as zero in the figure.

BOX 3: HETEROGENEOUS EFFECTS BY EXPORTER

The effects on national exports were not homogeneous given the particular exchange rate varia-
tions in specific countries. In a majority of cases, the elasticity of manufactures exports was greater
than that of total exports. In general, South American countries presented positive elasticities for
both manufactures and total exports, while Central America and Mexico exhibited null or negative
elasticities to the real exchange rate in the period 2003–2015. A potential explanation for this
phenomenon could be the participation of these countries in global value chains, in the context
of which the sensitivity of exports to exchange rate variations becomes only one of many factors
within a cost optimization strategy that may involve long-term decisions on the part of firms.

ELASTICITY OF EXPORTS TO THE REAL EXCHANGE RATE BY COUNTRY
(Estimated coefficients, 2003–2015)
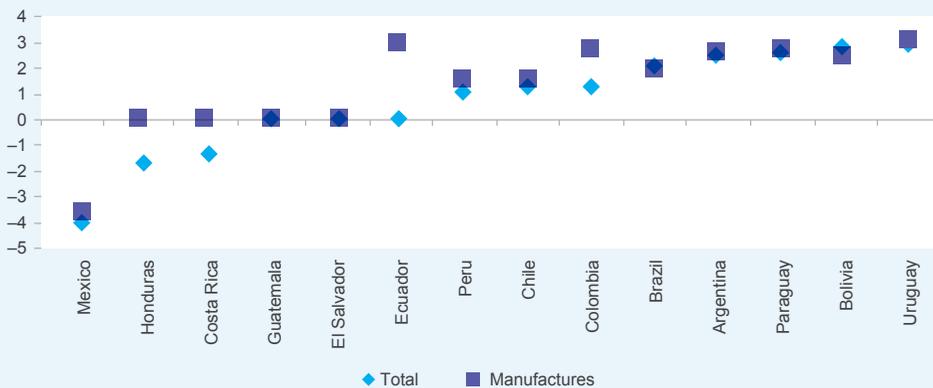
◆ Total   ■ Manufactures

Source: IDB Integration and Trade Sector, own estimates with data from INTrade/DataINTAL, IMF and national sources.
Notes: The diamonds show the elasticity of total exports, and the squares show the elasticity of manufactures
exports. The reported coefficients are statistically significant at the 10% level or higher. If the coefficient is not
statistically significant, it is reported as zero in the figure. The Dominican Republic is excluded from the estimation
(see Methodological Annex 4).

the effect on extra-regional and intra-regional exports of
manufactures continued to be significant and of considerable
magnitude.[24]

The Risks of Exchange Rate Volatility

Exchange rate realignments can lead to transitory or permanent
real effects, which in turn causes uncertainty and may influence

Regional
exchange
rate volatility
has increased
markedly.

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[24] This estimation includes year fixed effects to ensure that the results obtained are not influenced by the char-
acteristics of the analyzed periods (the first was a period of expansion, while the second was one of stagnation
and contraction).

FIGURE 23 • VOLATILITY OF THE NOMINAL AND REAL EXCHANGE RATES WITH RESPECT TO THE DOLLAR
(Standard deviation, average, 2002–2015)
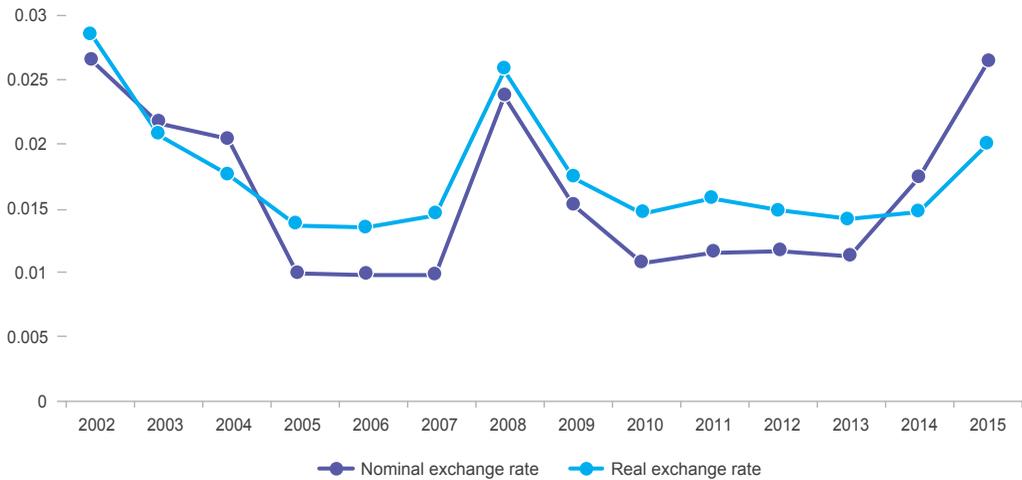
*Source*: IDB Integration and Trade Sector, own estimates with data from INTrade/DataINTAL, IMF and national sources.
Notes: The countries included are the same ones included in the elasticity estimations. The Methodological Annex 4 details the volatility measures utilized.

the reaction of exporters. Between 2002 and 2015, Latin America experienced significant variations in the volatility of exchange rates with respect to the dollar (Figure 23). The initial period of falling volatility coincided with the export boom and culminated at the beginning of the global financial crisis. After the trade collapse of 2008–2009, having increased drastically, the levels of volatility returned to pre-crisis levels, where they remained relatively stable until 2013, coinciding with the period of trade stagnation. From that point on, which comes close to the onset of the export decline, the levels of volatility rose again.

To measure the short-term impact of exchange rate uncertainty on exports, a variable for bilateral exchange rate volatility was included in the estimation. Also, despite the fact that the analysis has thus far focused on real variables, it is important to analyze the effects of volatility of the nominal bilateral exchange rate. Unlike the real exchange rate, the

Exchange rate volatility affects exports.

nominal rate is the one observed by exporters in the short term and has direct incidence on trade costs, including, for instance, investment in foreign exchange hedging instruments.[25]

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[25] The inclusion of these two measures in the elasticity estimation does not alter the previously presented results (see Methodological Annex 4).

Risks emerge for export diversification.

In general, greater volatility of the real exchange rate had no significant effect on total exports, but had a negative effect on exports of manufactures.[26] The decomposition of the effect by product category shows that it was driven entirely by exports of IM. Exports of AM and MM showed no sensitivity to this variable. A similar trend was observed with respect to the volatility of the nominal exchange rate, with the difference that, in this case, similar to exports of IM, AM exports were also affected negatively. Exports of MM continued to be unaffected by exchange rate volatility.

In synthesis, the analysis confirms the significant impact that exchange rate movements can have on Latin American exports. Comparing the results with those of studies carried out for other regions and countries of the world, it is observed that the average elasticity of exports with respect to the real exchange rate for Latin America (0.9) is slightly higher than that for other regions: 0.7 for OECD countries, and 0.6 for total and manufactures exports of a group of developed and developing countries. The average

In the short term it will be necessary to avoid exchange rate safeguards.

elasticity of manufactures exports of Latin America (1.2) is nearly double the one for these groups of countries.[27] However, it is worth noting that, despite the larger effect found on manufactures and intra-regional exports, the greatest real depreciations observed in Latin America occurred with respect to extra-regional partners. In contrast, at the intra-regional level, considerable real appreciations have arisen due mostly to the strong depreciation of the Brazilian real with respect to the currencies of the country's regional partners.

These estimates indicate that the substantial realignments in the real exchange rate parities that occurred in recent years may dampen export growth through the intra-regional channel. Consequently, they paint an adverse picture for export diversification, as intra-regional trade is the one in which manufactures, which are precisely those more sensitive to exchange rate fluctuations, feature more prominently. For these same reason, there may be increased incentives for the adoption of protectionist policies to safeguard—although inefficiently—the competitiveness of exporters. These results highlight the role that variations in the level and volatility of exchange rates have had on the recent regional trade performance at the same time that wider structural changes in the global trading system have taken shape. These will be the subjects of the next and last chapter.

[26] An increase of 0.01 standard deviations in the variation of the nominal exchange rate produced a reduction of real exports of manufactures of 0.92%. The effect of the same increase in the standard deviation of the variation of the real exchange rate was –0.97%.

[27] Berthou (2008) estimates the elasticity for OECD countries between 1989 and 2004. Ahmed *et al.* (2015) estimate the elasticity of total exports and the elasticity of manufactures exports for a sample of 46 developed and developing countries between 2004 and 2012.

Regional Exports in the Long Run

A groundbreaking analysis of global and regional exports at constant prices reveals that the boom that preceded the crisis resulted essentially from a price effect. With the exception of Mexico, Latin American countries have become increasingly specialized in commodities and their derivatives. The participation of these products in the region's export basket has increased, while the global market shares controlled by the region have either fallen or become increasingly concentrated in the less dynamic segments of global demand. There was also a movement towards specialization in the initial and lower value-added stages of production chains. The end of the commodity price supercycle thus reveals vulnerabilities in the regional trade performance that went unnoticed during the boom period.

To complement the analysis on the recent export performance of Latin America, this chapter offers a longer-term assessment of the interaction between the region's external sector and the global trade trends over the past two decades.[28] The chapter is based on two methodological innovations that bring a new perspective on the recent debate on the global trade slowdown. First, time series of world imports and regional exports were estimated at constant prices, allowing for the evaluation of the real growth of trade flows net of the effects of the commodity price supercycle. Second, goods were classified according to their sector of origin and level of elaboration, which reveals some qualitative features and the degree of diversification of the regional export supply.[29] This perspective exposes a performance that diverges from the notion that the region benefited from the bonanza in commodity markets.

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[28] The countries of the Caribbean are not included in the analysis due to lack of complete data series for the entire period. 1995 was selected as the initial year for the analysis based on the availability of disaggregated data, in addition to being a year in which the initial effects of the transformations undergone by the external sector during the expansive phase of the commodity price supercycle can be adequately observed.

[29] Methodological Annexes 2 and 5 detail the procedures used in the estimates at constant prices, and Methodological Annex 6 details the classification by category.

The Impact of the Commodity Price Supercycle

The growth trajectories of global and regional trade between 1995 and 2015 appear very different when the growth of volumes is separated from the price dynamics (Figure 24). The distinction, for the most part due to the increase in commodity prices that accelerated in 2003, is evident when comparing the exponential evolution of the series valued at current prices with the linear series estimated at constant prices.[30] In real terms, between 1995

The region faces a phase of lower global trade growth.

and 2008, during the boom period, the growth of world trade reached an annual average of 6.2%, double the rate corresponding to the growth of world GDP (Figure 25). Between 2010 and 2015, the expansion suffered a marked deceleration with an annual increase of only 2.6%, equal to the growth of global output. Recent literature has underscored this drop in the income elasticity of trade and, in some cases, interpreted it as signaling a change of gear in the process of globalization.[31] Independently of the structural character of this change in trend, it is evident that in the post-crisis Latin America has been facing a "new normal". The trade collapse of 2009 was associated with a discontinuity from the previous trajectory, observed both in world trade and in Latin American exports,[32] and led to subsequent rates of growth lower than those prevailing during the boom. Nonetheless, as shown in more detail below, this new normal is not so novel for the region. On the contrary, the drop in commodity prices exposed vulnerabilities in the regional export specialization that had been developing over the past two decades.

The trend in Latin American real exports has been essentially linear and stable in

The export boom was mainly due to a price effect.

both periods: exports measured at constant prices grew 5.1% per year during the boom, and 3.2% during the deceleration.[33] Measured in nominal terms, the growth of foreign sales followed different patterns, influenced by inflationary components that were particularly acute in the region: in the overall 1995–2015 period, world trade grew 10.2% more if measured in current

[30] In Figure 24 the real levels of trade and exports are adjusted to linear trends using the end points of each phase, with minor differences between the observed and the adjusted totals.

[31] The trade growth slowdown during the post-crisis has provided abundant material for academic and institutional analyses. A large part of the discussion seeks to clarify whether the phenomenon has cyclical or structural causes, taking into account the observed reduction in the income elasticity of trade. This chapter utilizes more specific indicators and focuses on the particular case of Latin America, which has been largely omitted from global analyses. See Constantinescu, Matoo and Ruta (2014, 2015, 2016), Boz, Bussière and Marsilli (2015), ECB (2015), IMF (2016c), IMF (2016d), and Hoekman (2015), which includes a series of essays on the subject.

[32] Had the pre-crisis trend continued, in 2015 Latin America's real export volumes and those of world trade would have been, respectively, 11.4% and 15.2% higher than the observed.

[33] It should be noted that, for Latin American exports, the boom period corresponds to 1995–2007, as they reached their maximum in 2007, while world exports did so in 2008.

FIGURE 24 • WORLD TRADE AND LATIN AMERICAN EXPORTS
(Billions of US$, 1995–2015)

Current prices

Constant prices of 2005

■ World Trade   ■ Exports from LA (right axis)
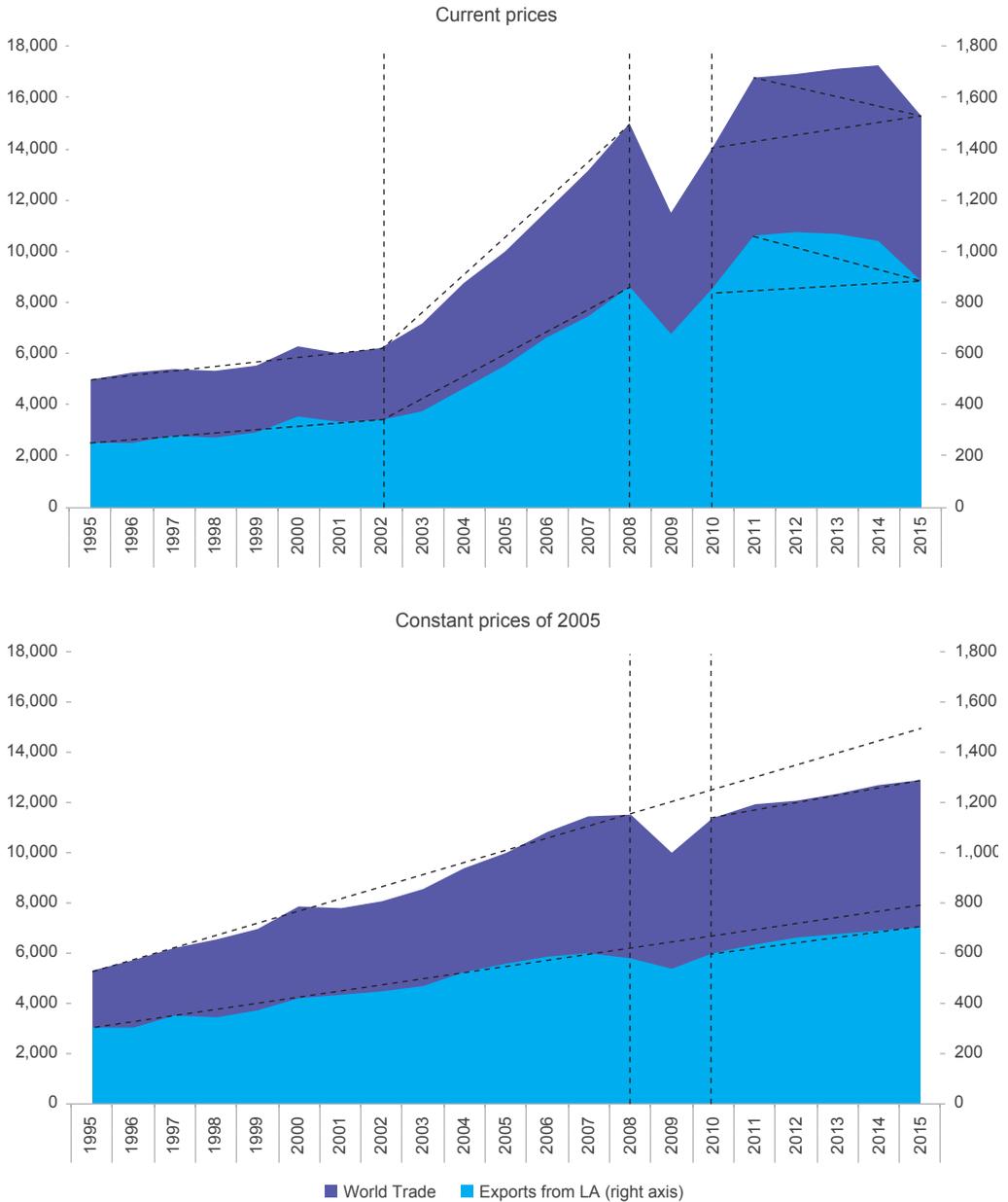
Source: IDB Integration and Trade Sector with data from INTrade/DataINTAL, Database for the Analysis of International Trade (BACI) of the Center for the Study of Prospective and International Information (CEPII), BLS, COMTRADE, CPB and the United Nations Conference on Trade and Development (UNCTAD).
Notes: World trade is defined as imports and includes the flows between Euro Zone countries. Methodological Annexes 2 and 5 detail the procedures used in the estimates at constant prices.

FIGURE 25 • GROWTH OF WORLD TRADE AND LATIN AMERICAN EXPORTS BY SECTOR
(Average annual growth rate, percentage, constant 2005 prices, 1995–2015)
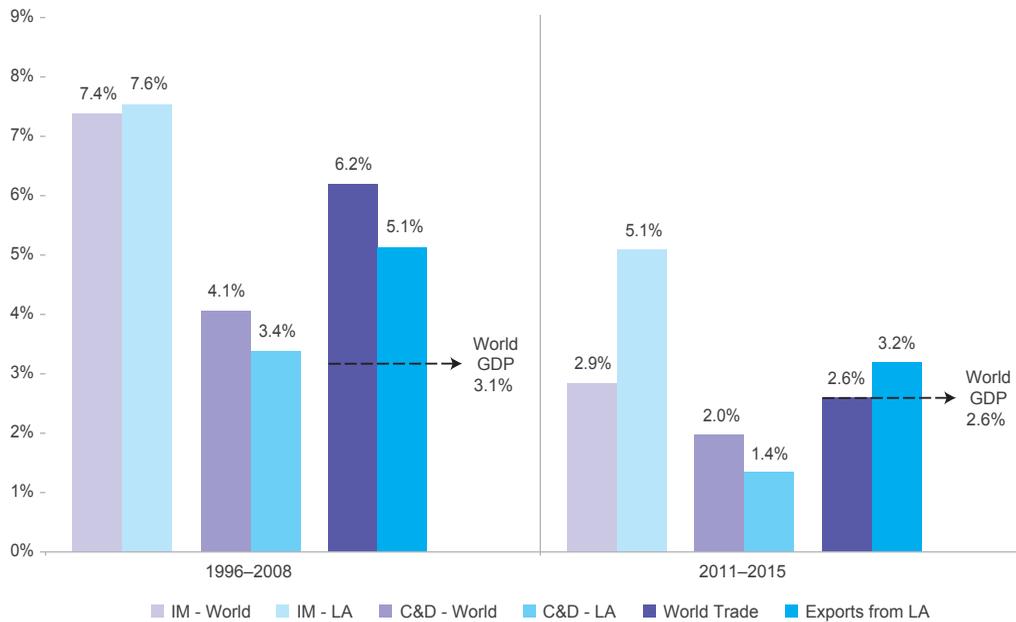
Source: IDB Integration and Trade Sector with data from INTrade/DataINTAL, BACI, BLS, COMTRADE, CPB, IMF and UNCTAD.
Notes: Flows are disaggregated into IM and C&D. C&D includes PM, PP and F&E. Methodological Annex 6 details the classification by category; footnote 34 lists the acronyms. The GDP growth rate corresponds to an aggregate average using market exchange rates.

instead of constant prices, while for Latin American exports the expansion at current prices was 17.8% higher than at constant prices due to the more marked impact of the increase in commodity prices. These differences make clear that the Latin American export boom was mostly due to an increase in prices, while the growth of real flows followed a more modest and linear path and at a rate slightly lower than that of world trade. However, in the most recent period, i.e. in the new normal of global trade, regional exports exhibited a real growth rate (3.2%) that, although below the pre-crisis level (5.1%), is greater than the world average (2.6%).

The Changes in the Composition of the Export Basket

The decomposition of trade flows into product categories[34] allows one to compare Latin America's trade performance to the dynamics of global trade. During the

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[34] The analysis is based on the following categories: a) *Disaggregated categories*: AP (Agricultural Primary Products), MP (Mineral Primary Products), AM (Agricultural Manufactures), MM (Mineral Manufactures), IM

boom period, the category that contributed the most to real growth of global trade was that of industrial manufactures (IM), which grew at an annual rate of 7.4% between 1995 and 2008. The category of commodities and derivatives (C&D), in turn, registered an annual growth of 4.1%, 3.3 p.p. lower than IM (Figure 25). The exports of Latin America exhibited a similar pattern in this period: the dynamism of IM (7.6%) exceeded that of C&D (3.4%) by an even greater measure (4.2 p.p.) than in the global case. Furthermore, in the phase of deceleration, not only did the growth of IM exports (5.1%) sustain the overall regional performance (3.2%), but it also slowed less than global IM trade (2.9%). The regional exports of C&D nonetheless grew below the C&D global average (1.4% vs. 2.0%).[35] The results of this analysis contrast markedly with the generally accepted notion that regional trade expansion had been sustained by commodity exports, stressing instead the role of manufactures exports during both phases of the cycle.

Regional exports were driven by industrial manufactures.

The lower dynamism of C&D markets may seem incompatible with the incorporation of China as a leading actor in world trade, as the country imports significant amounts of these products. The Chinese absorption of C&D, however, has mostly substituted the demand of other countries (Figure 26),[36] which fell due to multiple factors, e.g. greater production of C&D in developed countries (for example, oil in the U.S.), more efficient use of these products, as well as relocation of industries intensive in consumption of C&D to China. Therefore, although there has been indeed an increase in Chinese imports of C&D, which benefited some countries in the region, it has not compensated the relative decline in the purchases of other countries.

Greater Chinese demand for commodities was more than compensated by declines in other markets.

(Industrial Manufactures), and F&E (Fuels and Energy); b) *Aggregated categories*: PP (Primary Products = AP + MP), PM (Primary Manufactures = AM + MM), C&D (Commodities and Derivatives = PP + PM + F&E), Agricultural Complex (AP + AM), and Mineral Complex (MP + MM).

[35] This result is made even more relevant considering that C&D represented 64.1% of regional exports in 1995 and 48.0% in 2015; 78.3% and 77.0%, respectively, excluding Mexico. Note also that IM went from representing 58.4% of world trade in 1995 to 69.1% in 2015.

[36] The differences in growth rates between IM and C&D generated a gain of 10.8 p.p. for the former, and a loss of 10.7 p.p. for the latter (due to a fall of 4.8 p.p. of C&D without F&E, and another of 5.9 p.p of F&E). Concomitantly, China raised its participation in world imports from 2.7% in 1995 to 11.2% in 2015, equivalent to an 8.5 p.p. increase. Analyzed by product categories, this variation comprised increases of 5.4 p.p. in the imports of IM, and of 3.1 p.p. in the imports of C&D including F&E. The Chinese stimulus nonetheless, the C&D market contracted the already mentioned 10.7 p.p. due to a fall of 13.8 p.p. in other countries' imports.

FIGURE 26 • CHANGES IN THE GEOGRAPHIC AND SECTORAL STRUCTURE OF WORLD IMPORTS
(Percentage points, constant 2005 prices, 1995–2015)
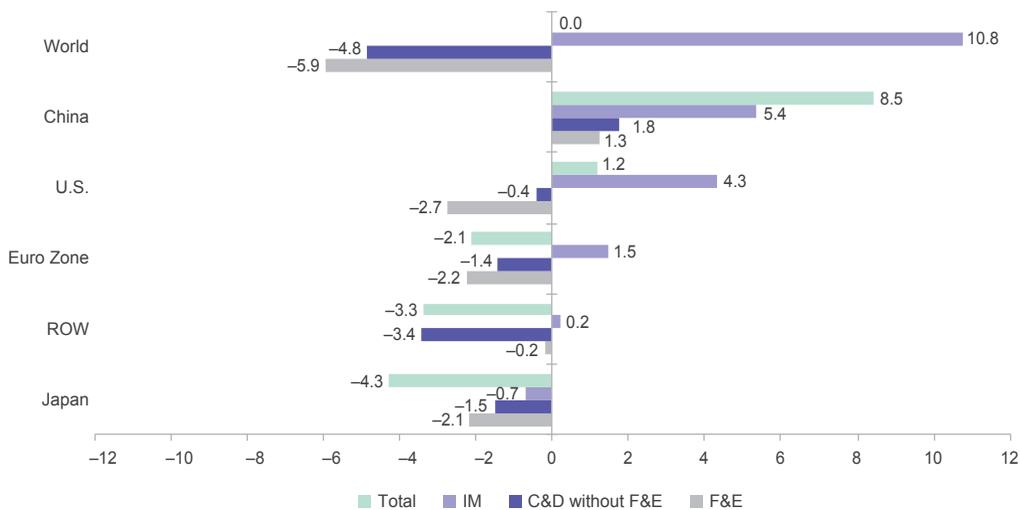
Source: IDB Integration and Trade Sector with data from BACI, COMTRADE, CPB, Eurostat and UNCTAD.
Notes: Bars correspond to the change in share of countries and sectors in trade at constant 2005 prices between the selected years, excluding the flows among Euro Zone countries. The rounding up of figures may affect the sum. Methodological Annex 6 details the classification by category; footnote 34 lists the acronyms.

The region suffered a concentration in low value added products.

It is moreover worth highlighting that, in the most recent period, the real import dynamism of China seems to be falling with respect to the boom period (Box 4).

The decomposition of exports by C&D sub-categories highlights relevant qualitative features of the region's external sector (Figure 27). Disaggregating agricultural and mining goods into primary products (AP and MP, respectively) and manufactures (AM and MM, respectively), and isolating fuels and energy (F&E), the determinants of the regional trade slowdown become clear. Between 2011 and 2015, the volumes exported of AP and MP, which correspond to the initial segments of their respective production chains, grew at relatively high rates (5.1% and 4.9%, respectively), even higher than in the pre-crisis (4.5% and 4.6%, respectively). Thus, exports of C&D decelerated due to reductions in the growth of agricultural and mineral manufactures (from 4.7% to 0.7% for AM and from 1.3% to 0.1% for MM), and to the drop in exports of F&E (from 3.0% to –1.3%). Therefore, in the post-crisis phase the trend towards specialization in the lower and less valuable segments of production chains has been intensified, a phenomenon frequently referred to by the neologism "reprimarization".

BOX 4: THE SLOWDOWN OF DEMAND FROM CHINA

One of the notable events of the last two decades was the emergence of China as a main player in world trade. Between 1995 and 2008 the volume of world trade exhibited a linear growth pattern with an annual rate of 6.2%. In contrast, between 1995 and 2011, the volume of Chinese imports followed an almost exponential trajectory, with an annual growth rate of 14.5%. This pattern was not initially affected by the crisis, which was associated with a severe discontinuity in the growth trajectory of the global aggregate.

After 2011, however, the real growth of Chinese imports waned: using that year's level as a reference, the average annual expansion fell to 3.5% in the four subsequent years. The slowdown also interrupted the trend of Chinese imports commanding an ever-increasing share of world trade. In effect, in 2013 the share reached a peak of 11.4%, falling to 11.2% in 2015. The new post-crisis scenario thus points to a moderation of the Chinese impulse on world trade.

IMPORTS FROM CHINA AND WORLD TRADE
(Indices, 2005 = 100 and percentages, constant 2005 prices, 1995–2015)

Legend: World Trade — China's imports — China's share (right axis)
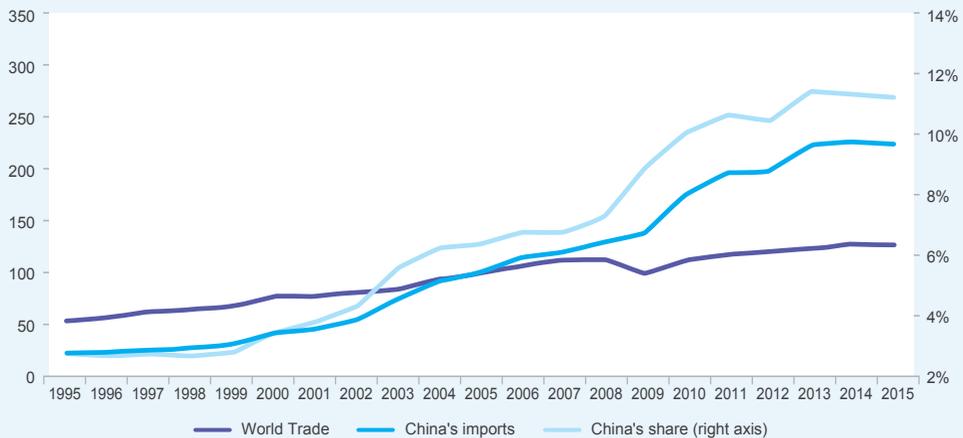
Source: IDB Integration and Trade Sector with data from BACI, COMTRADE, CPB, and UNCTAD.
Notes: Chinese imports and world trade are estimated at constant 2005 prices. World trade is defined as world imports and excludes the flows among Euro Zone countries. Participation corresponds to the share of world trade represented by the volume imported by China.

In summary, regional trade performance measured in real terms followed dual paths. The dynamism of exports of industrial manufactures, the engine of world trade in both the pre- and the post-crisis phases, has been higher than that of exports of commodities and their derivatives, which performed more poorly than the world average. However, industrial exports were concentrated in Mexico and Central America, while the countries of South America intensified their concentration in commodities and their derivatives. Furthermore, the region moved towards specialization in primary goods with low value added, to the detriment of more elaborated products that are positioned in higher segments of their respective value chains.

FIGURE 27 • LATIN AMERICAN EXPORTS OF COMMODITIES AND THEIR DERIVATIVES BY CATEGORY
(Average annual growth rate, percentage, constant 2005 prices, 1995–2015)
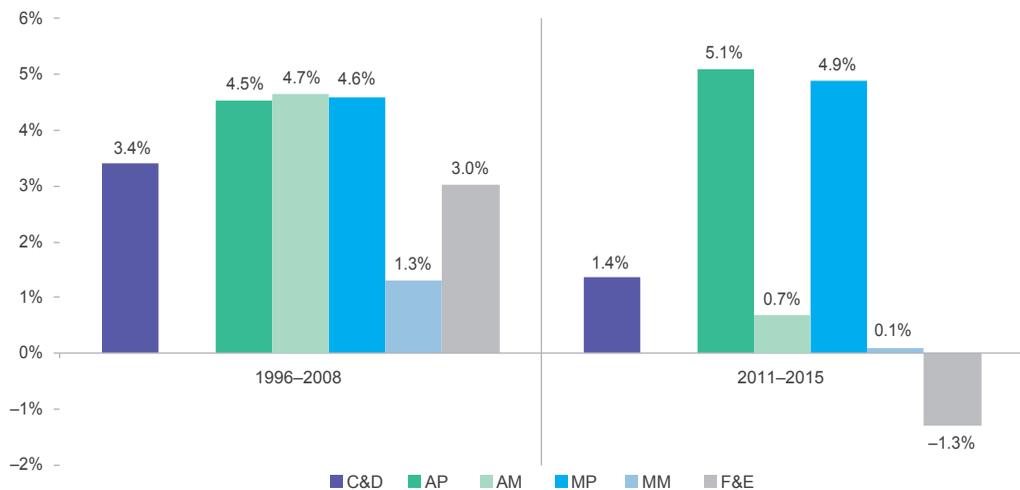
Source: IDB Integration and Trade Sector with data from INTrade/DataINTAL, BACI, BLS, COMTRADE, CPB, and UNCTAD.
Notes: C&D includes PM, PP and F&E. PM and PP are disaggregated into two primary categories each: AM and MM, and AP and MP, respectively. The rate of variation of MM in 2011–2015 excludes trade in gold. The reference years for the growth rates are 1995 and 2010. Methodological Annexes 2 and 5 detail the procedures used in the estimates at constant prices; Methodological Annex 6 details the classification by category; footnote 34 lists the acronyms.

The Region's Participation in Global Markets

From a global perspective, the participation of Latin America in world trade has been practically stagnant over the last two decades: in 2015 regional exports represented 5.4% of total world imports, a share slightly below the 5.7% of 1995 (Figure 28). The global market shares held by most groups of Latin American countries remained stable, with the exception

> The region's share in global trade stagnated.

of Mexico, whose participation in world trade increased markedly. Indeed, excluding Mexico, the participation of the rest of Latin America in world trade fell sharply from 4.0% in 1995 to 2.9% in 2015, equivalent to a 27% reduction. This fall is the result of reductions in the global market share of countries with exports intensive in agricultural products (from 0.6% to 0.3%) and especially of those whose exports are intensive in F&E (from 1.6% to 0.7%).[37] For their part, countries whose exports are intensive in mineral and metals maintained a stable global market share, while Brazil (from 1.0% to 1.2%) and Central America (from 0.2% to 0.3%) managed to marginally increase theirs.

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[37] The exports of F&E fell sharply prior to the boom in commodity prices.

FIGURE 28 • SHARE OF LATIN AMERICAN EXPORTS IN TOTAL WORLD IMPORTS BY COUNTRY GROUPING
(Percentage, constant 2005 prices, 1995–2015)
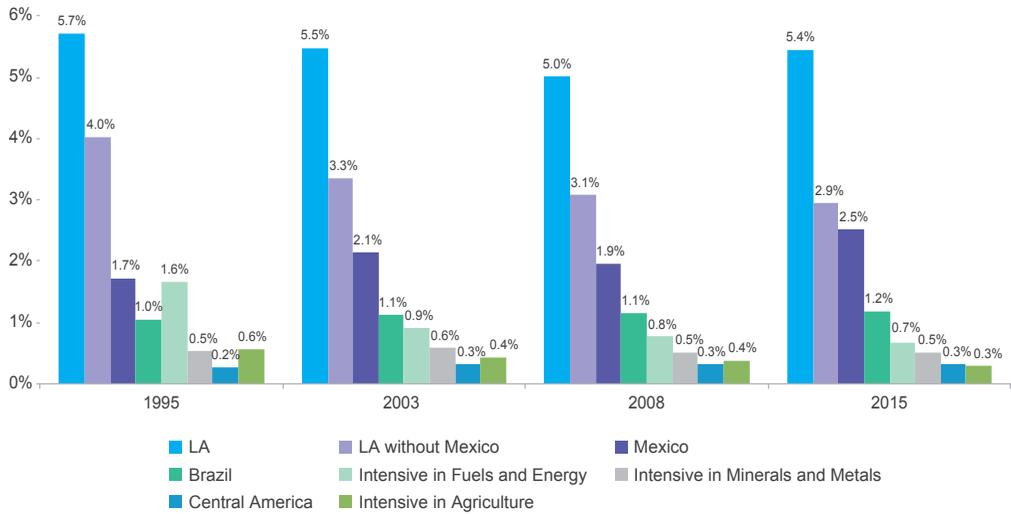
Source: IDB Integration and Trade Sector with data from INTrade/DataINTAL, BACI, BLS, COMTRADE, CPB, and UNCTAD.
Notes: Latin America includes the 18 countries listed in footnote 6.

> Regional manufactures exports were concentrated in Mexico and Central America.

The heterogeneous performance of country groupings is driven by their distinct specializations, and is reflected in the changing shares of global trade held by the region in each category (Figure 29).[38] Latin America increased its share of IM exports from 3.5% in 1995 to 4.1% in 2015. This gain, however, was concentrated in Mexico and, to a lesser extent, in Central America.[39] In contrast, the market share of C&D commanded by Latin America fell from 9.0% in 1995 to 8.5% in 2015.

> The share of commodities grew in Brazil and mineral-exporting countries.

This fall in Latin America's market share of C&D was the product of different changes in disaggregated categories. On one side, between 1995 and 2015 there was a noticeable decline in Latin America's share in global F&E markets, from

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[38] The classification of countries according to the sectoral intensity of their exports allows one to identify common features in regional performance. However, given that the composition of a country's export supply goes beyond those products in which the overall basket is intensive, it is worth complementing the analysis with an evaluation of the shares in global markets held by those products exported by the region.

[39] Exports from this sub-region include goods produced under STR.

FIGURE 29 • SHARE OF LATIN AMERICAN EXPORTS IN TOTAL WORLD IMPORTS BY CATEGORY
(Percentage, constant 2005 prices, 1995–2015)
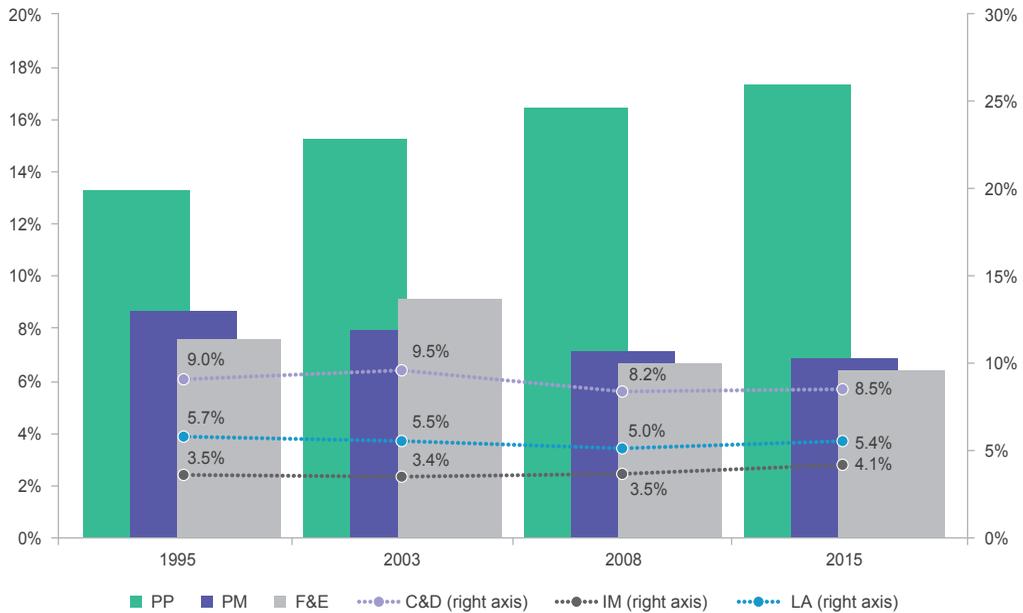
Source: IDB Integration and Trade Sector with data from INTrade/DataINTAL, BACI, BLS, COMTRADE, CPB, and UNCTAD.
Notes: C&D includes PM, PP and F&E. Methodological Annex 6 details the classification by category; footnote 34 lists the acronyms.

7.6% to 6.3%. In contrast, in the aggregate category of primary products that combines AP and MP, the region's share increased 4.1 p.p., reaching 17.3% of global flows. This increase was more intense between the late 1990s and 2003 (2.0 p.p.), with more modest subsequent gains, and was explained by the exports of Brazil and other mineral-intensive countries, and not by those of countries intensive in agricultural products, whose market share actually fell. Additionally, Latin America's share of primary manufactures (AM and MM) in world markets exhibited a marked reduction of 1.8 p.p. (from 8.6% to 6.8%). This decline reflected the previously mentioned trend towards concentration of exports in the lower-value segments of production chains.

In summary, in terms of global market shares, Latin American exports have not experienced the expansion that was observed from a purely regional point of view. The region's share of world trade has remained essentially stagnant, with important losses in fuels, localized gains in industrial manufactures and in some categories of the commodities and derivatives aggregate, particularly those with lower value added. To assess the future prospects of the region's export basket, it is worth examining the dynamism of global trade in those product categories in which the region's export supply has become progressively concentrated.

The Competitive Positioning of the Export Sector

The dynamics described above can be summarized in a framework that portrays the changes in the competitive positioning of Latin American countries in the world trading system in the past two decades (Figure 30). The competitive positioning is determined by the combination of changes in the *market share* commanded by the region in total trade by product category (horizontal axis) and changes in the *relative dynamism* of these categories in global trade (vertical axis). The diagram with four quadrants maps the possible combinations. If, at the end of the considered period, exports of a particular product category by a country or group of countries gained market share (rightward movement) while demand for this product category has increased in the global market (upward movement), the country has improved its competitive positioning. Moreover, the size of the circles illustrates the share of the different categories in the export basket of the country or country grouping in 2015, and the figures next to the circles correspond to the share of the product category in the global marketplace in the same year.[40] The analysis reveals clearly divergent trends between product categories and countries over the last two decades.

Industrial manufactures (IM), which represent the greatest proportion of Latin American exports, is the only category that has contributed positively to the region's competitive positioning. The category gained 10 p.p. in world imports, as Latin America increased its market share by 0.6 p.p., reaching 4.1% of the world total IM flows in 2015. This gain is mostly due to Mexico, which is strongly specialized in IM exports and accounted for three quarters of the market share held by the region (Box 5). For its part, Central America, where IM represents 57.5% of total exports, also increased its global market share, although marginally due to the smaller size of its economies. In all other countries and country groupings, global market shares in this category were stagnant or decreased.

The mining complex exhibited low dynamism at the global level: in the case of mineral primary products (MP), participation in global flows increased marginally (0.2 p.p.),

> Mexico and Central America improved their position in manufactures markets.

> Market share was lost in mining products, which had little global dynamism but are very important for the region.

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40 All values correspond to trade flows measured at constant 2005 prices and, as such, reflect the competitive positioning independent of price fluctuations that may have altered the relative value of the product categories that compose the regional export baskets and global imports.

FIGURE 30 • CHANGE IN THE SHARES OF LATIN AMERICAN EXPORTS IN WORLD IMPORTS BY CATEGORY

(Percentage points, constant 2005 prices, 1995–2015)
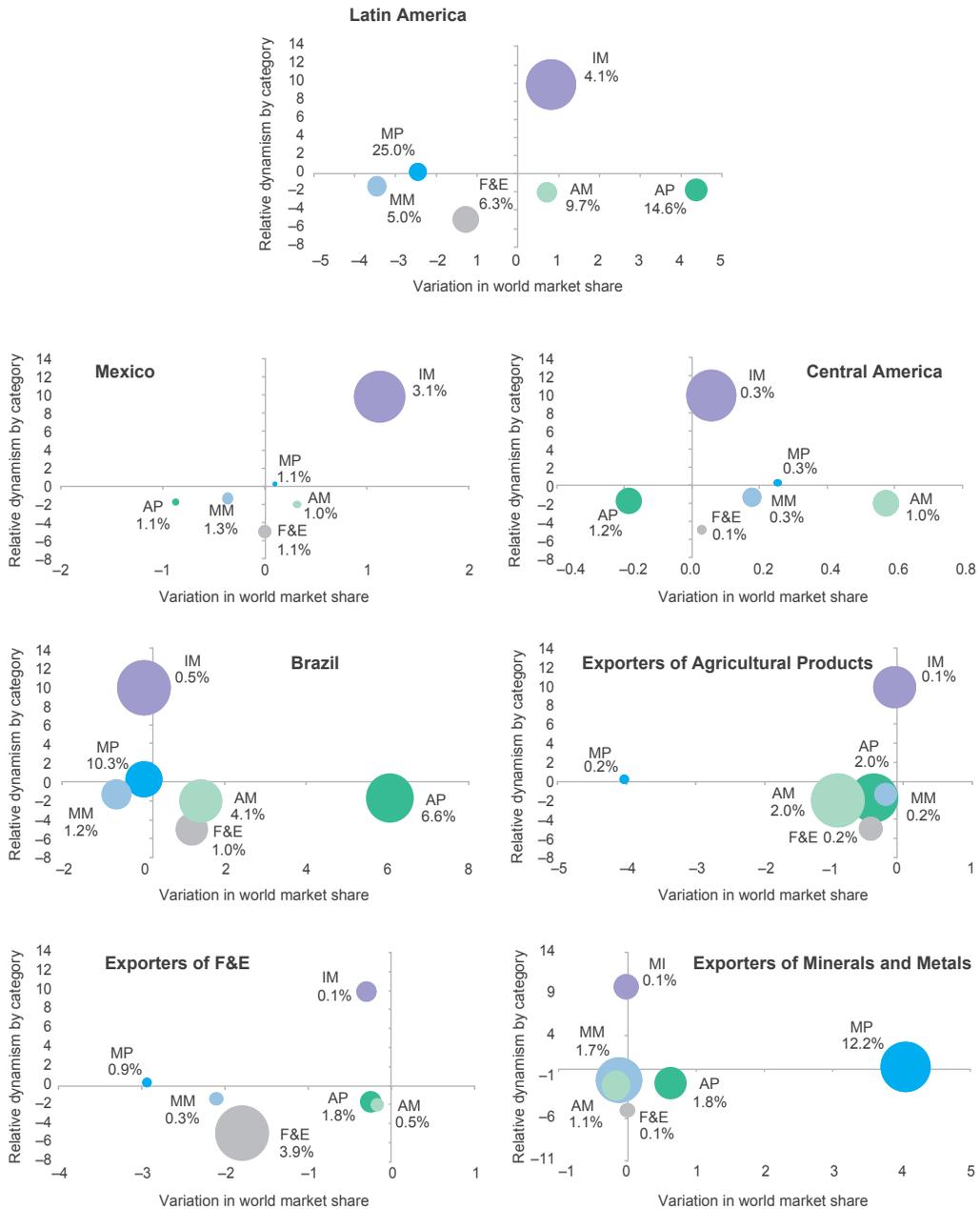
Source: IDB Integration and Trade Sector with data from INTrade/DataINTAL, BACI, BLS, COMTRADE, CPB, and UNCTAD.
Notes: Latin America includes the 18 countries listed in footnote 6. The vertical axis measures the change in the share of the respective category in world imports between 1995 and 2015 (dynamism by category); the horizontal axis measures the change in the share held by the country or country grouping in world imports of a particular category (world market share). The figures next to the circles correspond to the share of the product category in the global marketplace in 2015; the size of the circles orders the categories according to their share in the country's or country grouping's export basket, from most to least important. The rounding up of figures may affect the sums.

BOX 5: MEXICO'S EXPORT TAKEOFF

Between 1995 and 2015, a period that coincides with the implementation of the North American Free Trade Agreement (NAFTA), the share of Mexican exports in global trade measured in constant prices grew from 1.7% to 2.5%. This remarkable performance was a direct result of increased IM exports, which expanded at an average annual rate of 7.8% during the entire period, compared to the 5.4% rate of global IM exports. As a result, the fraction of IM trade controlled by Mexico expanded from 2.0% to 3.1%.

Between 1995 and 2008, the volume of IM exports exhibited real growth rates of 8.7%, also greater than the world average (6.2%). Furthermore, between 2010 and 2015, the volume of these sales increased at a rate of 7.2%, indicating that Mexico's exports did not experience the strong slowdown that afflicted global IM exports, which grew only 2.6% per year. In this period, the real growth in Mexican IM export volumes can be decomposed in the following sub-sectors: 43.1% electric and electronic machinery, 26.0% automotive, 21.6% mechanical machinery, and 9.4% other IM.

In the post-crisis, the automotive sub-sector gained prominence, explaining 31% of the increase between 2010 and 2015, compared with 19.1% in the period before the crisis. Average growth of export volumes of cars and car parts was 9.2%, while that of electric and electronic machinery, the category that contributed the most to the growth of manufactures, was smaller at 6.9%. It is particularly noteworthy that Mexico managed to maintain its position as a supplier of IM even as China emerged as a significant producer of these goods.

MEXICO: EXPORTS BY SUB-SECTORS
(Billions of US$, constant 2005 prices, 1995–2015)
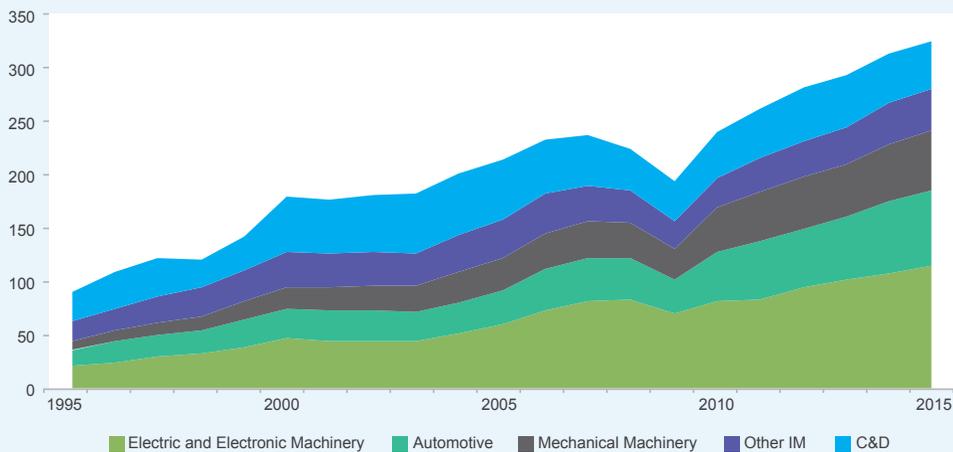
Source: IDB Integration and Trade Sector with data from INTrade/DataINTAL and BLS.

while mineral manufactures (MM), with greater value added, lost share (–1.4 p.p.). Although in 2015 Latin America held relevant market shares in these categories (25.0% in MP and 5.0% in MM), the region lost share in both categories, especially

in MM, a sector that represented 8.4% of the global market in 1995. Performance nonetheless varied across country grouping: those intensive in minerals and metals (Chile and Peru) increased their share by 4.1 p.p. in MP, but lost share in MM, while Brazil, which alone covered 10.3% of global MP and 1.2% of MM trade, lost market share in both categories, especially in the segment of greater value added.

Performance of agricultural products did not meet expectations.

The analysis of competitive positioning in the agricultural complex reveals the most surprising features considering the region's factor endowments and comparative advantages. Latin America commands a significant share of the global market (14.6% in agricultural primary products – AP – and 9.7% in agricultural manufactures – AM), but a valuation at constant prices reveals that these are categories that experienced falling demand over the last two decades (–2.0 p.p. for AM and –1.7 p.p. for AP). Furthermore, the trend towards "reprimarization" has been more intensive than in the mining complex, as denoted by the greater increase in Latin America's share of lower value added AP (4.3 p.p.) in the global marketplace, as compared to that of the more elaborated AM (0.8 p.p.). Finally, unequal behavior is observed among the main regional producers: Brazil increased its market shares markedly (1.1 p.p. and 5.2 p.p. for AM and AP, respectively), while the group of countries whose exports are intensive in these categories (Argentina, Paraguay, and Uruguay) lost market share (–0.8 p.p. and –0.3 p.p. for AM and AP, respectively).

Finally, the category of fuels and energy suffered a dramatic reduction in the share it represents in global imports, with a loss of 5 p.p. in the period under analysis. The phenomenon reflects the impact of energy-saving technological advances and the U.S. progress toward oil self-sufficiency, not compensated by growing demand from emerging countries. In the context of a shrinking market, the region lost 1.3 p.p.

The share in fuel and energy markets declined.

in its share of global trade. This resulted from a drop in the share held by countries whose exports are intensive in these categories (–1.8 p.p.), and an increase in Brazil's share (0.9 p.p.), which only partially compensated the drop in the regional aggregate.

Regional countries' pattern of international insertion suffered substantial changes.

Unquestionably the greatest source of dynamism in world trade in the past two decades has been industrial manufactures. While the region has increased its market share in the category, gains have been almost entirely due

to the performance of Mexico and, to a lesser degree, Central America. In fact, with few exceptions, Latin American countries reinforced their specialization in commodities and their derivatives, and within this category, in goods of lesser value added (Figure 31).

This mismatch between the evolution of global demand and regional export supply not only contributes to explain the weak trade performance of most countries, but raises the urgency of deepening the diversification agenda, especially in those economies with large proportions of primary products in their export baskets.

FIGURE 31 • CHANGE IN SHARES OF SELECTED CATEGORIES IN REGIONAL EXPORT SUPPLY
(Percentage points, constant 2005 prices, 1995–2015)
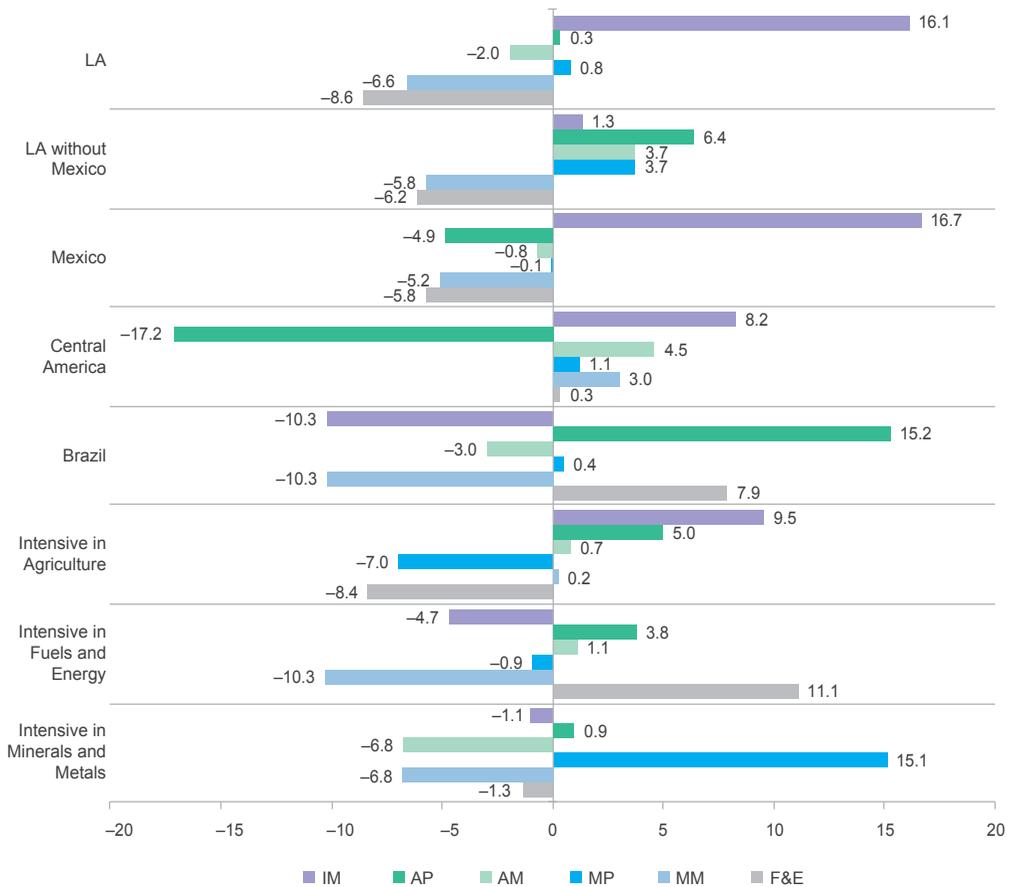
Source: IDB Integration and Trade Sector with data from INTrade/DataINTAL, BACI, and BLS.
Notes: Latin America includes the 18 countries listed in footnote 6. Bars correspond to the change in shares of categories in trade at constant 2005 prices between the years of 1995 and 2015. The rounding up of figures may affect the sums. Methodological Annex 6 details the classification by category; footnote 34 lists the acronyms.

Conclusions

In the middle of 2014 world trade entered into a second phase of contraction after the collapse generated by the financial crisis of 2008–2009. In the slowdown in Latin American and Caribbean exports, which was characterized by greater adjustments than the world average, two concurrent factors weighed heavily: a historic shock to the terms of trade and the most severe regional recession in recent decades. As a consequence, most countries experienced a worsening of their current account imbalances at a time when international financing conditions are expected to harden. Looking forward, the realignment of exchange rate parities paints an adverse scenario for intra-regional trade growth, reinforcing the long-standing trend towards specialization in commodities, especially in South America. In this context, it becomes ever more urgent to implement policies to promote the diversification of exports and to counteract the downshifting of world trade.

The intensity and the duration of the trade contraction indicate that the global trading system has entered a new normal. The slowdown in trade globalization derives from both real and nominal phenomena that have profound implications for the global insertion of Latin America and the Caribbean. On the real level, the weak demand of developed countries is no longer compensated by the dynamism of emerging economies—whether China or regional countries themselves—that are undergoing, for different reasons, intense adjustments that will take time to complete. On the nominal level, the regional terms of trade shock, driven by a sharp correction in commodity prices, reflects not only the confluence of the above-mentioned real factors, but also qualitative transformations in global production processes. Furthermore, in the medium term, the pressure on prices could be amplified by the expected appreciation of the dollar due to the progressive hardening of monetary policy in the United States. As with the downshift in world trade, these real and nominal trends outline an external scenario that may entail a change of gear in the policies that support the international insertion of Latin America and the Caribbean.

In the short term, the region faces a new configuration of real exchange rates that do not favor the growth of exports through the intra-regional channel. On the one hand, in South America, the diversification of exports may be adversely affected,

as intra-regional trade is the one displaying the greatest share of manufactures. Similarly, it is likely that an increase in uncertainty generated by exchange rate volatility will exercise a depressive effect on foreign sales. On the other hand, in Mexico and Central America, which have competitively positioned their exports of manufactures, the challenge will be to preserve competitiveness beyond the new exchange rate scenario that may favor them. Far from constituting a call for intervention in currency markets to boost export competitiveness, the point is rather to highlight the impact that changes in the level and volatility of exchange rates can have on regional trade performance. Additionally, it underscores the importance of avoiding protectionist temptations oriented to inefficiently safeguarding the competitiveness of exporters.

In a longer-term perspective, there is heightened urgency for the adoption of policies that promote trade diversification. The end of the commodity price supercycle exposes the duality of the region in terms of trade specialization, and the vulnerability that arises from concentration in the export of commodities and their derivatives, further accentuated by the movement of certain countries towards lower value-added segments of the production chain. It is thus necessary to accelerate the agenda of international trade negotiations in countries that still do not have access to a sufficiently deep and articulated network of preferential agreements. Also, in those countries that need to preserve and broaden their margins of preference, it is urgent to adopt complementary policies to boost preference utilization and trade facilitation. In all cases, it will be crucial to consider that, for the region, the external context over the next few years will be more challenging than the one that prevailed over the past two decades, not only due to the economic factors analyzed in this report, but also due to the political environment that is increasingly skeptical of market integration, especially in developed countries.

These are only some of the elements that an ambitious policy agenda should prioritize to confront the adverse elements in the external environment facing Latin America and the Caribbean. But it is evident that, in adapting to the slowdown of globalization, the region will require a high dose of political will, as well as effective and efficient instruments to support the private sector in a rapid and incisive process of internationalization.

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Methodological Annex 1
Estimation of World Trade

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

Euro Zone intra-regional trade

Conventionally the intra-regional trade flows of the Euro Zone are considered part of world trade. However, due to the degree of integration in that space and its peculiar macroeconomic behavior in recent years, it is advisable to exclude these flows from the global aggregate. For this purpose, the series by destination (intra- and extra-regional) at current prices in Euros were used, along with the corresponding volume and dollar exchange rate indices provided by Eurostat. With this information, the series for both destinations were obtained in current and constant dollars (2005 = 100). The totals obtained correspond to the series provided by the CPB for the Euro Zone, from which the intra-regional trade component has been excluded. The component was also excluded from the total for developed countries in the global aggregate.

Trade estimates for Latin America and the Caribbean

For regional exports, the CPB provides estimates at current and constant prices for a sample that does not include El Salvador, Honduras, Guatemala, Nicaragua, Panama, and Venezuela. Having determined that the composition of this sample has a significant impact on the estimates, they were replaced with series obtained following the methods explained in the Methodological Annex 2. These annual series were converted to monthly figures that follow the behavior of the CPB series.

Methodological Annex 2
Indices of Price, Volume and
Terms of Trade

This annex summarizes the methodology employed 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. Chapter 4 employs a series of export volumes disaggregated by categories for a group of countries for the years between 1995 and 2015, estimated with the same methodology for which additional detail is given in Methodological Annex 5.

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:

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

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.[41] The second used deflators elaborated by the Bureau of Labor Statistics (BLS) and

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[41] Microdata were filtered according to the dimension of the variable. For economies whose average annual trade flows exceed US$20 billion, all items with a value below US$1 million were eliminated; for economies whose average annual trade flows were less than that figure all items with values below US$ 0.5 million were eliminated. Additionally, all items without a declared weight were excluded.

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 1992 revision of the Harmonized System (HS). Estimates according to aggregate categories were also generated according to the classification described in Methodological Annex 6.

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

For exports and imports of Argentina, Bolivia, Brazil, Chile, Colombia, Ecuador, Paraguay, Peru, Uruguay, and Venezuela, and for imports of Costa Rica, El Salvador, Guatemala, Honduras, Nicaragua, Panama, and the Dominican Republic, 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 2016.

Methodology 2: Exports of Mexico and Central American countries

This group includes Costa Rica, El Salvador, Guatemala, Honduras, Mexico, Nicaragua, Panama, and the Dominican Republic. 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. For the countries of Central America, the price indices of total U.S. imports were used. For Mexico, the 2004–2015 series was used, estimated specifically for the imports of that country and, in the preceding years, for total imports. 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.

To obtain series for the period 1995–2015 with broad representation of manufacturing exports under special trade regimes (STR) it was necessary to combine information from different databases: DataINTAL, the Database for the Analysis of International Trade (BACI) from the Center for Study of Prospects and International Information (CEPII) and national sources.

Costa Rica: BACI (1995–1997) and DataINTAL (1998–2015).

El Salvador: DataINTAL (1995–2015). Between 1994 and 2004 the primary data assigns all exports from STR in chapter 98. This information was reclassified in three chapters (61, 62, and 85) that showed strong growth in 2005 using their average share between 2005 and 2015.

Guatemala: BACI (1995–2001) and DataINTAL (2002–2015).

Honduras: BACI (1995–2014) and national sources (2015).

Mexico: DataINTAL (1995–2015).

Nicaragua: BACI (1995–2002) and DataINTAL (2003–2015).

Panama: DataINTAL (1995–2015).

Dominican Republic: BACI (1995–2014) and national sources (2015).

Additional Notes

At the time of publication complete data was not available for any country of the Caribbean.

Indicators for the group of countries presented in Figures 10 (Chapter 1) and 14 (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 later updated and published by them. Therefore, these estimates should be considered preliminary.

Methodological Annex 3
Statistics for Goods and Services Exports

The 2003–2008 growth rates in Tables 1 and 2 of Chapter 2 correspond to the geometric growth over the interval, using 2002 as the reference year. The figures for 2014, 2015, and 2016 are preliminary and subject to changes by the national sources.

Table 1

Goods exports are expressed in Free on Board (FOB) values. For Venezuela the total was estimated based on official sources. The data for El Salvador, Guatemala, and the Dominican Republic include STR. The data for Costa Rica, Honduras, and Nicaragua exclude STR and are taken from sources other than INTrade/DataINTAL. The data for Panama refer only to national exports and imports. The growth of goods exports through July 2016 is an estimation of the year-on-year change based on monthly data through that month.

Table 2

The definition of services exports for 2003–2008 corresponds to the fifth version of the Manual of Balance of Payments, and those for 2014–2015 to the sixth. In all years the series exclude construction and government services, and in the period 2012–2015 those of manufacturing, maintenance and repair of goods. The services data for Suriname in the period 2002–2004 and for Barbados and Bolivia in 2015 are estimates based on figures from the World Trade Organization (WTO). The value of services exports for LAC is an estimate that excludes some countries for which no data were available at the time of publication.

Methodological Annex 4
Estimation of Export Elasticity to the Real Exchange Rate

This annex summarizes the methodology used to estimate the elasticity of Latin American exports with respect to changes in the real bilateral exchange rate presented in Chapter 3. For this estimation a panel dataset was constructed covering the period 2003–2015 and includes all annual data on bilateral real exchange rates and real bilateral exports, both total and by category, in dollars, for 15 Latin American exporters and 49 importers.[42] The latter, common for all reporting countries, represent at least 80% of trade of each of the 15 exporters. Nominal exports in dollars were deflated using the U.S. consumer price index (CPI).[43]

Sources

1. Total bilateral exports: INTrade/DataINTAL
2. Bilateral manufactures exports by broad category: IDB calculations, following the methodology explained in the Methodological Annex 6.
3. Real bilateral exchange rates: IDB calculations, using nominal exchange rates and CPI reported by the IMF and national sources.
4. U.S. CPI: IMF

Procedure

The following specification was estimated:

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[42] The exporters are: Argentina, Bolivia, Brazil, Chile, Colombia, Costa Rica, Ecuador, El Salvador, Guatemala, Honduras, Mexico, Paraguay, Peru, the Dominican Republic, and Uruguay. The importers are: Algeria, Angola, Argentina, Barbados, Belgium, Bolivia, Brazil, Canada, Chile, Hong Kong, China, Colombia, Costa Rica, the Dominican Republic, Ecuador, El Salvador, France, Germany, Guatemala, Haiti, Honduras, Iceland, India, Ireland, Israel, Italy, Japan, Republic of Korea, Malaysia, Mexico, the Netherlands, Nicaragua, Nigeria, Norway, Panama, Peru, Russia, South Africa, Spain, Sweden, Switzerland, Trinidad and Tobago, Turkey, United Arab Emirates, United Kingdom, U.S., Uruguay, Venezuela and Vietnam.

[43] The CPI is usually used to deflate exports. Other studies that have used this methodology are Freund and Pierola (2012) and Eichengreen and Gupta (2013).

$$X_{ijt} = exp\ (\alpha + \beta_1 lnTCR_{ij,t-1} + \delta_t + \delta_{it} + \delta_{jt} + \delta_{ij}) + \varepsilon_{ijt} \tag{1}$$

Where X_{ijt} are real exports in dollars of country i to country j in year t and $lnTCR_{ij,t-1}$ is the natural logarithm of the real exchange rate between country i and country j in the year $t-1$. The model includes fixed effects by year (δ_t), exporter-year (δ_{it}), importer-year (δ_{jt}) and country pair (δ_{ij}). ε_{ijt} is the standard error term clustered by country pair. β_1 is the elasticity of real exports to the real exchange rate. It indicates that an increase of 1.0% in the real exchange rate generates an increase of β_1% in real exports. The equation was estimated for different dependent variables, according to the case under analysis: total real exports, real exports of industrial manufactures (IM), real exports of agricultural manufactures (AM), real exports of mineral manufactures (MM), or real manufacturing exports, with this last being the sum of the three previous disaggregated categories.

Equation (1) was estimated using the Poisson pseudo maximum likelihood (PPML) method. The traditional focus for estimation of equation (1) has been to use ordinary least squares with the dependent variable in logarithms. However, logarithmic linearization in models that have (or are suspected of having) heteroskedasticity may result in biased estimations of the elasticities given by the estimated coefficients. To correct this bias, Santos Silva and Tenreyro (2006) proposed estimating the model in multiplicative form, as expressed in equation (1), with the dependent variable in levels, using the PPML method. This estimation gives consistent estimates, even in the presence of heteroskedasticity, and additionally, constitutes a natural form for treating the presence of zeros in the dependent variable.[44]

Effects by destination

In order to estimate the destination effect on the elasticity of real exports to the real exchange rate, an interaction term was added to equation (1):

$$X_{ijt} = exp\ (\alpha + \beta_1 lnTCR_{ij,t-1} + \beta_2(lnTCR_{ij,t-1} * regional_j)$$
$$+ \delta_t + \delta_{it} + \delta_{jt} + \delta_{ij}) + \varepsilon_{ijt} \tag{2}$$

The difference in this equation from the previous one is in the third term ($lnTCR_{ij,t-1} * regional_j$), where $lnTCR_{ij,t-1}$ continues to represent the natural logarithm of the real exchange rate between country i and country j in year $t-1$, and $regional_j$ is a binary

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[44] The majority of studies that face the problem of zeros in the dependent variable follow one of the following two approaches: drop the observations with the zeros, or add 1 to the dependent variable. However, these techniques generally result in inconsistent estimators.

variable that is equal to 1 when the importer is in Latin America and 0 otherwise. In this specification, β_1 is the elasticity when the partner is extra-regional, and $\beta_1 + \beta_2$ is the elasticity when the partner is intra-regional, that is, Latin American.

Effect by periods

For the estimation by periods, equation (2) was re-estimated for two different periods: 2003–2008 and 2009–2015. The coefficients are interpreted in the same manner as those in equation (2).

Effect by exporting country

To obtain elasticities differentiated by exporting country, the following equation was estimated:

$$X_{ijkt} = \exp\left(\alpha + \beta_1 \ln TCR_{ij,t-1} + \beta_i (\ln TCR_{ij,t-1} * country_i) + \delta_t + \delta_{it} + \delta_{jt}\right) + \varepsilon_{ijkt} \tag{3}$$

Where X_{ijkt} corresponds to the real exports of category[45] k from country i to country j in year t, $\ln TCR_{ij,t-1}$ is the natural logarithm of the real exchange rate between country i and country j in year $t-1$, $country_i$ is a binary variable that is equal to 1 when the country is i, and 0 otherwise. Due to problems of collinearity, it is necessary to exclude one interaction term, which in this case was the Dominican Republic. The model includes fixed effects by year (δ_t), exporter-year (δ_{it}), and importer-year (δ_{jt}).ε_{ijkt} is the robust standard error term. The elasticity of exports to the real exchange rate of country i is equal to $\beta_1 + \beta_i$. This equation was also estimated using PPML and was calculated two times: for total exports (including all categories) and for exports of manufactures.

Estimation of the effect of exchange rate volatility

To estimate the effect of exchange rate volatility on real exports an additional term was included in equation (1):

$$X_{ijt} = \exp\left(\alpha + \beta_1 \ln TCR_{ij,t-1} + \beta_2 VOL_{ijt} + \delta_t + \delta_{it} + \delta_{jt} + \delta_{ij}\right) + \varepsilon_{ijt} \tag{4}$$

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[45] The categories are: Agricultural Primary (AP), Mineral Primary (MP), Agricultural Manufactures (AM), Mineral Manufactures (MM), Industrial Manufactures (IM) and Fuels and Energy (F&E).

The new term in the equation, VOL_{ijt}, measures the volatility of the exchange rate (nominal or real) between country i and country j in year t. As the volatility variable is in levels, it is interpreted as a semi-elasticity.[46]

Equation (4) is estimated for different measures of volatility, which are introduced separately in the model.

1.   Volatility of the level of the nominal exchange rate $= \sigma_{tcn} (TCN_{ijm} - TCN_{ij,m-1})$

Where σ_{tcn} is the annual standard deviation, TCN_{ijm} is the nominal exchange rate between country i and country j in month m, and $TCN_{ij,m-1}$ is the nominal exchange rate between country i and country j in month $m-1$.

2.   Volatility of the real exchange rate $= \sigma_{tcr} (lnTCR_{ijm} - lnTCR_{ij,m-1})$

Where σ_{tcr} is the annual standard deviation, $lnTCR_{ijm}$ is the logarithm of the real exchange rate between country i and country j in month m and $lnTCR_{ij,m-1}$ is the logarithm of the real exchange rate between country i and country j in month $m-1$.

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[46]   A one-unit change in volatility translates into an increase of $100*(e^{\beta_2} - 1)$ percent.

Methodological Annex 5
Estimation of Trade Flows at Constant Prices

This annex summarizes the methodology used to estimate world trade and imports of a selected group of countries at constant prices for 1995–2015, disaggregated according to the classification by categories explained in the Methodological Annex 6. These volume indicators are employed in Chapter 4, together with the corresponding measures for LAC exports, whose estimation is described in the Methodological Annex 2.

The primary sources for the data used are: (a) BACI, developed by CEPII based on the International Trade Data Base of the United Nations (COMTRADE), (b) COMTRADE, and (c) CPB. All data were homogenized in the 1992 HS classification.

Volume of world trade

The estimation of the volume of world trade employs primary data provided in the BACI for the period 1995–2014 and in COMTRADE for 2014–2015.

The 1995–2014 series

Different methodologies were employed for commodities and their derivatives and for manufactures, segments considered in the classification by categories. In the first case, these products were identified in the BACI database, along with their value and volume figures in global imports, at the subheading level (6 digits of the HS). Based on this data, Laspeyres price indices were estimated (2005 = 100), with which the corresponding annual series in current dollars were deflated, except for flows of gold, bananas, and silver, for which international prices were used. Likewise, data on physical volumes for iron ore trade were taken from the UNCTAD database for this product. The disaggregated indices were grouped in the corresponding categories for that segment: agricultural primary (AP), mineral primary (MP), agricultural manufactures (AM), mineral manufactures (MM), and fuels and energy (F&E).

Industrial manufactures (IM) were deflated at the HS chapter level (2 digits) with price indices of U.S. imports published by the BLS. This procedure was applied in 20

chapters: 28, 29, 30, 39, 40, 42, 48, 61, 62, 63, 64, 69, 70, 84, 85, 87, 90, 94, 95, 96. Jointly, these represent close to 85% of world IM imports in the 1995–2015 period.

2014–2015 data

For 2015 the volume estimates for world trade disaggregated by categories were carried out with the same methodology described for 1995–2014, but applied to COMTRADE data for 2014–2015, as these data were not available in the BACI.

Total world trade

To maintain coherence between the data presented in Chapters 1, 2, and 4, total world trade at constant prices corresponds to the CPB series, adjusted as indicated in the Methodological Annex 1. This total was disaggregated according to the relative shares of the categories obtained through the procedure explained for estimation of the volume of total world trade.

Imports of China, the United States, the Euro Zone, and Japan

The volume of imports in China, the U.S., Japan, and the Euro Zone was calculated using values at current prices included in BACI (1995–2014) and COMTRADE (2014–2015), following the same guidelines already described for total global trade. In the case of the U.S. a disaggregation into 35 HS chapters was used: 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.

Methodological Annex 6
Classification of Trade Flows
by Category

The classification of products is based on the categories defined by the Institute of Statistics and Census (INDEC) of Argentina, but extends them to more accurately describe the degree of elaboration of products, particularly of commodities and their derivatives. To the categories in the INDEC classification—primary products (PP), agricultural manufactures (AM), industrial manufactures (IM), and fuels and energy (F&E)—the category of mineral manufactures (MM) was added, incorporating products that, in the INDEC version were included in the IM category, but that correspond to derivatives of minerals in the initial stages of industrialization, and whose prices are still highly influenced by the prices of the respective primary products. Furthermore, the category of PP was disaggregated according to origin: agricultural primary (AP), and mineral primary (MP). To illustrate the use of this classification, below are examples of some paradigmatic cases for the region, using the HS92 subheadings.

Subheading	Category	Subheading	Category	Subheading	Category
Soybeans and Derivatives		**Coffee**		**Wood, Cardboard, Paper, and Furniture**	
120100	AP	090111	AP	380400	AM
120810	AM	090112	AM	380700	AM
150710	AM	090121	AM	440110	AP
150790	AM	090122	AM	440121	AP
210310	AM	090130	AP	440310	AP
230400	AM	090140	AM	440320	AP
Fish, Crustaceans, and Mollusks		**Viticulture**		440910	AM
030613	AP	200920	AM	441090	AM
030623	AP	200960	AM	440920	AM
160520	AM	080540	AP	441010	AM
Hydrocarbons and Electricity		080610	AP	441090	AM
270900	F&E	080620	AP	**Iron**	
271000	F&E	**Copper**		250200	MP
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	**Chocolate**		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	030541	AM	730410	MM
271490	F&E	030219	AP		
271500	F&E	030310	AP		
271600	F&E	030322	AP		
		030329	AP		