



URUGUAY

Trade competitiveness diagnostic



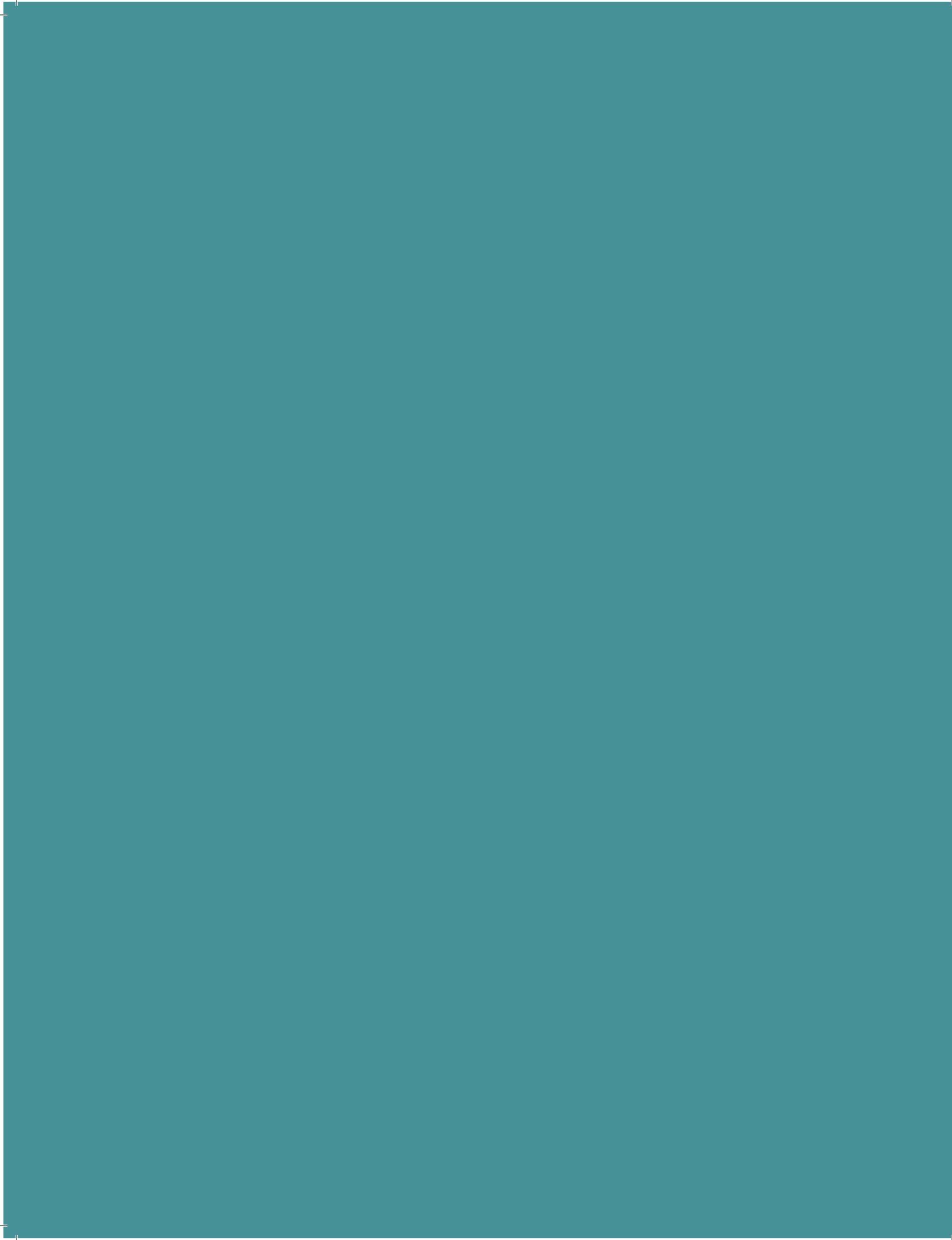
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Trade competitiveness diagnostic

Trade Group, Trade and Competitiveness Global Practice, The World Bank

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Acronyms

ANII	National Agency for Research and Innovation	LAC	Latin America and Caribbean
BPO	Business Process Outsourcing	LAIA	Latin American Integration Association
CAGR	Compound Annual Growth Rate	MEF	Ministry of Economy and Finance
CCM	Mercosur's Trade Commission	MERCOSUR	Southern Common Market
CET	Common External Tariff	MFN	Most Favored Nation
CMC	Council of the Common Market	NAFTA	North American Free Trade Agreement
CU	Customs Union	OLS	Ordinary Least Squares
CUTI	Uruguayan Chamber of Information Technologies	PPP	Purchasing Power Parity
EBM	Export Business Model	PPPs	Public-Private Partnerships
EU	European Union	PTA	Preferential Trade Agreement
FDA	Food and Drug Administration	R&D	Research and Development
FDI	Foreign direct investment	RCA	Revealed Comparative Advantage
FOB	Free on Board	REER	Real Effective Exchange Rate
FTA	Free Trade Agreement	RER	Real Exchange Rate
FTZ	Free Trade Zone	ROW	Rest of the World
GDP	Gross Domestic Product	SACU	Southern African Customs Union
GMC	Common Market Group	SMEs	Small and Medium Enterprises
GTAP	Global Trade Analysis Project	UN	United Nations
HHI	Herfindahl Hirschmann Index	UNCTAD	United Nations Commission for Trade and Development
HS	Harmonized System	US	United States of America
ICT	Information and Communication Technology	UTEC	Technological University
IMF	International Monetary Fund	WBG	World Bank Group
INAC	National Institute of Meats	WDI	World Development Indicators
ITC	International Trade Center	WITS	World Bank Integrated Trade Solution
		WTO	World Trade Organization

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Background and Acknowledgements

This report has been prepared as part of the Uruguay Pro-Growth Public Policies and Competitiveness Programmatic Approach.

The report provide a basic diagnostic of Uruguay's export competitiveness challenges based on the analysis of publicly available data and evidence, by examining export dynamics and outcomes and using field interviews with the public and private sector. The report then formulates a number of hypotheses for an in-depth competitiveness diagnostic of the external sector, as well as policy recommendations to further trade integration and on how to increase benefits from integration.

The report was prepared by a World Bank team led by Gonzalo Varela (GTCDR) under the guidance of Jesko Hentschel (Country Director, LCC7C) and Marialisa Motta (Practice Manager, GTCDR). The following team members were part of the core team of the report: Gonzalo Varela (GTCDR), Alberto Portugal (GTCDR), and Daniel Reyes (GTCDR). Ana Fernandes (DECTI) and Esteban Ferro produced the background paper 'Exporters in Uruguay: Competitiveness and Dynamics in 2005-2013'. The macroeconomic context and public policies section was produced by Cristina Savescu (GMFDR). Administrative assistance was provided by Silvia Gulino. Writing and editing support was provided by Esther Florence Thiyagaraj and Susi Victor.

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Executive Summary

As a small economy, Uruguay's growth and poverty reduction prospects are closely related to its performance in international markets. Integration into the global marketplace is a powerful vehicle for productivity and per capita income convergence to developed country levels. For economies like Uruguay, this vehicle is particularly important as the scale of the domestic market limits the feasibility of inward oriented growth strategies.

This report analyzes export dynamics in Uruguay over the period 2000–2013, benchmarking them against relevant comparator countries. Following the World Bank's Trade Competitiveness Diagnostic Toolkit (Reis and Farole 2013), it looks at export outcomes through four different dimensions of export performance: (1) the evolution, composition, and growth orientation of the country's export basket; (2) the degree of diversification across products and markets; (3) the level of sophistication and quality; and (4) the survival rate of export relationships. The analysis is complemented with field interviews with the public and private sector, constituting a first pass at the diagnostic of export competitiveness challenges based on the analysis of publicly available data and evidence. The report then offers a number of hypotheses for an in-depth competitiveness diagnostic of Uruguay's external sector, as well as policy recommendations to increase integration and to gain from it.

The period under consideration, 2000–2013, is an interesting one for the analysis of export competitiveness in Uruguay.

Toward the beginning of the period, Uruguayan households and firms were affected by a long and

deep recession and a number of shocks that impacted their decisions and welfare. Two of the most prominent ones were a currency and banking crisis in 2002 and an episode of foot-and-mouth disease in the same year. The currency and banking crises severely affected economic activity both in Uruguay and in its then main trading partner, Argentina. It also affected the solvency of many firms and the supply of credit to the private and public sectors. It also resulted in a dramatic realignment of relative prices in 2002, with a sharp real depreciation of the domestic currency which, while eroding the purchasing power of most Uruguayan households, increased the profitability of firms in the tradable sector by reducing the dollar cost of the inputs sourced domestically. Bovine products, the largest foreign exchange earner among merchandise exporters at that time, were hit hard by the episode of foot-and-mouth disease.

The period that followed the crisis years was characterized by relatively more positive shocks to the external sector. In addition to the real depreciation of the peso that followed the crisis, the international prices of Uruguay's main export products soared. This stimulated investment in technological improvements in the production of these natural-resource-intensive products. The process was reinforced by important Foreign Direct Investment (FDI) inflows into the economy.

However, the same period of rising commodity prices implied higher energy costs for firms and households in Uruguay, an oil-importing country. This particularly affected firms operating in tradable sectors that were not 'compensated' by high international food prices and which also had to cope with the steady real strengthening of the Uruguayan peso that followed the economic recovery after 2004.

As a consequence, Uruguay's export sector experienced important changes during this period, which are reviewed in this report. The main messages that emerge from it are the following:

Uruguay has become more integrated in global markets.

Uruguay's exports have experienced a substantial expansion over the last 15 years, becoming key in the country's successful growth model during this period. Today, Uruguay is more integrated into the world economy than it was in the late 1990s, with exports and imports having increased at double-digit yearly rates over the last decade, either when measured in gross or in value added terms. The rapid expansion of trade is concurrent, when looking at the firm level, with an explosion in exporter size, which doubled in the primary goods, medium-tech, and high-tech manufacturing sectors during 2007–2013.

Tailwinds due to high commodity prices certainly helped export growth.

While there has been some product churning, Uruguay's merchandise exports remain dominated by primary and resource-based products. The observed churning at the product level shows the effects of increased commodity prices on the supply decisions of firms. For example, there was a sharp increase in the exports of soybeans and wheat. Soybeans are now the top export product (with about 2 billion dollars exported in 2013), and wheat features among the top ten. Animal products also—on the back of unprecedentedly high international prices—performed very well.

However, the observed dynamism was also supported by a dynamic private sector and sound trade and investment policies.

An attractive framework for investment, along with increased global liquidity, consolidated Uruguay as a destination for export-oriented FDI. FDI inflows grew tenfold between 2000 and 2012. While from 2000 to 2003 Uruguay's record on FDI was below the world average given its level of development, from 2010 to 2013, the country's FDI was well above average. FDI inflows were not only associated with export growth at the intensive margin (that is, more exports of the same products to the same destinations) but also with growth

at the extensive margin (exports of new products or to new destinations). The paradigmatic example is that of the foreign firms that set up business in Uruguay to produce chemical wood pulp and that operate within free zones. The list, however, is long and involves investment in primary, manufacturing, and service-related activities.

Public sector support to add knowledge and value to exports has also resulted in increased market access and increased prices. Although a large portion of Uruguay's exports can be classified as 'primary' or 'resource based', there has been substantial technical change and knowledge addition into some of these export products that are typically considered 'primary'. One example is that of the bovine traceability from farm to consumer, which electronically identifies each bovine in the country, and which was achieved through a strong partnership between the private and public sectors. Policies toward increasing market access have also been fruitful, for example, to secure markets for beef in the United States and Mexico or for citrus in the United States.

In services, investment attraction efforts, combined with export promotion, have also contributed to export dynamism. The dynamism in this sector has been driven not only by exports of traditional services (transport, travel, distribution) but also of modern services, such as business services and Information and Communication Technology (ICT), to a wide variety of markets. Some of these sectors have been targeted by specific export promotion activities such as support for participation in trade fairs and for development of business plans, as well as by investment incentives.

Yet, there is still room for greater and better integration.

To continue growing

Uruguay remains weakly integrated in the global marketplace. It exhibits trade to gross domestic product (GDP) ratios that are lower than those displayed by other countries at similar levels of development, even after controlling for remoteness from the main international markets. Its share in export markets is still lower than it was in the late 1990s. Moreover, Uruguayan firms exhibit poor export survival rates compared to peers. As entering export markets is a costly activity in which fixed costs

play an important role, it is crucial that export flows that start in a given year remain active for long so that exporters secure a flow of profits that compensate for the fixed costs incurred. Thus, expanding and sustaining export growth requires a better understanding of the factors constraining the export survival of firms.

To continue diversifying

Diversification along the market dimension has been impressive, explaining a third of export growth during 2003–2008 and more than half during 2010–2013.

This reduces Uruguay's vulnerability to country-specific shocks. Still, there is substantial heterogeneity across sectors. While in traditional export sectors such as animal and crops, Uruguayan exporters reach about 100 or more destinations, in other sectors firms remain reliant on few destinations, often neighboring countries, making them vulnerable to country-specific shocks.

Diversification along the product dimension, however, has remained elusive and vulnerability to product-specific shocks has increased. Although the number of export products increased slightly, this increase did not matter substantially for export growth. The new export products only accounted for 2 percent of export growth during the period 2003–2008 and for 6 percent during the period 2010–2013. In fact, the concentration of the export basket along the product dimension increased. The top five products exported accounted for 28 percent of total merchandise exports during 1998–2000 while they accounted for 39 percent of exports during 2011–2013. Although this is to be expected during a period of fast growing food prices, it increases Uruguay's vulnerability to product-specific shocks. This is exacerbated by the fact that these top export products show substantial price volatility in international markets.

To continue improving in quality

In terms of sophistication and quality, although some key products show important improvements, stronger efforts are required to climb up the quality ladder and increase value addition. Merchandise export sophistication remained stable while the service sector has contributed to the sophistication of the overall export bundle. The pattern is similar to what is observed for countries with a comparable export structure, which were also affected by the commodity

price increases during this period. The EXPY indicator, that provides one measure of export sophistication however, may hide important changes in sophistication of the export bundle associated with, for example, additional knowledge content in seeds used for key crops or the case of the bovine traceability. In this latter case, for example, data on unit values suggest that Uruguayan exporters managed to improve their export quality during the period, climbing from the bottom to the top of the ranking and securing access to high-income markets.

In services, a transition toward more knowledge-intensive activities is observed. Booming services sector exporters are in computing and business services, with a high knowledge content. The services sector has also contributed to increase the knowledge content to Uruguay's export basket through the provision of inputs embedded in exports of merchandise. Exports of modern services constitute a unique and yet not fully untapped opportunity for Uruguay since remoteness and small scale are not as strong constraints as they are in manufacturing.

Challenges ahead and policy recommendations

Exporters in Uruguay face three additional and important challenges in the short to medium term. First, the deceleration in economic activity of its main trading partners, particularly that of Brazil and China. Second, and related to the first, the slowdown in the international prices of key commodities exported by Uruguay. Third, the relative strengthening of the dollar against the currencies of Uruguay's main trading partners. These factors, which shape today's international context suggest a less positive outlook for export performance and deserve attention. Indeed, recent data on export trends reveal a deceleration of export flows to many of the main trading partners. Firms will need to remain alert to preserve their market shares and to continue contributing to growth and development.

The following policy recommendations, seeking to alleviate the challenges faced by Uruguay, emerge from this report.

1. Increased market access for Uruguayan exporters. There are two levels at which policymakers could support access to markets for Uruguayan exporters.

a. **Negotiations at the country level.** The first is related to negotiations that contribute to the elimination of tariff and non-tariff barriers that export products face. This is particularly important given the fact that Uruguay recently lost access to the Generalized System of Preferences, as it transitioned into a high-income economy.

i. Negotiate within the Southern Common Market (MERCOSUR) to speed up the agreement between the European Union (EU)-MERCOSUR and encourage a two-speed alternative in which Uruguay and Brazil could start offering concessions before Argentina and Paraguay.

ii. Given the constraints that MERCOSUR represents for trade policy negotiations, particularly in merchandise, the systematic expressions of the government of Uruguay on the need to pursue a policy of 'open regionalism' are most welcome. There is a precedent of waivers that MERCOSUR has granted to Uruguay to negotiate bilateral free trade agreements (with Mexico). Efforts to continue in this direction should be most welcome as they would increase Uruguayan exporters' competitiveness. In addition, there is space for negotiating market access on a bilateral level even within the institutional arrangements of MERCOSUR. The recent negotiations with the United States that lifted barriers to the entry of Uruguayan citrus are an example that needs to be pursued more systematically and for other export products. For example, more efforts toward lifting barriers to bovine meat with bone in the United States and beef in Korea are needed.

iii. For services and particularly for modern services where remoteness does not crucially impede trade, as mentioned above, negotiating market access is essential to diversify the export bundle, increase its quality, and as a result, create good quality jobs. Negotiating trade agreements for services in which national treatment is secured for services firms interested in setting shop in foreign markets is as important as negotiating market access for goods. However, participation in trade agreements is not the only vehicle to improve market access in services. Efforts toward the elimination of double taxation in Uruguay's most important markets are crucial for export competitiveness of service firms.

b. **Support to firms.** In addition to negotiating market access, it is important to support firms as they attempt to penetrate foreign markets. There is a clear case for government intervention in this respect. As argued above, export diversification along product and market dimensions reduces the country's vulnerability to shocks. In addition to the returns that accrue to the firm, decreased vulnerability offers social returns, thus justifying government support to diversification efforts. Uruguay XXI, the export and investment promotion agency, has gone a long way in this respect, providing information to firms, supporting their participation in trade fairs and missions, and helping them develop business plans of internationalization, particularly for small and medium enterprises (SMEs) and in some sectors (mainly knowledge-intensive services with export potential). It is then crucial, in the context of reduced fiscal space, to evaluate the impact and effectiveness of these interventions.

2. **Attracting investment.** During the period of analysis, worldwide flows of FDI increased dramatically. Uruguay managed to secure an increasing share of global investment flow relative to the country's size, making the ratio of FDI to GDP soar. Domestic investment has also increased to historical levels. Investment promotion policies have arguably played an important role in ensuring this outcome. Activity in free zones has also boomed, with these zones now hosting thriving firms that operate in a diverse range of sectors. Part of the incentives received by investors involves sacrificing fiscal revenues. Rigorous impact evaluation of these incentives is needed. Interviews with foreign firms operating in Uruguay suggest that, while the investment attraction services provided by Uruguay XXI are of good quality by international standards, there is room for improvement in the after-care services provided to investors, particularly to navigate the complicated public sector system.

3. **Gaining from increased FDI.** International experience shows that given certain conditions, FDI can lead to technology and knowledge spillovers to the rest of the economy. FDI in services, for example, results in more varieties of services inputs, better prices, and often, higher quality, which has economy-wide gains. FDI that competes with domestic firms (horizontally) can induce competition-driven or imitation-driven productivity gains in domestic firms. The interaction of foreign

and domestic firms either through client or supplier relationships can also lead to productivity spillovers. The conditions under which these spillovers tend to materialize have to do with the absorptive capacity of domestic firms (for example, the level of skills of the labor force, the stock of research and development [R&D] spent, and the technological distance between the foreign and domestic firms). Efforts to increase these absorptive capacities, in the form of, for example, incentives to train the labor force or to invest in R&D will likely increase the chances that these spillovers materialize. Uruguay XXI's program to incentivize the set-up of research and development centers of medical and pharmaceutical services firms in the country is most welcome, although it is not clear why its objective is sector specific. When it comes to suppliers, large foreign firms also tend to engage with reliable firms that comply with certain standards. To ensure that domestic firms can comply with these standards, many governments, including Uruguay, have implemented supplier development programs. Some of these programs have been evaluated, and the impact has been shown to be positive. Uruguay would also benefit from evaluating these programs' impact and strengthening their design appropriately.

4. Promoting firms' productivity upgrading and linking labor costs with labor productivity.

Productivity upgrading is key to competing in demanding international markets. Here, the quality of management and the propensity to innovate in processes and products are usually important driving forces. Well-functioning, deep financial markets are needed for firms to be able to conduct the needed investments. In addition, key for productivity gains to translate into better jobs and wages is that labor markets operate flexibly enough so that wages actually reflect productivity of labor. Labor market rigidities have indeed been identified by firms as a constraint for competitiveness and value addition.

5. Logistics and infrastructure. Uruguay is one of the most remote countries in the world. It is distant from the main trading growth poles in the world. Within the region, however, it has a privileged location. Ensuring excellent connectivity is important for Uruguayan exporters of merchandise, and it is also important for exporters of logistics services to other countries in the region. The export boom of this decade has put substantial pressure on the logistics infrastructure and further investments

are needed—this is the consensus opinion of all of the firms interviewed in the process of elaborating this report. Indeed, several logistics indicators show that Uruguay has substantial space for improvement in this respect. Here, public-private partnerships (PPPs) are a crucial instrument. Specifically, Uruguay needs to (a) deepen its ports for the efficient circulation of larger ships; (b) upgrade road infrastructure, particularly those linking west with east (for example, upgrading Route 26, to reduce transportation costs of merchandise across the country and allowing the most efficient use of the lands); and (c) seriously consider the feasibility of a railway system for cargo.

6. Energy costs. While the reduction of international prices of Uruguay's main export products hurt exporters, the fall in international oil prices should alleviate some of their costs if these reductions are actually passed on to the consumers. In Uruguay, diesel price at the pump is the highest in the continent and its dynamics do not fully reflect international prices. Revising the price-setting mechanisms for fuels would reduce some of the cost pressures that the private sector faces. The public sector has engaged in important mega projects on energy development and efficiency with important fixed costs. Yet, it is not clear whether demand will exist for the extra energy produced and how these costs will affect the prices.

Disclaimer and Structure of the Report

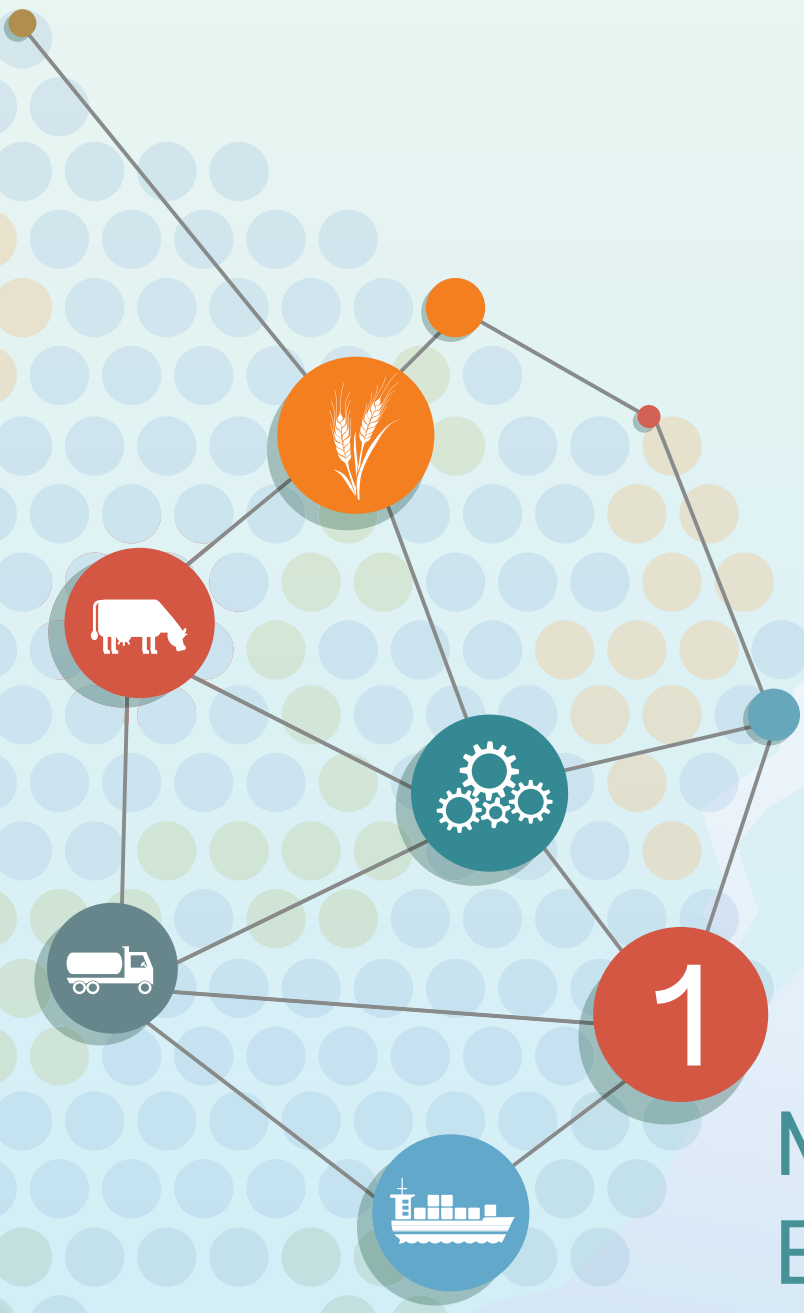
A disclaimer is in order. We rely on publicly available merchandise export data from UN Comtrade, services export and FDI data from United Nations Conference on Trade and Development (UNCTAD) and World Development Indicators (WDI), and trade in value added data from the World Bank's Trade in Value Added Dataset. As we rely on UN Comtrade for the analysis of merchandise trade, the results treat *Zonas Francas* (Free Zones) as another export destination and exclude the exports that originate within the zones. The analysis reported here is complemented by that of Ferro and Fernandes (2015), which looks at patterns of growth and dynamics of exporters, relying on exporter-level data from customs administration, where it is possible to incorporate into Uruguay's export flows those originating in the *Zonas Francas*.¹ Using a more comprehensive set of comparators, Figures A.1 and A.2 in the Appendix show that Uruguay exhibits a lower

¹ See Appendix A.1 of Ferro and Fernandes (2015) for details.

number of exporters than countries of comparable size as well as countries at similar levels of development.

The cutoff date of the analysis of overall export competitiveness is 2013. For the analysis of exports of value added, the cutoff is 2011. In both cases, this is based on data availability.

The remainder of the document is structured as follows. Section 1 analyzes the macroeconomic environment in which exporters operate in Uruguay during the period of analysis. Section 2 looks at level, growth, composition, and market share performance of Uruguay's exports, as well as the country's main trading destinations. It also briefly considers the evolution of FDI inflows and their sectoral composition. Section 3 focuses on the diversification of products and markets, considering several measures of concentration, including the share of top five products and markets in exports, and the Hirschman-Herfindahl Index for Uruguay's export portfolio. Sections 4 and 5 address quality and sophistication and survival, respectively.



Macroeconomic Environment and Public Policies

The prudent macroeconomic framework, strong institutions and a positive external demand shock, and terms of trade shock fostered export growth in the post-crisis period. In the aftermath of the 2002 crisis, Uruguay has managed to rebalance its macro economy relatively quickly through prudent policies. This, together with a stable political system and institutions and a much more competitive exchange rate, has enabled it to pursue new export-oriented investment opportunities in tradable items such as soybeans, rice, meat, forestry, pulp and paper, ports, tourism, software, and export of business services. A stable and more predictable macro environment has fostered investment and growth. The large positive external shock supported strong domestic demand growth, driven by both private consumption and investment.

A Favorable External Environment Has Supported Export Growth

Commodity prices have experienced a super cycle in the 2000s after a secular decline of almost four decades. Prices of food commodities have increased sharply between 2003 and 2012. With soybean prices more than doubling, this commodity has become one of the main export commodities of Uruguay, considering that by 2011, close to 50 percent of the agricultural land was used for soybean production. By 2012, soybeans were the largest export item, representing 15.9 percent of merchandise exports. International beef prices have increased 105 percent between 2003 and 2012, and Uruguay beef prices have increased even more rapidly because from 2007 they have commanded a traceability-linked quality premium over world prices. Meanwhile, pulp prices have also increased, albeit more slowly over this period, and pulp has also become an important export and paper output, up by more than eightfold.

The commodity price boom, in conjunction with stable macroeconomic environment and a favorable investment climate, has led to increased investment, including FDI, in the agriculture sector. Over the 2003–2008 period, about a third of investments went to the agriculture and forestry sector, with about 60 percent of that going to land acquisitions. Increased foreign participation in the agricultural sector brought more sophisticated production technologies, contributing to a sharp increase in productivity in the agricultural sector and reallocation of farmland to the agricultural sector.

Uruguay has benefitted from a period of robust import demand from its main economic partners.

Growth in Uruguay's main trading partners has been robust between 2002 and 2013, with Argentina and Venezuela expanding 6.1 percent and 4.4 percent, respectively, while GDP in the Brazil and Euro Area expanded at an annualized pace between 3.7 and 3.3 percent. Meanwhile, China, an increasingly important destination, has expanded at a rate of 10 percent. Uruguay has one of the largest elasticity to Chinese growth in the Latin America region (World Bank 2015). Import demand in the main economic partners grew at an even faster pace, averaging more than 8 percent annually during this period, with the import demand of the MERCOSUR partners and the Euro Area growing at double-digit rates. Brazil remained the main trading partner during this period, alongside the Euro Area, while the importance of Argentina and the United States declined to a certain extent. Meanwhile, exports to China, Venezuela, and Russia have increased at a rapid rate, becoming important destinations for Uruguayan exports. Exports of goods and services have contributed, on average, 2.4 percentage points to growth during the 2003–2012 period, or close to half the annual growth over this period.

The External Sector

The current account deficit has been more than financed by FDI inflows. The current account deficit has averaged 2 percent of GDP over the 2000–2013 period. This is because the merchandise trade deficit and the income deficit, which averaged -2 and -2.5 percent of GDP over this period, respectively, exceeded the surpluses in the income and transfer accounts, which averaged 2.5 and 0.5 percent of GDP, respectively. The non-oil merchandise balance has been in surplus of close to 3 percent of GDP, notwithstanding strong capital imports. Meanwhile a combination of high oil prices and recurrent droughts² has caused a marked increase in the oil merchandise balance to nearly 5 percent of GDP. The larger deficit in the income account is explained by higher interest payments as a share of GDP as well as rapidly rising dividend payments on rising FDI.

² Droughts affect the imports of oil, which is used for thermal power generation. Uruguay has been undergoing a structural transformation of its energy matrix to reduce reliance on hydropower while increasing the contribution of renewable sources such as wind power generation. Drought years are 2006, 2008/2009, and 2012.

Figure 1. Contributions to GDP Growth, Demand Side

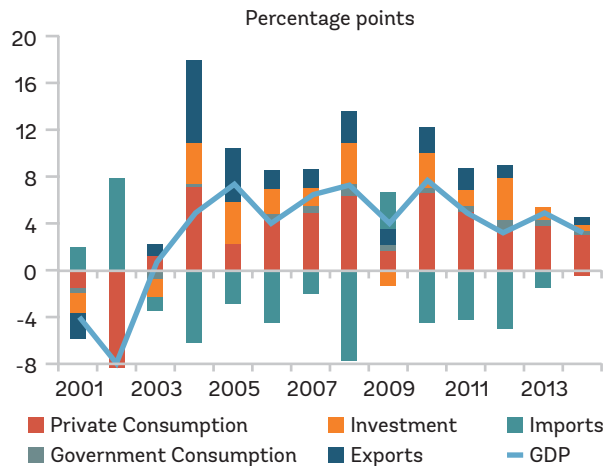


Figure 2. Contributions to GDP Growth, Supply Side

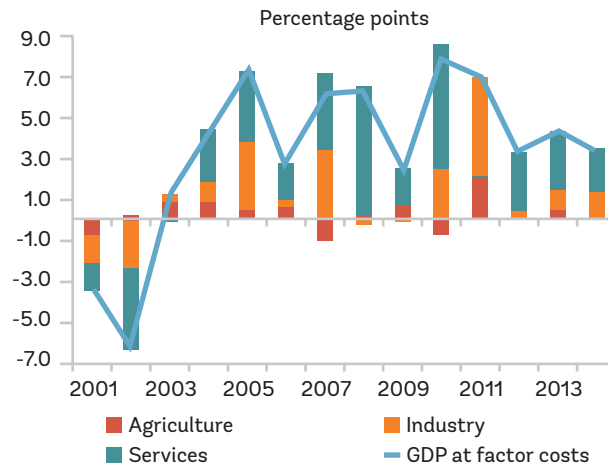


Figure 3. Commodity Price Cycle Index, 2010 = 100

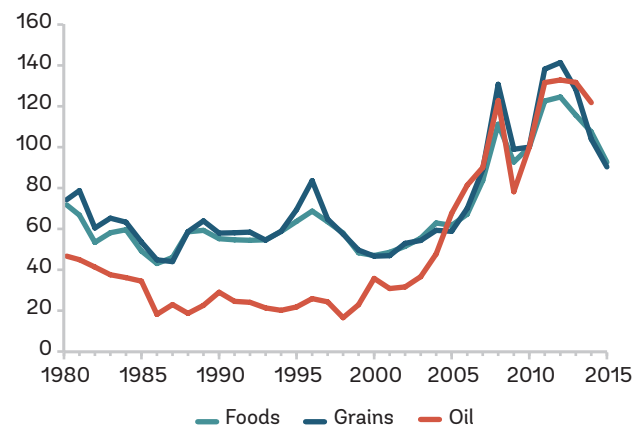


Figure 4. International Prices of Uruguay's Exports

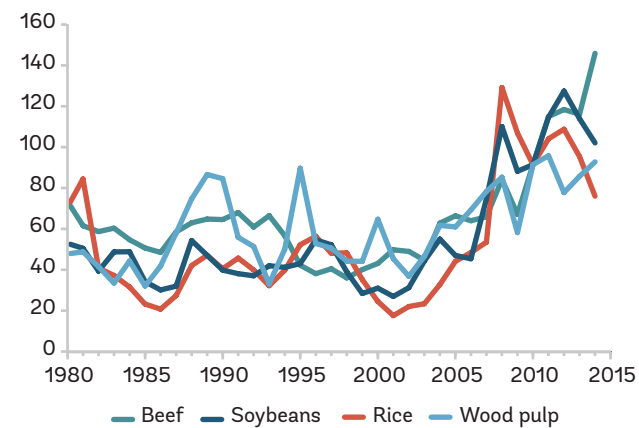


Figure 5. Annualized Real GDP and Import Growth, 2002-2013

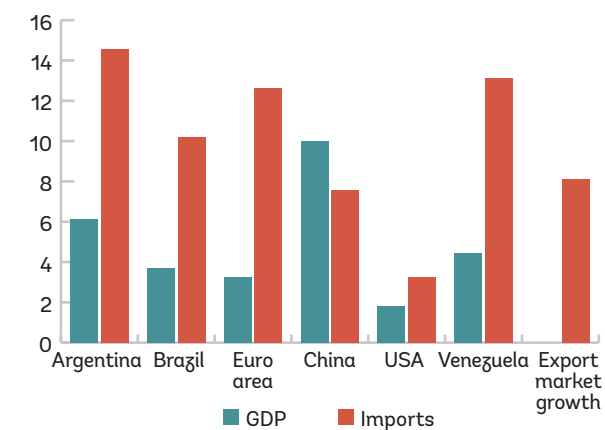
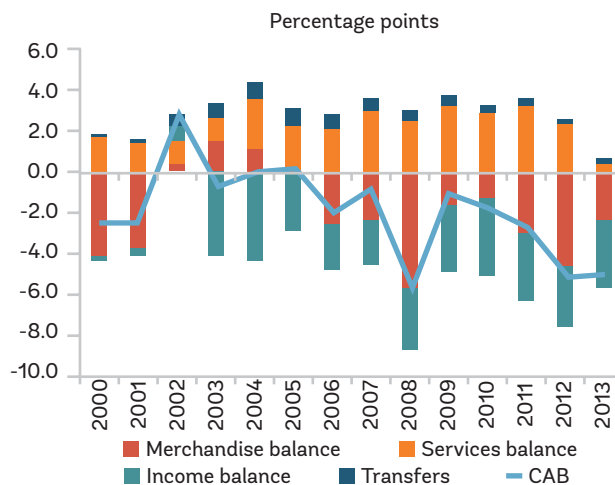


Figure 6. Current Account Balances



Over this period, the current account balance has been more than financed by FDI inflows. FDI has averaged close to 4.6 percent of GDP over this period, one of the largest in Latin America. On an average, a fifth of these flows went to the agriculture and forestry sectors, a fifth to construction, followed by manufacturing and financial services with about 10 percent of total FDI flows each.

The Role of the Real Exchange Rate

The real exchange rate (RER) depends on the relation between savings and investment and expenditure and income, with higher savings leading to RER depreciation. Empirically, it has been shown that growth takeoffs materialize during sustained periods of depreciated RERs and are significantly associated with sustained export growth (Hausmann, Pritchett, and Rodrik 2005). Conversely, real overvaluation hinders exports and contributes to a fall in economic growth (Easterly 2005; Johnson, Ostry, and Subramanian 2007). Haddad and Pancaro (2010) find that real undervaluation has a positive effect on economic growth and export expansion in countries with low per capita income and that it is insignificant for countries with real per capita incomes between US\$2,500 and US\$6,000. Meanwhile, in the long run, the undervaluation effect on economic growth becomes negative and insignificant on exports.

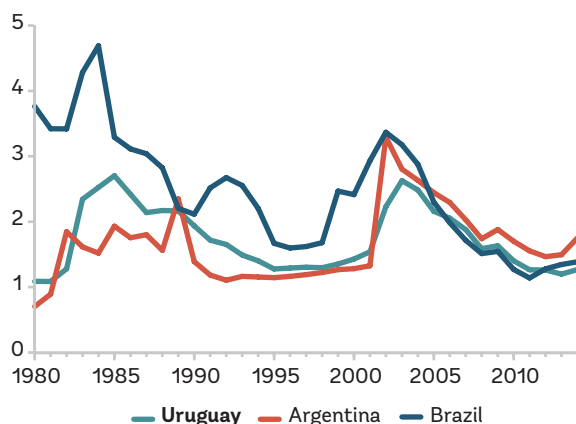
The variability of the RER is empirically shown to affect economic growth. This variability results in volatility in relative prices, increasing uncertainty and risks, and

reduction in the horizon and quality of investment. Higher volatility in relative prices leads to reallocations between tradable and nontradable sectors, which come with an adjustment cost. Furthermore, frequent volatility in RER is linked to interest rate volatility and financial instability. The impact of the variability of exchange rate on growth depends, however, on the level of political and macroeconomic stability (Eichengreen 2008), at the level of financial development and if economic agents can hedge against risk using financial instruments (Aghion et al. 2009).

The effect of exchange rate volatility on exports is found to be significantly negative in Latin America but it depends on the type of goods and country (Sauer and Bohara 2001). Haddad and Pancaro (2010) find similar results, confirming the negative relation between large RER variability and exports to GDP. The effect on the output growth of MERCOSUR countries, in particular, has been found negative overall but depends on how productive firms are and how exposed to trade they are (Varela 2011).

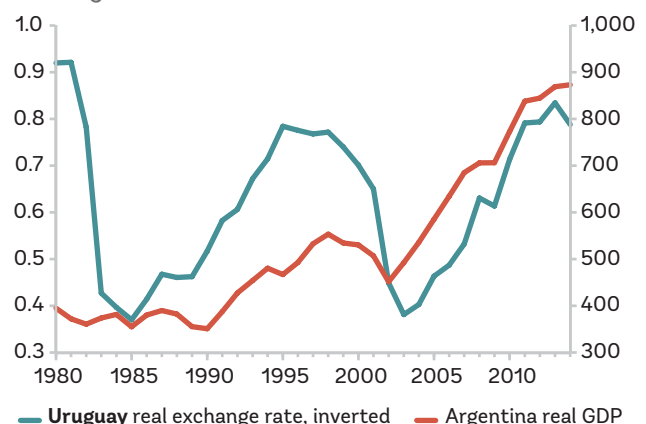
Uruguay's RER has experienced large swings, and even the five-year moving average has been quite volatile compared to other developing countries. This variability has tended to dwarf the impact from microeconomic policies aimed at encouraging exports. Historically, in Uruguay, improvements in terms of trade have been associated with an appreciation of the terms of trade. It has been argued that RER appreciation is also associated with strengthening the demand in Argentina for goods and services that would otherwise be sold only

Figure 7. Real Exchange Rates



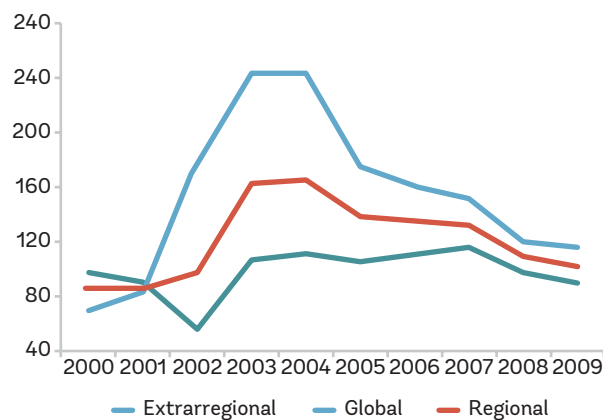
Source: World Bank staff calculations.

Figure 8. Large Co-movements with the Argentina GDP



Source: World Bank staff calculations.

Figure 9. Real Effective Exchange Rate, Index 2010 = 100



Source: Central Bank of Uruguay.

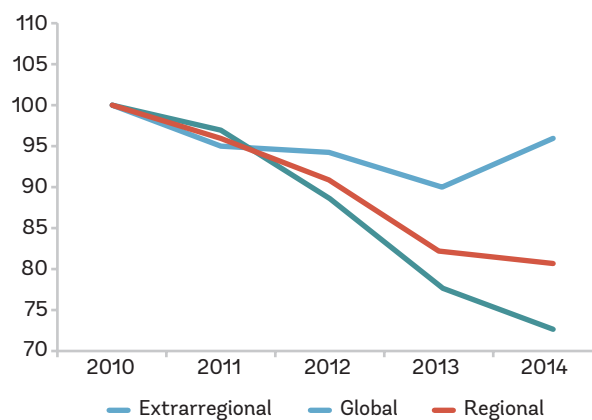
locally in Uruguay. The latter has been mirrored by large correlation between the RERs of Uruguay and Argentina in the past (Lorenzo, Daude, and Noya 2001).

Strong economic ties with Argentina and Brazil over this period mean that they had an impact on Uruguay's macro economy, including through the impact on the RER relative to the U.S. dollar. Volatility in Argentina, and to a lesser extent in Brazil, had spillover effects in Uruguay due to, among other things, fluctuations in external demand and relative prices.

RER developments in the 1990s, with a stable and strong peso with respect to the currency of its main regional economic partners (Argentina and Brazil) and appreciation with respect to the U.S. dollar contributed to the shift in Uruguay's tradable production in favor of regional goods and to a deeper integration with MERCOSUR (Hausmann, Rodriguez-Clare, and Rodrik 2005).

The sharp devaluation of the Brazilian real in January 1999 and the Argentine peso in December 2001, in conjunction with plummeting import demand from these countries, caused Uruguay to undergo a large real depreciation against the U.S. dollar. This eventually helped boost the profitability of the sectors exporting globally traded goods, such as agricultural products, including beef, rice, soybeans, and forestry, whose profitability depends on the U.S. dollar's international prices and on Uruguay's RER with respect to the U.S. dollar. These, in conjunction with the international commodity price boom, linked at least in part to rapid

Figure 10. Real Exchange Rates, Index 2010 = 100



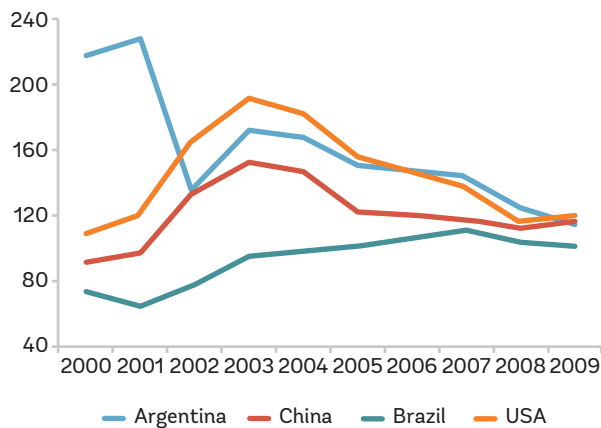
Source: Central Bank of Uruguay.

import demand from China, has in turn translated in a shift from regional goods toward globally trade goods.

The real effective exchange rate (REER),³ which is also used to assess a currency's overall alignment, has appreciated over the past decade. The appreciation has been more pronounced with respect to the currencies of the regional economic partners, Brazil and Argentina. This appreciation is, however, largely attributed to changes in fundamentals. With technological progress—particularly in the agribusiness sector—that has resulted in large productivity increases in the tradable sector, lowering prices for these goods relative to nontradables resulted in REER appreciation through the 'Balassa-Samuelson effect'. Both theory and empirics support that much of the REER appreciation is due to fluctuations in relative prices (tradable/nontradables), especially in developing countries. Persistent changes in terms of trade and differences in fiscal policies, tariffs, and financial development can also explain part of the differences in REER across countries. Large portfolio capital inflows and high FDI levels have resulted in appreciation of the Uruguayan peso, which has accelerated between 2012 and mid-2013 as the peso strengthened against the U.S. dollar, while the Brazilian real and the Argentine peso depreciated against the U.S. dollar, translating in particularly sharp real appreciations of the Uruguayan peso with respect to the currencies of regional partners.

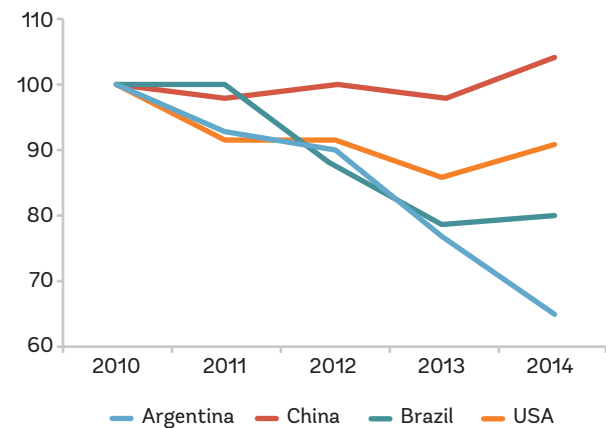
³ The REER is a weighted average of bilateral RERs between the country and its trading partners, weighted by the respective trade shares of each partner.

Figure 11. Real Exchange Rate Cycle and Growth/ Index 2010 = 100



Source: Central Bank of Uruguay.

Figure 12. Real Exchange Rates Index 2010 = 100



Source: Central Bank of Uruguay.

An RER assessment by the International Monetary Fund (IMF) in late 2013 (IMF 2014) found that the Uruguayan RER was slightly above its equilibrium level.⁴

Monetary Policy and Exchange Rate Flexibility

Uruguay is part of the full-fledged inflation targeters in Latin America, alongside Brazil, Chile, Colombia, Mexico, and Peru. Conventional wisdom is that it is impossible to achieve international financial integration, monetary independence, and an effective target on the exchange rate, and Uruguay has been targeting inflation during this period while having a flexible exchange rate. Following the 2002–2003 financial crisis, inflation overshot to almost 30 percent but subsequently decelerated to a single digit by 2004, remaining in the single-digit range for the longest period in history. However, inflation has exceeded the upper limit of the targeted range throughout most of the period between 2006 and mid-2009, embarking on a moderate yet persistent upward trend since 2010. Since 2011, inflation and inflation expectations have been consistently above the upper limit of the targeted range.

Important capital inflows over this period have put pressure on the currency to appreciate, thereby moderating inflation pressures to a

certain extent and allowing the central bank to have lower real interest rates than would have been otherwise. Following the 2002–2003 crisis, exchange rate flexibility has been crucial in preventing RER misalignment, with interventions on the foreign exchange market aimed at reducing volatility while maintaining the exchange rate near equilibrium level. However, quasi-fiscal losses linked to sterilization of capital inflows by the central bank have increased during the period of strong capital inflows. In addition, the Central Bank of Uruguay has used monetary instruments and macroprudential regulations to avoid excessive volatility and stem short-term capital inflows.

The appreciation lowered the prices of tradables, affecting employment and investment in the tradable sector, and contributed to an expansion in the supply of nontradables. Nevertheless, higher commodity prices have attracted investment in the agribusiness tradable sector over this period. The central bank tightened the monetary policy in the second half of 2012, but overall, the monetary policy remained accommodative with the central bank facing trade-offs between bringing inflation within the targeted range and containing nominal appreciation pressures.

For Uruguay, the effectiveness of monetary policy is affected by the lower level of financial intermediation given the income level and also due to liability dollarization on account of balance sheet effects.

⁴ IMF 2014 finds that the Uruguayan peso was between 0 percent and 10 percent above its equilibrium level as of June 2013, having appreciated strongly over the previous decade, and particularly since end-2011, against regional trading partners.

Fiscal Policy and the Real Exchange Rate

Over the long run, the RER is determined by the balance between aggregate demand and aggregate supply, and an anticyclical fiscal policy, conditional on strong solvency of the government, could lead to a less volatile RER. Conversely, larger fluctuations in aggregate demand would result in a volatile RER in the long run.

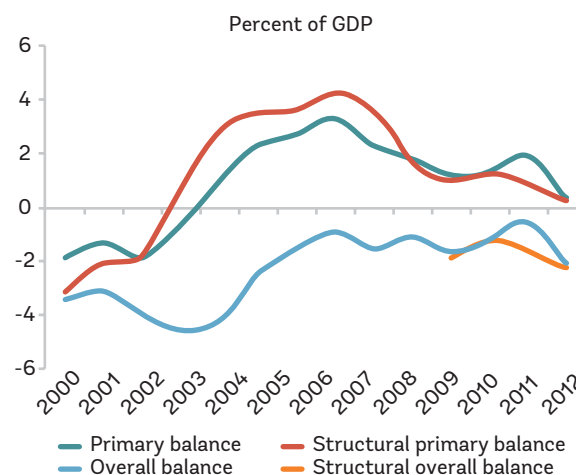
Uruguay has implemented a prudent fiscal policy in the wake of the 2002–2003 crisis, which together with strong economic growth has helped bring down debt levels. Uruguay has recorded a primary surplus on its consolidated public sector balance, averaging 2.7 percent of GDP between 2003 and 2011, before recording a deficit of 0.2 percent of GDP in 2012. About half of the deterioration was on account of one-off transfers and higher electricity generation costs and the other half on account of costs associated with the impact of the pension and health care systems. The structural balances of the central government⁵ has averaged about 2.3 percent of GDP over 2003–2012, with stronger outturns during 2003–2007, when it averaged 3.5 percent of GDP, and a deterioration during 2008–2012, when it averaged 1 percent of GDP. The deterioration has been more marked since 2011, resulting in a positive fiscal impulse and a pro-cyclical fiscal stance. Indeed, the World Bank (2015) has reported that the fiscal policy has been pro-cyclical in Uruguay, exacerbating the fluctuations of consumption and output.

Public Policies to Promote Investment and Exports

Uruguay has actively pursued a gamut of public policies to promote exports and competitiveness, using trade policy measures, fiscal incentives, and making efforts to improve infrastructure and access to competitive public services. It promotes investments in a bid to bolster productivity and enhance competitiveness to engender a structural change in the economy and steer investments in priority areas that would help achieve its development goals. The government has sought to

⁵ The central government structural fiscal balance was estimated using the standard method, correcting only for one-off factors and the effect of business cycles on the primary balance. This methodology is used by the IMF and by the MEF in Uruguay. Correction for the effect of business cycles on the primary balance is based on estimates of potential output and the output gap, combined with estimates of the elasticity of revenues and expenditures to changes in GDP.

Figure 13. Central Government Balances



Source: Pizzolon and Rasteletti 2013; World Bank Staff calculations; Ministry of Economy and Finance (MEF). Note: Estimates of structural balances up to 2008 are based on Pizzolon and Rasteletti (2013). World Bank staff estimates after 2009.

promote investments that would help attract large-scale FDI investments. The Investment Promotion Regime (Law 16.906/998) was established in 1998 and its role has received a significant boost since 2007 (Decree 455/007), which was further enhanced in 2012 (Decree 002/2012) to ensure a higher contribution to development goals in relation to fiscal incentives (MEF 2013). Uruguay has also signed numerous bilateral investment treaties. Few of the bilateral agreements allow for the pre-establishment of investments, including those with Chile and United States. All bilateral investment treaties that Uruguay signed since the early 1990s include mechanisms to resolve possible disputes between the investor and the State.

The government has also provided a variety of incentives such as fiscal measures ranging from lowering profit tax rates, tax holidays, tax credits for investments, accelerated depreciation, and indirect tax refunding, as well as direct subsidies and special regimes (automotive). To promote exports the government has used indirect tax refunding, temporary admission, and export financing (pre- and post-financing). The 2007 tax reform sought to align, streamline, and improve the design of these incentives while also dis-incentivizing exports of unprocessed raw materials. Following the 2008–2009 crisis, the government has increased the refund rate to 4 percent to provide temporary relief for the sectors most affected by the crisis and by the regional situation, including

poultry meat, processed fish, leather products, plywood, ceramics, glass, textiles and clothing, shoes, and metalwork and has better aligned the various export promotion regimes.

The objectives of the Free Zones Regime, established in 1987 (Law 15.921) were “to promote investments, expand exports, increase the use of national labor force, and incentivize international economic integration,” and the Regime also had a general coverage, with a specific mention of the services sector.

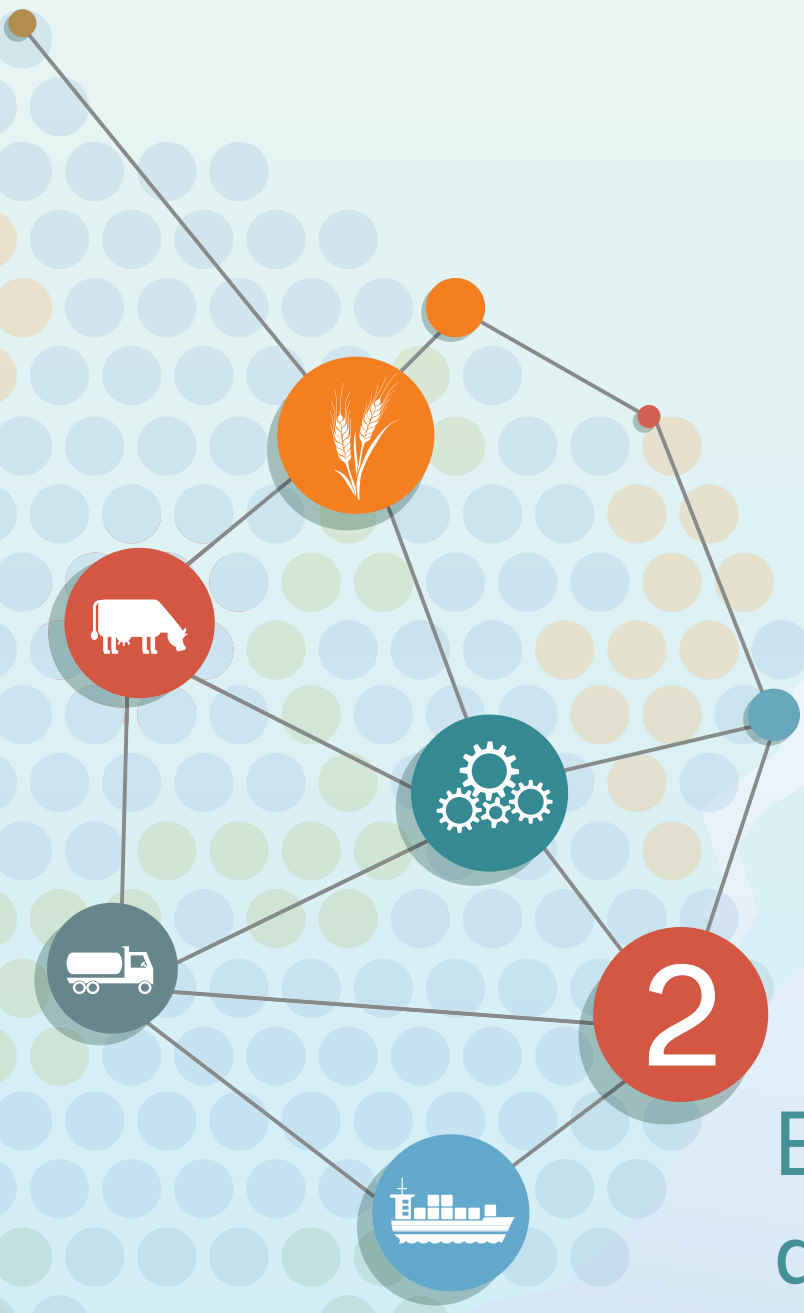
It has also helped attract an estimated US\$4 billion in investments between 2006 and 2013, particularly in the forestry industry (UPM, Punta Pereira); global export services (Aguada Park, World Trade Center); specialized services (Parque de las Ciencias); and logistic services. The value added within the Free Trade Zones (FTZ) has risen to above 4 percent of GDP with close to 90 percent of goods exports from the FTZ destined to markets outside Latin America (MEF 2013). In 2013 the government submitted to the Parliament a bill that seeks to modify and broaden the Free Trade Zones Law. The bill, which was resubmitted to the Parliament by the new administration seeks to promote investments, diversify the productive matrix, generate productive quality employment, increase national value added, stimulate high-technology activities and innovation, promote decentralization and regional development, increase the capacitation of national labor force, and promote insertion in international trade and investment.

The Uruguayan government has also used sectoral regimes (Law 16.906/98)—more intensively since 2007—to provide the stimulus for specific sectors and encourage international insertion, development of supply chains, diversification, technology adoption, and quality employment. Among the sectors that have benefited from sectoral regimes are software, tourism, call-centers, the naval industry, renewable energy, agricultural equipment and machinery, electronics, hotels and condominiums, seeds and trees, industrial residues, biotechnology, and hydrocarbon exploration.

Many of these sectors have contributed to boosting exports. To bolster tourism and regional development, especially along the border with Brazil, the government has also promoted the Free-Shops activity.

Among the more sector-specific instruments used since 2007 are the subsidies to the textile and clothing sector, according to Articles 308 and 309 of Law 18.172 and Law 18.846 of November 2011, which complement the incentives provided by the special regime for tax refunds and export financing. Meanwhile, the automotive sector, which exports almost exclusively to MERCOSUR, has continued to benefit from a special regime, according to Decree 316/92, which stipulates a subsidy of 10 percent of the free on board (FOB) export value.

As part of the economic structural reforms initiated in the 1990s, Uruguay has also implemented trade liberalization measures, unilaterally reducing tariffs following the General Agreement on Tariffs and Trade and through trade liberalization within the region with the creation of the free trade area (MERCOSUR) in 1991 and its transformation into a customs union in 1994. Certain sectors, particularly the agricultural, agro-industrial, and chemicals sectors, continue to benefit from an important degree of trade protection, largely through non-tariff measures. Uruguay has also made strides in increasing market access and facilitating trade. Uruguay has, for example, signed seven preferential trade agreements (PTAs) for merchandise trade and three PTAs in services (Ferreira and Vaillant 2014).



Export Growth and Orientation

Exports, Imports, and Trade Balance

Uruguay's merchandise trade balance has been relatively steady over the last decade, with a slight tendency toward a deterioration. Although export and import nominal values have steadily increased in the past ten years, their performance as share of GDP has been fairly stable except for a marked jump in the trade deficit in the early 2000s (Figure 14). Among other factors, the latter was the result of a combination of a general shift toward trade openness in the Latin American region, a positive shock to export prices, and fast GDP growth post 2002, which fueled import demand, and the realignment of relative prices, followed by gradual strengthening of the Uruguayan peso in real terms after 2004.

Overall, exports increased from 10.1 percent of GDP in 2000 to 16.3 percent in 2013 while imports moved from 15.2 percent to 20.9 percent of GDP during the same period. Remarkably, trade flows were relatively resilient to the global crisis, which caused only a short-term deterioration in the trade balance. Despite not yet surpassing pre-crisis levels, trade balance as a percentage of GDP increased in 2013.

Uruguay has still much to gain from further integration in the global marketplace. Uruguay's exports have increased rapidly over the last decade when compared to historic averages. However, it is important to compare its performance with that of peer and aspirational

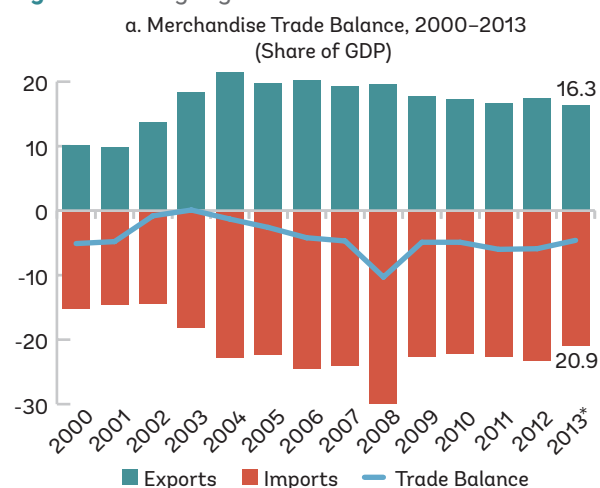
countries (Figure 14b). The performance of Uruguay's exports, which increased 3.95 times their value between 2000 and 2013, lags behind regional competitors such as Chile (4.3 times) or Paraguay (10.8 times).⁶ While Uruguay outperformed Costa Rica, Argentina, and New Zealand, the country is an average performer.

Services exports have also performed well in recent years and account for almost one-third of total exports. As shown in Figure 15, the share of services in total exports did not change significantly between 2005 and 2013. Yet, Uruguay is more reliant on services exports than comparator countries in the Latin American region. In fact, the share of services in total Argentine and Chilean exports is almost half that of Uruguay's. Uruguay still lags slightly behind New Zealand, which experienced a greater expansion in its share of export services over the last decade.

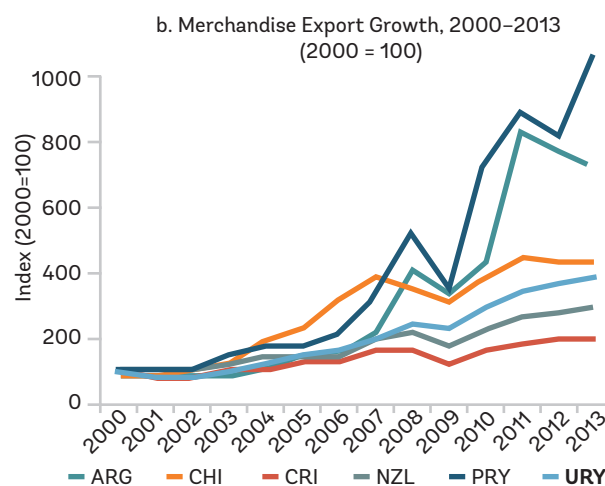
In the services sector, Uruguay has maintained a positive trade balance over the last decade. The services trade balance as a percentage of GDP tripled between 2002 and 2007 but deteriorated considerably during 2010–2013 (Figure 16a). This is explained by both an export contraction from 7.6 percent of GDP in 2011 to 5.7 percent in 2013 and an import expansion from 4.3 percent to 5.8 percent in the same period. The key driver behind the import growth was the segment of travel services, which more than doubled its import

⁶ In this two cases, the substantial increases in international prices of key commodities (copper for Chile, soybeans, beef and oil for Paraguay) have substantially contributed to the export expansion.

Figure 14. Uruguay's Merchandise Trade Performance



Source: Authors' calculations using data from UN Comtrade.
Note: The figure shows the evolution of exports, imports, and trade balance for merchandise trade, measured as a percentage of GDP.



Source: Author's calculations using data from the World Development Indicators (WDI). Note: The figure compares merchandise export growth in Uruguay with selected peer countries.

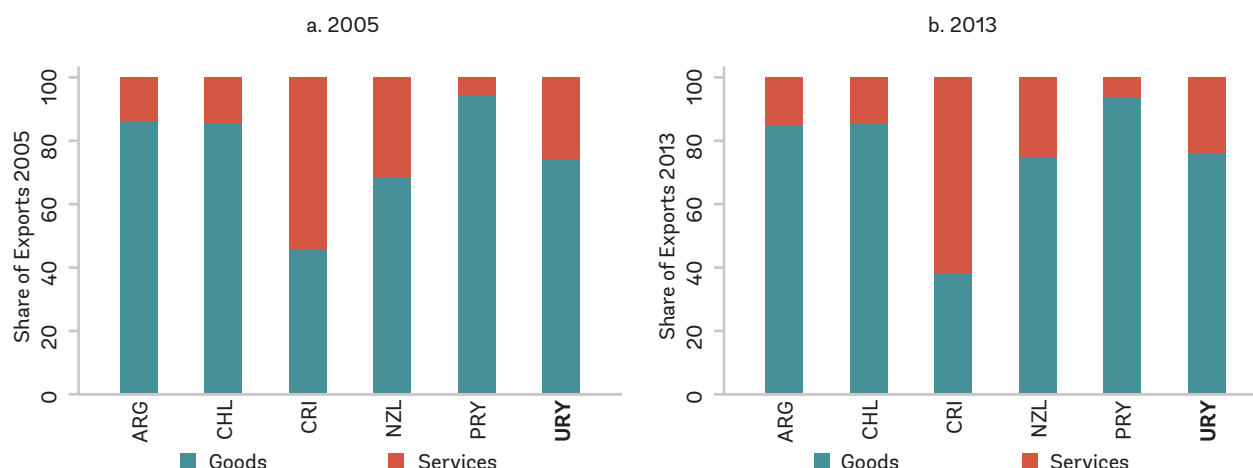
value, going from US\$644 million in 2011 to US\$1,312 million in 2013, driven partially by the strengthening of the domestic currency and by the sustained growth of income per capita.

Uruguay's services trade balance as a share of GDP has been higher than that of several of its peers.

Indeed, the consistent surplus over the period 2000–2012 stands in stark contrast to the performance of neighboring countries such as Argentina, Chile, and Paraguay. Uruguay was substantially outperformed by Costa Rica, which recorded a substantially higher services trade balance surplus during this period.

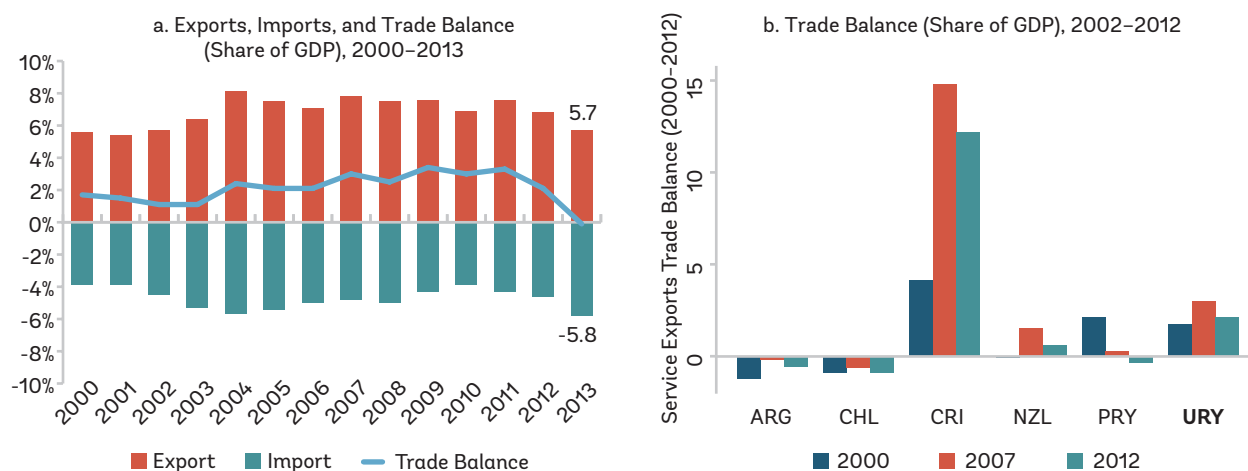
Uruguay's commercial service exports grew quite steadily between 2002 and 2010 but experienced a significant decline in the last three years. Measured in current U.S. dollars, exports of commercial services grew, on average, by 7.4 percent per year during the period 2000–2013. Over this period, however, there was some volatility. Services exports declined in 2001 and 2002 (mostly due to the contraction in travel services associated with the Argentine crisis) and also in 2012 and 2013. During the period of uninterrupted growth from 2003 to 2011, services exports increased at an impressive rate of 19 percent per year (Figure 17a).

Figure 15. Share of Exports of Goods and Services, 2005 and 2013



Source: Authors' calculations based on data from UNCTAD.
Note: Services exports include government exports of services. Figures for 2013 are estimated.

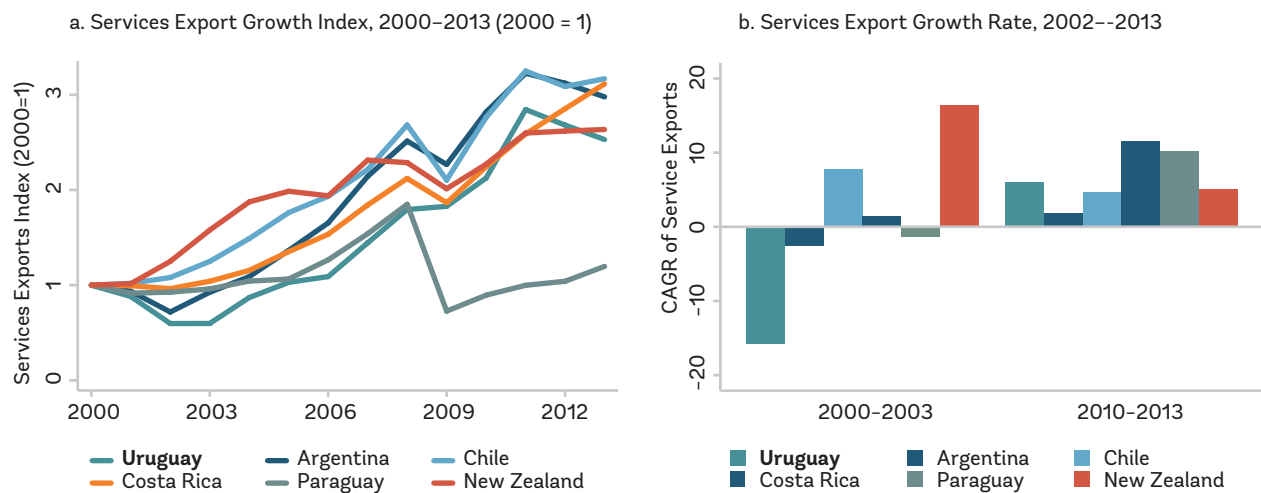
Figure 16. Services Trade Balance as a Share of GDP



Source: Authors' calculations using data from UNCTAD.
Note: The figure shows exports, imports, and trade balance for services trade in Uruguay, measured as a percentage of GDP.

Source: Authors' calculations based on data from the WDI.

Figure 17. Uruguay's Services Trade Performance



Export Market Shares

The analysis of export market shares is complementary to the analysis of export growth both in goods and services. While the previous section compared how Uruguay's export performance fared when benchmarked against select comparators, it is also useful to compare its performance against others' performances. The period of analysis, 2000–2013, is one in which world trade expanded dramatically. How much of that expanded market did Uruguayan producers secure?

In 2013, out of every million dollars exported globally, 70 originated in Uruguay. Figure 18 shows the evolution of market shares for Uruguay and comparators. Figure 19 shows the same for the period 1997–2013) and reveals that Uruguayan exporters secured 0.07 percent of the market in 2013. In 2000, they secured 0.06 percent of the market, implying that market shares grew by 19 percent during the period.

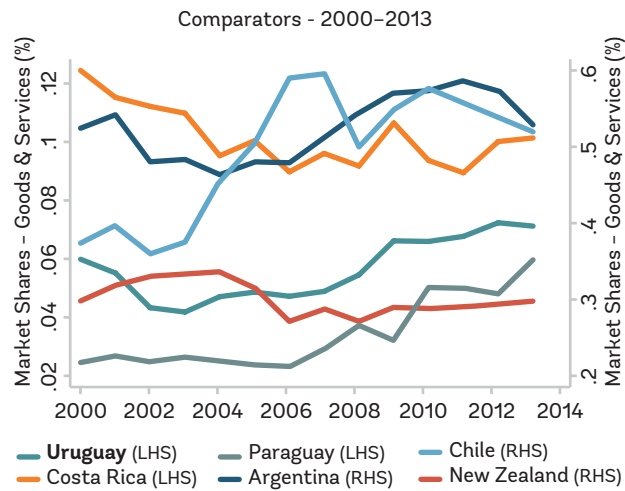
Three distinct processes can be identified during the period. First, a sharp fall of market shares, from 1997 to 2003. In 1997, exporters in Uruguay accounted for 88 dollars out of every million exported globally, while in 2003, that contribution more than halved, to 42 dollars. Second, rapid export share expansions were observed during 2004–2005 (boosted by the real depreciation of the Uruguayan peso) and 2008–2009 (due to the relatively more rapid contraction of world trade).

Export market shares have increased dramatically in vegetable products and wood products. The soy price boom and the investments around forestry-related activities resulted in market shares doubling and tripling since 1998, respectively. Other sectors have seen their world market shares collapse. The paradigmatic example is that of leather products (hides and skins). While in 1998 Uruguay accounted for 7 out of every 1,000 dollars exported globally, in 2013 it accounted for less than 3. Similar losses were observed in the textiles, clothing, and footwear sectors.

Trade Openness

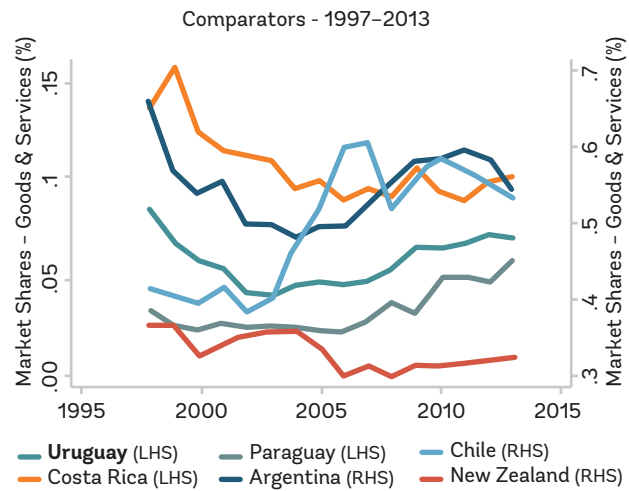
How open is Uruguay to trade? There are two approaches to this question. The first focuses on outcomes. A typical indicator is the trade-to-GDP ratio. It weighs the combined importance of export and import of goods and services in an economy and gives an indication of trade integration in the global marketplace. The problem with this indicator is that some countries may trade more than others for reasons related to their geography (for example, remote countries like Uruguay or island states typically present a handicap to trade) or their economic size (for example, firms in large economies tend to trade less internationally than small economies because they have more scope to trade among themselves). For these reasons, outcome-based indicators of openness are typically complemented with policy-based indicators. The second approach then focuses on policies, for example, the tariff barriers that the country imposes on the import of goods and services and the tariffs that its exports face abroad.

Figure 18. Export Market Shares, Uruguay and Comparators - 2000–2013



Source: Authors' calculations using data from World Integrated Trade Solution (WITS) and UNCTAD.

Figure 19. Export Market Shares, Uruguay and Comparators - 1997–2013



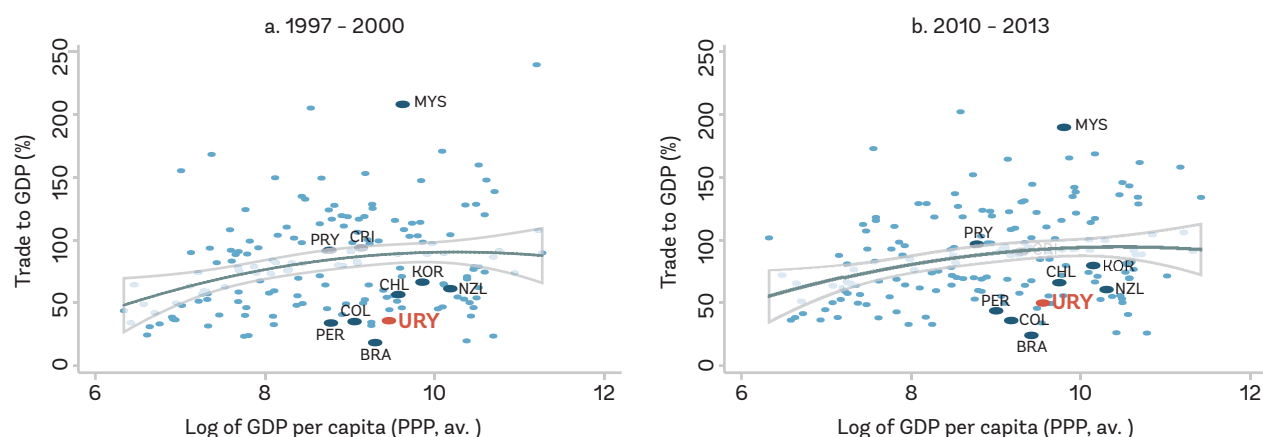
Source: Authors' calculations using data from World Integrated Trade Solution (WITS) and UNCTAD.

Table 1. Export Market Shares, by Product - Uruguay, Merchandise (%)

Product Group	1998	2003	2008	2013
01–05 Animal	0.768	0.487	0.806	0.774
06–15 Vegetable	0.290	0.210	0.299	0.572
16–24 Foodstuffs	0.093	0.040	0.035	0.037
25–26 Minerals	0.059	0.009	0.010	0.003
27–27 Fuels	0.010	0.005	0.008	0.002
28–38 Chemicals	0.030	0.015	0.025	0.031
39–40 Plastics/Rubber	0.048	0.036	0.049	0.057
41–43 Hides, Skin	0.738	0.551	0.391	0.277
44–49 Wood	0.057	0.050	0.131	0.158
50–63 Textiles, Clothing	0.126	0.059	0.049	0.044
64–67 Footwear	0.044	0.004	0.004	0.001
68–71 Stone/Glass	0.031	0.017	0.022	0.018
72–83 Metals	0.011	0.006	0.007	0.008
84–85 Mach/Elec	0.004	0.001	0.002	0.003
86–89 Transportation	0.027	0.004	0.010	0.017
90–99 Miscellaneous	0.007	0.005	0.004	0.010

Source: Authors' calculations using data from WITS.

Figure 20. Merchandise Trade as a Share of GDP vs. Income Level



Source: Authors' calculations using data from the WDI. Note: The panels plot the relationship between trade openness and GDP per capita for all countries in the world. Relevant comparators are labeled. The curve shows the expected trade openness for a given per capita income. The white band represents the 95 percent confidence interval. Countries above (below) the confidence interval are said to be more (less) open to international trade than what their economic development implies.

Outcomes

Figure 20 plots the trade-to-GDP ratio against GDP per capita for all countries in the world for the periods 1997–2000 and 2010–2013.⁷ The curve shows the average of trade openness conditional on a given per capita income. The grey band represents the 95 percent confidence interval of that conditional average. The comparison of both panels reveals that the average of trade-to-GDP ratio slightly increased between the periods 1998–2000 and 2010–2013, indicating that there has been a worldwide increase in the openness of countries to trade in the last 15 years.

Uruguay has become more open to international trade (in goods and services) although it is still less open than expected given its level of economic development.

Uruguay's location in the chart is below the predicted line in both periods, indicating that considering its income level, the country trades substantially less with the world than expected. In fact, Uruguay is less integrated in the global marketplace than Chile and Costa Rica and shows similar trade-to-GDP ratios as other larger South American economies that are typically less reliant on trade such as Peru or Colombia (see Box 1 for the role of geographical and economic characteristics on openness to trade). It is also interesting to examine changes in Uruguay's degree of trade openness over time. A

comparison of panels (a) and (b) shows an increase in this regard, although Uruguay remains below the average for its level of development. Other comparators such as Costa Rica or Paraguay appear substantially more integrated, as suggested by this indicator.

Focusing on the service sector alone, Uruguay's trade (exports plus imports) as a share of GDP is also lower than expected given its level of income.

Figure 22 plots commercial services trade as a share of GDP against the income level for all countries in the world for two periods, 1998–2000 and 2010–2013. Panel b shows that, as observed for total trade, Uruguay falls below the curve, which suggests that the country's openness in commercial services is less than expected given its level of development. Yet, when comparing the two periods, Uruguay has narrowed the distance to the predicted curve. In fact, in contrast to the trade in merchandise, Uruguay's openness to services trade is higher than that of some of the regional comparators, namely Chile, Argentina, and Paraguay. Only Costa Rica and New Zealand outperformed Uruguay in 2013.

Trade Policy

Since it joined MERCOSUR, Uruguay's trade policy has been to a large extent determined by the common policies adopted at the regional level.

MERCOSUR is a customs union composed of Argentina, Brazil, Paraguay, Uruguay, and Venezuela. Bolivia is in the process of joining it.

⁷ Note that empirically there is a concave relationship between the two variables, by virtue of the fact that trade increases with income per capita at a decreasing rate.



Box 1.

Measuring Openness to Trade

The most common indicator to assess the extent to which a country is integrated into the global marketplace is the ratio of its trade (that is, exports or imports) to GDP. These indicators have been reported here in Figure 21. As argued above, these indicators show that although Uruguay's openness to trade has been increasing over time, it is still below average when compared to other countries at a similar level of development.

However, assessing integration by just looking at trade-to-GDP ratios can be misleading. Many factors condition a country's possibility to participate in international trade markets, apart from its level of development. For example, larger countries tend to display a lower international trade intensity because there are more players inside the domestic economy with which to trade. Geographical characteristics also determine patterns of trade irrespective of how open trade policies are, as shown by countless implementations of gravity models. For example, countries that are remotely located from the most important international markets face greater transport costs and so tend to trade less. Similarly, island nations tend to face higher trading costs as land transportation—usually a cost-effective means of moving goods across borders—is not an option for them.

Here we present an alternative indicator of trade openness that controls for remoteness, the size of the domestic market, whether the country is an island state, and the level of development. The indicator is the residual of a regression of the trade-to-GDP ratio on these factors. We use cross-country averages for the period 2000–2013 for 168 economies. Remoteness is calculated as a country's weighted average distance to all markets, where the weights are the share of each market's GDP on the world's GDP. The size of the domestic market is proxied by domestic GDP (and a squared term to capture non-linear effects), and the level of development is proxied by the GDP per

capita at PPP. A dummy variable for island states is also included. Our trade orientation indicator shows a more accurate indicator of the revealed openness to trade.

Our measure of remoteness ranks Uruguay 183 out of 195 countries (where New Zealand and Australia are the most remote and the Netherlands, Great Britain, and Belgium are the least remote).

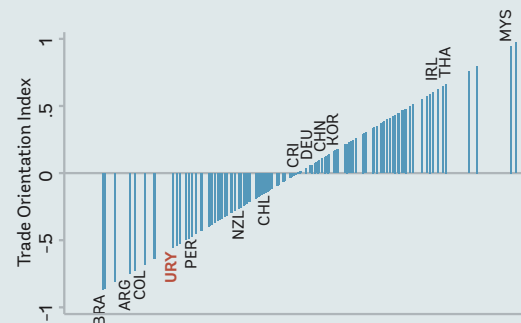
Latin American economies are generally poorly integrated into the global economy.

Given their geographic characteristics and the size of their markets, the trade orientation of most Latin American countries is at the bottom of the distribution, with some exceptions such as Panama or Costa Rica (just above the mean). Within South America, Chile is the most integrated and Brazil the least.

Uruguay appears at the bottom of the distribution even after controlling for its remoteness from the main world markets.

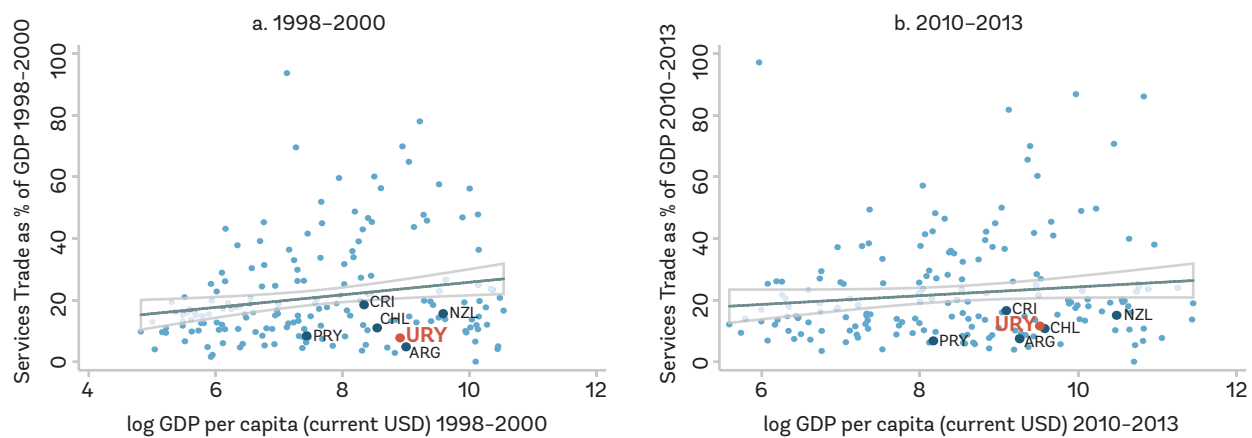
Indeed, it is distant from Chile or Costa Rica and only above Brazil, Argentina, and Colombia.

Figure 21. Trade Orientation Index - 2000–2013



Source: Authors' calculations.

Figure 22. Services Trade as a Share of GDP vs. Income level



Source: Authors' calculations based on data from the WDI. Note: The panels plot the relationship between trade openness (in services) and GDP per capita for all countries in the world. Relevant comparators are labeled. The curve shows the expected trade openness for a given per capita income. The gray band represents the 95 percent confidence interval. Countries above (below) the confidence interval are said to be more (less) open to international trade than what their economic development implies.

MERCOSUR's institutional structure, as determined by the Ouro Preto Protocol, which has been in force since December 1995, provides for two types of bodies categorized by the binding force of their acts:

- (a) Decision-making bodies produce binding decisions on the state parties and are (i) the Council of the Common Market (CMC), which acts essentially through decisions, is responsible for deepening the integration process, and achieving the objectives of the Treaty of Asunción; (ii) the Common Market Group (GMC), which acts through resolutions and is the executive body responsible for monitoring implementation of the Treaty of Asunción; and (iii) the Trade Commission (CCM), which issues directives and is entrusted with monitoring the application of common trade policy instruments and examining common trade policies related both to regional trade and trade with third parties.
- (b) The non-decision-making bodies are the MERCOSUR Parliament, the Economic and Social Advisory Forum, and the Secretariat.

MERCOSUR member states share a common external tariff (CET), which entered into force in 1995. Various exceptions have been allowed through decisions by the CMC. All MERCOSUR member states are currently authorized to have an exception list, although there are different provisions for each country. Decision CMC 56/10 established the creation of an ad hoc group to

examine the current CET structure and submit a proposal for the GMC's consideration in 2015. In the context of the global economic crisis, MERCOSUR member states were also authorized to increase their tariffs for up to 200 tariff lines until the end of 2014, within the World Trade Organization (WTO) bound rates. MERCOSUR's rules provide that none of the state parties may apply any trade policy measure independently to goods except in those sectors that are in the process of converging toward the customs union and those that have been granted a waiver from the general regime for extra- and/or intra-regional trade. Thus, since no common policy has been agreed on sugar, automotive vehicles, or spare parts; these sectors continue to be governed by national law (sugar) and bilateral agreements (automotive sector), according to the WTO (2012).

Through its participation in MERCOSUR, Uruguay has signed preferential trade agreements, including with countries of the Andean Community (Bolivia, Ecuador, Colombia and Peru) as well as with Chile and Cuba. Uruguay also has bilateral preference agreements with other member countries of the Latin American Integration Association (LAIA). Of these, the broadest in scope is the Free Trade Agreement (FTA) with Mexico, signed on November 15, 2003, which entered into force on July 15, 2004, following the adoption of Law No. 17.766 and covers almost all tariff headings except oil and motor vehicles. A partial scope agreement between MERCOSUR and India and an FTA with Israel has entered into force since 2006. Agreements have also been signed

between MERCOSUR and the Arab Republic of Egypt and between MERCOSUR and the Southern African Customs Union (SACU) but have not yet entered into force.

Tariff Structure

The simple average of bound tariffs are 31.5 percent as agreed with the WTO, whereas the simple average most favored nation (MFN) tariff is 10.5 percent, which is low for world standards, as shown in Table 2. The trade-weighted applied MFN average falls to 8.3 percent as products with lower tariffs tend to have a higher volume. Weighted average MFN applied for agricultural products is 11.7 percent whereas the average for nonagricultural products is 7.9 percent.

Uruguay's applied tariff has 11,345 lines (at the ten-digit level), with rates ranging from 0 percent to 35 percent. Table 3 summarizes the structure of tariff values for different ranges. For instance, only 8.7 percent of tariff lines for agricultural products have a zero-MFN tariff or are duty free, whereas 16.1 percent of tariff lines in nonagricultural products are duty free. Most of the tariff lines (56.4 percent) in agricultural products are between 5 percent and 10 percent. Around 38 percent of nonagricultural products are between 15 percent and 25 percent.

Some Evidence on Uruguay's gains in MERCOSUR

Existing literature is mixed about the gains that Uruguay accrued from being a member of MERCOSUR.

In general, positive effects have been reported that are not related to the customs union membership as such but rather to the process of economic integration in the region.

Moncarg and Vaillant (2010) observe how tariff preferences affected the origin of imports of MERCOSUR members, to shed light on whether MERCOSUR produced diversion of trade.

Diversion of trade happens when, in the context of a customs union, importers switch suppliers away from the lowest cost option due to the introduction of a preferential tariff rate applied to the previously less competitive supplier who is now part of the customs union. From a welfare point of view, trade diversion reduces welfare because it leaves the economy with less tariff revenue, and that loss is not fully matched by a reduction in production costs faced by the user of the imported good. Using a detailed database on intra-MERCOSUR tariffs, the authors show that tariff preferences did affect import patterns for Argentina and Uruguay, supporting the hypothesis that MERCOSUR produced trade diversion for these countries.

Table 2. Summary of Tariffs and Imports for Agricultural and Nonagricultural Products, 2013

Summary	Agricultural	Nonagricultural	TOTAL
Simple average final bound (%)	34.0	31.2	31.5
Simple average MFN applied (%)	9.9	10.6	10.5
Trade-weighted average. MFN applied (%)	11.7	7.9	8.3
Imports (billion US\$)	1.2	10.1	11.3

Source: WTO International Trade Center (ITC) UNCTAD - World Tariff Profiles 2014.

Table 3. Applied MFN Tariff Structure for Agricultural and Nonagricultural Products, 2013 (in percentages)

Frequency Distribution	Duty Free	0 < t ≤ 5	5 < t ≤ 10	10 < t ≤ 15	15 < t ≤ 25	25 < t ≤ 35
Agricultural products						
MFN applied (share in %)	8.7	7.4	56.4	13.1	13.5	0.9
Imports share	19.6	1.3	35.8	12.7	26.4	4.2
Nonagricultural products						
MFN applied (share in %)	16.1	17.5	12.3	15.4	38.2	0.5
Imports share	43.2	11.2	9.4	6.7	29.0	0.6

Source: WTO ITC UNCTAD - World Tariff Profiles 2014.



Box 2.

Challenges to Market Access: Benchmarking Uruguay Trade Compliance in the U.S. Market

Regardless of the type of preferential treatment, market access remains conditional to compliance with technical regulations in the destination country—the so-called non-tariff measures. The ability of exporters to comply with stringent regulations in developed countries is an indicator of their competitiveness in international markets. Employing information on border rejections in the U.S. market, this section benchmarks the ability of Uruguayan exporters to meet U.S. standards.

The Food, Drug, and Cosmetic Act (the Act) authorizes the U.S. Food and Drug Administration (FDA) to detain a regulated product that appears to be out of compliance with the Act when it is brought into the United States. The FDA district office will then issue a 'Notice of FDA Action' specifying the nature of the violation to the owner or the consignee. The owner or consignee is entitled to an informal hearing to provide testimony regarding the admissibility of the product. If the owner fails to submit evidence that the product is in compliance or fails to submit a plan to bring the product into compliance, FDA will issue another 'Notice of FDA Action' refusing admission to the product. The product then has to be exported or destroyed within 90 days. The FDA publishes the information of these products, which is used to compare how Uruguay's rejections compare to peer countries.

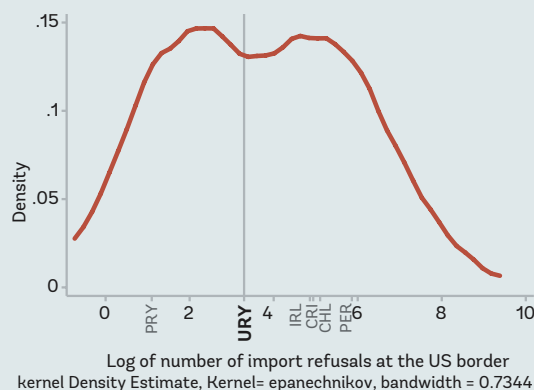
Uruguayan exporters experienced fewer rejections at the U.S. border than similar countries. Between 2012 and 2013, Uruguay experienced 27 rejections, which is below the mean of the distribution of rejections across all trading partners. Figure 23 identifies the position of Uruguay in the distribution of the number of import refusals, taking into account all products that are supervised by the FDA. Mostly all peer countries (with the exception of Paraguay) face a higher number of rejections. The location of peer countries in the distribution is shown on the X-axis.

The likelihood of inspections (and rejections) is a function of the number of shipments sent to the U.S. market. Therefore, the comparison of trade compliance must take into account the value of exports by individual partner countries. Figure 24 shows the distribution of the number of import rejections per US\$1 million of export value (unit rejection rate). According to this measure, Uruguay's position is not only above the mean of the distribution but is also higher than for other peer countries. In other words, Uruguay faces higher refusal rates per US\$1 million of exports to the United States than other peer countries. The apparent contradiction with the first analysis is explained by the fact that Uruguayan exports to the United States are of a much lower value than those of their peer countries.

Uruguay's rejections are concentrated in 14 products, with a heavy reliance on non-prescription sunglasses. During 2012–2013, seven consignments of sunglasses from two different exporters were rejected due to misbranding issues—specifically, because the lenses did not appear to be impact resistant or because the importer did not submit proof that the producers were registered under the ACT. Table 10 in the Appendix displays the details of all Uruguayan exports that were denied entry at the U.S. border by the FDA between 2012 and 2013.

Some agricultural products have also faced rejections due to misbranding, adulteration, or the use of forbidden pesticides. Different types of cheese, rice, and basil accounted for eight rejections over the period of analysis. These rejections affect five different exporters, suggesting that shipments from some firms have been rejected more than once. There is also one rejection of cigarettes and several rejections of medicines and medical utensils. Overall, the main reasons for rejections of Uruguayan products are misbranding issues (60 percent of refusals), adulteration of the product (16 percent), use of forbidden pesticides (14 percent), and unapproved new drugs (10 percent).

Figure 23. Distribution of Import Refusals at the U.S. Border (2012–2013)



Source: Authors' computations using FDA import refusal reports (<http://www.accessdata.fda.gov/scripts/importrefusals/>). Note: This figure shows the distribution of the logarithm of rejections at the U.S. border between 2012 and 2013. It includes all products that are supervised by the FDA across all trading partners.

Figure 24. Distribution of Unit Rejection Rates at the U.S. Border (2012–2013)



Source: Authors' computations using FDA import refusal reports (<http://www.accessdata.fda.gov/scripts/importrefusals/>) and COMTRADE data. Note: This figure shows the distribution of the logarithm of unit rejections rates at the U.S. border between 2012 and 2013. It includes all products that are supervised by the FDA across all trading partners.

Peluffo (2013) investigated dynamic gains from trade and looked at the impact of trade-related R&D spillovers from MERCOSUR, the North American Free Trade Agreement (NAFTA), and EU partners on the productivity of industries in Uruguay. International evidence shows that trade can be a powerful vehicle for the diffusion of knowledge. Looking at the case of Uruguay, the author finds evidence of trade-related technology diffusion from MERCOSUR partners to Uruguayan industries. The effects are significant in R&D-intensive industries, which have in turn higher absorptive capabilities. Instead, no trade-related R&D spillovers are found from the EU or the rest of the world on Uruguay's producers. It is hypothesized that the technological and geographical distance of the EU and the rest of the world from Uruguay's producers may reduce the scope for these spillovers to materialize.⁸

Nicita, Olarreaga, and Soloaga (2003) investigated whether the region served as an export platform to the world for MERCOSUR exporters. It has been argued that the region can serve as a 'classroom' for potential exporters, where they can learn 'how to export'. Through trade preferences, exporters accumulate experience and may build reputation to become reliable suppliers in world markets. The 'region as a platform'

argument, according to the authors, "assumes that there exists a positive externality between exports to the regional market today and future exports to more distant markets." If that is the case, some may advocate temporary regional trade preferences to encourage regional trade. The evidence that the authors present, however, suggests that while regional markets have helped Uruguay penetrate more distant markets, these effects are not due to the trade preferences, which, if anything, reduced the amount of informational spillovers that helped them penetrate more distant markets. For Argentina and Brazil, the regional market does not seem to be a generator of information spillovers. Regional markets, the authors conclude, can indeed be used as a platform for small country exporters, but regional tariff preferences do not necessarily enhance the role of the region as an export platform.

Patterns of Exports of Value Added

Examining patterns of exports on a value added basis rather than on a gross basis is crucial as international production networks increase in importance. Because exporting firms use imported intermediates in their production processes, data on gross exports tend to overstate the contribution of sales to the rest of the world to domestic economic activity. Thus, netting out imports of intermediate inputs and focusing on the value

⁸ For NAFTA, the author actually reports negative spillover effects on productivity of Uruguayan industries.

added of exports is essential. When looking at sectoral patterns, we need to account for the fact that some domestic sectors are inputs to other sector's exports, to gauge the 'true' contributions of different sectors to the exports of value added. This subsection looks at exports through the lens of value added, exploiting a novel dataset developed by the Bank (see Box 3 for details).

Overall Trends

During 1997–2011 Uruguay's gross exports of goods and services have grown faster than those measured in terms of value added (Figure 26). This suggests that imported intermediates embedded in Uruguayan export products have increased during that period. When focusing on the post-2002 crisis period and comparing export performance across comparator countries, Uruguay's exports of value added grew on par with gross exports and, at a rate of 17 percent per year, faster than those in value added of Argentina, Chile, Paraguay, or New Zealand (Figure 26).

Sectoral Composition of Exports of Value Added

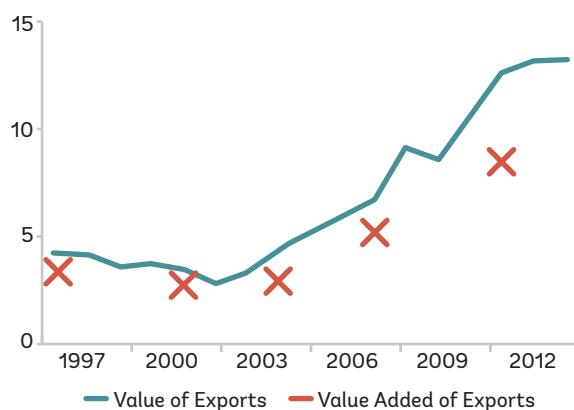
Services and agriculture play a larger role in exports of value added than in gross exports. The relative importance of different sectors in exports changes substantially when we net out the imports of intermediate inputs and focus on value addition (Figure 27). For example, the manufacturing sector accounted for more than half of Uruguay's gross exports in 2011,

while it contributed slightly more than one third of value-added in exports, either through direct exports, or through inputs embedded in the exports of services or agricultural products (forward linkages). In fact, the services sector is the one that contributes the most to the value added of exports, either directly, or through the services inputs embedded in the exports of other sectors (Figure 28).

Still, exports from the manufacturing and primary sectors have been increasing their share of value added in exports. Figure 27 also shows the evolution of exports in gross and in value added over time (unfortunately data on exports in value added are only available until 2011) and reveals that despite the services sector being the largest contributor to the value added of exports, its share of exports has lost about 10 percentage points while manufacturing gained 6 percentage points and the primary sectors 6 percentage points.

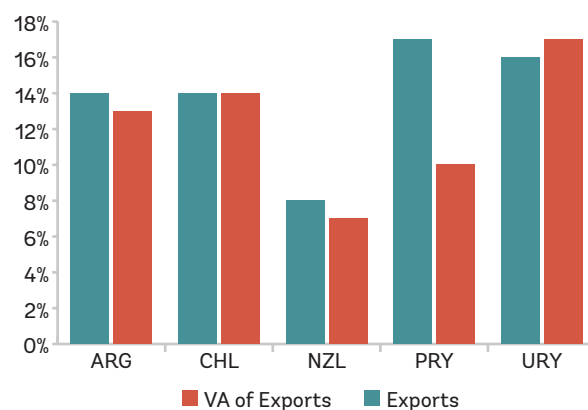
Primary agriculture experienced the highest growth rate of value added exports and it is also the subsector whose exports contribute the most to value added (Figure 27). The sector accounts for one-fifth of value added exports (average of 2004–2011), and its contribution to value added has grown at 24.1 percent per year during that period. The expansion, supported by a commodity boom, was greater than that experienced by other countries with similar natural resource endowments, such as Argentina (16.2 percent per year), Paraguay (14 percent per year), or New Zealand (4.6 percent per year). The value added of exports of

Figure 25. Evolution of Exports of Goods and Services in Gross and Value Added (US\$, billions)



Source: Authors' calculations based on data from the WDI and the World Bank Trade in Value-Added Database.

Figure 26. Growth of Exports, Gross and Value Added - Comparators (CAGR 2004–2011)



Source: Authors' calculations based on data from the WDI and the World Bank Trade in Value-Added Database.



Box 3.

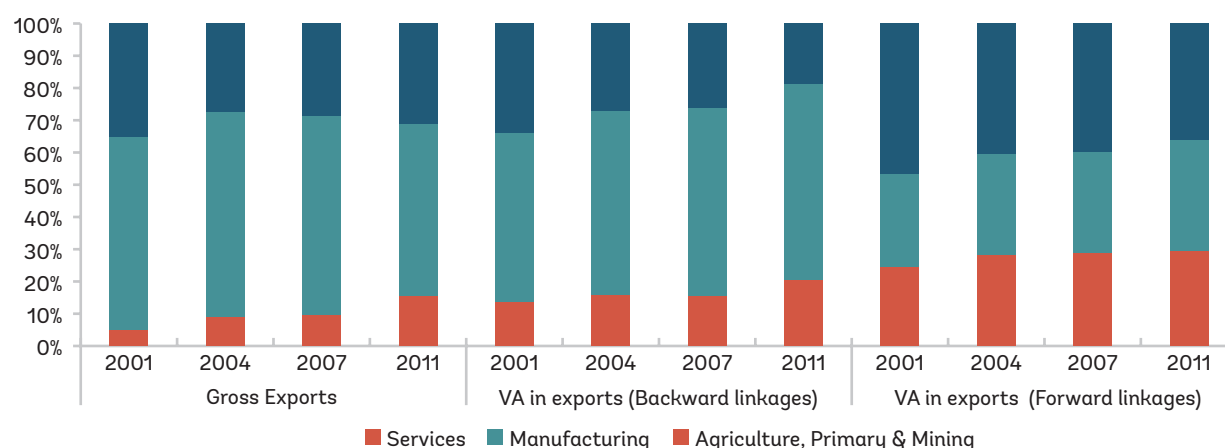
Measuring the Value Added in Exports

This section focuses on Uruguay's exports on a value added basis using the World Bank Export of Value Added Database (Francois 2013), both direct exports of services and indirect exports of services when used as inputs into other sectors' exports. The database uses input-output data from the Global Trade Analysis Project (GTAP) to construct country-specific measures of the direct and indirect contribution of services to the value added contained in a given country's domestic production and exports. Specifically, the dataset contains two matrices, a domestic value added table and an export value added table, which identifies the value added contribution of particular inputs to sectors that either sell the final good to the domestic market or export it. The sectoral coverage includes 27 sectors (9 commercial services sectors, 3 primary sectors, and 14 manufacturing sectors). The cross-country dataset covers about 100 countries spanning intermittent years from 1992 to 2011. We use data for Uruguay and its peer economies for 2004 and 2011 (the underlying input-output table for Uruguay is the latest available at GTAP - 1997).

The following measures are used for goods and service exports:

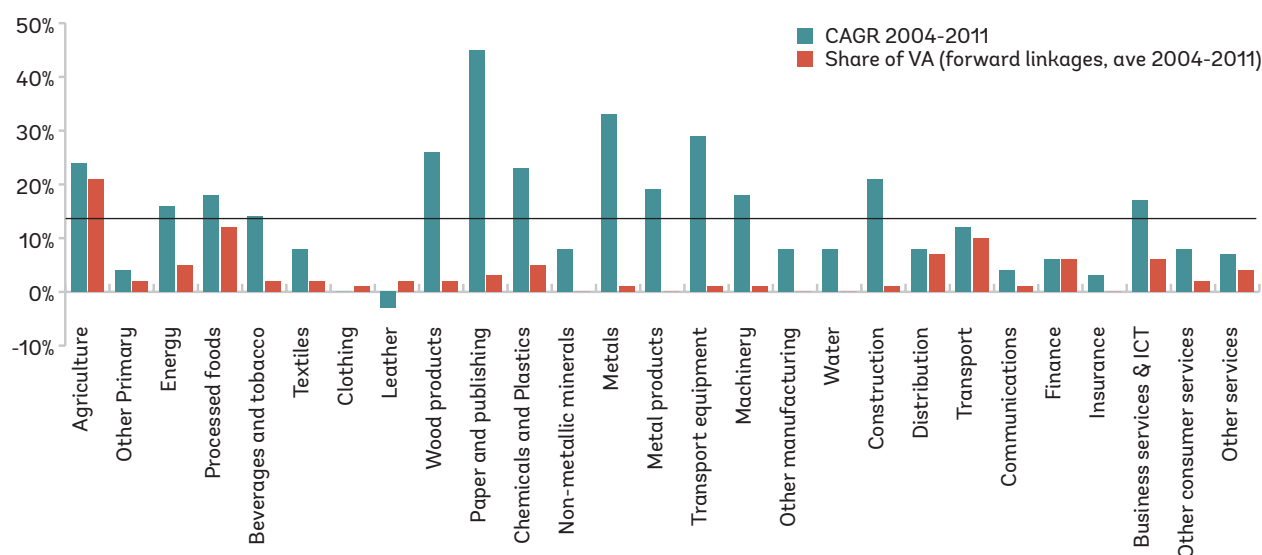
- **Gross exports:** Total value of exports. This captures both the value added embodied in the production of the export as well as all domestic and imported intermediate inputs. Gross measures of trade statistics are registered in customs or balance of payments, usually at the transaction value, that is, the price actually paid or payable for the goods and services. Transaction values measure the gross value of goods and services.
- **Direct value added of exports:** A sector's domestic value added embodied in its own exports, measured as gross exports less domestic and foreign inputs. This measure captures the true sector-specific value added of exports. This is increasingly important in an environment where global production is fragmented across production sharing networks. For example, a business process outsourcing (BPO) service from India contains telecommunication services, both from local providers and from foreign owners of satellites. The delivery price of the BPO service accounts for the cost of such inputs. This measure nets out domestic and foreign inputs and captures the true value added generated in the BPO sector in India.
- **Total value added of exports:** This measure adds to the direct value added of exports, the portion of the value added of the inputs that are produced domestically. To continue with the above example, the measure captures the value added of the BPO service plus the value of the domestic satellites used as input in the underlying telecommunication service (but not the value of the foreign-owned satellite input). This measure captures the full domestic component of an exported service. This in turn can be expressed in terms of forward and backward linkages.
- **Forward linkages:** The total value of a sector when considering the contribution of that particular sector as an input to other sectors' value added. This treats the particular sector as an upstream activity.
- **Backward linkages:** The total value of a sector when considering the contribution of all other sectors to that particular sector's value added. This treats the particular sector as a downstream activity.

Figure 27. Share in Total Exports by Main Sector, 2011



Source: Authors' calculations based on data from UNCTAD, UN Comtrade, and the World Bank Trade in Value Added Database.

Figure 28. CAGR of Value Added in Exports by Sector (Current US\$), 2004–11



Source: Authors' calculations based on data from the World Bank Trade in Value-Added Database. Note: CAGR = Compound Annual Growth Rate.

processed foods increased well above the average rate, as well as that of wood and wood products (mainly to free zones, due to increased demand for the production of cellulose pulp); paper and publishing; chemicals and plastics; metals and metal products; transport equipment and machinery.

In the service sector, ICT and other business services, value added exports have also expanded at an above average rate (Figure 28). During the period 2004–2011, these exports grew at 17 percent per year, well above the expansions experienced by this sector's exports in Argentina over the same period (14.3 percent

per year), Chile (6.6 percent per year), or Paraguay (8.6 percent per year). In 2011, the sector accounted for 5.4 percent of domestic value added embedded in Uruguayan exports, representing twice as much as the value added generated by textile, garments, and leather exports together.

Composition of Exports

The primary sector, which accounts for nearly 62 percent of all exports, continues to be the engine of export growth. Table 11 shows the evolution of export values by sector, their share in total exports, and the

indicators of revealed comparative advantage (RCA), for three sub-periods: 2000–2003, 2005–2008, and 2010–2013.⁹ Within the primary sector, agricultural-based exports (vegetables) show the highest growth, accounting for 30 percent of total merchandise exports in 2010–2013 (vs. 15 percent in the early 2000s). This segment experienced the most dynamic expansion in the last decade. In fact, the share of vegetable exports doubled between 2000 and 2013. Soybeans have been a key contributor to this surge, by virtue of both an increase in international prices and quantities exported, and have also introduced substantial technical change in the sector.¹⁰ Table 11 shows that during this period, Uruguay deepened its comparative advantage in vegetables products, with the RCA index for this segment almost doubling between 2001 and 2013.

The animal segment, particularly fresh and frozen bovine meat, continues to be the top exporting sector. Yet, the sector has lost ground in recent years to vegetables, as the relatively more fertile lands were devoted to more profitable crops such as soybeans and wheat. The share of animal products in total exports declined from 36 percent during 2005–2008 to 32 percent during 2010–2013.

The absolute value and share of wood products also expanded between 2000 and 2013. This segment was particularly dynamic during the 2005–2008 period, exhibiting a compound annual growth rate of 34 percent. About a third of wood exports (US\$200–250 million) are actually sold to firms operating in free zones. There, wood in the rough is transformed into chemical wood paste, which is then exported to other countries.¹¹

In contrast, traditionally important sectors such as skins and textiles dropped significantly in terms of

export value and share. The share of hides and skins, for instance, declined from 13 percent in 2000 to 3 percent in 2013. Similarly, the share of textiles in total exports fell by two-thirds during this period. This phenomenon is mostly explained by the consolidation of South East Asia as the main pole of production of such items, due to the considerable advantage of the region in labor-intensive industries such as apparel. These changes in international competitiveness are also reflected in marked erosion of Uruguay's RCA index in these sectors, particularly for hides and skins, which fell from 17.2 in the early 2000s to 5.6 by the end of the decade (Table 4).

Uruguay's top export products are strong performers in international markets, with some gaining world market share and others growing at the same rate as the world's exports. Figure 29a plots the annualized growth rate of Uruguay's top ten exports between 2003 and 2013 against the world's growth rate of exports of the same products during the same period. Products above the 45-degree line indicate that Uruguay has gained market share in this product as its exports have grown faster than world exports. Uruguay has substantially gained market share in wheat seeds (excluded from the figure because its growth rate of over 200 percent per year distorted the picture) and in soybeans, the most important export line. Demand for Uruguay's dairy products, particularly milk, cream, and cheese, and wood has also expanded faster than world exports of these products. Conversely, Uruguayan bovine leather appears to have lost market share in the past decade, as suggested by the dramatically declining share in total Uruguayan exports. Another one of Uruguay's main export products, bovine meat, has maintained international market share during this period.

As mentioned above, one of the most important export products in Uruguay's export basket is chemical wood pulp, which we do not observe in the dataset when looking at reported data by Uruguayan authorities since exports from free zones are not included. A way to partially address this data constraint is to look at 'mirror data' of exports. The mirror of Uruguayan exports to the world is the world's imports from Uruguay. By looking at mirror data, we can circumvent the problem of not having free zones as the rest of the world registers imports from Uruguay's free zones as

⁹ The RCA index is the ratio of a country's export share in a specific sector to the world share of that sector in total world exports. An RCA index above 1 indicates that the country's share of exports in a sector exceeds the global export share of that product and is thus a measure of its competitiveness. The RCA index is, of course, not free of criticism. In reality, trade patterns can be distorted by government policies and interventions, and thus not purely reflect the underlying comparative advantage of a given product or sector. The indicator should then be interpreted with caution, and complemented with other indicators, such as diversification of markets and measurements of export quality.

¹⁰ The volume of soybeans exported by Uruguay increased from around 27,000 tons in 2000 to 236,000 in 2013 in a similar fashion, the price of soybeans has increased from US\$193/ton in 2000 to US\$549/ton in 2013.

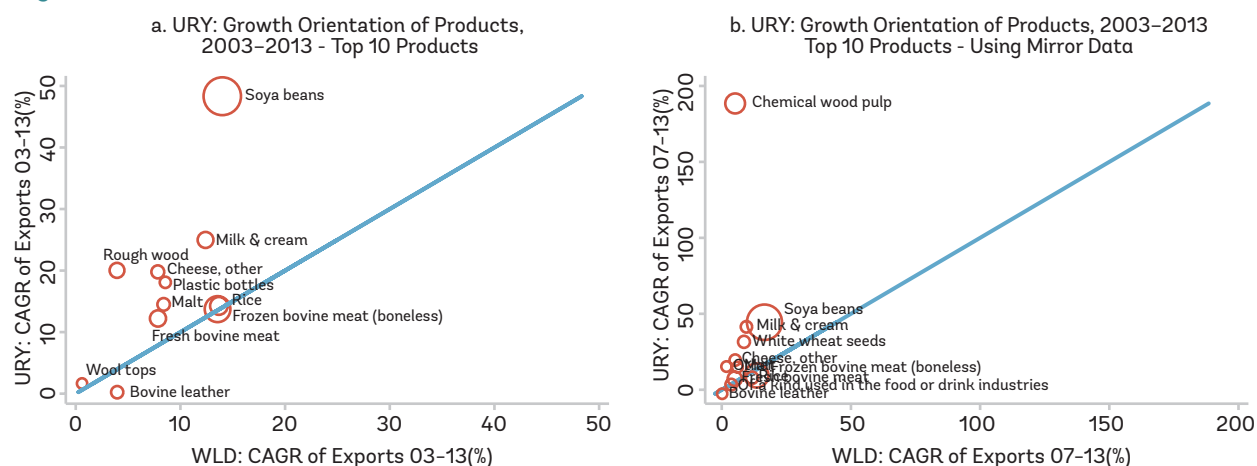
¹¹ In our dataset, free zones are considered to be a foreign territory, and therefore we do not have data on exports from the free zones to the rest of the world.

Table 4. Merchandise Exports: Sectoral Composition, Revealed Comparative Advantage, and Growth

	2000–2003				2005–2008				2010–2013			
	Value	Share in %	RCA	CAGR %	Value	Share in %	RCA	CAGR %	Value	Share in %	RCA	CAGR %
01–05 Animal	612,032	29	13.8	0	1,585,867	36	19.5	19	2,544,981	32	15.8	7
06–15 Vegetable	314,495	15	5.4	14	804,427	17	6.4	36	2,475,321	30	8.9	21
16–24 Foodstuffs	103,791	5	1.6	-8	144,858	3	1.2	1	218,154	3	0.9	0
25–27 Minerals	38,668	2	0.2	-7	187,845	4	0.3	8	117,869	2	0.1	-39
28–38 Chemicals	96,405	5	0.5	-4	222,430	5	0.5	28	427,233	5	0.6	11
39–40 Plastic / Rubber	93,709	4	1.1	3	231,379	5	1.2	20	417,371	5	1.1	8
41–43 Hides, Skins	264,853	13	17.2	1	313,484	7	12.7	1	275,868	3	5.6	9
44–49 Wood	117,520	6	1.5	0	317,180	7	2.4	34	608,708	8	3.1	3
50–63 Textiles, Clothing	243,632	12	2.0	-5	280,609	6	1.4	4	329,389	4	1.0	2
64–67 Footwear	5,001	0	0.3	-46	3,747	0	0.1	6	2,061	0	0.0	-20
68–71 Stone / Glass	38,438	2	0.6	-4	86,860	2	0.7	16	120,783	1	0.4	12
72–83 Metals	27,220	1	0.2	1	79,101	2	0.2	21	89,576	1	0.1	16
84–85 Mach/ Elec	26,486	1	0.0	-8	45,537	1	0.0	19	104,900	1	0.1	10
86–89 Transportation	93,504	4	0.4	-39	116,727	3	0.2	34	232,461	3	0.3	15
90–97 Miscellaneous	29,699	1	0.2	13	47,499	1	0.2	-5	122,825	1	0.3	24

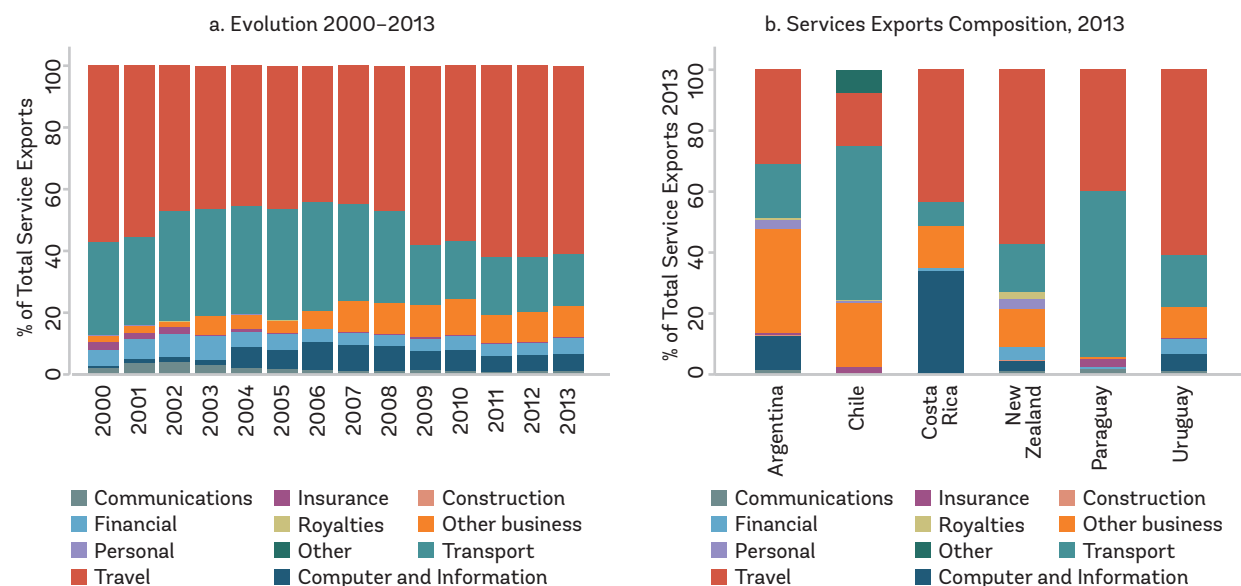
Source: Authors' calculations using data from WITS. Note: The RCA index is the ratio of a country's export share in a specific sector to the world share of that sector in total world exports. An RCA index above the unit indicates that the country's share of exports in that sector exceeds the global export share of the same sector in the same period. In such cases, we infer that the country has a comparative advantage in that sector. Export value is in thousands of U.S. dollars.

Figure 29. Growth Orientation of Products



Source: Authors' calculations using data from WITS (Panel a) and UN Comtrade (Panel b). Note: The y-axis shows the annualized growth rate of Uruguay's exports between 2003 and 2013. The x-axis shows the annualized growth rate of world exports during the same period. The size of each bubble indicates the importance of that product for the Uruguayan export basket.

Figure 30. Services Exports Composition (%)



Source: Authors' calculations based on data from UNCTAD. Note: Figures for 2013 are estimated.

if they were coming from Uruguayan territory.¹² Using mirror data, we replicate Figure 29a but are focused on the period 2007 to 2013. This is presented in Figure 29b and clearly shows chemical wood pulp as the product with the most significant gain in international market shares, with annual growth of exports close to 200 percent. The rest of the figure reveals a similar picture than that observed when looking at reported data and for the period 2003–2013.

Services

In terms of services, the most notable trend in the last decade is the considerable expansion of travel services exports, mainly at the expense of transportation services. Figure 30a shows that travel services, which accounted for more than half of total services exports in 2000, declined in relative importance after the 2002 crisis. However, the share of travel services in total services exports increased from less than 45.5 percent in 2002 to 61 percent in 2012. Conversely, transportation services lost significant ground in recent

years, diminishing its share from a high of 35 percent in 2007 to less than 17 percent in 2013.

The share of travel services in Uruguay's total services exports is higher than that of benchmark countries in the region, including other popular travel destinations like Costa Rica and Argentina (Figure 30b). Exports of computer and information services also increased in importance during the last decade, becoming the third most important exporting segment in 2013. While in Uruguay exports of computer and information services account for less than total services exports than in Costa Rica, they account for more than in Chile or Paraguay. Uruguay is better positioned than its regional peers in terms of financial services. In fact, the composition of Uruguay's services exports is more similar to New Zealand than to that of other Latin American countries.

Overall, Uruguay has substantially increased its competitiveness in travel, computer, and information services in the last decade. Table 5 reports the changing absolute values, export shares, and RCA of different types of services between 2002 and 2013. It shows a marked increase in the competitiveness of the travel services subsector during this period. In fact, the RCA index for travel increased from 1.55 in 2002 to 2.4 in 2013. Computer and information services saw their RCA almost doubled between 2002 and 2013, grounded

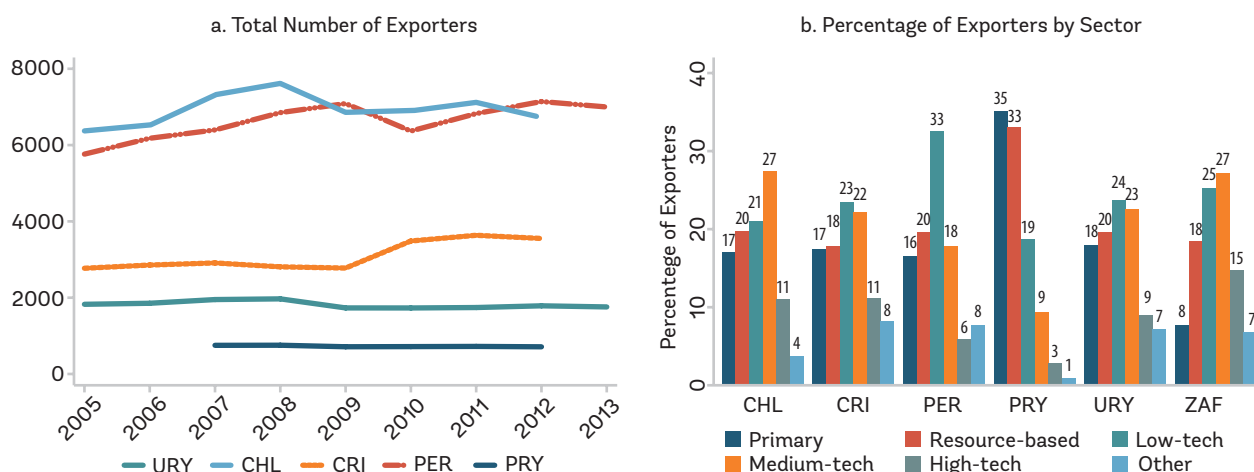
¹² There are other differences between mirror and reported data, which makes looking at mirror data unadvisable when reported data are available, the most important being that not all countries in the world report import data to UN Comtrade and if they do, they do not necessarily report it every year. In this way, not observing a flow between Uruguay and a developing country can be either indicative of zero bilateral trade or a country not reporting that flow for a particular year.

Table 5. Services Exports: Sectoral Composition, Revealed Comparative Advantage, and Growth

Category	2002			2007			2013			CAGR 2002–2007	CAGR 2007–2013
	Value	Share	RCA	Value	Share	RCA	Value	Share	RCA		
Communications	29.88	4.01	1.71	20.85	1.16	0.48	35.5	1.1	0.4	-7%	9.3%
Computer and information technology	13.77	1.85	0.50	153.61	8.52	1.87	179.1	5.7	0.9	62%	2.6%
Construction	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Financial services	54.15	7.27	1.16	70.91	3.93	0.45	158.5	5.0	0.7	6%	14%
Insurance	17.09	2.30	0.83	3.96	0.22	0.1	9.1	0.3	0.1	-25%	15%
Other business services	13.62	1.83	0.08	183.16	10.15	0.41	320.1	10.1	0.4	68%	10%
Personal, cultural, and recreation	0.19	0.03	0.03	0.02	0.01	0.01	0.4	0.01	0	1%	56%
Royalties and license fees	0.02	0.00	0.00	0.03	0	0	0.43	0.01	0	13%	56%
Transport	265.13	35.60	1.60	562.26	31.17	1.39	534.4	16.9	0.9	16%	-1%
Travel	350.91	47.12	1.55	808.89	44.84	1.75	1,920.3	60.8	2.4	18%	15%

Source: Authors' calculations based on data from UNCTAD. Note: Value in million current USD. Values from 2013 are estimated.

Figure 31. Number of Exporters by Sector



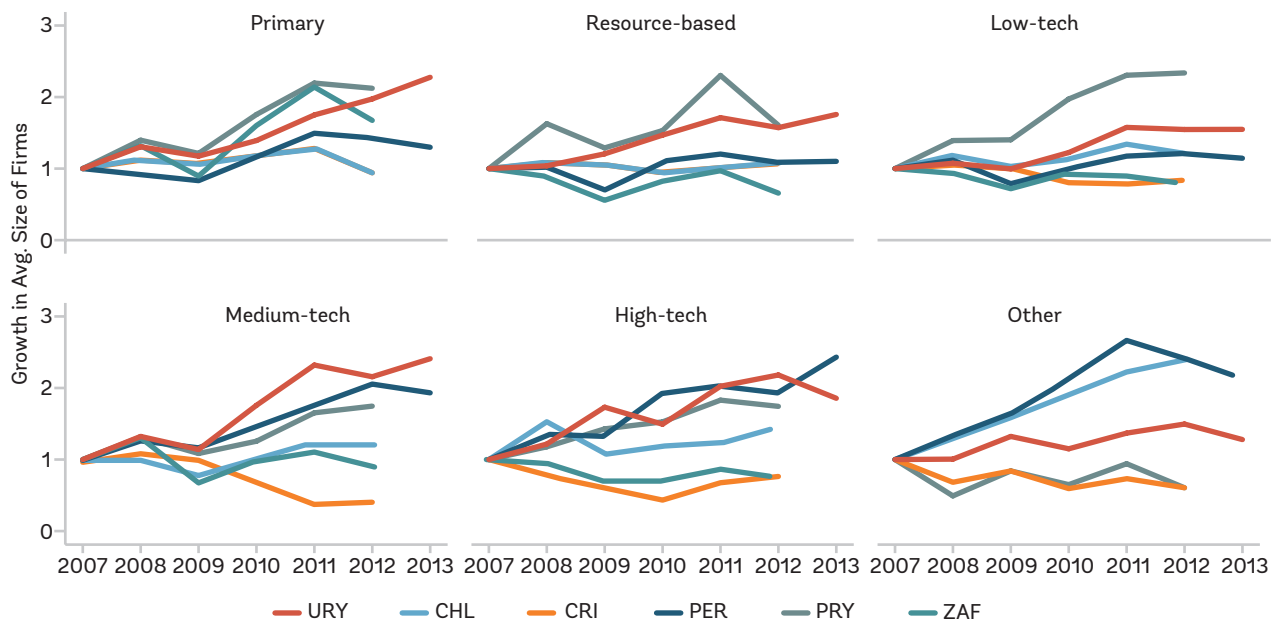
Source: Authors' calculations based on data from the Exporter Dynamics Database. Note: Panel B shows averages for the following periods: 2005–2013 for Uruguay and Peru; 2005–2012 for Chile, Costa Rica, and South Africa; and 2007–2012 for Paraguay.

in a solid increase of exports, at a rate of 62% per annum between 2002 and 2007, and continued growth (although at a lower rate) between 2007 and 2013. In contrast, financial services, which lost significant ground between 2002 and 2007, recovered in 2013. Transportation services consistently decreased in relevance and international competitiveness during the period under investigation.

Exporter Size Dynamics

Using the Exporter Dynamics Database, a rich new dataset in the universe of exporting firms collected by customs administrations, this section uncovers novel stylized facts on exporter competitiveness and dynamics in Uruguay. The analysis benchmarks Uruguay's exporters relative to regional comparators—

Figure 32. Growth in the Average Size of Exporters by Sector



Source: Authors' calculations based on data from the Exporter Dynamics Database.

Chile, Costa Rica, Peru, and Paraguay—and to South Africa, an economy that, although substantially larger than Uruguay, is similar in terms of economic development.¹³ All these countries are covered by the Exporter Dynamics Database.¹⁴ The analysis focuses on non-oil exports, breaking them down into six categories based on the widely used typology proposed by Lall (2000) to measure the technological content of a country's exports: primary goods, resource-based manufacturing, low-tech manufacturing, medium-tech manufacturing, high-tech manufacturing, and others.

The main message that emerges when looking at exporter-level data is that the merchandise export growth observed during 2007–2013 is mostly explained by some exporters getting larger rather than by a widespread increase in participation in export markets of new firms.

While Uruguay's non-oil exports doubled during 2007–2013, the number of exporters decreased during the same period. Panel A of Figure 31 shows that Uruguay has less than 2,000 exporting firms in any given year,

with that number slightly decreasing from 1,951 in 2007 to 1,758 in 2013. Costa Rica, Chile, Peru, and South Africa all have substantially larger numbers of exporters than Uruguay, but they are substantially more populous countries. Only Paraguay, a more populous, but less developed economy, with close to 725 exporters, trails behind Uruguay.¹⁵ More importantly, the number of exporting firms in all these countries increased between 2005 and 2012, whereas in Uruguay that number declined. Uruguay's exporter distribution across sectors in Panel B of Figure 31 resembles that of Chile and Costa Rica. On average, 37 percent of exporters in Uruguay export primary goods or resource-based manufacturing products, 46 percent export low-tech and medium-tech manufacturing products, and 10 percent export high-tech manufacturing products.¹⁶

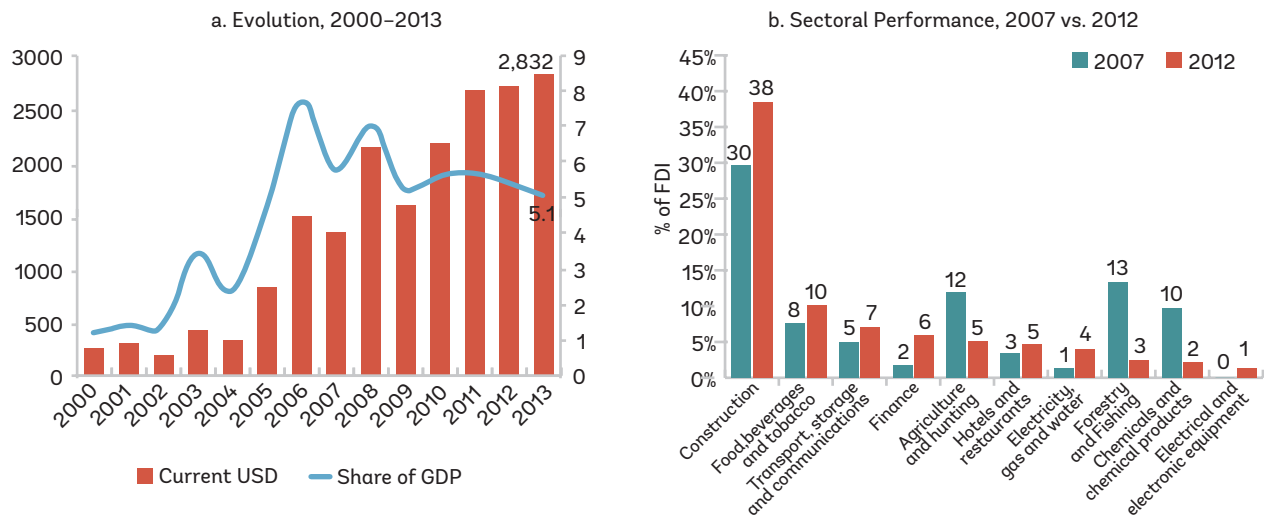
¹⁵ South Africa has 19,970 exporting firms in 2005 and 23,695 exporting firms in 2012 but is not shown in Panel A of Figure 31. Due to its much larger exporter base, its inclusion would make the graph unreadable for the other countries.

¹⁶ This analysis focuses on non-oil exports, breaking them down into six categories based on the widely used typology proposed by Lall (2000) to measure the technological content of a country's exports: primary goods, resource-based manufacturing, low-tech manufacturing, medium-tech manufacturing, high-tech manufacturing, and others. The typology was built from available indicators of technological activity in manufacturing and his own knowledge of industrial technology. It conforms to most analysts' conception of the technological ranking of manufactured products. Lall's definition of the six groups of sectors was based on products defined at the 3-digit Standard International Trade Classification

¹³ These results are taken from the complementary study by Ferro and Fernandes (2015). In contrast to the rest of the analysis, here export flows from *Zonas Francas* are accounted for.

¹⁴ The choice of comparators when examining exporter-level customs data is constrained by data availability.

Figure 33. FDI Net Inward Flows to Uruguay



Source: Authors' calculations based on data from WITS. Note: The figure presents the evolution of the net FDI inflows to Uruguay in current U.S. dollars and as a share of the GDP.

Source: Author's calculations based on data from ICT. Note: The figure presents the share of the net inward FDI flow by sector.

Uruguay's fast export growth is explained by an explosion in exporter size during 2007–2013, which doubled in the primary goods, medium-tech, and high-tech manufacturing sectors. Figure 32 shows a very clear growing trend in the size of Uruguayan exporters in every sector. In the primary goods and medium-tech manufacturing sectors, the average size of exporters more than doubled during 2007–2013. Also, during 2011–2013, the average size of exporters in the primary goods sector grew in Uruguay as the size of exporters in benchmark countries contracted. The size of Uruguay's exporters in the medium-tech manufacturing sector grew slightly faster than Peru's, with both countries exhibiting the highest growth rates of average exporter size in that sector. In the high-tech manufacturing sector, the average size of exporters also doubled in Uruguay but declined significantly in 2012–2013. Finally, in the resource-based manufacturing and low-tech manufacturing sectors, the average size of exporters grew by more than 50 percent during the same period in Uruguay. However, the average size of exporters in the primary goods, resource-based manufacturing, and low-tech manufacturing sectors grew faster in Paraguay than in Uruguay.

of Commodities (SITC) rev. 2 level. We use a concordance between that level of disaggregation and the 6-digit Harmonized System (HS) level in order to define the groups of sectors based on our exporter-level customs data.

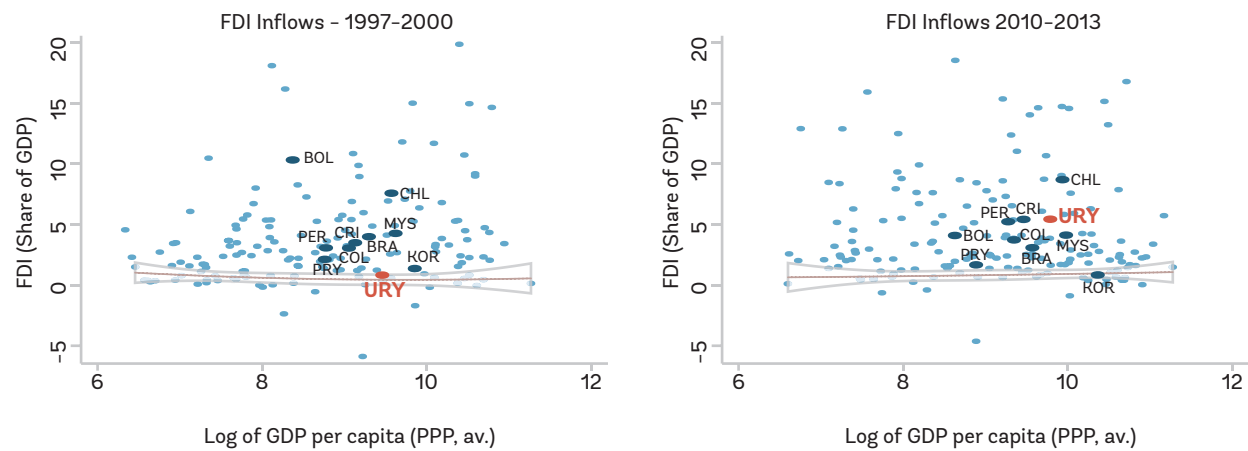
Foreign Direct Investment

In a world of regional and international production networks, trade and investment are inextricably linked. Given the right conditions, FDI inflows have been found to be typically associated with technology and knowledge spillovers, with improvements in export quality and increase in diversification. How has Uruguay performed in attracting FDI?

Uruguay has positioned itself as an attractive investment destination, with FDI flows soaring in the past few years. After hitting the lowest point during the 2002 crisis, FDI flows have shown a remarkable and relatively steady growth. More precisely, the investment value went from US\$270 million in 2000 to US\$2.830 million in 2013, with a corresponding increase in its GDP share from 1.2 percent to 5.1 percent (Figure 33a). Although this trend was disrupted by the global crisis when inflow dropped around 25 percent between 2008 and 2009, the recovery was swift. Pre-crisis levels were achieved in just one year and inflows have been growing steadily ever since, reaching an all-time high in 2013.

Construction, foodstuffs, and electricity gas and water are among the sectors with the highest share of FDI inflows between 2007 and 2012 (Figure 33b). In the first case, the investment mostly from Argentinian origin focuses on the luxury segment in Montevideo and Punta del Este through the development of condominiums. In a

Figure 34. FDI as a Share of GDP vs. Income Levels



Source: Authors' calculations using data from UNCTAD and the WDI. Note: The panels plot the relationship between FDI as a share of GDP and GDP per capita for all countries in the world. Relevant comparators are labeled. The curve shows the expected level of FDI for a given per capita income. The white band represents the 95 percent confidence interval. Countries above (below) the confidence interval are said to be more (less) open to FDI than what their economic development implies.

similar fashion, the presence of the largest global grain processors and traders such as ADM, Cargill, and Louis Dreyfus has contributed to the performance on the foodstuffs segment, while the energy segment has seen investment for the development of wind farms under the supervision of the Spanish firm TEYMA. Finally, it is also worth noting that although the forestry segment is presently contracting, it has played a key role in the trend of Uruguayan FDI expansion in the last decade, especially with the Montes del Plata pulp mill.¹⁷

In fact, the growing trend has been strong enough to position the country as a top regional performer. Even after taking into account that Latin American countries are faring quite well in terms of FDI attraction,¹⁸ the Uruguayan performance is outstanding (Figure 34). A comparison of FDI inflows as percentage of the GDP during 2010–2013 positions Uruguay (5.1 percent) as the second most important destination only surpassed by Chile (7.3 percent) among the set of chosen comparators, having a big, strong lead against countries such as Brazil (2.9 percent) and Mexico (2.8 percent) and contrasts with its own performance in attracting FDI during 1997–2000, which was just at the average.

The private sector has pointed to the investment attraction strategy as an important ingredient in

¹⁷ Source: Uruguay XXI, National investment and export promotion agency.

¹⁸ The regional growth for 2012–2013 was 17.5 percent while the global growth rate for the same period was 10.9 percent (UNCTAD).

this role of Uruguay as a top performer. When we asked managers from foreign firms that had recently set up shop in Uruguay their opinion of the investment attraction infrastructure in place, one of the salient elements of their answers was related to consistency in the message received about institutions and the rule of law in the country. For example, managers were impressed with the fact that different players (Uruguay XXI, Ministry of Finance, Private Consultancy firms, and so on) conveyed the same messages about the country's fiscal position, the development strategy, and, more generally, about the advantages and disadvantages of investing in Uruguay. They also praised the professionalism of the different government officials conducting the promotion/attraction-related activities.

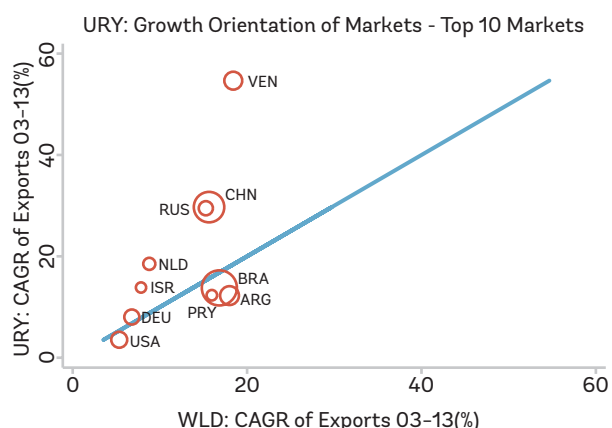
Strengthening after-care services is crucial to help foreign firms navigate the Uruguayan system. Once firms set up shop in Uruguay, there are a number of regulations with which they need to comply and compliance is not always transparent, as indicated by some of the managers interviewed. For foreign workers, for example, obtaining residency and moving freely in and out of borders appears to be problematic, adding often unnecessary burdens and costs for them. After-care services to help in navigating the system in the short run and streamlining some of these regulations—particularly those related to travel permits for foreigners in the process of obtaining residency—should be considered.

Table 6. Most Important Destinations

Average 2001-2004		Average 2005-2008		Average 2009-2012		2013	
Market	Share	Market	Share	Market	Share	Market	Share
Brazil	15.6	Brazil	11.2	Brazil	15.8	China	21.7
USA	10.1	USA	8.1	China	12.9	Brazil	15.6
Argentina	6.4	Argentina	7.2	Argentina	5.1	Argentina	4.4
Germany	4.5	China	5.4	Germany	5.0	Germany	4.4
Italy	3.3	Germany	4.6	Russia	3.5	USA	3.9
Spain	3.2	Mexico	4.5	Venezuela	3.0	Russia	2.9
Mexico	3.1	Spain	3.0	USA	2.9	Mexico	2.5
China	2.7	Russia	2.6	Mexico	2.6	Italy	2.2
UK	2.7	UK	2.4	UK	2.0	Netherlands	2.2
Canada	2.4	Chile	2.3	Spain	2.0	Egypt	2.0
	54.1		51.4		54.8		61.7

Source: Authors' computations using data from WITS.

Figure 35. Growth Orientation of Trading Partners, 2003–2013



Source: Authors' computations using data from WITS. Note: The y-axis shows the annualized growth rate of Uruguayan exports to each market between 2003 and 2013. The x-axis shows the annualized growth rate of world exports during the same period. The size of each bubble indicates the importance of that market for the Uruguayan export basket.

Trading Partners

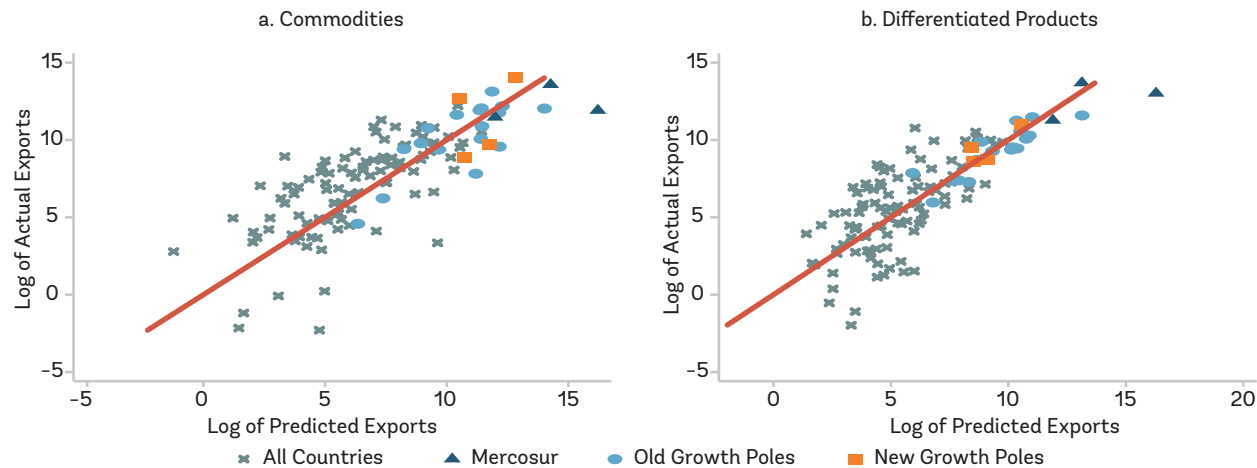
The structure of destinations of Uruguay's merchandise exports changed significantly between 2001 and 2013. Table 6 reveals that, although Brazil is still a key destination for Uruguayan exports, with a relatively stable share, it was recently displaced from the top position. Argentina, another neighboring country and MERCOSUR partner, has also slightly decreased in relevance as an export destination. Traditional destinations such as the United States and some

European countries have also lost ground. Exports to the United States, for instance, fell from a share of 10.1 percent at the beginning of the decade to 3.9 percent in 2013. A similar but less pronounced tendency has affected exports to Italy, Spain, and the United Kingdom.

The decrease in relevance by MERCOSUR partners and other traditional markets like the United States and Europe has been compensated primarily by a sharp increase in exports to China (from 2.7 percent to 21.7 percent) and an incipient process of penetration of new markets. Russia, which was not a top destination in the early 2000s, became the eighth main export market during 2005–2008 and the fifth during 2009–2012. The appearance of Venezuela and Egypt among the top ten export destinations, in the more recent period also exemplifies this new trend of diversification towards new markets.

The destination churning is also evident in Figure 35 which shows the growth concentration of Uruguay's exports in terms of markets. In this figure, observations above the 45-degree line correspond to destinations in which Uruguay has gained market share relative to other countries during the period 2003–2013. This data confirms that Uruguay has significantly diversified its export destinations, increasing its market share in markets such as Venezuela (now a member of MERCOSUR), Russia, China, and Israel. The country has also expanded its presence in European countries, particularly Germany and the Netherlands. However,

Figure 36. Benchmarking Bilateral Trade Relationships in Uruguay Using a Gravity Model (Average 2010–2012)



Source: Authors' calculations using data from the WITS and WDI. Note: The figure shows the gravity-predicted exports versus the actual exports levels from 2010–2012 and a 45-degree line (in red). Any observation above (below) the 45-degree line (lower) means that Uruguayan exports to the country are above (below) their 'gravity' potential. The panels' separation helps discern different patterns by type of product: commodities versus differentiated products.

traditional destinations, including MERCOSUR partners Argentina, Brazil, and Paraguay, and the United States fall under the 45-degree line, suggesting a loss of Uruguay's market share. Uruguayan exports to these markets have lagged behind the expansion of world exports to these destinations.

How 'Natural' Are Export Destinations?

Generally, Uruguay's bilateral trade relationships perform above or roughly in line with their potential.

After exploring the composition and market distribution of Uruguayan exports, the next step is to evaluate how 'natural' those partners are. To shed light on this issue, we employ gravity estimates to benchmark Uruguay's observed bilateral exports relative to 'potential' exports to each country, controlling for distance, economic size, and culture-related variables, among others. Overall, the country has a relatively good performance, over-trading with a large subset of the countries included in the analysis. As Figure 36 shows, in the case of commodities, the majority of observations lie above the red line. While considering differentiated products instead, Uruguay under-trades with roughly half of considered partners.

A more detailed look reveals that Uruguay's trade strategy is in sync with new global trends, although there is still untapped potential in traditional and regional markets. A country-by-country analysis of observed versus potential exports shows a proclivity toward trading with new growth poles, mostly at the

expense of the United States. While China and Russia have coefficients of 0.44 and 1.08 respectively, that of the United States is -1.56 (Table 7). This trend is observed in both the differentiated products and commodities segments. In fact, the shift away from old growth poles is particularly pronounced in the case of commodities, which show substantial under-trading with Japan. In contrast, the commercial relationship with Europe falls within the gravity-predicted range in both cases.

Uruguay is also trading below its potential with Canada and with some large markets in South-America. In particular, the Uruguayan exports to Brazil, Argentina, and Chile are well below the benchmark. It is worth mentioning that ad hoc barriers to trading across borders with Argentina and Brazil may be driving this results. These results are useful to guide existing export promotion efforts to help firms diversify their export bundles along the destination dimension.

How Can Uruguay Consolidate Export Growth?

To what extent can Uruguay maintain these fast growth rates in merchandise and services exports in the medium to the long term? With food prices declining, and the global economy decelerating, aggressively increasing competitiveness appears as one of the only strategies to ensure that the external sector continues to be a source of growth for Uruguayan firms.



Box 4.

Benchmarking Bilateral Export Relationships using a Gravity Model of Trade

We use a theory-grounded gravity model to evaluate pair-wise export relationships for Uruguay with its trading partners. The gravity model has been extensively used in international trade due to its intuitive empirical and theoretical appeal. Anderson and van Wincoop (2003), Feenstra (2004), and Baldwin and Taglioni (2006), among others, present exhaustive literature reviews on the gravity equation as applied to international trade. Our specification of the gravity model follows the micro-founded model of Helpman, Melitz, and Rubinstein (2008).

Specifically, for merchandise trade, we regress the log of 2005–2011 total bilateral exports among 213 countries on the following bilateral characteristics: distance, contiguity, common language, colony, common colonial power, log of GDP, log of GDP per capita, and time-invariant exporter and importer fixed effects. The model is run separately for commodities¹⁹ and for differentiated products. The characterization of Rauch (1999) is employed to identify differentiated products. The model incorporates three main components. First, a measure of remoteness is computed by summing distances weighted by the share of GDP of the destination in world GDP. This is to take

note of the fact that relative distances matter greatly, alongside absolute distances. Second, we control for zero trade flows with the use of Heckman sample selection correction method. When observations with nonexistent bilateral trade are dropped, as Ordinary Least Squares (OLS) does, our dependent variable is not really measuring bilateral trade but one contingent on a relationship existing. An important variable left out of the model, therefore, is the probability of being included in the sample that is having a non-zero trade flow. To the extent that the probability of selection is correlated with GDP or distance, this has the potential to bias OLS estimates. Third, we control for firm heterogeneity without using firm-level data using the fact that the features of marginal exporters can be inferred from the export destinations reached. With these steps, the gravity results are better grounded on modern trade theory.

The coefficients in Table 7 show the log difference between the observed bilateral export value and the expected value predicted by the gravity model. Red (green) cells indicate under-trading relationships, indicating that the observed value is smaller (larger) than what is predicted by the econometric model.

Source: Authors' elaboration.

Fieldwork conducted for this report identified a number of horizontal challenges that firms face.

1. Energy costs are high by international standards.

Diesel prices at the pump, for example, are the highest in the continent.²⁰ The public sector has engaged in important mega projects on energy development and efficiency with important fixed costs, and it is not clear whether demand will exist for the extra energy produced and how these costs will affect the prices.

¹⁹ The model does not control for preferential trade agreements between pairs of countries. Methodologically, preferential trade agreements are likely endogenous to the trade patterns. That is, the probability of signing a free trade agreement between a pair of countries is affected by the amount of trade between them. For this reason, that variable was left out of the model.

²⁰ Source: German Agency for International Cooperation, GIZ.

2. Infrastructure. With merchandise exports quadrupling during 2000–2013, road infrastructure has been under severe strain. Yet, the investments in infrastructure have not matched the wear and tear. The road system that concentrates traffic through Montevideo is a constraint for activities in which location of production and raw materials are geographically separated. For example, a reduction in transport costs of wood from Cerro Largo (center-east) to the cellulose producing plants located in the southwest of the country would reduce production costs substantially for these firms. This is because these firms could further develop their forestry operations in Cerro Largo instead of in the more fertile (and therefore more expensive) lands in the southwest, which would be allocated to more efficient use.

Table 7. Uruguay: Over-Trading and Under-Trading Export Relationships

	Differentiated Products	Commodities		Differentiated Products	Commodities
Mercosur			Rest of America		
Argentina	-3.28	-4.31	Canada	-1.93	-0.34
Brazil	-0.62	-0.70	Chile	-0.91	-1.34
Paraguay	0.55	-0.52	Peru	0.12	0.22
			Mexico	0.46	1.31
Old Growth Poles			Bolivia	0.61	-0.80
United States	-1.56	-1.98	Colombia	0.63	-0.76
Europe-27	-0.14	0.11	Ecuador	1.13	-1.24
Japan	0.90	-2.61	Costa Rica	1.32	-1.27
			Panama	2.29	-0.08
New Growth Poles			Venezuela	2.37	2.03
India	-0.37	-2.03	Nicaragua	2.74	-0.88
Indonesia	0.11	-1.87	Guatemala	3.74	-1.87
China	0.44	1.20	El Salvador	4.37	-1.16
Russia	1.08	2.20			

Source: Authors' calculations using data from WITS. Note: The table presents the gravity-predicted coefficients by type of product—commodities versus differentiated—for selected countries, including regional peers and key global players named Growth Poles. A positive (negative) coefficient indicates over (under) trading and its magnitude reflects the size of the deviation from the predicted value.

However, the poor condition of Route 26 (linking Melo with Paysandu) increases costs substantially. It was reported that while trucks in Finland have the capacity to transport up to 100 tons per trip, in Uruguay, due to poor infrastructure, they can load only 30 tons per trip. With high diesel prices, this increases costs substantially.

The infrastructure for fluvial and sea transport is also a challenge. Taking again the example of the wood-forestry sector, with costs being up to four times cheaper per ton transported, fluvial transport is crucial to keep production costs down. The challenges identified in this area are related to the depth of sea/ rivers in the vicinity of the ports, which prevents access of larger boats/ships, and the size of the ports. For example, the Panamax that would typically load 60–65 tons can only load 40 tons and then completes the load elsewhere (typically in Necochea, Argentina). Montevideo's port is in the process of expansion (the third quay has been recently inaugurated), but it is still congested, keeping ships waiting up to a week to park.

On the positive side, customs procedures are streamlined and transparent, and clearance is speedier than in other countries in the region.

3. Labor market rigidities. Firms have expressed concerns about labor market conditions. In particular, collective bargaining has been repeatedly brought up as a challenge due to heterogeneities that firms exhibit within a sector where the negotiations take place. In addition, labor market conflicts have been identified as a constraint for operations and productivity upgrading. Conflict, in particular, increases the firm's uncertainty about output flows and reducing the incentive for firms to move into higher value added or relatively more labor-intensive activities. In fact, firms have reported to be automatizing processes and substituting labor for capital as much as it is technologically possible.

Beyond the reported anecdotal evidence, there is, to the best of our knowledge, no formal study of the impact of labor market conditions on firms' performance or competitiveness is available for the case of Uruguay.



Diversification

Uruguay's export structure, in which specific products carry a heavy weight, such as soybeans, beef, rice, or wheat, is particularly vulnerable to shocks. Diversifying exports across markets and products reduces the risk in the country's export portfolio to partner-specific shocks and volatility in export prices. As shown by Haddad et al. (2011), the effect of openness on output volatility, for example, depends on the degree to which a country's export basket is diversified. This section looks at Uruguay's performance in terms of diversification along the product and destination dimensions.

Number of Products and Markets

Two useful indicators of a country's diversification are the number of product varieties exported in a period and the number of markets reached by these products. Figure 37a and Figure 37b present these two indicators for Uruguay and comparators between 2000 and 2013.

Uruguay's level of diversification in terms of products exported and of destinations reached has increased since 2000. Figure 37a shows that the number of products exported is below all benchmark countries except Paraguay. However, Uruguay has also expanded its export product scope during this period. In 2013, for example, Uruguay exported 606 product varieties compared to 411 exported in 2002. Moreover, along the destination dimension, Uruguay has increased the number of export markets served quite impressively (Figure 37b). Uruguay has outperformed Costa Rica and Paraguay in this regard and has converged to the number of destinations reached by substantially larger economies such as Chile and Argentina.

Concentration

While looking at the number of products exported and the destinations reached is useful to assess the extent to which a country is diversified, these indicators have limitations. Consider, for instance, two countries—one that exports to 100 destinations but only one of these markets concentrates 90 percent of total exports and another one that spreads its exports among 100 destinations with equal share. The former is much more concentrated than the latter. The Hirschman-Herfindahl Index (HHI) allows comparing export concentration of two or more countries that may be equal in terms of number of products (or markets) but may vary in

terms of concentration.²¹ Figure 38a shows the HHI for products and Figure 38b shows the HHI for market destinations for the period 2000–2013.

The concentration of Uruguay's export basket has increased along the product dimension but has decreased in terms of markets served. Figure 38 shows that although concentration has increased over the years, with the soybeans and wheat export booms, Uruguay's exports are relatively diversified in terms of products. Uruguay outperforms some of its peer countries, such as Costa Rica, Paraguay, and Chile, which are significantly more concentrated in terms of export basket composition. The increase in concentration, moreover, appears to be a trend shared by all benchmark countries as most (with the exception of Costa Rica) are natural-resource rich and their export patterns were affected by the commodity price boom. Regarding destinations, Uruguay was relatively concentrated compared to benchmark countries in the period 1998–2000 but has recently experienced a reduction in its HHI (Figure 38b). Uruguay's average HHI value (0.08) for 2011–2013 is quite low when compared to Costa Rica's (0.16) and Chile's (0.09).

An alternative way to measure concentration is to look at the share of export value accounted for by the top five products exported or by the top five markets served. When compared with other resource-rich countries, Uruguay's export revenues are not extremely concentrated in the top five products, as can be seen in Figure 39a. Indeed, during 2011–2013, the top five export products accounted for 39 percent of export revenues. This is lower when compared to the levels of concentration of Chile (56 percent), Costa Rica (42 percent), or Paraguay (73 percent). However, the comparison across periods reveals an increase in concentration—again consistent with the commodity boom and the increases in land productivity experienced during the period of analysis that resulted in high growth rates of the main export products. For example, during 1998–2000, Uruguay's top five products accounted for only 28 percent of the exports. In contrast, concentration remained relatively stable when looking at the top five destinations (although as mentioned, these top five destinations changed during the period). As Figure 39b

²¹ The HHI is computed as the sum of squared shares of each product (market) in total export. A country with a perfectly diversified export portfolio will have an index close to 0, whereas a country with only one export (market) will have a value of 1 (least diversified).

Figure 37. Number of Export Destinations and Exported Products

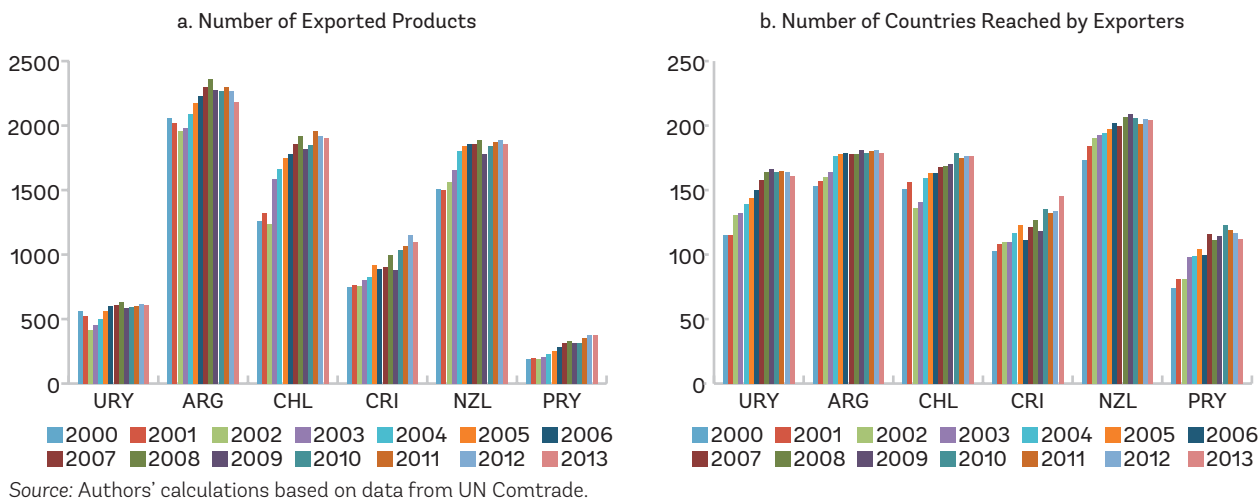


Figure 38. Concentration of Products and Markets

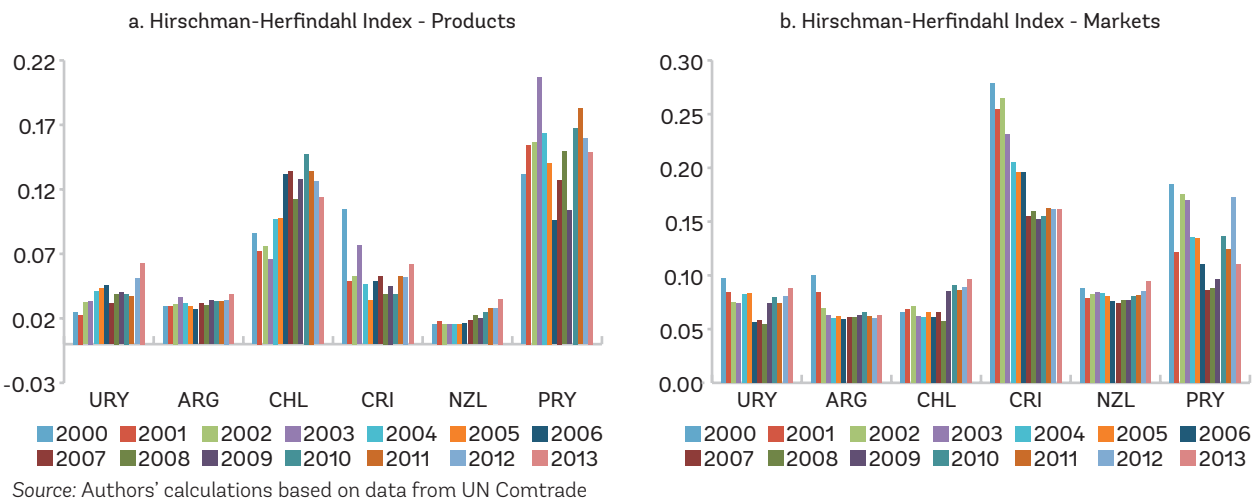
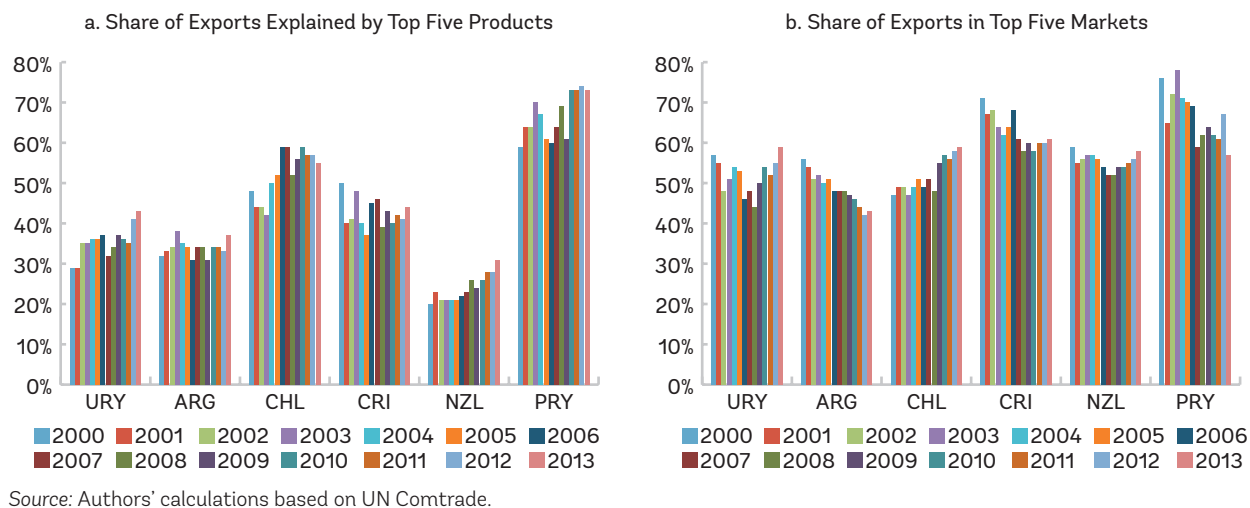


Figure 39. Share of Top Five Products and Markets



shows, the top five markets absorbed 60 percent of export revenues during 1998–2000 while they absorbed 56 percent during 2011–2013.

Export Diversification by Sector

The process of destination diversification has reached most sectors although there are substantial differences in market reach. Sectors in which Uruguay has a clear revealed comparative advantage show the highest destination scope. For example, Uruguayan animal products reached over 110 destinations in 2013, up from less than 80 in 2000. Similarly, vegetable products, foodstuffs, and chemicals are exported to almost 100 destinations. Other types of products such as minerals or footwear have actually reduced their destination scope from an already low base.

Where Are Different Types of Export Products Being Sold?

To complement Figure 40, Figure 41 shows the evolution of export destinations by sector. Machinery and equipment, transport equipment, metals, plastics, and rubber exports are almost entirely dependent on MERCOSUR trading partners, and this has not changed during the last 15 years. Conversely, exports of vegetables, foodstuffs, and chemicals have shifted destinations away from MERCOSUR. Hides and skins exports have remained as an ‘extra-region’ export product.

Intensive and Extensive Margins of Exports

The analysis above shows that Uruguayan exporters have increased their destination scope substantially while they have increased their product scope only mildly and that concentration at the product level increased due to the export boom of select commodities. How

have these factors played in explaining the observed export growth?

Diversification along the market dimension has played an important role in Uruguay’s export growth performance over the last 15 years. Table 8 shows Uruguay’s export growth divided into the margins of trade for two periods, 2003–2008 and 2010–2013. This division shows the portion of export growth explained by increased sales of the same products to the same markets (intensive margin of export growth) and the portion explained by increased sales of the same products to new markets, new products to the same markets, or new products to new markets (the latter three categories being the extensive margin of export growth). During 2003–2008, 67 percent of total export growth was explained by more sales of the same products to the same destinations. Only 2 percent of growth resulted from selling new products in old markets. More significantly, 31 percent of export growth is explained by diversification along the market destination, that is, more exports of the same products to new markets. In the more recent period, the importance of market diversification increased, accounting for 53 percent of export growth while diversification along the product dimension explained 6 percent. The remaining 41 percent is explained by growth along the intensive margin.

The results confirm and complement these findings. The count of export destinations reached by Uruguayan exporters increased substantially during the period under investigation, and this increase actually explains more than half of the export growth observed in recent years. In addition, even if Uruguay’s overall export bundle appears more concentrated during 2010–2012 than it was in 1998–2000, there has been substantial product churning. The new products introduced accounted for a sizeable 6 percent of export growth over the last 15 years.

Table 8. *Decomposition of Export Growth*

Margin	2003–2008	2010–2013
Intensive Margin		
Net Increase of old products in old markets	67%	41%
Extensive Margin		
Increase of new products in new markets	0%	0%
Increase of new products in old markets	2%	6%
Increase of old products in new markets	31%	53%

Source: Authors’ calculations based on UN Comtrade..

Figure 40. Number of Markets Reached by Sector

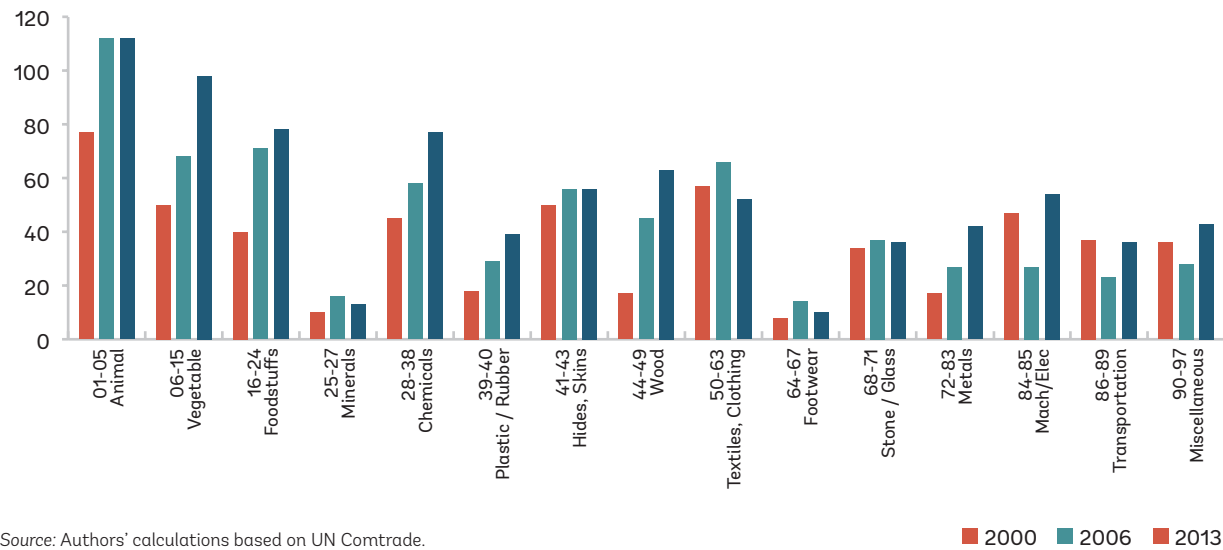
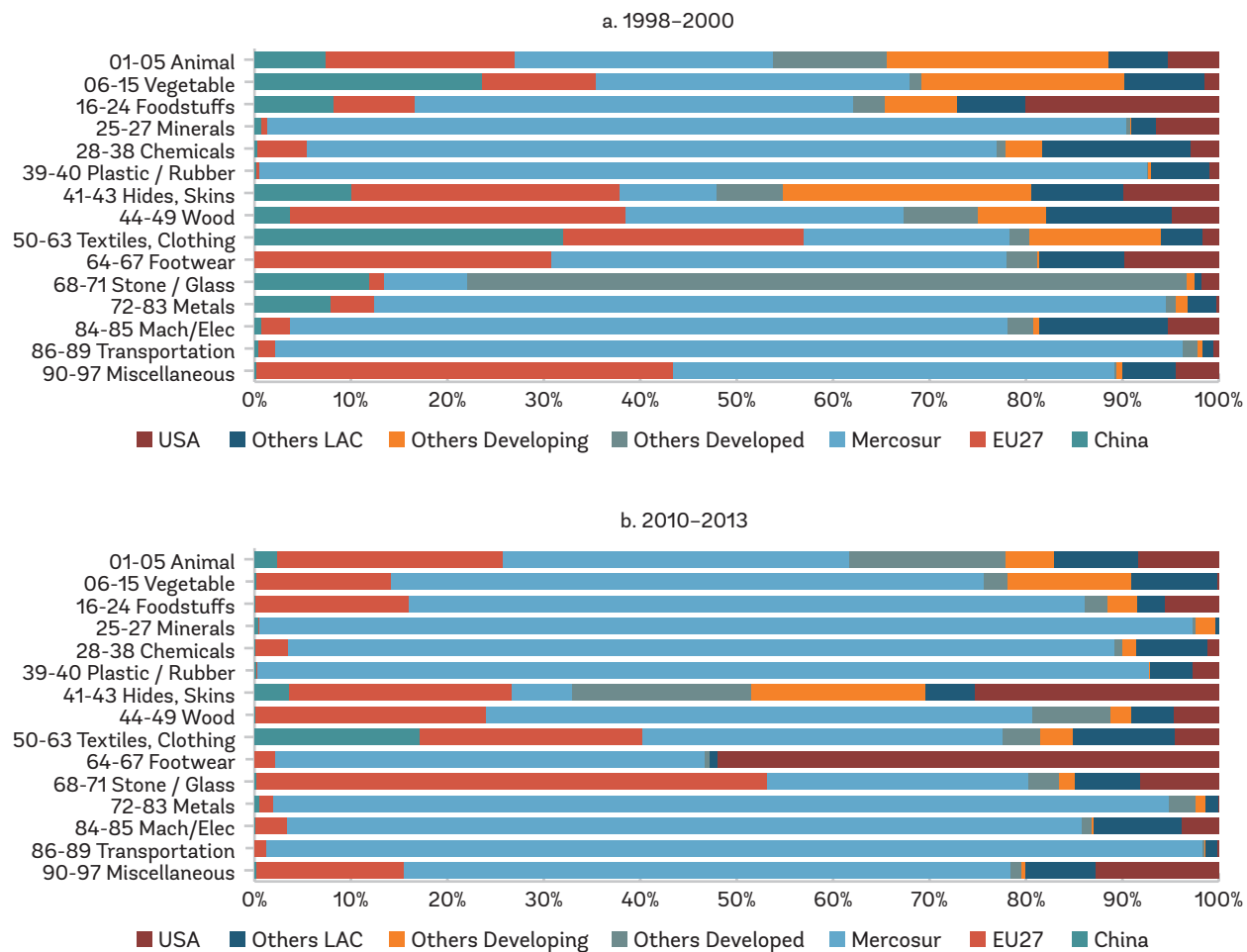


Figure 41. Export Composition in Destinations (Average %)



How Can Uruguay Penetrate New Markets?

Uruguay's process of diversification along the market dimension, and to a lesser extent along the product dimension, has been commendable. How can this process be consolidated? There are two levels at which policymakers could support access to new markets for Uruguayan exporters. The first implies negotiations of market access at the country level. The second implies support for the internationalization of firms.

Negotiations at the Country Level

As a member of MERCOSUR's Customs Union (CU), Uruguay faces restrictions to negotiate market access independently of its CU partners—Argentina, Brazil and Paraguay. The delays in the negotiations of the MERCOSUR–EU agreement illustrate the complexity and lengthy process implied by negotiations at the block level.

However, there are a number of negotiations that affect market access in which Uruguay can act unilaterally and that are complementary to MERCOSUR. Three examples are considered: (a) product by product negotiations; (b) trade in services negotiations; and (c) agreements to reduce double taxation.

(a) **Negotiating access to specific products subject to sanitary and phytosanitary controls.** As agricultural foods are the most important Uruguayan export products and as these products are typically subject to restrictions to trade based on sanitary or phytosanitary reasons, it is crucial for Uruguay to proactively seek access to markets for specific products. Simultaneously, the relevant government agencies should work closely with the private sector to ensure compliance with required standards. The track record has been successful in some cases (for example, beef in the EU and Mexico and citrus in the United States), but a long-pending list exists (for example, beef in South Korea).

(b) **Negotiating market access for trade in services.** Services have been gaining importance in Uruguay's export basket. Services exports have also played an important role in the sophistication of this bundle as they are typically more knowledge intensive than Uruguay's merchandise exports. Firms in this sector are particularly well positioned for internationalization relative to those exporting

merchandise. This is because in services, remoteness and scale—two important constraints for Uruguayan exporters of merchandise—are less likely to be constraints for scaling up. However, firms in the services sector still face restrictions to trade due to market access barriers in importing countries. For example, a software development company that had set up shops in Paraguay and Panama mentioned that restrictions to trade in those countries implied the need to find a domestic firm to partner with, to hire a certain number of domestic personnel, and to pay tariffs. In addition, the Uruguayan Chamber of Information Technologies (CUTI) expressed that increased market access would be key for this booming sector to fully internationalize, which is necessary for reaping its full potential. Indeed, Kesidou and Sgirmai (2008) studying innovation and export performance in the software service in Uruguay, found that international knowledge transactions turned out to be very important in determining economic success in this sector. That is, software developers benefit substantially from being connected to the international economy.

In this context, it is important that Uruguay continues negotiating market access for its services exports. At each stage, it is important to map the costs and benefits of these potential trade agreements for Uruguay. For example, several firms in the software sector operating locally benefit from public procurement that is biased toward domestic firms. If Uruguay were to provide national treatment to foreign providers, in the context of a bilateral or multilateral trade in services agreement, firms in Uruguay would need to compete with foreign providers. At the same time, Uruguayan firms would face national treatment in substantially larger foreign markets.

Uruguayan negotiators need to be well prepared for the negotiations. In preparation for these negotiations, Uruguay policymakers and negotiators need to have a clear understanding of (i) the benefits that Uruguay expects to attain by adhering to the agreement and (ii) the current restrictions to services trade in Uruguay, their rationale, and their assessed impact on trade and welfare.

(c) **Agreements to reduce double taxation.** When services sector firms were asked to identify the most

important constraint they faced when operating across borders, the main issue they raised was that of double taxation. To increase the competitiveness of services sector firms, it is important to continue reducing the scope for double taxation in the most important markets in which Uruguayan firms operate.

In the long term, Uruguay should encourage an evidence-based discussion on the trade policy institutions that best serve Uruguay's interests. This includes, for example, carefully examining the costs and benefits of belonging to MERCOSUR's CU versus alternative options, such as having an FTA. Notice, of course, that the aforementioned option of an FTA may be considered politically unfeasible. If Uruguay was to withdraw from the customs union, the rest of the members of that union may not be willing to sign an FTA with Uruguay in the first place. On the other hand, while it has been frequently argued that being part of a CU with MERCOSUR allows Uruguay to better negotiate with third markets, given the size of the block relative to the size of Uruguay. However, given the structural differences between the largest economies of the block (Argentina and Brazil) and Uruguay, it is likely that the conditions of any agreement reached by MERCOSUR are more likely to represent the interests of the largest economies than those of Uruguay.

Support for the Internationalization of Firms

Market information is very important for successfully exporting, particularly when penetrating new markets. Empirical evidence worldwide suggests the existence of substantial fixed (sunk) costs when entering export markets, some of which are related with information search (identifying initial contacts and discovery costs) and the importance of information sharing for improved survival chances in international markets.

Information problems, typically more important for firms operating internationally than for those just serving the domestic market, have motivated public interventions usually under the name of 'export promotion activities'. From an economic point of view, these interventions are justified because it is difficult to exclude third parties from information and because its use is one of non-rivalry. There is a potential for free riding on the successful searches of firms for

foreign buyers (or information) as firms may learn from other firms through employee circulation, customs documents, customer lists, or referrals (Volpe 2011).

Firms have praised the work of Uruguay XXI both in terms of export (and also on investment) promotion.

Participation in trade fairs or trade missions have been considered fruitful in general. The targeting of specific types of firms may need further consideration. For example, SMEs may find it difficult to survive in the international marketplace in the first place because of poor access to finance and 'shallow pockets'. Note, for example, that in the software sector, the initial investment to serve clients abroad, including market research, visits, and tailoring of products to a country's tastes and regulations, is in the range of US\$200,000–300,000, as mentioned by a medium-size firm that was interviewed. For these reasons, among others, SMEs may face difficulties surviving in the global marketplace, and their importance as job creators and value added generators may be reduced. Large, dynamic companies or some high-growth start-ups instead may have better chances of successfully internationalizing their operations, creating high-quality employment, and adding value. Indeed, international experience and empirical evidence tend to support this view. Moreover, it is important that existing interventions are subject to rigorous impact evaluation so that informed decisions can be made about their continuity or reform.

It is also important to look at what other agencies have done, particularly interventions whose impact has been rigorously evaluated. Export promotion agencies provide firms with diverse services to subsidize these searches and thus counter the disincentive arising from potential free riding. These services include counseling, general information on targeted markets, arrangements of meetings with potential customers, and organization and sponsorship of participation in international events such as trade missions and fairs. The evidence on the impact of export promotion activities on export performance is heterogeneous (Lederman, Olarreaga, and Payton 2010). This is partially related to the fact that export promotion activities are heterogeneous themselves and their effectiveness will also depend on the institutional attributes of the organizations, their incentive structures, and the kind of activities and instruments used (see a selection of cases in Table 9).

Table 9. Selected Evidence on Export Promotion Interventions and its Estimated Impact

Country	Intervention	Effect	Documented by
Ireland	Grants to encourage investment in technology, training or physical capital, feasibility studies, technology acquisition—typically not exceeding 45–60% of capital cost—and paid in instalments subject to periodic reviews	Positive effect of grants on export intensity (among already exporters) when grants were large enough. No significant effect on turning non-exporters into exporters.	Görg, Henry, and Strobl (2008)
United States	Export promotion expenditures at the state level (no information on the exact type of instrument)	Weak evidence of increased participation in global markets	Bernard and Jensen (2004)
Czech Republic	Public export credit guarantees against political and commercial risks; no thresholds on size or legal form of the exporter.	Evidence of increased export flows in the short and longer run	Janda, Michalikova, and Skuhrovec (2013)
Tunisia	Matching grants for export development (new products, new markets, or export skills for first-time exporters). Eligible activities needed to address informational constraints to enter export markets.	Increased the value of exports and expanded the extensive margin (helped diversify). They were found useful to encourage first-time exporters. Three years after receiving the grant, however, export performance of recipients was again on par with that of non-recipients of the grant.	Cadot et al. (2011)
Korea, Rep.	Network of export promotion agency offices abroad (78 offices with the mandate to provide information and bolstering the trade-investment infrastructure - business matchmaking, international exhibitions, and marketing of IT and cultural industries).	Positive effect on export values at the macro level	Kang (2011)
Canada	Trade missions co-financing (macro level)	No effect on exports	Head and Ries (2010)
Chile	Trade missions, trade shows, and exporter committees	No effect on exports from trade missions and trade shows. Positive effect from participation in exporter committees.	Álvarez (2004)
Colombia	Counselling (training on export process, information on opportunities and target markets); participation in international trade fairs; support in setting up an agenda of commercial meetings	Positive effect of the combination of all interventions relative to participation in only one of them—effect is concentrated mainly on the extensive margin and within it, on market diversification.	Volpe and Carballo (2008)
Egypt, Arab Rep.	Random assignment of export opportunities to handloomers producing rugs	Strong evidence of increased efficiency and quality	Atkin, Khandelwal, and Osman (2014)

Source: Authors' elaboration.

From an examination of the literature on export promotion activities, we can learn the following:

1. Export promotion activities focusing on reducing costs associated with information search (for example, providing market research and trade intelligence and matching buyers with sellers) tend to have a positive effect on export diversification (mainly along the market dimension and weaker along the product dimension) while generally having no effect on the growth of exports of the same products to the same markets. This is reasonable since information is more crucial in the process of diversification.
2. Support for participation in trade fairs and trade missions shows weak evidence, if any, of positive effects on export growth.
3. Counseling and export committees in which exporters exchange information and in which mentorship is provided tend to be effective in reducing information costs for firms and increasing participation in export markets.
4. Bundled services tend to perform better than isolated interventions.
5. The effects of export promotion activities diminish relatively fast over time; after-care services may be needed.

Some of the informational barriers that exporters face are subtler than finding buyers or doing market research and may be related to the design of strategies to conceive, produce, and market products that are fit for foreign markets. These strategies are not implemented as isolated improvements in the firm's operations but as coherent elements of a different approach to business. Artopoulos, Friel, and Hallak (2010) termed these export-related managerial practices 'export business model' (EBM). The authors provide evidence that firms that adopt drastic changes in their production and market methods are more successful in entering and surviving in international markets. Informational barriers may prevent especially small firms from adopting these managerial practices.

The Spanish Institute for Foreign Trade (ICEX) and AusTrade in Australia, for example, have been providing training to SMEs on managerial international best practices. To date, to the best of our knowledge, rigorous impact evaluations of these types of training activities on exporters have not been conducted. Two more recent similar activities, one in Colombia and another planned for Argentina, have been designed to allow for the evaluation of its impact and will provide some additional information in the near future.



Quality and
Sophistication

The goods that countries produce and how they produce them both matter for export-led development.

All else equal, goods that embody greater value added in terms of ingenuity, skills, and technology tend to fetch higher prices in world markets. Countries that produce goods that are more sophisticated than what their income levels would suggest tend to see higher rates of future economic growth. Upgrading product quality, therefore, can be a source of both export and economic growth. This section assesses the 'income' and 'factor' contents of Uruguay's exports to evaluate whether the country produces sophisticated and high-value-added goods.

Technological Classification

Uruguay's exports have shifted from low-tech products to resource-based and primary products.

Figure 42 shows the evolution of exports by categories of diverse technological levels using the Lall classification.²² Low-tech goods, which accounted for almost half of Uruguay's total exports in 1988, rapidly lost ground during the last 15 years. In 2013, less than 15 percent of Uruguay's exports fell in the low-tech category. By contrast, resource-based products increased their share of the country's exports from less than 10 percent in 1988 to 29 percent in 2013. Still, primary products continue to account for the highest share of Uruguay's exports. Indeed, the share of high-tech products in the country's external sales has experienced almost no change during the last 15 years.

Sophistication

The sophistication of Uruguay's export bundle as measured by Hausmann, Hwang, and Rodrik's EXPY indicator has remained stable during the period.

Figure 43 shows the evolution of EXPY, a proxy for export sophistication (see Box 5 for a description of the indicator), jointly with the evolution of per capita GDP for Uruguay and comparator countries. Uruguay's exports

tend to embody greater sophistication than Chilean and Paraguayan exports. However, Uruguay is below the levels achieved by Costa Rica and a substantially more developed country such as New Zealand. The observed growth of income per capita in Uruguay, in fact, was not associated with a change in sophistication. This is also the case for the comparator countries, most of them rich in natural resources, which took advantage of the commodity price boom to boost growth performance.²³

Sophistication in the Services Sector

Although the EXPY is not calculated for the services sector given the lack of granularity of the services export data at the product level, there are reasons to state that Uruguay's services exports are becoming more sophisticated.

The clearest case is that of software exports. As mentioned above, the sector has experienced dynamic growth, expanding significantly more rapidly than total exports, and today represents 1.5 percent of GDP, double the share in 2004. Exports go to numerous countries in the region, with more than 25 percent going to the United States and 10 percent to Europe. The sector is made up of about 350 firms producing and selling products and services to 55 markets (Betarte and Moleri 2008). At the turn of the century, Uruguay briefly became the largest software-exporting country in Latin America. It still ranks first in the region in terms of per capita exports. Significantly, it is the first time in Uruguay's history that knowledge accumulation at the national level has generated significant exports that are not based on natural resources. Other nontraditional service exports have doubled their export value between 2007 and 2011 and in addition to ICT, include professional services such as financial services, consulting, commercial, and logistic services.

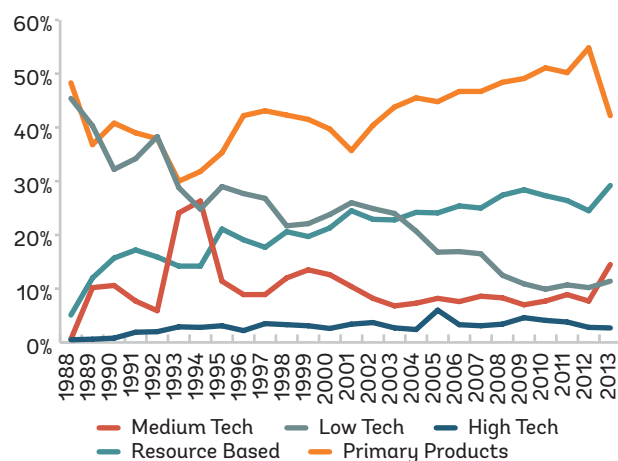
Quality

Most of the top ten Uruguayan exported products do not show a marked quality upgrade between 2007 and 2009. Figure 44 plots the unit values, which serve as a measure of relative quality (see definition in Box 6) for the top ten Uruguayan exports defined at the HS-6

22 The Lall classification of export products according to their technological content has its caveats. For example, although beef is classified as a primary product, the technological content of Uruguayan beef has increased substantially through, for example, the bovine traceability from birth to the meatpacker's premises. Similarly, technological change in agriculture has been substantial and knowledge is increasingly being embedded in seeds used to plant some of Uruguay's main crops. However, these factors are not taken into account in the Lall classification. The reader should consider these caveats when interpreting these results. An alternative methodology to look into the research and development efforts put into Uruguayan export products has been commissioned by Uruguay XXI and developed by CINVE.

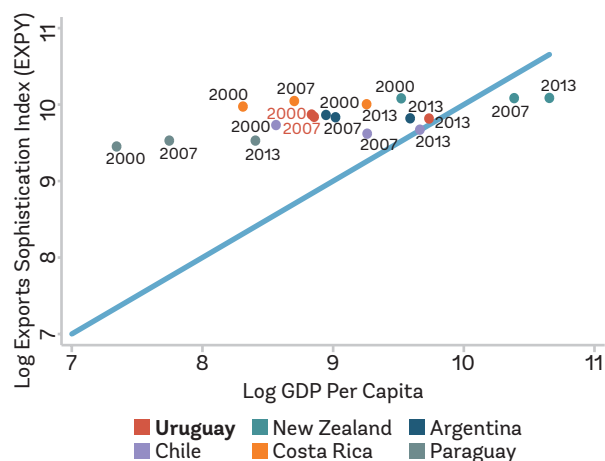
23 The EXPY indicator has been subject to substantial criticism as an indicator of export sophistication and should be interpreted with caution. With the increasing international fragmentation of production processes, in what stage of production of a given product is a country involved mostly, rather than what product it is that it ends up exporting (which is the basic input for the EXPY). In addition, it also matters how the product is produced, rather than which one is produced.

Figure 42. Technological Classification of Exports (Lall Classification - %)



Source: Authors' calculations based on UN Comtrade.

Figure 43. Change in Export Sophistication



Source: Authors' calculations based on data from the WDI and UN Comtrade.



Box 5.

Measuring Export Sophistication

Calculating export sophistication, denoted by EXPY, is a two-stage process. The first stage is to measure the income level associated with each product in the world, termed 'PRODY'. The PRODY of a particular product is the GDP per capita of the typical country that exports that good. Typical GDP is calculated by weighting the GDP per capita of all countries exporting the good. The weight given to each country is based on 'revealed comparative advantage', defined as the share of its exports that comes from that good relative to the 'average' country. The PRODY for a single product is calculated by weighting the GDP per capita of all countries exporting that product. Therefore, a product that typically makes up a large percentage of a poor country's export basket will have stronger weights toward poor countries' GDP per capita. This will be less the case for a product that makes up a small

$$PRODY_k = \sum_j \left(\frac{x_{jk}}{X_j} \right) Y_j \quad \text{and} \quad EXPY_i = \sum_k \left(\frac{x_{ik}}{X_i} \right) PRODY_k$$

Source: Authors' elaboration.

percentage of a poor country's exports but is a significant component of many rich countries' export baskets.

The second stage is to measure the income associated with a country's export basket as a whole; this is its EXPY. From the first stage, each product that a country exports will have a PRODY. The EXPY is calculated by weighting the PRODY by the share that each good contributes to total exports. If butter makes up 15 percent of a country's exports, its PRODY will be given a weight of 0.15. Countries whose export baskets are made up of 'rich-country goods' will have a higher EXPY while export baskets made up of 'poor-country goods' will have a lower EXPY.

A shortcoming of PRODY, and thus of EXPY, is that it does not take into account the quality differences within exported products across countries. For example, exports of fully traceable fresh beef are likely to be highly more sophisticated than those of non-traceable beef. However, all beef exports are clustered together as a single product, assumed to be identical.

Figure 44. Relative Quality Upgrading from 2007 to 2009



Source: Authors' calculations based on WITS.

digit between 2007 (x-axis) and 2009 (y-axis). The size of each bubble represents the share of the product in Uruguay's export basket during 2010–2012. While the quality of mixtures of odoriferous substances for food or drink industries (HS 330210) jumps from Relative Quality below 0.2 in 2007 to nearly a unit in 2009, quality of other food preparations (HS=210690) drops from nearly 0.6 in 2007 to less than 0.2 in 2009.

Uruguay has upgraded in quality in one of its most important export products: fresh boneless beef. A recent case of product upgrading, as measured by the relative prices fetched in international markets, has been that

of fresh boneless beef. While in 2006, the average unit value received by Uruguayan exporters was at the center of the distribution (indeed just below the median), by 2013, it had climbed up the quality ladder to the middle of the upper quintile of the distribution (Figure 45 and Figure 46).

Uruguayan beef has increasingly been purchased by relatively richer countries. An alternative approach to understanding whether a certain product has upgraded its quality is to look at the income per capita profile of the countries that buy that product. Figure 47 and Figure 48 show the position of Uruguay exporters of fresh boneless beef in the world ranking of average income per capita of the importers, for 2006 and 2012, respectively (PRODY). During the period, Uruguayan beef was increasingly bought by relatively richer countries—implicitly suggesting an increase in the product's quality.

The experience of bovine traceability has been an effective quality-enhancing tool in addition to other innovations in the sector. When we asked the private and public sector about the drivers of this quality upgrading process, there was relative consensus on how the experience of the bovine traceability, an example of an initiative that required a strong PPP, has been effective in creating a country brand and securing higher prices in international markets (which in turn helped in attracting FDI and accessing new markets). PPPs are also taking place in terms of genetic selections of beef and deepening the reach of the traceability experience



Box 6.

Measuring Relative Quality of Exports Using Disaggregate Trade Data

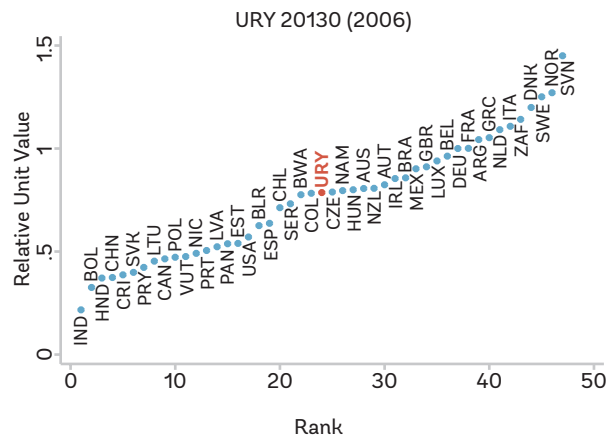
We rely on the UN-COMTRADE database to characterize the relative unit values of exports. As in Schott (2004), unit values were calculated simply as the quotient of general imports values and quantities. Within any product (six-digit combined nomenclature code) for any given year, we then have a distribution of unit values of imports from the different source countries. For each good i and exporting country c , in time year t , we generate a measure of relative quality R as,

$$R_{itc} = \frac{uv_{itc}}{uv_{it}^{90}},$$

where u_{itc} denotes the unit value of the good and u_{it}^{90} denotes the value at the 90th percentile of the unit value distribution across countries for that product. R_{itc} denotes the relative quality of the country's export of that good, that is, quality relative to other countries exporting the same good.

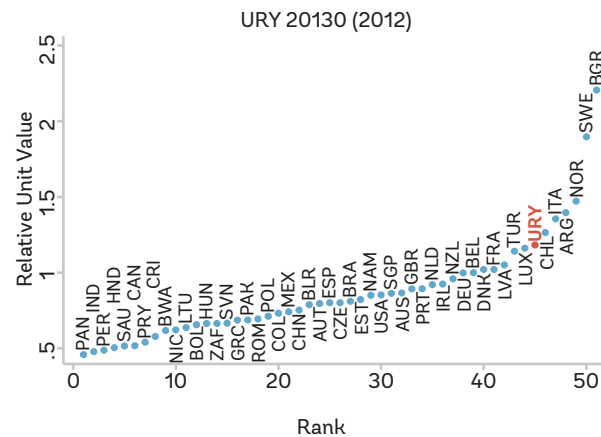
Source: Authors' elaboration.

Figure 45. Quality Ladder for Fresh Boneless Beef - 2006



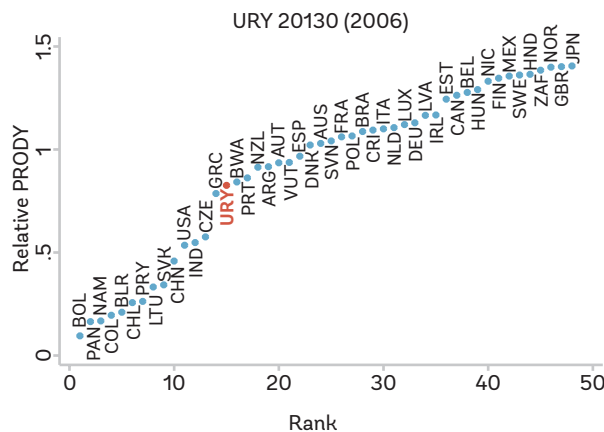
Source: Authors' calculations based on data from UN Comtrade.
Note: Uruguay's position is in red.

Figure 46. Quality Ladder for Fresh Boneless Beef - 2012



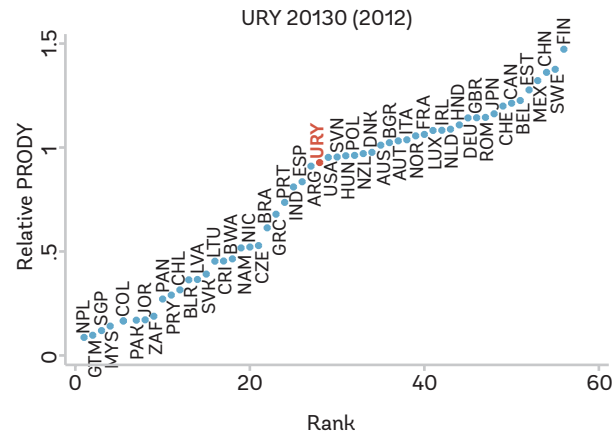
Source: Authors' calculations based on data from UN Comtrade.
Note: Uruguay's position is in red.

Figure 47. Fresh Boneless Beef's Importers' Relative Income per capita (PRODY) - 2006



Source: Authors' calculations based on data from UN Comtrade and the WDI. Note: Uruguay's position is in red.

Figure 48. Fresh Boneless Beef's Importers' Relative Income per capita (PRODY) - 2012



Source: Authors' calculations based on data from UN Comtrade and the WDI. Note: Uruguay's position is in red.

within bovines, with for example, the development of technologies for the analysis of carcasses to maximize output per animal that is currently being led by INAC, the National Institute of Meats.

How Can Uruguay Further Improve Export Quality?

Improvements in export quality are closely linked with upgrading the skills of firms and workers.

On workers. Concerns exist about the quality of education at the primary and secondary levels that may affect

the supply of skills in the medium term. In addition, the level of investments in tertiary education per graduate has been stagnant, which is likely to have an impact on skills in the shorter term. On the positive side, in some sectors that are currently more constrained due to the unavailability of skilled workers, such as ICT, there has been coordination between the private sector and the skill providers (*Universidad Tecnológica* [UTEC] in particular) to adapt the curricula to the needs of the sector. This is most welcome given the increasing needs of the sector. When we asked the Uruguayan Chamber of Information Technologies how many engineers a year they would need, they argued that there is potential for employment of 500 additional engineers every year but that only 180

newly graduates enter the labor market every year. UTEC is expected to add 100 new engineers per year, still far from satisfying potential demand. On BPO services—for example, accounting—the supply of skilled labor is less of a constraint and managers have actually praised the technical knowledge as well as the language skills of this segment of the labor market—university graduates in accounting and management. Indeed, wage signals have been transmitted and enrolment in accounting degrees has soared in recent years.

Incentives provided by the government to train workers on the job have been praised by the private sector. It is to be expected that the training received on the job will have positive spillovers, as there is substantial churning in the labor market, according to anecdotal evidence.

On firms. To achieve quality upgrading, it is also important for firms themselves to upgrade their know-how and for them to be able to source inputs from firms that operate with high quality standards. The emergence of large multinational companies in the last few years in fact had an impact on many small domestic firms that are linked with multinationals as suppliers. Supplier development programs have been in place, in some cases endogenously developed, and in some cases encouraged by the public sector some sort of support. International evidence on the effects of supplier development programs on the productivity and profits of firms has been heterogeneous, as the programs themselves. It is important that these programs are designed by the private sector and subject to impact evaluation so that changes can be introduced if needed.

Access to Finance

Upgrading is costly and accessing external financing remains a problem for Uruguayan exporters, particularly for SMEs, given the shallow financial markets.

Anecdotal evidence suggests that even successful firms may struggle to obtain bank financing for innovative projects due to information asymmetries between lenders and creditors. When we asked a successful entrepreneur how she financed her activities, she expressed that banks tend to be willing to fund activities with a well-established track record of success but are reluctant to finance innovations. They had less information about the project than the entrepreneur did, and took a more risk averse stance.

In the services sector, firms also struggle to get credit from financial markets due to the intangible nature of their assets (non-collateralizable). An entrepreneur in a small high-growth firm in the services sector mentioned that because their main assets are ideas, that cannot be offered as collateral. His firm, and in general, many knowledge-intensive services firms struggle to borrow from banks. In a small segment of the market, it is argued that the gap for financing is large, particularly for angel investors and venture capitalists. There are some public funds available through the *Agencia Nacional de Investigación e Innovación* (ANII) for innovation investments, which have been praised by the private sector. How can the issue of access to finance be addressed? Two ideas are presented below.

1. Training on financial skills among micro and small firms has been found to improve the quality of the financial information that firms provide to banks, thus reducing the problem of asymmetric information.
2. A system of incentives is needed to build a dynamic funding ecosystem for exporting start-ups and high-growth services firms. Angel investors and venture capitalists are key players in this ecosystem, at different stages of the business development. In Malaysia,²⁴ for example, the government provides a tax incentive for individual angel investors in the form of a personal tax deduction after two years of shareholding. In addition to tax incentives, it is important also to encourage angel investors to network to raise awareness and promote that type of investment in businesses in the early stages of growth.

²⁴ Angel investors are typically important at the 'pre-seed' and 'seed' stages (birth, conceptualization, and proof of concept stages and at the product and commercialization—market entry stages). Venture capitalists are typically needed at the enhancement and scaling-up stages.



Survival

For countries to achieve fast export growth and diversification, both successful entry into export markets and survival of export flows are crucial. The majority of export relationships (at the product-country level) forged by developing countries do not survive more than a few years. Assessing the dynamics of export participation and survival is valuable for diagnosing the export competitiveness of a country. From a policy perspective, understanding the main challenges to export survival is key to promote growth and ensure diversification.

This section focuses on how Uruguayan exports flows have performed along the sustainability margin. For this purpose, two data sources are used: (a) product-level data (HS-6 level) from COMTRADE over the period 1996–2013 and (b) firm-level data from the World Bank Exporter Dynamics Database over the period 2005–2013.²⁵ The product-level data provide us with a rough approximation to the issue of export survival but allows broader international comparisons and to estimate survival rates over more years as COMTRADE covers more countries and years than the Exporter Dynamics Database.

Uruguayan export survival is slightly below that of comparators. Figure 49a shows that the probability of a Uruguayan export relationship surviving past the first year is less than 45 percent, and the probability of maintaining that relationship for more than two years is less than 30 percent. In comparison, the survival rate of peer countries, such as Argentina, Costa Rica, and New Zealand is higher, although only slightly. The probability that an Argentine export relationship survives after the first year is 50 percent, after which it drops to 35 percent for survival past the second year. Survival rate beyond the first year is around 47 percent for both Costa Rica and Chile and 46 percent for New Zealand. Only Paraguay is outperformed by Uruguay in terms of export survival.

Uruguayan exports have a much higher probability of survival in Latin American countries than in other more distant markets. Figure 49b compares survival rates of Uruguayan exports to different groups of countries, including Latin American countries, the EU-27, Middle East and North Africa, Sub-Saharan Africa,

South Asia, other developed countries, and so on.²⁶ The results shows a statistically significant higher probability that an export relationship will survive if it is established with other Latin American markets. Indeed, the probability that exporting ties with other Latin America and Caribbean countries last beyond a year is almost 47 percent. Exports to the EU have a 40 percent survival probability of being active past the first year.

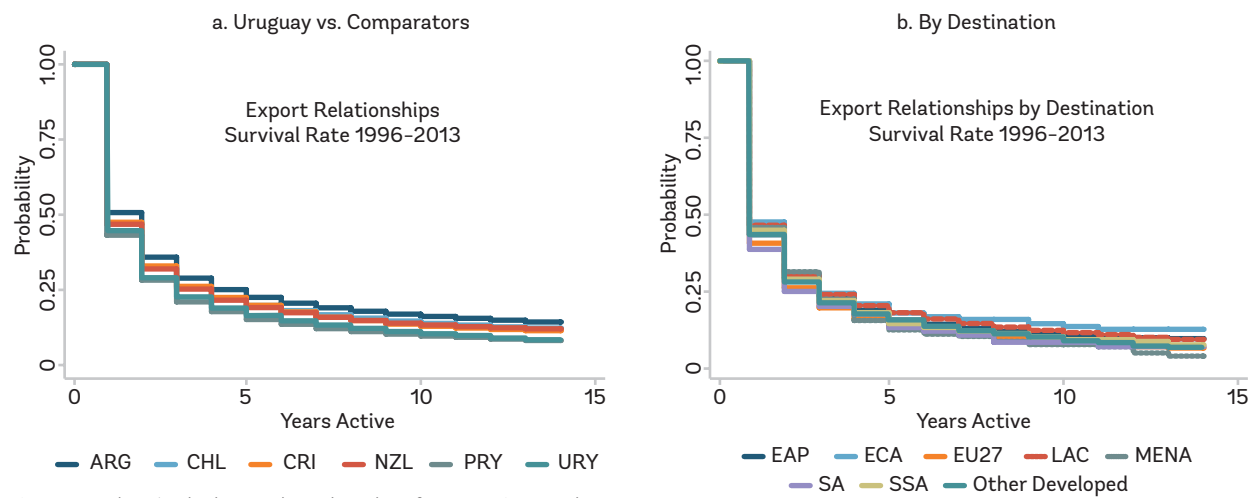
Focusing on dynamics at the firm level, Uruguay's lowest exporter entry and exit rates are in the primary goods sector while Uruguay's highest exporter entry and exit rates are in the medium-tech manufacturing sector, (despite their decline during 2005–2013) where they are higher than in all benchmark countries, as shown in Figure 51. Uruguay's exporter entry rates are high in the high-tech manufacturing sector though lower than in Peru and Costa Rica. Uruguay's entry rates in the resource-based manufacturing sector declined during 2006–2013 more substantially than in comparator countries, and the corresponding exit rates increased over the period. In all sectors, Uruguayan exporter entry and exit rates tend to be higher in the more distant Chinese, U.S, and EU (EU-27) markets and lower in the closest MERCOSUR and Latin American markets. Within most markets, Uruguayan entry and exit rates tend to decrease with the degree of technological sophistication of the sector.

The one-year survival rates of new exporters are lower in Uruguay than in benchmark countries in the resource-based, low-tech, and medium-tech manufacturing sectors (Figure 52). Complementary to the exporter entry and exit patterns, it is important to examine how new exporters perform in their first years in the export market. In the primary goods sector, Uruguayan new exporters' survival rates are close to those in Chile, Paraguay, and Costa Rica but decline significantly from 2010 to 2012 (from about 60 percent to less than 50 percent). In the high-tech manufacturing sector, Uruguayan new exporters' survival rates are higher than those in Peru and Costa Rica in several years. Importantly, in both the medium-tech manufacturing and high-tech manufacturing sectors the one-year survival rates of new Uruguayan exporters are rising, indicating an encouraging trend of maintenance in the export market beyond their first year.

²⁵ The results based on the Exporter Dynamics Database are taken from Ferro and Fernandes (2015). In contrast to the rest of the analysis here export flows from Zonas Francas are accounted for.

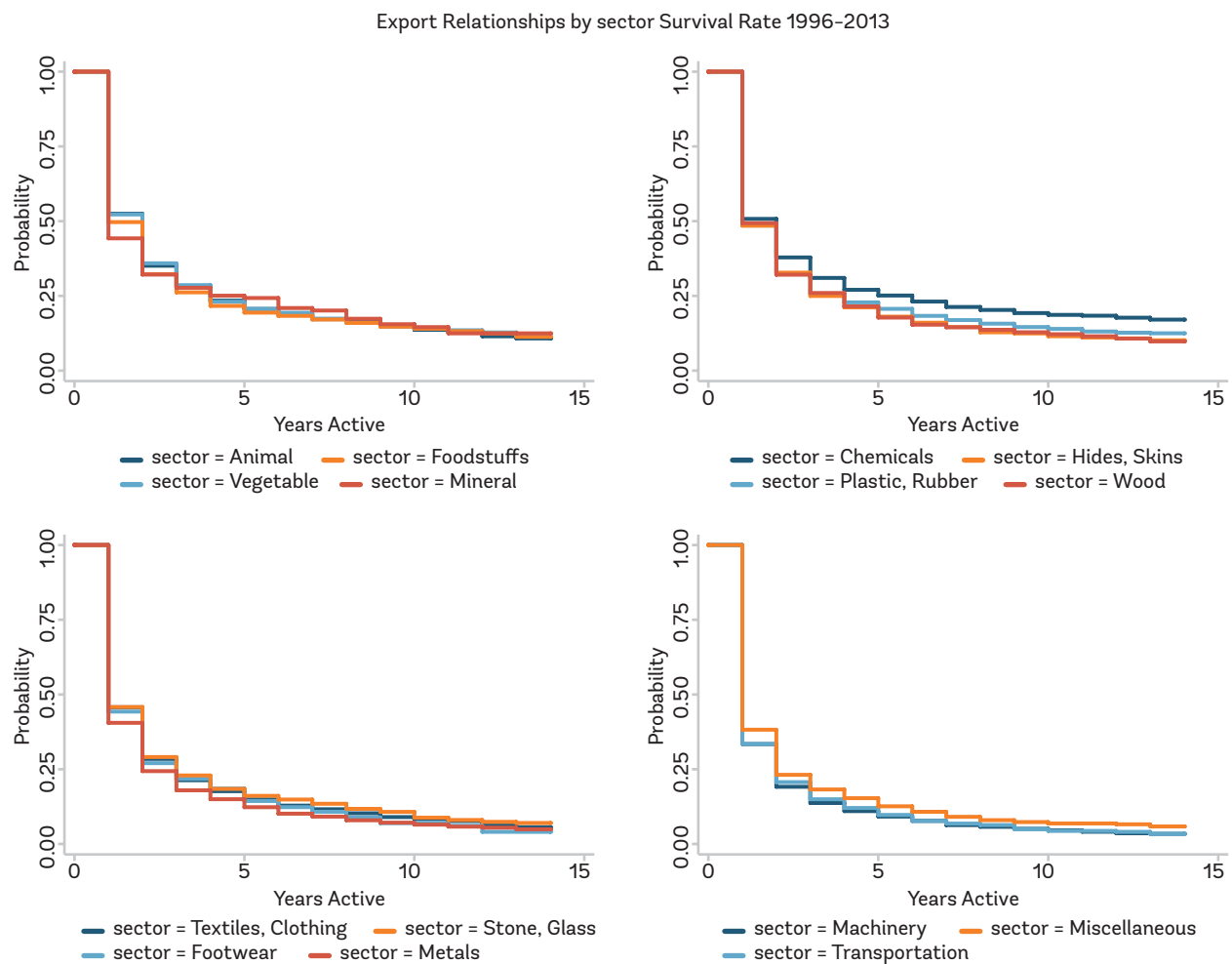
²⁶ Although the figure shows that the predicted probability of survival beyond year 1 is highest for Europe and Central Asian countries, this estimate is not statistically significant.

Figure 49. Export Relationships Survival Rates (1996–2013)



Source: Authors' calculations based on data from UN Comtrade.

Figure 50. Export Relationships Survival Rates - Product Type (1996–2012)



Source: Authors' calculations based on data from UN Comtrade.

Figure 51. Exporter Entry and Exit Rates by Sector



Source: Authors' calculations based on data used for the Exporter Dynamics Database.

The financial crisis starting in 2008 reduced the survival of all Uruguayan new exporters to the EU27 but also of primary goods new exporters to the United States and Argentina (Figure 53). In addition, a clear second dip after 2011 characterizes the survival rates of new Uruguayan exporters of high-tech manufacturing in all markets. Survival rates of new Uruguayan exporters to China are rising whereas those in Argentina and

the rest of the world are declining across sectors and those of high-tech manufacturing exporters in Brazil also declined dramatically during 2010–2012. Finally, the survival rates of new exporters selling to Argentina are trending downwards in all sectors, possibly due to recent instability in the trade relationships between the two MERCOSUR partners.

Figure 52. One-Year Survival Rates of New Exporters by Sector

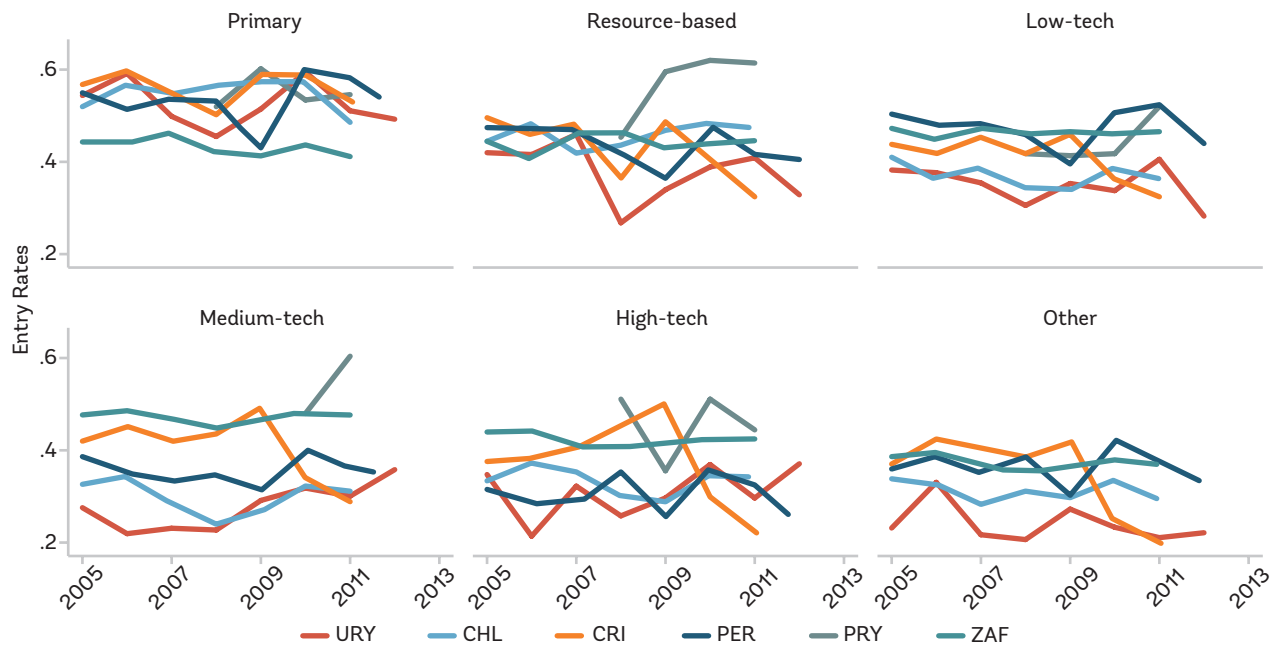
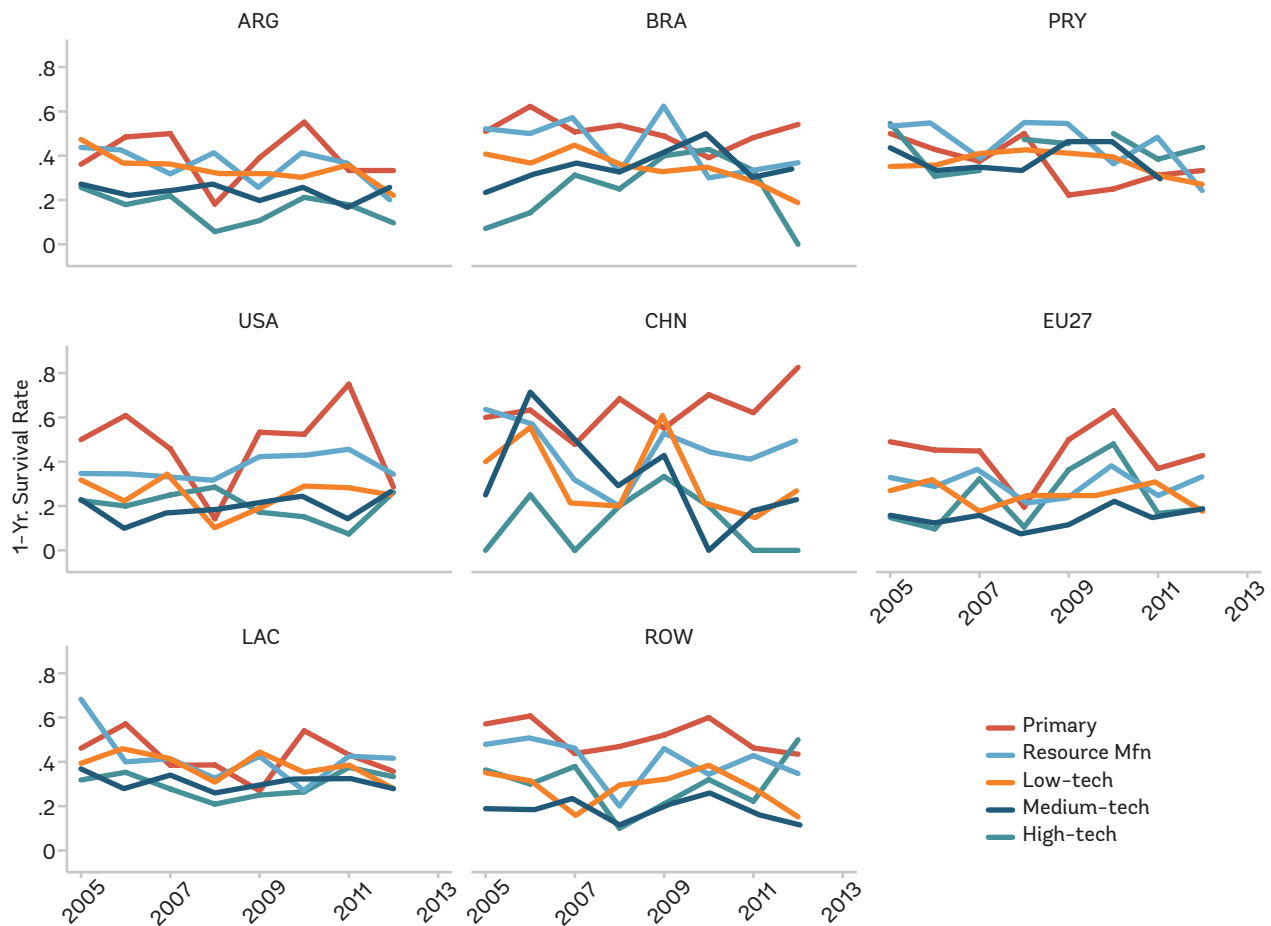


Figure 53. 1-Year Survival Rate of New Exporters by Sector in Each Destination Market



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Appendix

Table 10. Uruguay Rejections at the U.S. Border (2012–2013)

Products	Nbr of Refusal	Nbr of Exporters	Refusal Category	Refusal charges
Sunglasses (non-prescription)	7	2	Misbranding	It appears the drug or device is not included in a list required by Section 510(j).
			Misbranding	The lenses do not appear to be impact-resistant.
			Misbranding	The device is subject to listing under 510(j) and the initial distributor has not registered as required by 21 CFR 807.20 (a)(5).
				The importer, owner, or consignee did not submit to the Secretary a statement that identifies the registration under section 510(i) of the Act of each establishment that with respect to such article is required under such section to register with the Secretary.
			Misbranding	It appears that the product was manufactured, prepared, propagated, compounded, or processed in an establishment not duly registered under section 510 of the Act.
Miscellaneous patent medicines	3	2	Misbranding	Required label or labeling appears to not be in English
			Unapproved new drug	The article appears to be a new drug without an approved new drug application.
				The article appears to be a drug which requires a prescription from your doctor.
Cheese, parmesan	2	1	Adulteration	The article appears to contain an unsafe food additive
			Misbranding	It appears the food is fabricated from two or more ingredients and the label does not list the common or usual name of each ingredient.
Cigarettes, unflavored	2	1	Adulteration	The article appears to be a tobacco product in violation of section 911 of the Act
Frame, spectacle	2	1	Misbranding	The device is subject to listing under 510(j) and the initial distributor has not registered as required by 21 CFR 807.20 (a)(5).
			Misbranding	It appears the drug or device is not included in a list required by Section 510(j)
			Misbranding	It appears that the product was manufactured, prepared, propagated, compounded, or processed in an establishment not duly registered under section 510 of the Act.
Rice, Enriched Processed (Packaged)	2	1	Pesticides	The article appears to be adulterated because it contains a pesticide chemical.
Rice, Plain (white or polished) processed	2	1	Pesticides	The article appears to be adulterated because it contains a pesticide chemical.
Basil	1	1	Misbranding	Required label or labeling appears to not be in English
Cheese, semisoft	1	1	Adulteration	The article appears to contain an unsafe food additive
			Misbranding	"It appears the food is fabricated from two or more ingredients and the label does not list the common or usual name of each ingredient."
Cyclobenzaprine hydrochloride (relaxant)	1	1	Unapproved new drug	The article appears to be a new drug without an approved new drug application.
Multiple food specialties, side dishes, and desserts	1	1	Misbranding	Required label or labeling appears to not be in English
Rice, brown, processed (packaged)	1	1	Pesticides	The article appears to be adulterated because it contains a pesticide chemical.
Spectacle, magnifying	1	1	Adulteration	The article appears to not have impact-resistant lenses
			Misbranding	It appears the device is not included in a list required by Section 510(j)
Stimulator, intestinal	1	1	Misbranding	It appears that a notice or other information respecting the device was not provided to FDA.
			Misbranding	It appears the drug or device is not included in a list required by Section 510(j)

Source: Authors computations using FDA import refusal reports (<http://www.accessdata.fda.gov/scripts/importrefusals/>). Note: This table shows the complete list of Uruguay's rejection at the U.S. border in 2012–2013. The information contains the name of the product, the number of refusals faced over that period, the number of firms affected by the rejections, the FDA category of the rejection, and the specific charge.

Table 11. CAGR of Value Added in Exports by Sector and Across Comparators, 2004–11 (current US\$, %)

Sector	URY	ARG	CHL	PRY	NZL
Primary Agriculture	24.1	16.2	11.2	14.0	4.6
Other Primary	3.9	15.1	16.7	24.4	18.9
Energy	15.8	1.6	3.3	1.0	13.0
Processed foods	17.8	13.7	10.6	17.7	10.6
Beverages and tobacco	14.1	19.9	10.9	18.9	15.1
Textiles	7.7	7.1	2.4	18.8	1.5
Clothing	0.5	6.1	-5.0	11.0	-10.7
Leather	-3.2	-4.3	8.3	9.1	-0.2
Wood products	26.1	-4.3	4.0	1.0	3.4
Paper and publishing	45.2	7.1	12.1	28.3	4.8
Chemicals and Plastics	23.4	14.1	12.3	16.4	3.6
Non-metallic minerals	8.4	8.0	5.7	11.0	5.9
Metals	33.0	21.6	19.1	19.9	9.8
Metal products	19.0	12.1	22.1	18.2	0.0
Transport equipment	29.5	23.9	5.3	-13.6	6.6
Machinery	17.6	14.0	18.6	21.5	3.0
Other manufacturing	7.8	9.7	14.4	-0.2	2.7
Water	7.8	10.6	5.0	11.8	3.5
Construction	21.2	-0.1	15.5	25.4	-5.5
Distribution	8.4	9.4	9.2	8.0	0.8
Transport	11.9	8.2	9.9	23.3	4.2
Communications	3.6	11.6	1.0	3.5	-0.5
Finance	5.8	15.2	7.1	-5.6	-3.6
Insurance	3.3	11.8	8.7	9.4	1.0
Business services & ICT	17.0	14.3	6.6	8.6	4.2
Other consumer services	8.2	11.3	5.7	9.1	3.9
Other services	6.9	9.4	4.8	15.5	7.4

Figure A.1. Number of exporters and GDP

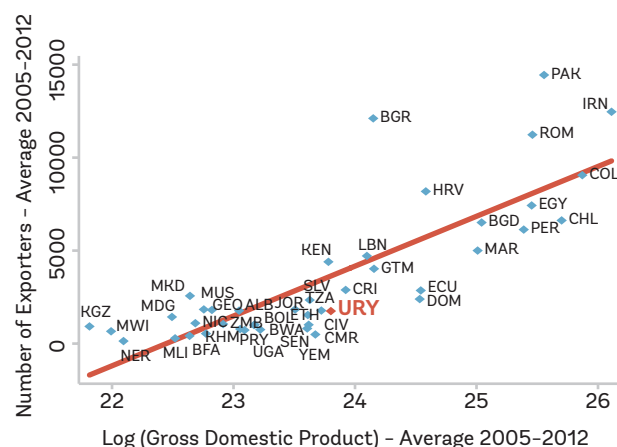
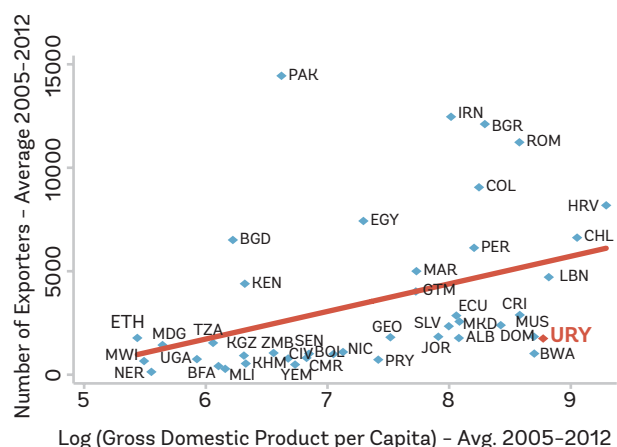


Figure A.2 Number of exporters and GDP per capita





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