Argentina

Trade Patterns and Challenges Ahead

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Abstract

Argentinean export growth was impressive during the recent economic boom (2003–2007). However, decomposing export growth reveals that the extensive margin (increases in exports of existing products to existing markets) dominates, while the intensive margin (increases in exports of new products or new markets) contributes little to export growth. Argentina's trade product concentration has increased in the past 10 years, and the main export products remain overwhelmingly natural-resource intensive. The little diversification of non-primary exports limits the country's ability to

weather a decline in export commodity prices. The country has had some success finding new export markets, especially in Latin America, but should seek to develop deeper trade relationships with high GDP export destinations such as the European Union and the United States. Another challenge going forward is the relatively low sophistication of exports and limited integration into the global production chains, falling behind regional competitors such as Brazil. This calls for policy measures to improve the ability of existing firms to innovate and compete successfully in global markets.

This paper—a product of the Economic Policy Sector, Latin America and the Caribbean—is part of a larger effort in the department to deepen the understanding of the key trade challenges faced by LAC countries. Policy Research Working Papers are also posted on the Web at <http://econ.worldbank.org>. The author may be contacted at panoscasero@worldbank.org.

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ARGENTINA: TRADE PATTERNS AND CHALLENGES AHEAD

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1. INTRODUCTION

At the beginning of the 20th century, Argentina ranked in the top ten countries of the world in terms of income per capita and shares of world exports. Argentina's growth and per capita income were similar to Australia's. These countries shared characteristics that made them ready to tap the benefits of the globalization of the world economy that took place around 1900. "First, they had open grasslands apt for the development of rural activities. Second, low density of population permitted the generation of . . . surplus . . . rural goods for export. Third, settlement was easier . . . [because of low populations of indigenous peoples]. Finally, all these characteristics combined made the countries attractive to migratory currents from Europe. Furthermore, United Kingdom interests in these economies generated an important inflow of [capital] that accounted for growing shares of investments, mainly in infrastructure sectors like railroads and other transportation systems." (Gallo, 2000; 88-89). During the first half of the 20th century, the share of Argentina's world exports was over 3 percent (although on a declining trend). Since the 1980s, high growth volatility resulted in a growing gap between Argentina and its peers that continued growing at a stable rate. By then, Argentina's share of world exports had shrunk to less than 0.5 percent and remained stagnant until recent years (Figure 1).

Figure 1. Argentina's GDP/capita and Share of World Exports: Long-term Trends

Argentina is richly endowed with natural resources, so agriculture and agro-industries have traditionally been the main contributors to export growth, despite only accounting for around 10 percent of GDP. The industrial sector was the most important until the end of the 1970s, when it started shrinking and left space to a growing services sector, with a parallel decrease in agriculture value added (Figure 2). After the 2002 crisis the trend reversed slightly, with an increasing share of agriculture and industry and a decline in the share of services. Agricultural profit margins were helped by the devaluation of the peso in 2002. The rise in soft commodity prices since then lifted profits and encouraged investment. One major change in recent years has been the growth of soybeans at the expense of cereals. Argentina is the third-largest world supplier of soybeans to the world market, after the US and Brazil¹.

Figure 2. Argentina GDP Composition by Sector Over Time

Source: WDI 2008.

¹ EIU Argentina Commerce Report July 2008.

Trade liberalization helped boost manufacturing output, which shrunk during the 2001-crisis but rebounded since 2003. The output of the largest firms rose during the 1990s, although that of small and medium-sized businesses fell sharply. These firms were operating behind protective barriers and were ill-prepared to face international competition. Following the introduction of a special promotional regime and a bilateral agreement with Brazil, the Argentinean automotive industry boomed during most of the 1990s. Manufacturing's share of GDP reached almost 30 percent in 1998. It shrunk during the 2001-2002 crisis –the largest output declines were recorded in the textile and metal-mechanic industry (including motor vehicles). Since 2003, the rebound in domestic and external demand and the steep devaluation of the peso that led to import-substitution in some sectors led to a recovery of the manufacturing's share of GDP. The first sectors to respond to the stimulus of the devaluation of the peso were those supplying the domestic market, where imports had become prohibitively expensive.

FDI flows increased in the 1990s following trade liberalization and improved market entry. Since the 1990s, regulations related to market entry do not differentiate between foreign and local capital as long as the company has presence in the country². As a result, the presence of foreign firms increased through both greenfield investments and foreign acquisitions. Argentina was one of the main markets for FDI flows during the 1990s³, higher (as share of GDP) than in Brazil (Figure 3) although the trend has reversed since 2007.

Figure 3. FDI flows to Argentina, Brazil and Chile

Source: Ministerio de Economía (AR Total FDI) and WDI 2008. Note: Direct investment in reporting economy/gross domestic product, current prices from WDI 2008.

In spite of the progress achieved, tariff and non-tariff barriers remain. Argentina's tariff barriers as measured by the tariff restrictiveness index remain more restrictive than in an average LAC country (11.2 versus 8.2 in LAC). Import restrictions remain in several product categories (such as vehicles, auto parts, and used tires). In 2002, following the devaluation of the Argentinean peso, export taxes were increased. The declared objective was to act as a barrier against the effect of exchange rate fluctuations on domestic prices and to boost fiscal revenue. Export taxes represented, on average, some 10 percent of total fiscal revenue between 2002 and 2005. They were introduced as temporary measures, but no end date to their application has been announced. Primary products have been particularly affected. Processors and other consumers, on the other hand, have benefited from the

² Argentina Trade Brief, PREMTR World Bank.

³ Chudnovsky, D., López, A. and Orlicki, E., The Impact of Foreign Takeovers and FDI on Export and Import Performance in Argentina.

availability of inputs at prices below those that would prevail in the absence of taxes and other export restrictions. Exports of manufactures have also been encouraged through a number of tax incentives schemes such as special customs zones and the free zones regime, with the latter permitting production only for export⁴.

2. RECENT TRADE PATTERNS

Since 2003, Argentina has experienced an impressive growth in exports. After almost a decade of negative trade balance, the 2002 drastic currency devaluation had an important role in boosting exports and strengthening the trade balance (Figure 4). However, the boom has taken several years to materialize. Export volumes have grown considerably and have provided a hefty trade surplus. Part of this recovery is attributable to excellent terms of trade brought by the peso's undervaluation and the rising commodity prices of Argentina's main exports. However, even though exports have visibly increased in value over the last years, their share in world exports has remained quite stable, around 0.4 percent in the 2002-2007 period.

Figure 4. Trends in Trade Flows

Source: Comtrade 2008 (Left graph) and Banco Central de la República Argentina (right graph).

Some sectors have contributed more than others to export growth, with primary products and agro-industry registering the most noticeable export growth rates (Figure 5). Export growth has been led by growth in quantity rather than prices, a fact that has been overturned in the 2006-2007 periods, when prices have clearly led exports growth (top graph). The agriculture manufacturing sector has experienced a decrease in the quantity of export, but a tremendously steep increase in prices, which has led the increase in export growth. On the other hand, industrial manufacturing has followed the opposite pattern: the increase in export growth is clearly attributable to an increase in quantity, as prices have experienced a downward trend since 2004.

The bulk of industrial manufacturing exports (notably vehicles) go to MERCOSUR, mainly Brazil. This explains the unsatisfactory performance of manufacturing exports between the 1990s and 2002, due to slow growth in Brazil. Afterwards, when the Brazilian economy picked up in 2004, manufacturing exports grew more rapidly compared to other categories of exports. Fuel exports decreased since 2004, with a negative growth rate in the quantity of exports and a decreasing growth rate in prices. In 2006 the trend was reversed by a sudden increase in prices and further decrease in

⁴ WTO Trade Policy Review: Secretariat Report.

quantities, with a resulting disappearance of fuel exports. Such a poor performance in the energy sector is a result of severe cuts in the amount of gas exported to Chile and Uruguay and falling oil production.

Figure 5. Growth Rate of Exports, Volumes and Prices by Category (index year 1993=100)

Source: Instituto Nacional de Estadísticas y Censos (INDEC).

Economic recovery since the crisis has also led to an upturn in imports, despite a weak exchange rate. In 2006 the import bill exceeded the previous peak in 1998, and it grew even more steeply in 2007. The value of Argentina's imports reached US\$46.6 billion during 2007, a jump of 45.6 percent on 2006 (Figure 6). Import prices remained flat over the period under consideration, while both value and quantity fluctuated in tandem. An important decrease in 2001-2002 was followed by a sharp increase in 2003 and then a decline again. This decline is associated with the fact that many local firms have shifted from imports to local equivalents as a response to the devaluation of the peso and to the import substitution strategy.

Figure 6. Growth of Imports, Volumes and Prices by Category (index year 1993=100)

Source: INDEC.

A main feature of Argentina exports development in 2005-2008 was the dynamic performance of services exports. The recovery in services following the 2001-02 crisis was initially weak, but since 2005 growth in the services sector picked up again. The poor performance in services after the crisis seems to be explained by a downward trend in the flows of insurance services in 2001-2007 (Figure 7). The recovery in services exports from 2005 is mainly attributable to recreational services (travel and tourism), combined with other business services, communications and IT. This points to scope for further growth of the services sector in the future.

Figure 7. Argentina Net Flows of Services 1999-2007

Source: BOPS IMF 2008.

Box 1: Pattern of Exports in 2008

During the first nine months of 2008 exports grew by 40 percent, mainly driven by an increase in prices. Imports increased by 39 percent compared to the same period in 2007, with a resulting trade balance of US\$10,229 million. Merchandise trade grew 50 percent compared to the same period in 2007. The primary sector grew as a share of total exports, increasing to almost one quarter of export value (Figure 8). Agriculture manufacturing remained stable, while industrial manufacturing and energy declined slightly as a share of total exports.

Figure 8. Share of Exports by Product Group (left) and Destination (right)

Source: CEI based on INDEC.

During the first months of 2008 the EU and China were the most important export markets. China became Argentina's third largest export market, due to the increase in exports of primary products and agriculture manufactures. The Middle East and Maghreb also increased their importance in total exports, from 6 percent in 2007 to 9 percent in 2008, led by an increase in demand for oleaginous products.

Exports in services increased from the previous period by 17 percent, reaching US\$ 5,695 million. Imports accounted for US\$ 6,255 million, an increase of 23 percent compared to the previous period. Even though overall there was an increase in deficit for the services trade, it still remained below the values registered between 1994 and 2001. In fact, service exports have constantly increased since 2003, with an average growth rate of 24 percent in 2003-2007. During the first semester of 2008, this growth was led by travel and business services, which together accounted for 71 percent of service exports.

Argentina's exports remain strongly natural resource-intensive, while imports are highly technology-intensive. The structure of neither imports nor exports has drastically changed over time (Figure 9). Exports contain an average of 70 percent natural resources, while imports contain very little natural resources and a very high composition of technological products.

Figure 9. Evolution in Share of Factor Content for Argentina Exports (left) and Imports (right)

Source: COMTRADE and author's computations based on UNCTAD (1985) methodology, SITC1 4 digit.

This is corroborated by the fact that the Argentinean basket of main export products has not changed dramatically over the past decade, even though some products have changed ranking (Table 1). This indicates that Argentina's export profile has not changed as a result of the crisis. The most noteworthy agricultural products and agricultural manufactures include soybeans, beef and alcoholic beverages.

Table 1. Top 10 Exports to the World in 2007 and 1997 SITC3 (5 digit)

2007					1997				
Product Name	Exp to world (US\$)	Share in tot exp (%)	Main Exp Destination by product	Share in world exp (%)	Product Name	Exp to world (US\$)	Share in tot exp (%)	Main Exp Destination by product	Share in world exp (%)
Oil cake of soya beans	5,748,010	10	EU 25	59	Oil cake of soya beans	2,044,098	8	EU 25	49
Crude soya bean oil	4,260,480	8	China	36	Crude soya bean oil	1,010,778	4	China	27
Goods transp. vehicle	1,695,981	3	Mercosur	43	Prepared leather	845,510	3	USA	31
Prepared leather	855,464	2	EU 25	21	Crude safflower oil	817,488	3	Iran	17
Iron	825,072	1	Saudi Arabia	14	Goods transp. vehicle	597,701	2	Mercosur	97
Beef fresh/boneless	790,060	1	EU 25	69	Beef fresh/boneless	363,623	1	EU 25	61
Crude safflower oil	562,487	1	EU 25	29	Shell fish	352,630	1	Taiwan	30
Non monetary gold	562,235	1	Switzerland	90	Beef, frozen, boneless	229,441	1	EU 25	37
Motor vehicle gear	497,940	1	Mercosur	53	Iron	227,038	1	China	18
Still/fortified wines	486,199	1	EU 25	30	Oil cake of sunflower	226,004	1	EU 25	78

Source: COMTRADE and own calculations.

The basket of Argentinean imports has also not changed over the last decade, although it is clear that Brazil has taken over markets previously covered by the EU and the USA (Table 2). In 1997 Argentina's main provider of motor vehicles body parts, piston engines, and motor vehicle gear boxes was Europe, while ten years later Brazil has become the main import market for these products. Imports do not show any sign of product concentration (as per the low share of product imports in total imports), however they show high market concentration—not only is the share of imports in total imports in product very high for each destination, but Brazil constitutes the main imports partner.

Table 2. Top 10 Imports from the World in 2007 and 1997 SITC3 (5 digit)

2007					1997				
Product Name	Imp to world (US\$)	Share in tot imp (%)	Main imp Destination by product	Share in world imp (%)	Product Name	Imp to world (US\$)	Share in tot imp (%)	Main imp Destination by product	Share in world imp (%)
Radio transceivers	1,349,966	3.0	Brazil	53	Goods transp vehicle	828,771	2.7	Brazil	54
Motor vehcl parts	879,010	2.0	Brazil	44	Motor veh body parts	649,199	2.1	EU 25	49
Goods transp vehicle	759,256	1.7	Brazil	95	Radio transceivers	643,558	2.1	USA	65

Motor veh body parts	631,909	1.4	Brazil	35	Motor vehcl parts	529,162	1.7	Brazil	43
Medicam nes packs	385,618	0.9	EU 25	42	Diesel engines	248,537	0.8	Brazil	62
Motor vehicle gear boxes	379,644	0.8	Brazil	35	Piston engines	207,713	0.7	EU 25	55
Diesel engines	362,751	0.8	Brazil	73	Equipment P&C	200,380	0.7	USA	50
Monoamm onium phosphate	320,240	0.7	Russian Federation	44	Telecom equipment	197,400	0.7	EU 25	33
Piston engines	306,358	0.7	Brazil	58	Medicam nes packs	181,853	0.6	EU 25	44
Motorcycles	301,377	0.7	China	83	Motor vehicle gear boxes	147,862	0.5	EU 25	37

Source: COMTRADE and own calculations.

Imports are comprised predominantly of manufacture products (specifically in the automobile sector), both in 1997 and in 2007, corroborating the fact that imports are highly technology-intensive and that the structure of imports has not changed much. The import content of exports for Argentina⁵ shows that manufacturing has the highest imported content, at 18.5 percent of total exports, followed by agriculture, with 7.9 percent of imported content (Table 3). For the country as a whole, the imported intermediate content of total exports amounts to 14.5 percent of total exports (US\$4 billion).

Table 3. Imported Intermediate Content of Exports, Argentina, 1997
(US\$ millions)

Sector	Import content	Total exports	Imported intermediate content of exports (%)
Agriculture	289.7	3,665.1	7.90
Mining	94.6	2,311.5	4.09
Manufactures	3,487.8	18,908.3	18.45
Services	146.3	2,907.7	5.03
Country total	4,018.4	27,792.6	14.46

Source: Author's calculations based on INDEC data.⁶

Within manufactures, motor vehicles have the highest import content (45 percent), followed by radios and fertilizers (41 percent) (Figure 10). These findings show that there is important scope for Argentina to develop new inputs (especially parts and components) for the production of exports. Even though there is no evidence of important changes in the structure of Argentina's exports and imports, it would be important to repeat the same analysis with more updated data.

⁵ Following the "import-content" approach, Hummels et al. (2001) develop a measure of vertical specialization based on data from input-output tables, which measures imported inputs embodied in exported goods.

⁶ Input-output tables available for 124 production activities, corresponding to 18 sectors of economic activities, which can be in turn aggregated into four broad aggregates: agriculture, mining, manufacturing and services. Data is used at basic prices, that is, not including taxes net of subsidies, trade and transportation margins or customs expenditures.

Figure 10. Import Content of Exports by Manufacture Sectors, Argentina, 1997

Source: Author's calculations based on INDEC data.

3. TRADE PERFORMANCE

Structural transformation in Argentina has been scarce, as evidenced by the fact that the Argentinean basket and structure of export products has not changed dramatically over the past decade. This results in a relatively low and stagnated sophistication of its exports, and specialization in activities that appear to offer relatively little scope for technological catch-up to the world frontier.⁷

At the same time, Argentina's exports are well diversified compared to the average in LAC, even though product concentration has increased over the past decade. In 2007 almost 30 percent of total exports were concentrated in ten products, up from 25 percent in 1997 (Table 1). The product concentration index (Figure 11) has been stable over the last decade, with a slight increase in 2001-2003 (clearly due to a decrease in exports diversification due to the crisis) and then a decrease in 2003-2006. The recent decrease is probably related to a revival in manufacturing after the crisis related to the commodity boom and import substitution following the devaluation of the peso and the rebound in domestic demand. Compared to LAC's average and other competitors like Chile and Russia, Argentina's product concentration is fairly low. However, Argentina's product concentration is high compared to other important competitors such as Brazil. Moreover, product concentration started increasing again in 2007, a sign that the country may need to reconsider boosting export diversification in its trade policy.

Figure 11. Product Concentration Index for Argentina and Main Competitors 1990-2007

Source: COMTRADE and own calculations.

⁷ Sanchez, G. and Butler, I. (2008), Competitiveness and Growth in Argentina: Appropriability, Misallocation or Disengagement? IERAL - Fundación Mediterránea.

An analysis of export destinations shows that Argentina has been able to diversify export destinations over the 1997-2007 period. The five top export destinations have not changed over the last decade, despite a change in their ranking (Table 4). In fact the US and Chile have slightly lost importance over the last decade—even though their share in the Argentinean market has not changed—due to a rise of exports (largely agriculture-related) to China, whose share in Argentina’s exports has tripled from 3 to 9 percent from 1997 to 2007. However, the following five destinations have radically changed, due to the emergence of countries like Mexico, South Africa, Peru and India as new important destinations. Argentina has signed trade agreements with Mexico, India and members of the Southern African Customs Union. Moreover, as a member of Mercosur, it has signed preferential trade agreements with Bolivia, Chile and Peru.

Table 4. Argentina’s Top Destinations and Share in World Exports in 2007 and 1997 SITC3

Partner Name	Flow Name	2007	Share
Mercosur	Gross Exports	12,469,594	22
EU25	Gross Exports	9,741,452	17
China	Gross Exports	5,166,609	9
United States	Gross Exports	4,344,407	8
Chile	Gross Exports	4,176,201	7
Mexico	Gross Exports	1,433,739	3
Venezuela	Gross Exports	1,176,183	2
South Africa	Gross Exports	999,362	2
Peru	Gross Exports	957,848	2
India	Gross Exports	858,817	2

Partner Name	Flow Name	1997	Share
Mercosur	Gross Exports	9,600,503	36
EU25	Gross Exports	4,136,773	16
United States	Gross Exports	2,204,026	8
Chile	Gross Exports	1,931,584	7
China	Gross Exports	871,003	3
Iran	Gross Exports	659,103	2
Japan	Gross Exports	554,427	2
Bolivia	Gross Exports	464,214	2
Egypt	Gross Exports	459,097	2
Venezuela	Gross Exports	315,320	1

Source: COMTRADE and own calculations

Argentina has been successful in boosting trade relationships with its regional partners, but it should improve its trade relationship with higher GDP export destinations such as the EU and the US. The increase in trade intensity between Argentina and Chile over the 1998-2003 period is noticeable, but it was followed by a decrease over the last years (Figure 12). The trade relationships with Mercosur—and more specifically Brazil—have been stable over the last decade, with a shock registered during the crisis. The low band in the graph includes the countries with which Argentina has smaller bilateral trade flows, including important markets like the EU, the US, India and China.

Figure 12. Trade Intensity Index of Argentina with Main Export Partners

Source: COMTRADE and own calculations.

Argentina should improve its trade relationship with higher GDP export destinations such as the EU and the US. Argentina is one of 29 countries that have access to the US market under the GSP regime, which has the potential to benefit 3,635 goods. But Argentina does not export some 2,000 of these products.⁸ The products with the highest revealed comparative advantage (RCA) are primary products, but it is interesting to note that some of the most important exports—like vehicles and parts—have a very low RCA and still manage to be exported in high volumes (Table 5).

Table 5. Argentina's Revealed Comparative Advantage (RCA) 2007 (SITC3 3 digit)

	Product Name	RCA		Product Name	RCA
1	Fixed veg oil/fat	49.98	11	Beef, fresh/chilld/frozn	10.57
2	Animal feed	35.59	12	Margarine/shortening	10.01
3	Oil seeds	26.73	13	Leather	9.49
4	Maize	25.67	14	Wool/animal hair	9.07
5	Flour/meal wheat/meslin	16.69	15	Tobacco, raw and wastes	7.20
6	Wheat/meslin	15.52	16	Liquid propane/butane	6.92
7	Copper ores/concentrates	15.03	17	Leather manufactures	6.83
8	Cereal grains	12.65	18	Fruit presvd/fruit preps	6.00
9	Fuel wood/wood charcoal	12.47	19	Crustaceans and molluscs	5.73
10	Dyeing/tanning extracts	11.85	20	Fruit/veg juices	5.38

Source: Comtrade and own calculations.

In order to maintain or expand its export markets, Argentina needs to foster its competitive advantage compared to the countries that export the same products to the same markets. The middle-income countries that recur more often as competitors in Argentina's top exports are Brazil, Chile, Russia and Turkey (Table 6). Many East European countries and some Asian countries like India, Malaysia and Thailand are also competitors, and it would be interesting to research the structure of these countries' economies and exports, to see if and where Argentina is underperforming (if at all) and what lessons may be learned. Eastern Europe countries have a clear advantage in market access to the EU, so Argentina should focus on its competitiveness in order to improve its trade relationship with this important destination.

Table 6. MIC Competing with Argentina in Main Export Destinations by Product 2007 (SITC3)

Product Name	Export Partner	Competitors
Oil cake of soya beans	EU 25	Chile, Bulgaria, Macedonia, Moldova, Romania, Lebanon, Turkey, Georgia, Croatia, China
Crude soya bean oil	China	Brazil
Goods transport vehicle	Mercosur	Brazil, Thailand, Mexico, China, Uruguay, Chile, India, Malaysia, Russian Federation, Bolivia
Prepared leather	EU 25	Brazil, India, Uruguay, Poland, Russian Federation, Romania, Mexico, Croatia, Thailand, Turkey
Iron	Saudi Arabia	China, Mexico, Russian Federation, Ukraine, Indonesia, Brazil, Romania, India, Malaysia, Turkey
Beef fresh/boneless	EU 25	Brazil, Uruguay, Poland, Chile, Lithuania, Latvia, Romania, Azerbaijan, Iran, Russian Federation
Crude safflower oil	EU 25	Ukraine, Russian Federation, Romania, Poland, Bulgaria, Bosnia and Herzegovina, Mexico, Moldova, Lithuania, Croatia
Non monetary gold	Switzerland	Colombia, Kazakhstan, Sri Lanka, China, Armenia
Gear boxes and parts for motor vehicles	Mercosur	Brazil, Chile, India, Indonesia, China, Poland, Mexico, Turkey, Thailand, Ukraine
Still/fortified wines	EU 25	Chile, Bulgaria, Macedonia, Moldova, Romania, Lebanon, Turkey, Georgia, Croatia, China

⁸ Argentina Commerce Report 2008.

Source: COMTRADE and own calculations.

Even if structural transformation is low, Argentina's aggregate exports have shown a considerable dynamism over the past 15 years. The country has performed better compared to world and regional comparators. Argentina recovered its world trade share during the 1990s, a period associated with macroeconomic stabilization, trade liberalization, deregulation, large capital inflows, real exchange rate appreciation and fast GDP and productivity growth until 1998. From 1992 to 2007, Argentina's export growth was above the rate of growth of world trade (Table 7).

Table 7. Export Dynamics in Argentina vs. Comparators (SITC 3)

	Average Annual Growth Rate		
	1992-99	2000-07	1992-07
World	6.7	11.3	9.0
Argentina	10.5	11.6	11.0
Brazil	4.4	16.9	10.6
Chile	7.9	21.8	14.8

Source: Comtrade and own calculations.

Mining products have grown fast in terms of exports (Table 8). This reflects the fact that mining has been one of the sectors that has benefited the most from the devaluation, and has attracted new foreign investment. Moreover, an amendment to the mining law passed in 2001 set out new fiscal stability rules and exempted the sector from export taxes. Some manufactures good appear in the list too (sound recorders and steam turbines), together with dairy and primary products. The least dynamic products are mainly minerals and industrial manufacturing (furniture on top), further confirming that manufacturing production is mainly focused on domestic demand.

Table 8. Least and Most Dynamic Export Products in 2004-07 (STIC3 3 digit)

Product Name	Share in total exports	Average annual growth 04-07	Product Name	Share in total exports	Average annual growth 04-07
Non ferrous base metal waste	0,00	-30,28	Iron ore/concentrates	0.00	31489.85
Furniture/stuff furnishing	0,18	-14,44	Base metal ores	0.02	3975.26
Rolled plated m-steel	0,18	-12,07	Veg text fibre	0.00	490.84
Mach-tools remove material	0,01	-10,90	Iron/steel railway material	0.00	361.91
Petrol./bitum. oil,crude	2,36	-10,23	Butter and cheese	0.09	330.25
Photographic equipment	0,00	-9,90	Sound recorders	0.00	327.09
Sulphur/unroastd pyrites	0,00	-9,58	Steam/vapor turbines	0.00	293.82
Printing industry machinery	0,01	-5,49	Flour/meal wheat	0.46	283.82
Synthetic spinning fibre	0,01	-4,63	Coke/semi-coke	0.00	257.10
Polyacetals/polyesters	0,14	-3,31	Plastic waste/scrap	0.05	257.00

Source: Comtrade and own calculations.

Note: Although most of the listed products may not constitute a large share of exports, above average growth in these products may mean they eventually become an important source of a country's export earnings. In addition, the specific production characteristics of dynamic products could also convey important information on export opportunities in relation to other similar goods.

Overall Argentina has increased exported products with almost all partners, which would explain an increase in the number of products exported and consequently an increase of product diversification (Figure 13).⁹ Regarding existing important export markets (right graph), Argentina has been exporting at an even path to Japan, while the diversification of exports has decreased to partners

⁹ For the methodology, please refer to Amurgo-Pacheco, A. and Pierola, M.D. (2008), Patterns of Export Diversification in Developing Countries: Intensive and Extensive Margins, PRWP 4473, World Bank.

like Brazil and USA. However with Canada, Mexico, Peru, EU and Chile the number of zeros has decreased over the years, implying an increase in the number of products exported to these partners. For growing trading partners (left hand graph), a large reduction of zeros can suggest that there is scope for further increase of trade relations. The steepest reduction of zeros is observed in trade with South Africa, Australia and China.

Figure 13. Evolution of Number of Zeros by Partner 1990-2005 (HS 6 digit)

Source: Comtrade.

Note: A zero indicates the absence of trade in a specific product, so an increase/decrease in the number of zeros reflects a reduction/increase in exported products. Note that the scale of the number of zeros on the Y axis is different on the left and right graphics.

Argentina is clearly following the same pattern as the LAC region, with a decrease in the number of zeros over the past years (Figure 14). The country has experienced a steeper reduction in the 2004-2005, similarly to what has happened in the group of industrialized countries and East Asia.

Figure 14. Evolution of the Average Number of Zeros for Argentina vs Comparators

Source: Comtrade.

This is consistent with the findings of Brenton and Newfarmer (2007),¹⁰ who assess the contribution of both intensive and extensive margins to export growth. The contribution of the intensive margin (first three columns) and extensive margin (last three columns) to growth is similar for the 1995-2004 periods (Figure 15). However the dominant impact on growth comes from increases

¹⁰ Brenton, P and Newfarmer, R (2007), Watching More Than The Discovery Channel. Export Cycles and Diversification in Development. WPS4302 World Bank.

in certain existing trade flows (121 percent). In Brenton and Newfarmer's analysis, this contribution appears similar to that of the average across all countries in the sample. Argentina appears to differ somewhat from the average in terms of a much greater impact from the decline of some existing flows (-55 percent for Argentina compared to -35 percent on average) and the complete loss of some trade flows (-19 percent in Argentina compared to -5 percent on average). An important source of export growth in Argentina has been its ability to export existing products to new markets, while exports of new products have contributed little to export growth in this period.

Figure 15. Components of Export Growth in Argentina 1995-2004

Source: Comtrade.

The low or flat growth of new exports products is also parallel by poor growth in the sophistication of the Argentine export basket, measured in Sanchez and Butler (2008).¹¹ The income content of Argentine exports has grown only 15 percent between 1975 and 2000, compared to 100 percent and 50 percent for Brazil and Chile respectively (Figure 16). Moreover, Argentina's current per capita income lies above its export sophistication, a measure that—according to the authors—suggests that its current export basket will not offer a positive contribution to growth. Moreover, in the cases of Brazil and Chile, it was very important that export sophistication was significantly bigger than per capita GDP at the beginning of the observed period. Especially for Brazil, the sophistication of exports increased more than per capita GDP between 1975 and 2000, suggesting increasing opportunities for growth. In the case of Argentina, export sophistication was never much bigger than its per capita GDP, which may help explain its poor growth performance since 1975.

¹¹ Sanchez, G. and Butler, I. (2008), Competitiveness and Growth in Argentina: Appropriability, Misallocation or Disengagement? IERAL - Fundacion Mediterranea.

Figure 16. Export Sophistication: Argentina versus Comparators (1975-2000)

Source: Sanchez and Butler (2008).

A low level of export sophistication can explain the low export growth of Argentina's manufacturing sector compared to primary products and agro-industry. However it is also well known that FDI has a significant role in the development of the manufacturing sector, and as a consequence it is interesting to analyze how Argentina has integrated into the global production chain. In this scenario, it is important to distinguish between two different value chains: *buyer-driven* and *producer-driven*. Buyer-driven networks refer to the situation where global buyers create a supply base upon which production and distribution systems are built without direct ownership.¹² Producer-driven networks emerge from production fragmentation in vertically integrated sectors. Both types of networks are analyzed below, with buyer-driven networks considering textiles and clothing (T&C), footwear and furniture; and producer-driven networks focusing on automotive and information and communication technology (ICT).

T&C represents the most important network for Argentina, with exports representing on average 68 percent of total buyer-driven exports over the last decade (Figure 17). However T&C also registered the steepest increase in imports over the same period, well above the value of exports. A comparison between Argentina and its main comparators illustrates that Brazil is the net best performer, showing high exports in the three networks, but a clear comparative advantage in the footwear chain. Neither Argentina nor Chile are net exporters in any of the three networks. Clearly Brazil has been able to exploit the benefits of buyer-driver networks, as its exports have maintained strong growth over the years, with an impressive trade surplus. Overall, it seems that Argentina has not been able to integrate its production into the global chain of buyer-driven networks. In fact, import values significantly exceed export values in the three sectors. The conclusion seems to be that buyer-driven networks have not fostered Argentinean exports and have not shown important spillovers on the structure of its export-oriented industrial production.

¹² This is common in industries in which large retailers, branded marketers and branded manufacturers play the central role in setting up decentralized production networks in a variety of exporting countries. This pattern has become common in labor-intensive, consumer goods sectors; this is the reason why the three main sectors considered in this analysis are textiles and clothing, footwear and furniture.

Figure 17. Buyer-driven Networks: Argentina vs Comparators

Source: Comtrade and author's calculations (SITC version 2).

The producer-driven networks are far more important than buyer-driven networks for Argentina. Automobiles are the most important network, with a share of almost 100 percent in the producer-driven network's exports (Figure 18). Automobile exports have increased at an average rate of 38 percent over the 2003-2006 periods (29 percent in 2007-08). ICT exports seem negligible, however the graph does not show that they have experienced an increase of 56 percent in 2006 (up from a meager 2 percent in 2005). On the other hand, imports have increased in both networks after a drop in 2002, so that the trade balance would be in deficit in both sectors.¹³ The automobile network is the most important also for the two comparators (as shown by the high share in producer-driven network), but Brazil seems to be the only net exporter, even though its imports have increased at a high speed over the last years. In fact Brazil's share in world export in 2006 was 1.35 percent, compared to 0.4 percent in Argentina. So regional competition in the automobile sector is fierce, but it also indicates an important regional market, as shown by the great importance of Brazil as a partner in trade of vehicles. It would be interesting to analyze more in depth the value and dynamics of intra-industry trade and the scope for more regional cooperation. ICT grew in importance for Brazil over 2000-02, however none of the three countries is a net exporter of ICT, so there is still scope for further

¹³ However, Business Monitor International forecasts that by the end of 2012, Argentina will turn into a net exporter of automobiles (http://www.businessmonitor.com/argentina_autos.html).

development. The sector has grown importance over the years for Chile, but the volume of exports is still meager.

Figure 18. Producer-driven Networks: Argentina vs Comparators

Source: Comtrade and author's calculations (SITC version 2).

These findings are in line with Anlló and Ramos (2007), who argue that investment in R&D in Argentina has been stagnant over the past decade, while Brazil has undertaken a very proactive approach with policies supporting the productive sector. In fact Brazil has experienced a change of R&D strategy in subsidiaries, which have acquired new responsibilities, especially in the automotive industry and to a lower extent in ICT. Generally, the difficulties encountered by local productive sector in accessing and generating knowledge are related to the position of the local firms in the global chain. In a few cases integration into the global chain has even been negative because some functions and production components have been transferred outside of the country. Brazil is ahead of Argentina in this respect, and the changes in Brazil policies for the productive sector have helped to maintain and entrench some of the most knowledge/technology-intensive activities within its local production chain.

The increase of exports in the automobile network has been led by exports to Brazil, which have grown at an average speed of 47 percent in the 2004-06 periods and represent almost 50 percent of total exports (Figure 19). P&C do not represent an important share (and has even decreased), so the increase must be led by final products. However Brazil is also the most important source of automobile imports (60 percent of Argentina's automobile imports are sourced in Brazil), the value of which exceeded Argentina's automobile exports to the country. This reflects the fact that Brazil is the main recipient of Argentine exports of industrial manufactures, owing to integration of the production chain in the automotive and other sectors. The regional bloc has frequently served businesses as a springboard to other markets by enabling them to achieve economies of scale and specialization, to promote the learning process and to increase the proportion of high-end technological products involved in trade. The EU and the USA have not been important recipients of automobile exports in terms of value, and they import almost only P&C from Argentina's automobile network.

With regard to the ICT network, exports are low but have increased over the last years. The USA used to be an important destination before the drop due to the crisis, but exports to the country have started to increase again in 2004 and 50-60 percent of these exports are composed by P&C. Brazil wasn't an important destination of ICT until 2003, when exports to Brazil first exceeded those to the USA in value and kept increasing. Exports to the EU have also increased although from a low level, with a steep rate in the 2005-2006 led by an increase in exports of radio broadcast receivers.

Figure 19. Volume of Exports and Imports to Partner Countries and Share of P&C in Network (in US\$'000)

Source: Comtrade and author's calculations (SITC version 2).

Overall, it seems that also in producer-driven networks Argentina is likely to be a net importer. Both in automobile and ICT, imports value has exceeded exports value. However, the producer-driven network has clearly contributed to the increase in Argentinean automobile exports, increasing its market share in world exports from 0.2 to 0.4 percent between 2003 and 2006, and it may help the country to become a net exporter in few years.

4. CONCLUSIONS

Despite a rich endowment of natural resources, Argentina's export dynamism has not performed up to its potential as a contributor to economic growth. Following the liberalization policies of the 1990s and the devaluation of 2001 exports have grown steadily, which has helped the country weather difficult economic times. However, the number and sophistication of exported products has remained stagnant. Most export growth has come as a result of increased existing flows and finding new markets for existing products.

The composition of exported goods has not changed significantly in the past decade. Argentina's trade product concentration remains relatively low, but it is higher than important regional competitors such as Brazil, and has increased in the past 10 years. In 1997, 25 percent of exports were concentrated in 10 products, but by 2008 that share had risen to 30 percent. The main export products remain overwhelmingly natural-resource intensive, compared to highly technology-intensive imports. In 2006, exports contained on average 70 percent natural resources, compared to about 10 percent

technology. The income content of Argentine exports—a measure of export product sophistication—has risen only 15 percent between 1975 and 2000, compared to 100 percent in Brazil and 50 percent in Chile. Argentina’s current per capita income lies above its export sophistication, which suggests that its current export basket will not offer a positive contribution to growth. Moreover, the participation of Argentina in global product chains has not been well-exploited, and the country does not seem to have benefited either from buyer-driven or producer-driven networks.

Argentina has had some success in recent years in finding new buyers for its exported goods. The country’s top five export destinations have not changed in the past decade, but exports have grown sharply to smaller export destinations. This is especially the case with Latin American regional partners such as Mexico, Peru and Chile, and also to more distant markets such as India and South Africa. However, Argentina should work to improve export relationships with higher GDP export destinations such as the EU and US. For example, Argentina has privileged access to the US market for over 3,500 products, but it does not export around 2000 of these products.

Overall, the analysis indicates that Argentina has a number of important opportunities to improve its export dynamism by taking better advantage of its rich natural resource endowment and sophisticated labor force. Greater promotion of research and development, streamlined tariffs and export taxes, and more pro-active efforts to penetrate high-value export markets, among other measures, all can help boost the ability of firms to compete in the global market and increase the contribution of trade to Argentina’s economic growth.