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SMEs, TRADE AND DEVELOPMENT IN LATIN AMERICA: TOWARD A NEW APPROACH ON GLOBAL VALUE CHAIN INTEGRATION AND CAPABILITIES UPGRADING

October 2015

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Abstract

This paper studies the potential for a higher involvement of Latin American SMEs in global value chains (GVCs). Intra-regional variations in trade patterns are discussed, and the role and benefits of the SME internationalization for the region's development, in particular in relation to technological and knowledge spillovers, are analyzed. Although the SME sector represents 99 per cent of all firms and 80 per cent of all employment, it has minimal participation in GVCs and exports. A major problem, we show, is that SMEs in Latin America, suffer from huge productivity and technological gaps, especially when compared to SMEs in other emerging markets, like those in East Asia and post-communist countries. Conventional solutions are not working. Government and other non-market institutional support is crucial improve SME capabilities to learn faster – both from one another and from more advanced foreign firms. We stress the importance of certain non-market institutions facilitating SME access to new horizontal professional networks and accessing a variety of applied, experiential knowledge.

JEL Classification: F14, L15

Keywords: trade, prices, SME

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Introduction

This report analyzes the internationalization of small and medium sized enterprises (SMEs) from Latin America and their integration into international value chains. Such integration largely occurs when the SME is a direct exporter or a supplier to exporters or to a certain degree to subsidiaries of multinational corporations (MNCs) and part of global value chains (GVCs). While SMEs historically account for the vast majority of firms in emerging markets (and Latin America in particular) and a majority of employment, their participation in international value chains has in general been minimal.[1] Scholars and policy makers believe that increasing their participation would not only bring immediate economic benefits, such as improved earnings and wages, but improve the general competitiveness and technological sophistication of SMEs. The basic notion is that with the liberalization of trade and investment, SMEs have every greater opportunity to become exporters or suppliers of global buyers or MNC subsidiaries, and in turn, become beneficiaries of the great spillover effects of these value chains. Put another way, the international value chains can become vital sources of technological and organizational upgrading and knowledge transfer for local SMEs, in turn contributing to the overall strengthening of the fundamentally important SME sector in developing countries (ECLAC 2014; OECD 2008).

Despite over two decades of increased economic openness, the expected benefits of open markets have not manifested themselves very much for SMEs. For example, a recent report by the McKinsey Global Institute argues that despite the growth in exports and FDI for Mexico after twenty years of NAFTA, productivity has not grown, especially for SMEs (McKinsey & Company 2014). Although large firms in Mexico have greatly improved their capabilities, and in turn their productivity, medium firms have made no gains and small firms have greatly declined. At the same time, employment has declined for large firms, held the same for medium firms and expanded for small firms. In short, twenty years of potential benefits from NAFTA have not reached SMEs.[2]

A cursory look at the evidence shows a similar pattern across Latin America, but with some variation. We highlight how certain types of mechanisms, institutions and policies can improve both SME participation in global value chains and SME competitive capabilities over time.

We build our argument incrementally. Section 1 shows the growth and composition of both exports and FDI in Latin America countries. Despite their growth over the past twenty years, Latin American countries in general suffer, especially relative to Asian countries and the advanced world, from a low export participation in the overall economy, a narrow or shallow composition of both exports and FDI, and limited integration into GVCs. In Section 2 we introduce SMEs into the mix. The data reveal the great importance of SMEs in most countries but their great weakness in terms of export participation, integration into key value chains, and weak productivity. Section 3 then turns to a review of policies aimed at supporting SMEs and their value chain activities. In general, public support for SMEs in Latin America lags far the policies and expenditures of advanced countries as well as comparable competitors, such as in East Asia and East Central Europe. Beyond the problems of scope and scale of such policies, reliance in Latin America in the 1990s on trying to support SMEs finances and reduce red tape failed to stimulate broad based SME restructuring, learning and upgrading. More recently, governments and NGOs have experimented with a variety of policies aimed at improving the positive spillover effects for SMEs from large firms and global supply chains (Crespi et al., 2014). These are done through programs to strengthen clusters, improve supply chain coordination, and improve SME access to international technologies and standards. However, many of these programs have often lacked coherence and a thorough understanding of some of the main elements of value chains, such as their governance and inner organization within a context of asymmetric information and skewed distribution of power (Pietrobelli and Staritz, 2013).

In this latter area, we observe some very important gains. But they are not widespread. In turn, in Section 4, we analyze more concretely what types of knowledge resources SMEs need the most and what types of

[1] Blyde (2014) shows that Latin America tends to participate in GVCs at a lower rate that the EU or Asia, finding that exports from the EU and Asia include 15 and 12 % points more foreign value added, respectively, than Latin American exports.

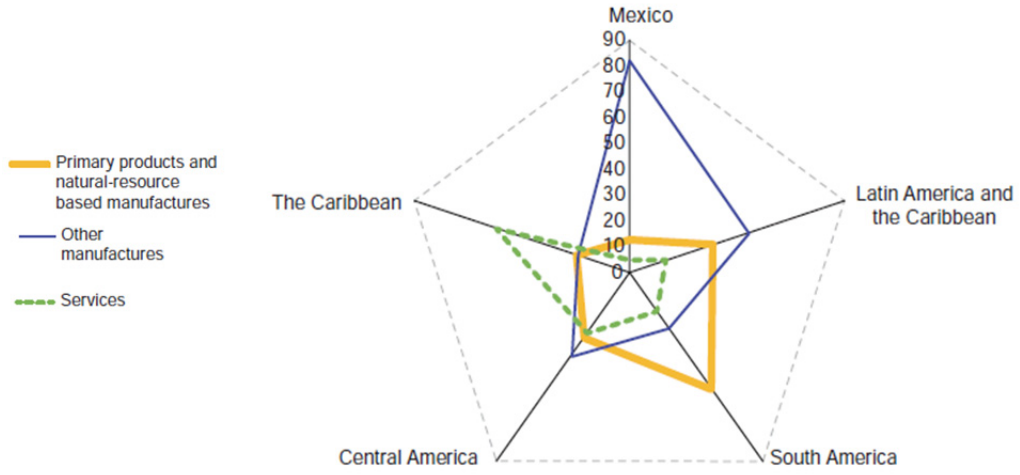
[2] A related source of disappointment of after twenty years of NAFTA refers to the very limited value added by Mexican firms to the value of imported intermediate inputs and technologies. It has been estimated that local content of Mexican exports is only 23% (Blyde, 2014, p. 101), whereas it has reached 60% of China's exports in recent years (Koopman, Wang, and Wei, 2008).

mechanisms can accelerate learning for capability upgrading. Our point of departure is that simply using even more focused incentives per se to force SME integration in GVCs will not necessarily accelerate the broad based diffusion and implementation of international practices. Rather, in order to expand and deepen their integration into sustainable GVCs, SMEs especially need greater access to a variety of applied, experiential knowledge rather than simply pioneering technology. The former allows the SMEs to absorb and adapt the latter (Morrison et al., 2008; Lall, 1992). Moreover, it appears that non-market institutions, rather than simply other firms or consultants, may be the best positioned to facilitate this access and learning (Corredoira & McDermott 2014; Pietrobelli & Rabellotti 2011).

1. Regional and Global Integration in South America: Trade and FDI

Since the 1990s, Latin America and the Caribbean have seen export growth slow slightly for goods (from 12% to 11% per year), but rise slightly from 7% to 9% per year for services (ECLAC, 2014, p. 53). South America's export structure is strongly linked to primary goods and natural resources, Central America's (including Mexico's) is dominated by manufactures, and the Caribbean's is dominated by services (i.e. tourism, finance and transport) (See Figure 1).

Figure 1. Structure of Exports by Sub Region in LAC (2010) (Percentages of total goods and services exported)



Source: ECLAC, 2014

In South America alone, export performance, as measured through export growth and exports- to-GDP ratios, has been steadily improving in almost all countries in the sub-region between 1990 and 2012. Increases in export prices rather than increases to volume were much of the reason, where export prices grew 8.5 percent per year compared to only 5.4 percent growth in volume. In the natural resource rich Andean countries, the differences are even starker with export prices growing by 10.9 percent per year along with a mere 2.5 percent per year increases in volume (ECLAC, 2014, p. 53). This spike in export prices has led to a "reprimarization" or an increase in unprocessed raw materials relative to total exports. In all South American countries except Colombia, growth in export to GDP ratios were accompanied by increases in export-related employment, far outpacing growth in total employment, with a large role played by the agro-export sector (see Table A1).

In South America's largest countries—Colombia, Argentina, and Brazil—exports account for less than 20 percent of GDP, which is below the 25 percent average for LAC, and the 23 percent average for low-income countries. Indeed, largely due to strong domestic demand, in Brazil and Colombia exports accounted for only 13 and 18 percent of GDP, respectively, in 2013. Smaller countries like Paraguay and

Bolivia rely heavily on foreign markets with exports accounting for around half of GDP and contributing 69 and 56 percent, respectively, to nominal GDP growth in 2011.

Export diversification is a major indicator of export performance.[3] Over the past 10 years, South American exports, for the most part, have become more concentrated in fewer items. The Herfindahl-Hirschman Index (HHI) of diversification displays a slight decrease in export diversification in South America between 2000 and 2010, while exports from Central America appear to become more diverse. Argentina, Brazil, and Uruguay are the only countries in South America to display a relatively high degree of diversification in 2010 (HHI's between 0.4 and 0.5). As seen in Table 1, growing export concentration, especially for Venezuela and Andean countries, is strongly linked to greater reliance on the expansion of mining, gas and oil industries. For instance, until 2000 Bolivia did not export any natural gas which in 2013 accounted for over 50% of exports. In a similar fashion, crude oil exports in Venezuela have grown from 70% in 1998 to 96% in 2011. In Colombia crude oil exports have doubled from 1996 to exceed 65 percent in 2013, dwarfing in size the agricultural exports that used to form part of the country's top exports (i.e. Coffee: 15% in 1996 vs. 3% in 2013; Cut flowers: 5% in 1996 vs. 2.3 in 2013; Bananas: 4.4% in 1996 vs. 1.3 in 2013, see Table A6).

Table 2 reveals the shifts in composition of export country markets. China has overtaken the U.S. as the main export destination for natural resources, and China is the destination of 25 and 19 percent of total exports from Chile and Brazil, respectively. In Peru, China is on a par to become the principal export destination (17.5 percent of exports now go to China, compared to 17.8 percent to the U.S.). Regional markets are more important for small and medium-sized countries, as well as for the Southern Cone countries. For example, Bolivia exports over half of its total exports to Brazil and Argentina. Brazil is also the top export destination for fellow MERCOSUR members, Argentina and Paraguay (33 and 30 percent, respectively). Ecuador and Colombia are the only two countries that have retained the U.S. as their principal trading partner, although for Colombia the percent exported to the U.S. has declined from 50 percent in 2000 to 32 percent in 2013.

[3] There is ample literature arguing that diversification and structural change are synonymous of development, through its effects on lower dependence and vulnerability, better resource allocation, learning by exporting, etc. (MacMillan and Rodrik, 2011)

Table 1. Top 5 Exports by Country, 2000 vs. 2013

Country	Top 5 Export Products, 2000	% of Total Exports 2000	Top 5 Export Products, 2013	% of Total Exports 2013
Argentina	Petroleum oils, crude (10.7); Oil-cake and other solid residues (8.2); Wheat and meslin (4.6); Petroleum oils, other than crude (4.4); Maize (corn) (3.9)	31.8	Oil-cake and other solid residues (13.9); Maize (corn) (7.6); Motor cars and other motor vehicles principally designed for the transport of persons (5.4); Motor vehicles for the transport of goods (5.4); Soybeans (5.3)	37.6
Bolivia	Zinc ores and concentrates (11.7); Aircraft, powered; spacecraft & launch vehicles helicopters, satellites (9.9); Oil-cake and other solid residues (9.7); Petroleum gases (8.7); Gold (6.0)	46.0	Petroleum gases (50.1); Precious metal ores (7.1); Zinc-ores and concentrates (6.2); Oil-cake and other solid residues (5.0); Petroleum oils, crude (4.2)	72.6
Brazil	Aircraft, powered; spacecraft & launch vehicles helicopters, satellites (6.3); Iron ores and concentrates (5.5); Soya beans (4.0); Motor cars & other motor vehicles principally designed for the transport of persons, incl. station wagons & racing cars (3.2); Oil-cake and other solid residues (3.0)	22.0	Iron ores and concentrates (13.4); Soybeans (9.4); Petroleum oils, crude (5.4); Cane or beet sugar (4.9); Light-vessels, fire-floats, dredgers, floating cranes, and other vessels (3.2)	36.3
Chile	Refined copper and copper alloys (25.6); Copper ores and concentrates (13.1); Chemical wood pulp, soda or sulphate (6.1); Fish fillets and other fish meat (3.3); Wine of fresh grapes (3.2)	51.3	Refined copper and copper alloys (24.4); Copper ores and concentrates (22.2); Unrefined copper (4.6); Chemical wood pulp (3.6); Fish fillets and other fish meat (2.6)	57.4
Colombia	Petroleum oils, crude (30.5); Coffee, whether or not roasted or decaffeinated (8.1); Coal (6.6); Petroleum oils, other than crude (5.7); Cut flowers and flower buds (4.4)	55.4	Petroleum oils, crude (47.0); Coal (10.6); Petroleum oils, other than crude (7.4); Gold (3.8); Coffee (3.3)	72.1
Ecuador	Petroleum oils, crude (44.5); Bananas, including plantains, fresh (17.0); Crustaceans, whether in shell or not, live, fresh, chilled, frozen, dried, salted or in brine (5.7); Petroleum oils, other than crude (4.8); Prepared or preserved fish; caviar (4.4)	76.4	Petroleum oils, crude (53.7); Bananas (9.3); Crustaceans (7.2); Prepared or preserved fish (5.4); Cut flowers and flower buds (3.4)	79.0
Paraguay	Soya beans, whether or not broken (32.9); Cotton, not carded or combed (9.0); Oil-cake and other solid residues (8.7); Meat of bovine animals, fresh or chilled (6.3); Leather of bovine or equine animals (5.9)	62.8	Soya beans, whether or not broken (26.6); Electrical energy (23.7); Oil-cake and other solid residues (9.8); Meat of bovine animals, frozen (8.2); Soybean oil (5.0)	73.2
Peru	Gold (16.7); Flours, meals & pellets, of meat or meat offal, of fish or crustaceans, molluscs, aquatic invertebrates, unfit for human consumption (12.7); Refined copper and copper alloys (10.8); Zinc ores and concentrates (5.1); Petroleum oils, other than crude (4.0)	49.3	Gold (19.2); Copper ores and concentrates (18.2); Petroleum oils other than crude (7.9); Refined copper and copper alloys (5.0); Petroleum gases and other gaseous hydrocarbons (3.8)	54.0
Uruguay	Meat of bovine animals, frozen (10.6); Leather of bovine or equine animals (9.3); Rice (7.2); Meat of bovine animals, fresh or chilled (5.0); Wool and fine or coarse animal hair (4.8)	36.9	Soya beans, whether or not broken (20.7); Meant of bovine animals, frozen (10.4); Rice (5.6); Milk and cream (5.1); Meat of bovine animals, fresh (4.0)	45.7

Venezuela*	Petroleum oils, crude (58.9); Petroleum oils, other than crude (26.6); Unwrought aluminium (2.0); Ferrous products obtained by direct reduction of iron ore and other spongy ferrous products (0.9); Parts & accessories for motor vehicles (0.5)	89.0	Petroleum oils, crude (66.7); Petroleum oils, other than crude (29.8); Iron ores and concentrates (0.6); Ferrous products (0.5); Flat-rolled products of iron or non-alloy steel (0.3)	97.9

Source: UN Comtrade, Note: * Data for Venezuela for 2013 is from 2011 (latest available data). See Table A7 in Appendix for a more detailed table.

Table 2. Top 5 Export Destinations by Country, 2000 vs. 2013

Country	2000	% of Total Exports	2013	% of Total Exports
Argentina	Brazil (26.5), U.S. (12.0), Chile (10.2), Spain (3.5), Uruguay (3.1)	55.3	Brazil (21.2), China (7.2), U.S. (5.6), Chile (5.1), Venezuela (2.8)	41.9
Bolivia	U.S. (24.0), Colombia (13.2), U.K. (11.5), Brazil (11.4), Switzerland (11.2)	71.4	Brazil (33.0), Argentina (20.6), U.S. (10.0), Colombia (5.5), Peru (5.1)	74.2
Brazil	U.S. (24.3), Argentina (11.3), Netherlands (5.1), Germany (4.6), Japan (4.5)	49.8	China (19.0), U.S. (10.3), Argentina (8.1), Netherlands (7.2), Japan (3.3)	47.8
Chile	U.S. (16.5), Japan (14.0), U.K. (5.8), Brazil (5.3), China (5.0)	46.6	China (24.8), U.S. (12.7), Japan (9.9), Brazil (5.7), South Korea (5.5)	58.7
Colombia	U.S. (50.4), Venezuela (9.9), Ecuador (3.5), Germany (3.3), Peru (2.8)	70.0	U.S. (31.8), China (8.7), Panama (5.5), India (5.1), Spain (4.9)	55.9
Ecuador	U.S. (37.9), South Korea (6.6), Panama (6.1), Peru (6.0), Colombia (5.4)	61.9	U.S. (44.6), Chile (9.9), Peru (7.5), Colombia (3.7), Russian Federation (3.3)	69.0
Paraguay	Brazil (38.7), Uruguay (14.1), Argentina (10.6), Netherlands (7.1), Chile (5.7)	76.3	Brazil (30.0), Russian Federation (10.0), Argentina (7.6), Chile (5.6), Italy (3.6)	56.9
Peru	U.S. (28.0), U.K. (8.4), Switzerland (8.0), China (6.4), Japan (4.7)	55.6	U.S. (17.8), China (17.5), Switzerland (7.2), Canada (6.5), Japan (5.3)	54.4
Uruguay	Brazil (23.1), Argentina (17.9), U.S. (8.3), China (4.0), Germany (3.9)	57.2	Brazil (18.9), Free Zones (16.0), China (14.2), Argentina (5.4), Venezuela (4.9)	59.5
Venezuela*	U.S. (59.6), Netherlands Antilles (5.6), Unspecified (4.4), Brazil (3.6), Dominican Republic (2.8)	76.0	Unspecified (82.6), Other Asia, not else specified (13.9), China (0.5), U.S. (0.5), Colombia (0.5)	98.0

Source: UN Comtrade; **Note:** * Data for Venezuela for 2013 is from 2011 (latest available data).

1.1. FDI in South America

FDI flows to Latin America and the Caribbean reached record levels in 2012 and 2013 (Table 3) (ECLAC, 2012, p. 9). Brazil receives the largest share of FDI flowing into the region, followed by Chile. FDI inflows in Latin America reached 3 percent of GDP in 2012.

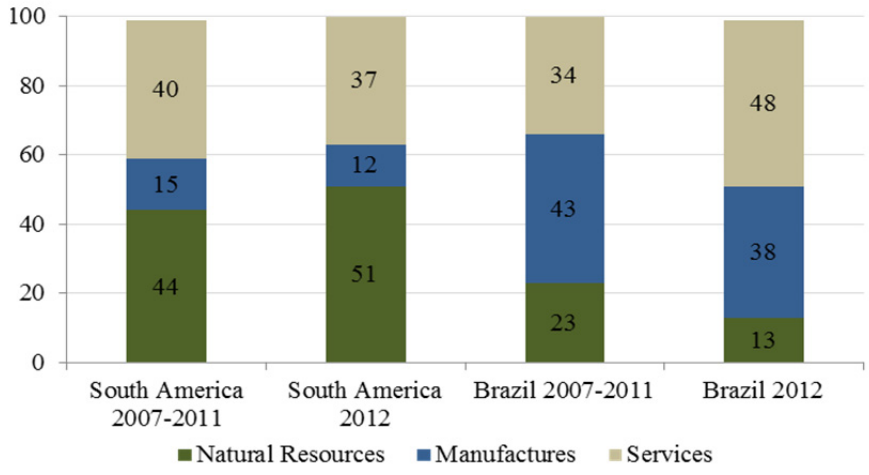
Table 3. FDI Inflows by Country (2000-2013) (Millions of USD)

	2000-2006*	2007	2008	2009	2010	2011	2012	2013
South America	38,582	71,766	93,447	56,604	92,112	129,140	144,054	133,354
Argentina	4,473	6,473	9,726	4,017	7,848	9,882	12,551	9,082
Bolivia	342	366	513	423	643	859	1,060	1,750
Brazil	19,144	34,585	45,058	25,949	48,506	66,660	65,272	64,045
Chile	5,387	12,572	15,518	12,887	15,373	22,931	30,323	20,258
Colombia	4,108	9,049	10,596	7,137	6,758	13,438	15,823	16,772
Ecuador	539	194	1,058	306	163	641	587	703
Paraguay	59	202	209	95	228	215	273	382
Peru	1,870	5,491	6,924	6,431	8,455	8,233	12,240	10,172
Uruguay	551	1,329	2,106	1,529	2,289	2,505	2,710	2,796
Venezuela	2,110	1,505	1,741	(2,169)	1,849	3,778	3,216	7,040
Sub-Saharan Africa	13,849	29,773	38,724	39,635	33,352	42,206	41,044	44,839
Developing Asia	173,289	365,822	396,025	323,683	409,021	430,622	415,106	426,355

Source: UNCTAD; **Note**: * Simple Average

Similar to the export sector, the sectoral decomposition of FDI inflows in South America has been one of increasing concentration of FDI in natural-resource-based sectors.

Figure 2. FDI Inflows in South America, by Sector (%)



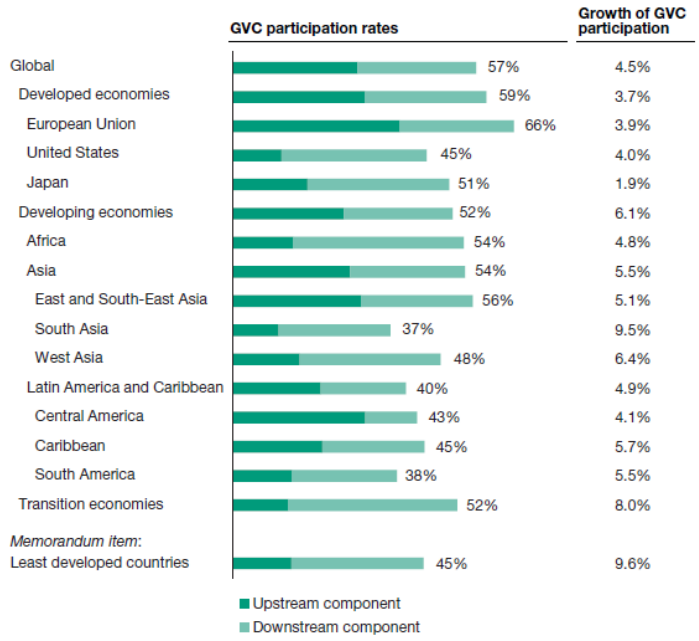
Source: ECLAC, 2012, p.38

Mining accounted for 51 percent of FDI South America (without Brazil, in 2012), while manufacturing and services accounted for 12 percent and 37 percent, respectively. Mining tends to rely less on outsourcing and on local linkages with domestic firms. However, some new evidence is showing how mining companies, urged to cut costs in a competitive market with declining prices, are increasingly outsourcing – often services – to local suppliers (Urzua, 2012).

1.2. GVC Participation

Recently, UNCTAD began developing metrics to track the participation rates of firms from different countries in GVCs.

Figure 3. Global Value Chains participation rates, selected regions, 2011



One approach is to estimate the so called trade in value-added, which reflects the value that is added by industries in producing goods and services. Looking at trade from a value-added perspective better reveals how upstream domestic industries contribute to exports as well as how firms participate in global value chains (OECD-WTO, 2012).[4] UNCTAD's estimates of GVC participation rates i.e. the share of a country's exports that is part of a multi-stage trade process, are the sum of the foreign value added (FVA) used in a country's exports (the upstream component) plus the value added supplied to other countries' exports (the downstream component), divided by total exports (Figure 3).

Source: UNCTAD-EORA GVC Database

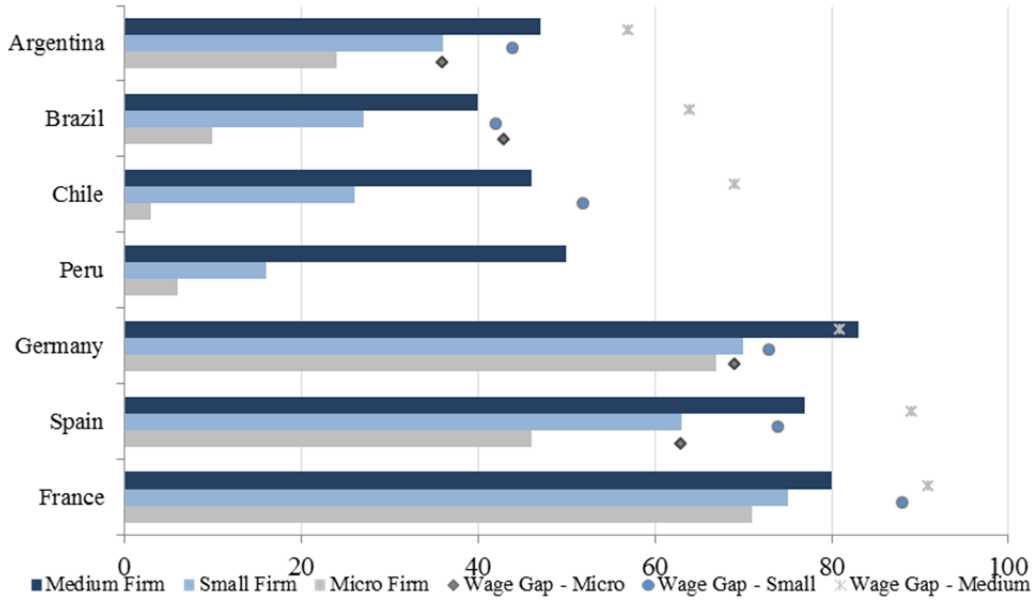
The evidence presented suggests that LAC is less integrated into GVCs than other regions of the world. Substantial differences occur across countries in the region: in Central America and Mexico an upstream specialization tends to prevail suggesting a relevant presence of foreign inputs in their overall exports through arrangements such as in-bond assembly. For the typical export processing firm in Mexico the share of domestic value added as a proportion of its exports was equal to 24% in 2013 (it was 28% in 2007). By contrast, the share of domestic value added for China was already 35% in 2000 and rose to 49% in 2006 (Blyde, 2013). In South America a downstream integration prevails, with countries more involved in exporting goods which are intermediate inputs in other countries' productions, typically natural resources and minerals, like for Brazil, Chile, Peru and others.

2. SMEs in South America

In this section, we now introduce SMEs into the mix. First, we see that although SMEs are a major component of these economies, they lag tremendously in terms of productivity growth and integration in global value chains. We then look more closely at some of the variation in value chain integration. SMEs face a Catch-22 situation: the forces of competition and isomorphism from participating in GVCs should likely improve their productivity, but because of their backward capabilities and weak resources, they cannot enter into these more sophisticated supply chains.

[4] A new literature has emerged recently with the idea of tracing the value added of a country's trade flows by combining input-output tables with bilateral trade statistics and proposing new indicators (Hummels et al., 2001; Koopman et al., 2011 and 2014. In addition, the World Trade Organization (WTO) and the Organization for Economic Cooperation and Development (OECD) are building new databases on trade in value added (TiVA), as well as the World Input-Output Database (WIOD) developed by the University of Groningen, based on individual countries' supply-and-use tables (Timmer et al., 2014)

Figure 4. Relative Productivity & Wage Gaps in Selected South American and OECD Countries (Large firms=100)



Source: Adapted from OECD-ECLAC, 2013; **Notes:** Wage gap data refers to 2006.

As shown in Table 4, SMEs account for the vast majority of firms in South America, making up 99 percent of all firms, and almost 80 percent of all employment.[5] However, on the whole when compared to OECD countries, SMEs in South America are much less productive than their larger counterparts. For example, as displayed in Figure 4, the labor productivity levels of small firms relative to large firms ranges from 16% to 36% in South America, but from 63% to 75% in Europe (where large firms=100 percent) (OECD-ECLAC, 2013, p. 46). These discrepancies in productivity affect the earnings of workers, creating larger wage gaps than found in OECD countries.

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Table 4. Firm Size in Selected South American and OECD Countries (%)

Country	Micro	Small	Medium	Large
Argentina	81.6	16.1	1.9	0.4
Brazil	85.4	12.1	1.4	1.0
Chile	90.4	7.8	1.2	0.6
Colombia	93.2	5.5	1.0	0.3

[5] Firm size is calculated based on the OECD definition: Micro firms (10 or fewer employees); Small firms (11-50 employees); Medium firms (51-250 employees); Large firms (251 employees or more)

Ecuador	95.4	3.8	0.6	0.2
Peru	98.1	1.5	0.3	0.02
Uruguay	83.8	13.4	3.1	0.6
Germany	83.0	14.1	2.4	0.5
Spain	92.6	6.5	0.8	0.1
France	93.0	5.9	0.9	0.2

Source: Adapted from OECD-ECLAC, 2013, p. 48.

SMEs typically are relegated to the least productive sectors of economy with low barriers to entry (i.e. skilled workers). Retail and low value-added services are the main sectors in which micro and small firms operate – other low-productivity sectors -, while medium firms tend to be more manufacturing or retail based. Large firms tend to have the capabilities to overcome barriers to entry and thus tend to focus predominately on manufacturing and higher value-added services (i.e. telecommunications and financial intermediation) (OECD, 2013, p. 48). This is compounded by the fact that often SMEs are initially established due to a lack of better employment opportunities elsewhere (World Bank Enterprise Surveys, 2010).

2.1. SME participation in Exports and GVCs in Latin America

Only 13% of South American SMEs, on average, export directly.

Figure 5: LAC SMEs Direct Exporters (%), 2009-2010 (Directly export at least 1% of sales)

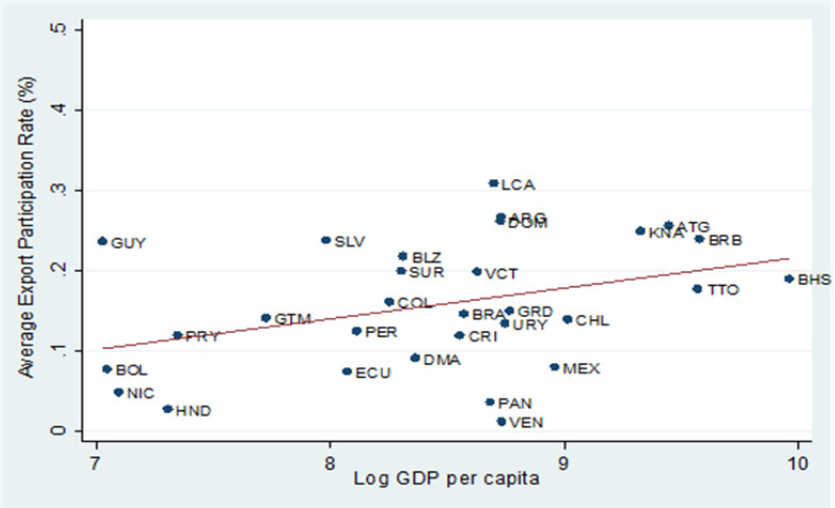

Figure 5 displays the export participation rates for SMEs across LAC countries using 2010 World Bank Enterprise Survey data. It shows the percent of SME that directly export at least 1% of sales, finding that small Caribbean countries are more internationalized than their counterparts in South America (Argentina is an exception).

Source: World Bank Enterprise Surveys (2010) and World Development Indicators

This pattern holds true across economic sectors with large firms exporting substantially more than SMEs in both manufacturing and service sectors (although the difference within services is less). When compared to other regions, the export participation by LAC SMEs is very low compared to Asian countries like Malaysia (55%), Thailand (47%) or South Korea (19%) (IDB, 2014). Similarly, the export intensity of South American SMEs (export sales as a percent of total sales) also tends to lag behind other countries in the region and abroad.[6] While few SME firms in the region are exporters, when analyzed together a few patterns emerge. SME exporters in LAC tend to be foreign-owned (at least 10% foreign ownership), they tend to be older (16 years or older), they tend to be more productive, and they tend to pay higher wages

[6] A recent IDB report finds that the export intensities of SME exporters in countries such as Brazil, Chile, and Colombia are about 10 to 20 percentage points below that found among SME exporters in Turkey (IDB, 2014).

than non-exporter firms (IDB, 2014).[7] Thus, it could be argued that strong performing SMEs 'self-select' into export markets, while less productive firms do not have the capabilities or know-how to expand beyond the domestic market.

SME export firms in South America represent a large percentage of all exporters. However, when the actual value of SME exports is calculated, the relative importance of SME export firms drops substantially. For example, while Peruvian SME export firms account for 88% of all exporters, they only account for 3.3% of total export sales. In Chile, despite the fact that 58% of all exporters are SMEs, they only make up 8% of the total export value (and create 21 percent of jobs directly related to exports) (ECLAC, 2014, p. 102). In addition, SME exporters tend to focus on regional markets as export destinations, unlike large firms who are more likely to export natural resources to non-resource rich markets in Asia, principally China. SME exporters in Argentina and Brazil primarily export to Latin America, while the main export destinations for SME exporters in Chile, Colombia and Peru are both Latin America and the U.S. Overall, SMEs in the region are can be classified as narrow exporters in that they export a small number of products to a small number of markets (IDB, 2014).[8]

Table 5. SME Export Indicators for Selected South American Countries (2010)

	Argentina	Brazil	Chile	Colombia	Peru
SME Exporters (% of total export firms)	76.1	61.2	58.3	71.1	88.0
SME Exports (% of total exports)	6.0	7.5	7.0	4.5	3.3
SME Export Markets	LA	LA, EU	LA, U.S.	LA, U.S.	LA, U.S.

Source: ECLAC, 2014, p. 102. **Note:** See Table A2 in Appendix for expanded version. LA = Latin America.

SMEs have the potential to contribute to export diversification. SME exporters have a presence in a variety of sectors—namely, the commercial, agricultural, and low-technology manufacturing sectors— and often export products not exported by large firms. For example, in 2008 SMEs in Peru and Argentina each exported over one thousand products that were not exported by large firms (IDB, 2014); in contrast, large firms exported only between 195 to 330 products not exported by SMEs.[9]

SMEs can also play an important indirect role in exports through supply chains and production linkages with large exporter firms. For example, it is estimated that, at the aggregate level, in Chile there are an average of five suppliers (mostly SMEs) for every export firm, and the evidence suggests that, in the case of about half of all SME exporters, there are 16 other SMEs that provide them with inputs and services (ECLAC, 2014, p. 103). Given the heterogeneity of goods produced by SMEs, there are wide possibilities for greater incorporation into global value chains. Greater participation by SMEs in GVCs would enable these firms to indirectly access foreign markets and thereby maintain greater interaction with larger, more established firms in the chain. This has the potential to create spillover effects through improved processes to meet quality standards (leading to greater efficiency and productivity), as well as access to new technology and organizational practices.

Over the past 25 years, exposure to international markets and technologies for developing countries comes increasingly via participation in fragmented value-chains managed by multi-national corporations (MNCs), instead of direct exports. New evidence shows that 28 percent of exports worldwide are made by

7 According to the same study, SME exporters in LAC pay 42% higher wages, are 9% more skill intensive, and have 55% higher sales than non-exporters, when controlling for employment and industry and fixed effects (IDB, 2014).

8 The average exporter firm in Colombia, Chile, Ecuador and Peru exported 5 products to three destinations between 2007 and 2009. However, the median exporter firm in these countries exported only two products to one destination (IDB Exporter Dynamics Database).

9 SMEs here refer to firms with fewer than 200 employees.

intermediate products produced in third countries (31 in developed countries and 25 in developing countries respectively). In Central America this percentage stands at 31 while in South America only at 14, largely due to the importance of natural resources and commodities exports with little foreign inputs from South America, and assembly operations in Central America and Mexico (see above and UNCTAD, 2013, p. 127). In fact, of the little data available, SMEs tend to participate more in export oriented chains than in direct export operations. For example, in Chile, some 4,800 SMEs carried out direct export operations in 2010, whereas at least 33,000 served as suppliers to export companies (ECLAC, 2014, p. 129). In addition, the growing evidence from case studies reveals that firms that have successfully integrated into GVCs have been able to upgrade their products, processes and functions (Gereffi et al., 2013; Pietrobelli and Rabellotti, 2007; Sturgeon et al., 2014).

2.2. Obstacles to SME Participation in Exports and Global Value Chains

In sum, while SME exporters comprise a large portion of total export firms, their actual contribution to the total value of exports is minimal. Despite this, the heterogeneous nature of the SMEs has the potential to play a major role in export diversification in South America. Policies tailored to support the internationalization of SMEs have the potential to reduce the productivity gap and barriers to entry that inhibit SMEs from accessing foreign markets, either directly or indirectly. For example, relative to large firms, SMEs are more likely to be part of the informal sector due to the burdensome formalization process, which limits opportunities to create direct or indirect linkages with the formal export market. SMEs also tend to face higher fixed costs and greater difficulties accessing credit, which has ripple effects in terms of the amount of investment in physical and human capital in a firm. Other constraints to SME exporters include low-skilled human capital, inexperienced management, and the inability to meet international quality or technical regulations (ECLAC, 2014, p. 102).

Participation in GVCs represents additional key obstacles for SMEs. First, SME low productivity manifests itself with the inability to produce the intermediate goods and services with the time and quality standards demanded by lead companies (Kaplinsky, 2010). Second, remarkable asymmetries often prevail within GVCs, and SMEs do not have access to the requisite technologies and capabilities (Pietrobelli and Staritz, 2013). Third, the governance of these GVCs may represent a further impediment to technology transfer and learning and upgrading of local suppliers. Hierarchically governed GVCs with uneven bargaining power often offer lower upgrading opportunities to local providers, and some forms of governance may reduce the “switching costs” to alternative suppliers (Humphrey and Schmitz, 2001; Pietrobelli and Rabellotti, 2007). Fourth, regulatory and infrastructural issues (such as a weak competition policy, trade barriers and regulations) can also make it hard for SMEs to participate in GVCs (ECLAC, 2014, p. 129).

3. SME Support Policies in LAC

Historically, government support for SMEs and exporting firms in Latin America is not very strong. Public support for SMEs in South America is very low and ranges between 0.03% and 0.09% of GDP, which is five to nine times less than average investments in SMEs by OECD governments. This is matched by the limited budgets for export promotion agencies in the region (Table 6 and also Table A4 and A5).

SME and export support programs grew in the 1990s, but focused mainly in generic forms, focusing for instance on employment generation or on access to financing. In general, these approaches proved ineffective, especially in addressing the capabilities-productivity problem mentioned above (OECD-ECLAC, 2013; Tan, 2009; WEF, 2010) More recently, some countries have reformed their policy approach and acknowledged the relevance of knowledge transfer and capabilities creation, and in turn their dependence on getting SMEs linked into learning networks to access different types of knowledge resources (public and private).

To a certain degree, this shift is reflected in two different strategies to integrate SMEs into international markets. The most common approach in Latin America has been to design export programs specifically targeted at SMEs. The problem here is that SMEs are constrained by the pre-existing concentration of exports in natural resources and primary goods. Most of the current efforts of export promotion agencies in the region are focused on helping existing producers within a structured industrial base (for example, suppliers of locally made goods for the domestic market) to gain the ability to sell their products internationally (Gonzalez and Hallak, 2013, p. 17). An alternative comes especially from East Asia, where

countries lack natural resources. This strategy focused on integrating SMEs into global value chains based on production activities only (Gereffi, 1999).

These two different strategies toward SME integration into international linkages have varying end goals. The first strategy accomplishes the overarching goal of becoming an exporter, although SMEs must have ex ante certain capabilities (i.e. technology, know-how), making it harder for many small firms. The second strategy enables SMEs to interact indirectly with export markets through value chains. This approach requires firm-level support, as entering a GVC does not ensure that local (SME) firms will benefit (Morrison et al., 2008): the effort to build a solid base of technological capabilities is needed. These two approaches are not mutually exclusive and, in the case of South American countries, could be complementary (Gonzalez and Hallak, 2013).

Table 6. SME Public Support to SMEs

Country	Overall Public Support to SMEs	Overall Public Support to SMEs		
	(as % of GDP)	Agency Name	Budget 2007-2009 (in millions of USD$)	Budget 2007-2009§ (as % of GDP)
Argentina	-	Fundacion ExportAr	4.5	0.002%
Bolivia	-	Promueve Bolivia	0.2	0.002%
Brazil	0.085	ApexBrasil	120.0	0.012%
Chile	0.030	ProChile	33.0	0.024%
Colombia	0.008	Proexport	55.0	0.032%
Ecuador	-	CORPEI-PRO Ecuador	6.8	0.015%
Paraguay	-	REDIEX	1.4	0.014%
Peru	-	PROMPERU	29.0	0.031%
Uruguay	0.024	Uruguay XXI	0.6	0.003%
Spain*	0.410	ICEX	61.0	0.005%
South Korea**	0.270	KOTRA	165.4	0.016%
United States**¥	0.390	Various government agencies	1172.0	0.009%

Source: Source: ECLAC (2014); Volpe (2010); USAID (2009); Congressional Research Service (2013); **Notes:** See Table A4 in Appendix for an expanded list of export promotion agencies in Latin America. *Estimated budget for Spain in 2013, which is a big decrease from the 2010 budget of $147.7 million; ** Estimated budget for 2009; ¥ Total industrial export companies are taken into account; Nine different key government agencies are involved in export promotion in the U.S. §GDP calculated as simple average for 2007 – 2009.

Many South American countries have export promotion policies that date back to the 1960s. These first policies, which remained in place through much of the 1990s, were designed as direct fiscal and credit instruments. These programs attempted to increase access to finance for exports. For example, in Colombia, the Export Promotion Fund (PROEXPO-- now PROEXPORT) extended subsidized loans to exporters, financed by a surcharge on imports, initially of 1% and then 4% from 1974 until 1990 (Melendez, 2013).[10] The use of fiscal instruments to boost exports had mixed success. Additionally, these policies were geared toward firms of all sizes and likely did not have a homogeneous impact on firms of different sizes, with large firms benefitting more.

However, some financial instruments tailored towards SMEs looking to export have seen success. Colombia's BANCOLDEX, by extending lines of credit to SMEs, is one example. A recent study finds a positive impact of a BANCOLDEX loan on firm productivity, production, and the number of products exported, with the effects lasting up to four years after obtaining the loan (Eslava et al., 2012). Equality of

10 Other fiscal measures to address market failures in Colombia have since ended, such as, the 1967 Tax Credit Certificate (CAT) in Colombia, and later became the Tax Rebate Certificate. The CAT initially applied to all exports of non-primary goods at 15% to compensate for the bias of the import substitution policy against exports of this type of goods (Melendez, 2013).

access to SME export programs is another issue. Frequently, only the most capable SMEs are able to take advantage of programs. This may spur a process of healthy competition but at the same time induce further dualism across firms (Ferraro and Stumpo, 2010, p. 89).

Over the past two decades, policies have evolved to more comprehensively address the changing landscape of international trade. The surge in global value chains as a widespread production method creates significant opportunities for SME involvement (Gereffi and Sturgeon, 2013). In turn, public programs have adapted accordingly to increase local firms participation in value chains and other supplier programs. These production linkage policies aim to strengthen links and integration across firms in different sectors.

3.1. Cluster development programs (CDP) for internationalization

As part of the broader effort to improve SME participation in GVCs, governments have also expanded programs supporting the development of SME networks or clusters. The early focus was helping SMEs cooperate in securing common resources or goals, such as increasing economies of scale in buying/selling, accessing difficult markets with high entry costs, and creating joint innovation processes and sectoral strategies (Casaburi et al., 2014). More recently, the focus has become more targeted, such as linking firms of one sector or similar technologies with public-private research and training centers to help improve capabilities and technologies (OECD, 2013). These programs "focused on seeking and developing processes to exchange and complement resources, knowledge and skills, while building a foundation of trust that facilitates contact and dialogue among the agents involved" (OECD, 2013, p. 166). They usually start by promoting coordination among local actors that may lead to the definition of shared objectives and of the joint actions required to achieve them. This in turn provides essential information and helps policy-makers "discover" what the key missing inputs are that public policies may provide (Hausmann and Rodrik, 2006, Hausmann et al., 2008).

A key benefit form inter-firm linkages, be they horizontal or vertical, are the knowledge and technological spillovers and externalities among the firms. But this is the "paradox" of clusters and agglomeration: although they often offer remarkable opportunities for development and innovation, they also have their drawbacks related to the externalities that make coordination harder (Glaeser, 2010). A new product or process is copied more easily; the externalities cannot be internalized by the investor who therefore cannot fully appropriate of the returns to the investment. As a consequence, coordination failures would lead a cluster to low-investment equilibrium, because the local agents, government included, fail to coordinate their investment decisions. In sum, the existence of information asymmetries, externalities and coordination failures represent the guiding principles and justification for CDPs that aim at strengthening linkages and improving their quality. In several instances, clusters are the ideal place within which it makes sense to address these coordination issues and improve business linkages.

The most common policy tools to achieve these goals are subsidies in the form of technical assistance and partial grants to help support collective actions to strengthen existing linkages, support the establishment of new ones, and therefore improve firm competitiveness.[11]

Since 2000, the Inter-American Development Bank (IDB) has promoted such programs in South America worth almost US$500 million and that have reached over 300 enterprise clusters (Maffioli and Pietrobelli, 2015) (See Table A7 in Appendix for examples of IDB financed cluster support programs). Evaluations of these programs have concluded the following (Maffioli et al., 2015):[12]

- Cluster development programs have represented useful tools to coordinate microeconomic policies at the local level.
- They have often been flexible enough to adapt to local circumstances and needs.

[11] For experiences in advanced countries see Chatterji et al., 2013

12 Recent quantitative random control impact evaluations have been carried on these programs in LAC (Maffioli et al., 2015). For example, it has been evaluated that a CDP in Brazil has had positive direct and significant effects on (i) Employment: about 20% increase in 3-5 years; (ii) Probability to export: about +5% per year; (iii) Export levels: increase 50%-80% for each exporter, with persisting and growing effects overtime. Indirect effects on firms localized in the area of influence of clusters, especially on the export probability and levels have also been detected.

- Through their participatory approach they have often helped to identify ("discover") the missing public inputs, the public policies needed, to prioritize policies, and create consensus.

- Many programs created local conditions for a better coordination and collaboration among firms and with public entities. "Platforms" to facilitate joint actions were in fact created.

- "Capture" of subsidies and "rent-seeking" appear to have been lower than one would fear. "Checks and balances" were built thanks to multi-stakeholder participation.

An interesting example of effective cluster development is the salmon cluster in Chile, where coordination between private and public actors helped promote high collective efficiency as well as upgrading in processes, product, and functions. However, the Chilean salmon cluster experience was importantly led by large foreign companies and quickly moved towards larger, vertically integrated firms. Delayed regulations and excess investment damaged the environment and led to a production crisis in 2008. This experience reveals the importance of careful regulation of clusters and value chains oriented to the international market (Box 1).[13]

Box1 The Salmon Cluster in Southern Chile. A Story of Upgrading and Evolving Challenges and Policies

The salmon and trout sector started off in Chile in the late 1970s, began to develop significantly in mid 1980s, and grew since at an incredible pace. In 1987, Chile was producing 2,000 tons of salmon – a mere 1.5 per cent of the total world production – but in 2001 the production of salmon and trout had reached 405,000 tons (of which 350,000 coming from the 10th Region): Chile, with a share of 32.4 per cent of the international market, had become the second biggest world producer and exporter (300,000 tons exported) of farmed salmon, behind Norway. In 2007 28,500 people worked in the salmon sector and other 12,500 people are employed in firms linked the salmon industry in the 10th Region (Los Lagos). On the whole, 175 firms worked in the cluster and, considering both direct and indirect employment, the cluster accounted for 25 per cent of the labour force in the Region. The salmon cluster is organized in three different subsectors: the first one includes all firms directly involved in the treatment of salmons (the core of the productive chain), the second takes in all intermediates suppliers (i.e. suppliers of fish food, instruments, equipment, and transport services, etc.), while the third comprises support institutions (i.e. business associations, regulatory bodies, promotion agencies, universities).

The main explanations of the rapid growth of the cluster are to be sought mainly in the favourable environmental conditions existing in Southern Chile and the availability of abundant work force (skilled and unskilled). However, collective actions, early public policies in the sector (e.g. the role of Fundación Chile that presented a success model in an unknown sector in the country) with long term technical cooperation (e.g. more than 20 years of technical cooperation from Japan International Cooperation Agency, JICA), the establishment of a favourable regulatory and legislation framework and the presence of a strong entrepreneurial capacity also contributed significantly to the development of the productive chain.

All through the past 10 years, governmental institutions, associations of producers, universities and all other actors involved in the salmon industry, have joined forces and created the conditions to sustain and encourage the growth of the cluster, and the policy framework and specific policy tools have changed over time as the cluster went through the different stages of its life-cycle. Thus, the initial development of the cluster was made possible by the pre-competitive research and technological transfer carried out by JICA and Fundación Chile.

[13] One additional opportunity for SMEs in South America to internationalize is through the development of local suppliers for global suppliers of natural resources. One example of this is BHP Billiton-CODELCO in Chile, whose supplier's program aims to have 250 suppliers to meet an international quality standard by 2020, thereby improving their competitiveness and their prospects for internationalization (OECD, 2013, p.178). The program seeks to meet these goals through technical assistance on the production process, setting targets for improving the quality of products and services, and providing consulting services to improve business management.

The maturing of the industry was helped by policies favouring investments in infrastructure and marketing and promotion abroad. Later, the need for regulatory policies became more stringent, and some of its weaknesses provoked the crisis started in 2008.

Over time, the internal organization of the cluster has also undergone a substantial restructuring, due to the pressure to exploit economies of scale in salmon farming. As a result, several companies have experienced a process of vertical integration, carrying out an increasing number of functions in-house, including direct sale in export markets, as well as production of smolts and fish food that in turn represents a large percentage of total production costs (50 per cent approximately) and demands substantial financial resources. Most of these large companies are foreign-owned, but some are Chilean.

Over the years, the salmon industry has faced new challenges, notably related to the need to make the considerable environmental impact of this particular type of activity compatible with industry growth, with varying degrees of success. Thus, after years of accelerated development, the Chilean salmon farming industry experienced a dramatic downturn since 2008 with rapid spread of the Infectious Salmon Anaemia (ISA), a viral disease that affects the salmon's immune system, eventually leading to death.

The industry suffered a dramatic downturn at the beginning of 2008 as the ISA spread with a devastating effect, and close to 20,000 jobs was lost in only two years. By 2010, the production of salmon had fallen to around 200,000 tons down from its peak of nearly 700,000 tons in 2006. Iizuka and Katz (2012) argue that the long term decay in industry performance has been the outcome of a complex process of gradual productivity deterioration that started in the midst of a hike in world prices for salmon, inducing an increase in fish density in the cultivation ponds and a subsequent fall in the quality of water and in fish welfare due to the regulatory institution not reflecting the local ecological realities with sufficient scientific evidence. This situation suggests a typical "tragedy of the commons" scenario. Firms responded to the economic incentives of rising export prices, and did not respect the environmental and biological sustainability constraints of salmon farming with no effective measures to regulate such behaviour.

Regulatory policies were remarkably inadequate to monitor local ecological carrying capacity to ensure sustainability of this economic activity, like for example the monitoring of the distance between salmon farming centres and of the fish density, both increasing at levels much higher in Chile than for example in Norway. This resulted in declining productivity already before the outbreak of ISA. The industry so far had been mainly acquired knowledge on how to producing competitively through learning by doing and imports of capital goods and technology, with low levels of R&D. As a consequence, whilst production capabilities were developed, the domestic scientific and technological capabilities to provide local solutions to emerging new questions of bio-security, environmental sustainability and control of emerging pathogens were not created.

Since 2010, efforts have been made to strengthen the institutional capacity of the industry with modification of the General Law of Fishery (Ley General de Pesca No. 18.892) and the new Ley de Acuicultura (No. 20.434). Indicators based on stronger scientific evidence (e.g. fish density and mortality rate) are being used to monitor the sanitary conditions in new geographical units (i.e. barrios and macrozones) by strengthened national authorities such as the National Fishery Service and the Undersecretary of Fishery and Aquaculture. In 2013, the volume of production is recovering and starting to exceed the pre-crisis level; however, concerns still remain on whether these institutional changes are sufficient to accommodate rapid and sustainable recovery.

This case teaches at least two important lessons: first of all policies and programs to promote clusters – and the institutions related - need to evolve over time depending on the varying challenges and contexts prevailing in the sector. Second, in industries dependent on the long-term sustainability of natural resources the close interaction between industry growth and the evolution of the associated institutions regulating the industry is essential and needs to be cleverly fostered.

Sources: Katz J., Iizuka M., Muñoz S., 2011, "Creciendo en base a los recursos naturales, "tragedias de los comunes" y el futuro de la industria salmonera chilena", CEPAL Naciones Unidas, Serie Desarrollo Productivo, División de Desarrollo Productivo y Empresarial, N.191, April.

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4. Experiential Knowledge, Networks and Institutions

The previous section illustrated how policy is shifting in Latin American countries to help SMEs become more integrated into clusters and global supply chains. Often those policies assume that once presented with incentives of supplying GVCs, SMEs will be able to improve their capabilities to meet the new international product and process standards (Corredoira & McDermott 2014, Perez-Aleman 2011). The problem however is that SMEs in the region lack the material and knowledge resources to fill the large productivity gaps, and the lead firms, be they MNC subsidiaries or large domestic buyers, have limited interest and capabilities to train the more backward firms.

In this section, we suggest a solution to this problem by revising our understanding about what types of knowledge the SMEs most need and what types of mechanisms or policies can best facilitate the creation and diffusion of such knowledge. We argue: a) that SMEs especially need access to a variety of applied and experiential knowledge that helps firms convert their capabilities from where they were to where they need to be, and b) that certain constellations of public-private institutions can best facilitate this process.

The dominant view on upgrading tends to view the main solutions to the technological gap coming from downstream buyers, such as MNCs, and from innovation systems based on organizations providing advanced R&D and standards. These views are based on the assumption that local firms with greater access to advanced technology and practices will necessarily learn faster, accelerate capabilities upgrading and improve productivity. However, there are two problems here. On the one hand, it is becoming increasingly evident that the very competitive advantage an MNC derives from internalizing and transferring proprietary knowledge to its subsidiaries (Kogut & Zander 1993), can actually impede its interest or ability to transfer such knowledge to suppliers, especially more backward ones. Collaboration with MNCs in sophisticated supply chains – from advanced manufacturing to fresh produce – demands that suppliers maintain a minimum level of capabilities or absorptive capacities. This is reinforced by the notion that global buyers and MNC subsidiaries may convey well to the local firms “what” they need to produce but not necessarily “how” or “why”. For instance, even in automotive production, where practices, such as lean production, have become very well standardized and codified, their implementation often demands their adaptation to the local context. Evidence from this sector in Mexico, Brazil, and Argentina strongly shows the difficulty MNCs have in implementing such practices through the value chain, with local suppliers not entering or dropping out (McDermott, and Corredoira, 2010).

Such knowledge is rather tacit and embedded in discreet learning relationships, which often do not emerge. Indeed, recent statistical work on Argentine auto parts suppliers, most of which are SMEs, suggest they gain few benefits for process upgrading solely from direct ties with MNC customers. Similar results come from studies in the agricultural sectors in such countries as Mexico, Nicaragua and Chile. In these cases, local firms may be aware of the international product and process food safety standards that are required for exports, but lack the resources and know-how to implement them in a broad based and sustained manner (Perez-Aleman 2005, 2011; McDermott & Avendano 2014).

On the other hand, much of the western advice on institutional solutions, particularly via innovation systems, stresses the importance for countries like those from Latin America to invest in public and private resources for creating and diffusing pioneering technology. In contrast, growing evidence shows that innovation in emerging markets mostly focuses on incremental changes to absorb and apply existing practices and technologies. (Perez-Aleman, 2011; Pietrobelli and Rabellotti, 2010; Thun, 2006). Science and technology institutions also tend to have weak capacities, while the linkages among them and local firms are limited (Baruj et al., 2009; Sutz, 2000). This stream of research instead places greater emphasis on non-market institutions that provide low cost access to technology application and extension services, such as in metrology, standards, testing and quality (Pietrobelli and Rabellotti, 2011). These types of services draw on knowledge of production systems through practical examples within the resource and organizational legacies at hand. It seeks to recombine old habits and practices into new process capabilities that can meet needed performance standards (Perez-Aleman, 2011).

To the extent that applied and experiential knowledge is key for SME upgrading, and thus insertion into the GVCs, the next question is what types of institutions and organizations, can facilitate its creation and diffusion. As the foregoing suggests, while MNCs or global buyers may not be best direct channels for this, more locally embedded public and private organization can be better positioned. Note that we are not saying that new, advanced knowledge on processes and products are not important, but rather it is not

sufficient. Firms need to use this knowledge as a benchmark and then learn how to adapt and improve their practices to meet them over time.

Consistent with the recombinatory view of innovation (Fleming, 2001), this line of research suggests that to improve their capabilities suppliers from developing countries need to access a diversity of applied, experiential knowledge via the constellation of the evolving non-market institutions, such as schools, business associations, and government supported centres for training and extension. As Breznitz (2005) has noted, the distinguishing traits of these institutions to support innovation are that they provide reliable channels for collective learning and knowledge diffusion as well as create forums and programs that infuse the system with trust and cooperation. Recent research in manufacturing and agriculture shows how certain industry associations and public R&D and training centers, though lacking in substantial material resources, facilitate upgrading of firm capabilities (especially in SMEs) because their services can act as repositories of diverse applied knowledge drawn from the local contexts, provide mentoring relationships, and foster collaborative inter-firm relationships (Lengyel & Bottino, 2012; McDermott et al., 2009; Perez-Aleman, 2011; Casaburi and Piccaluga, 2015 in Maffioli et al.). In a highly resource constrained and volatile environment, like Latin America, this discussion opens analysis to a greater variety of institutional configurations for firms to improve their process capabilities. The diffusion of diverse knowledge may occur through training programs, applied practice sharing or repeated demonstration experiments via collective non-market institutions. Moreover, such activities do not necessarily demand the financial, organizational and human resources associated with the collective provision of pioneering technologies.

Hence, while the programs discussed in Section 3 that focus on encouraging SMEs to build linkages to one another and to MNCs are a good start, they are not sufficient. Rather, the public-private institutions vital for SME upgrading trigger both direct tutelage and social learning among the actors. Here we would like to begin to specify the conditions under which such institutions will likely emerge and be sustained.

First, the growing evidence points to the importance of access to diverse experiential knowledge which comes from collective learning and organizations. Consider two sets of research from agriculture where the international process and product standards are already well established but where upgrading is a product of collective action. Perez Aleman (2005, 2011) studied in detail the rise of fresh produce suppliers in Chile and dairy farmers in Nicaragua. In both cases, while the MNC buyers could specify the standards, the local producers had severe difficulties implementing them, even with long histories of professional ties. Great changes came about when governments and foreign agencies collaborated with associations of local producers. Together they first established the key product and process standards, and a system of local monitoring to ensure compliance. This certification process signaled to foreign firms the seriousness of the commitment and reliability of products. Next, they established common organizational resources, from cooperatives to training centres, to help firms understand directly the how and why of the standards, and most importantly how to improve gradually their own practices toward those needed for the supply chain. The organizations are necessarily embedded into the industry or region so they can draw on, integrate and diffuse to experiential and applied knowledge gathered from the firms themselves. This accelerates learning since the centres are both a repository of this knowledge and then encourage mutual learning among the producers.

However, the experience of fresh produce suppliers in Mexico reveals limits to this approach alone, particularly how the common resources can become exclusionary. In their study of export suppliers of a variety of products, including tomatoes, mangos, melons, green onions, citrus and avocados, McDermott and Avendano (2014) reveal that upgrading of practices and avoidance of outbreaks of food safety problems came only when producers created associations which then collaborated with local governments and the USDA to define the key standards and implement monitoring and regulatory steps to ensure consistent compliance. At the same time, these actors, mainly with their state governments, created subsidized training and certification programs to help firms implement the practices, despite their original backward start levels. The problem, however, has been that most of these programs, and the associations themselves, exclude the vast majority of producers. To gain access to the programs, one has to be a member of the association, which in turn restricts membership largely due to significant fees. In the meantime, the Mexican government agencies, at both the federal and state levels, have made limited progress to create publicly accessible support institutions for this type of knowledge diffusion.

Another limitation is that reliance on very locally embedded institutions can constrain sustained learning and upgrading. To the extent that the SMEs and the relevant centres are part of local network or industrial

district, local ties can encourage knowledge sharing, but they can also block firms from accessing new knowledge, be it advanced or experiential, from other regions or networks (Giuliani and Bell, 2005). This not only can retard continuous learning for these firms but it also can limit the transfer of their applied knowledge to other less capable regions and networks.

To overcome these constraints – those of exclusive access and those of redundant knowledge – we suggest a few organizational traits to be applied to the aforementioned institutions. First, while governments, external agencies and industry leaders want to encourage a focus on creating collective resources for applied and experiential knowledge close to producers and linked to the value chains, they also should be encouraged to build more encompassing public – private institutions that can act as social and knowledge bridges across different producer communities. The idea here is that structures and programs can be designed in a variety of ways to help SMEs access a variety of knowledge resources – directly and indirectly. The indirect channel comes from training, R&D, and benchmarking programs that continually draw on and are embedded in a diverse set of localities or inter-firm networks. The direct channel comes from programs and forums that help the firms themselves begin to learn from one another, particularly those from previously isolated producer communities. For instance, recent research on Argentine autoparts producers showed that the most effective non-market institutions – a combination of public testing and training programs and encompassing sectoral associations had both traits (Corredoira & McDermott, 2014). Despite their limited resources, the simple testing programs accelerated learning and knowledge transfer because they integrated experiences of restructuring from suppliers embedded in several different industrial districts. This allowed two types of recombinatory learning – one was the recombining of adaptation experiences from the suppliers and another was then helping integrate them with the standards demanded from the MNC customers. Indeed the same study shows that suppliers did learn from MNCs when they already were participating in such public programs. The associations did not provide the direct training, but rather were some of the very few forums where suppliers from different regions could exchange knowledge among themselves and discuss upgrading issues with the MNCs.

Second, research suggests that the relevant public-private institutions can be designed with discreet but basic governance rules that can reinforce both open access and the bridging qualities. Drawing on work from other dynamic industrial districts in the world, McDermott et al (2009, 2007) found that the public private institutions at the center of the transformation of the Argentine wine sector had two important governance traits: rules of inclusion and rules of participatory governance. These rules demanded that government actors and a variety of relevant industry associations jointly govern and invest into these institutions. These rules helped improve the responsiveness of programs to different types and communities of firms, ensuring that their needs be met, if not immediately, at least over time. They also allowed the programs to draw on a variety of new and applied knowledge resources from these participating actors and their communities. In turn the relevant institutions first created programs that were synthesizing and disseminating applied knowledge from different producer communities and from the international markets. They also created programs that helped firms learn from one another, and especially build professional relationships across previously isolated wine making and grape growing regions.

Concluding Remarks

This report has tried to highlight some of the key patterns and challenges for improving SME participation in international markets and their integration into value chains in Latin America. The importance of this participation is not only the immediate economic gains, but particularly the technological and learning spillovers to SMEs. That is, as exporters or suppliers into global value chains, SMEs can greatly improve their capabilities and in turn their productivity and competitiveness. Despite the gains in Latin America from increased exports and FDI, SMEs in general have not benefited very much. While there is some variation across sectors and countries, SMEs have not been able to participate broadly and deeply in GVCs, and in turn, they remain trapped in weak productivity and growth.

Part of the problem is structural, beyond SME issues per se. That is, many of these countries have limited experience with exports, FDI and global value chains or lack diverse sectors in international value chains. Nonetheless, Latin American countries are increasingly focusing on problems of SME development in general and their internationalization in particular. In so doing, governments and NGOs alike have begun shifting their emphasis away from the traditional approaches of regulatory reductions and access to finance and toward ways to accelerate and expand SME direct involvement in relevant value chains and in exports. This shift is due to the realization that spillover benefits for SMEs will come from their direct interaction with MNC subsidiaries and global buyers and from being directly exposed to the challenges of meeting international product and process standards, regardless of the industry.

We argue however, that while this philosophy is crucial, it is insufficient. Rather, we argue that SMEs above all need access to diverse experiential and applied knowledge. While local firms naturally may benefit from exposure to pioneering practices and technologies, the vast majority do not have the capabilities to capture those benefits or even link into the relevant value chains. And MNCs are unlikely to help them make the leap. In turn, a growing set of research suggests that diverse experiential knowledge can more effectively help SMEs upgrade their practices and organizational capabilities to then engage global buyers and MNCs in a more sustained fashion. Such an approach would also help accelerate the growth of a broad based SME supplier network.

We further argue that the same research offers some direction on the types of policies and institutions that can facilitate such a process. For instance, non-market institutions can be most effective in providing the relevant knowledge and training when they are structured to act as social and knowledge bridges across previously isolated producer communities. Such a design not only facilitates the gathering and synthesizing of diverse knowledge resources but also can accelerate the formation of new horizontal professional learning networks among firms. Lastly, the governance form of these institutions can anchor such a learning structure.

While this report in no way puts to rest the debates on SME development and SME participation in GVCs, it has aimed to shift the discussion about SME upgrading and related policies. Both scholars and policy-makers would be wise to expand the institutional experiments that focus on growing SME learning networks and GVC linkages as well as connect them to efforts to improve SME access to diverse sources of experiential and applied knowledge.

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Appendix I

Table A1. Total Employment and Export-Related Employment

Country	Year	Total Employment		Export-related employment (direct and indirect)		
		Thousands of persons	Average annual variation *(%)*	Thousands of persons	Average annual variation *(%)*	Percentage of total employment
Argentina	1997	9,584	1.2	881	5.9	9.2
	2007	10,320		1,559		15.1
Brazil	2000	78,972	2.9	7,956	10.6	10.1
	2005	90,906		13,149		14.5
Chile	1996	5,180	1.6	953	5.6	18.4
	2003	5,785		1,397		24.1
Colombia	1997	13,092	3.4	1,908	1.1	14.6
	2005	17,118		2,087		12.2
Uruguay	1997	1,522	-0.5	190	4.2	12.5
	2005	1,463		264		18.0

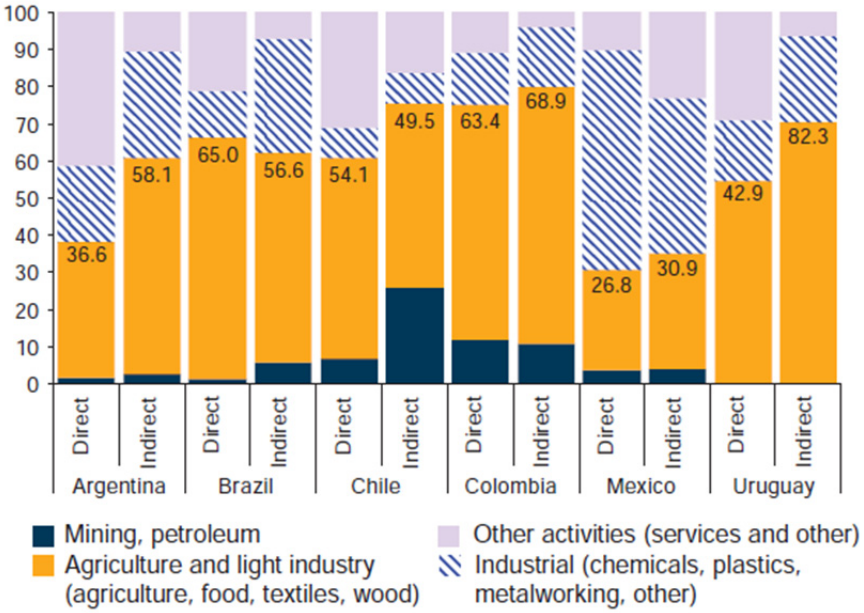
Source: ECLAC (2014)

Table A2. SME Export Indicators for Selected South American Countries (2010)

	2000-2006*	2007	2008	2009	2010	2011	2012
South America	38,582	71,766	93,447	56,604	92,112	129,140	144,054
Argentina	4,473	6,473	9,726	4,017	7,848	9,882	12,551
Bolivia	342	366	513	423	643	859	1,060
Brazil	19,144	34,585	45,058	25,949	48,506	66,660	65,272
Chile	5,387	12,572	15,518	12,887	15,373	22,931	30,323
Colombia	4,108	9,049	10,596	7,137	6,758	13,438	15,823
Ecuador	539	194	1,058	306	163	641	587
Paraguay	59	202	209	95	228	215	273

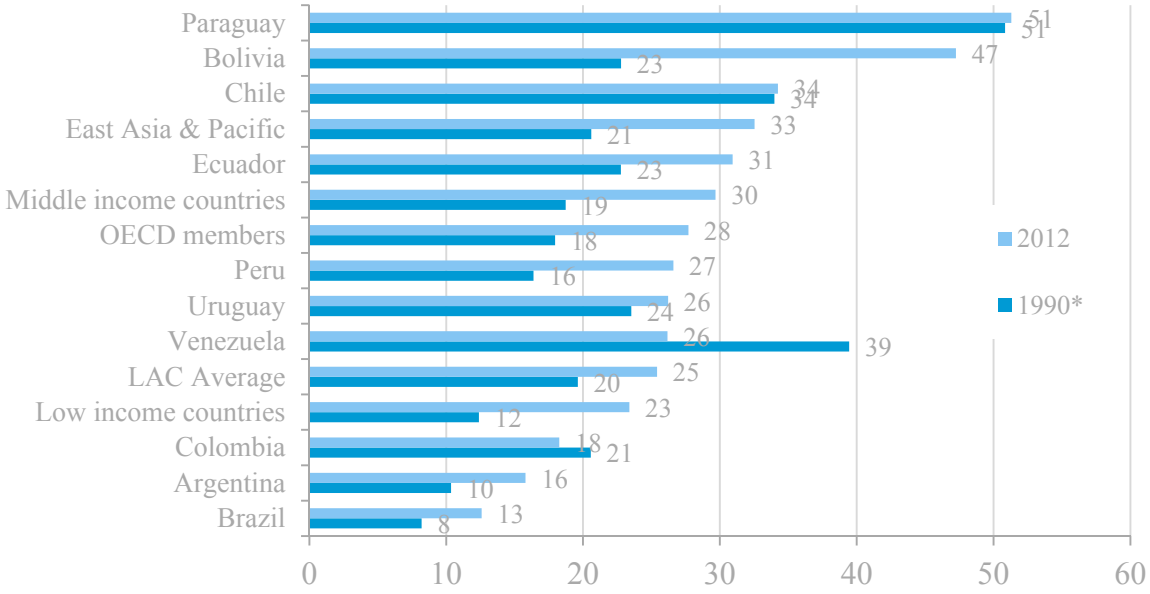
Source: ECLAC (2014)

Figure A1: Export-Related Employment (Direct and Indirect) by Sector (around 2005)



Source: ECLAC (2014)

Figure A2: Export to GDP Ratios by Country in 1990 and 2012 (%)



Source: WDI (World Bank)

Table A3. Proportion of Exports by Firm Size in South American and OECD Countries (%)

	Argentina	Brazil	Chile	Spain	Italy	Germany	France
Micro	0.3	0.1	-	11.1	9.0	8.0	17.0
Small	1.6	0.9	0.4	13.3	19.0	12.0	10.0
Medium	6.5	9.5	1.5	22.6	28.0	18.0	15.0
Large	91.6	82.9	97.9	47.1	44.0	62.0	58.0

Source: Latin American Economic Outlook 2013 (OECD-ECLAC)

Table A4. Trade Promotion Agencies by Country

Country	Agency	Year Established	Budget (2007-2009) (Millions of dollars)	Budget/ Exports (%)
Argentina	Fundacion ExportAr	1993	4.5	0.008
Bolivia	Promueve Bolivia (former CEPROBOL)	1998-2008	0.2	0.004
Brazil	ApexBrasil	2003	120.0	0.078
Chile	ProChile	1974	33.0	0.061
Colombia	Proexport	1992	55.0	0.168
Costa Rica	PROCOMER	1996	11.8	0.136
Dominican Republic	CEI-RD	2003	2.4	0.044
Ecuador	CORPEI-PRO ECUADOR	1997-2011	6.8	0.049
El Salvador	EXPORTA	2004	2.0	0.053
Guatemala	Trade Promotion Department	2000	0.4	0.005
Honduras	FIDE	1984	0.9	0.039
Jamaica	JTI	1990	6.7	0.241
Mexico	ProMexico	2007	97.0	0.042
Panama	National Export Promotion Bureau	1998	1.8	0.129
Paraguay	REDIEX	2004	1.4	0.044
Peru	PROMPERU	2007	29.0	0.113
Uruguay	Uruguay XXI	1996	0.6	0.011

Source: ECLAC (2014)

Table A5. SME Development Agencies in Latin America

Country	Agency	Ministry
Argentina	Secretariat for SMEs and Regional Development	Ministry of Industry
Bolivia	Vice-Ministry of Micro and Small Enterprises	Ministry of Productive Development and the Plural Economy
	Vice-Ministry of Medium and Large Scale Production	
Brazil	Brazilian Micro and Small Enterprise Support Service (SEBRAE)	Independent
Chile	Production Development Corporation (CORFO)	Independent
	Technical Co-operation Service (SERCOTEC)	Ministry of Economy, Development and Tourism
Colombia	MSME Bureau	Ministry of Trade, Industry and Tourism
Dominican Republic	Council for Promoting and Supporting MSMEs	Ministry of Industry and Commerce
Ecuador	Undersecretariat of MSMEs and Crafts	Ministry of Industry and Productivity
El Salvador	National Micro and Small Enterprise Commission (CONAMYPE)	Ministry of Economy
Guatemala	Vice-Ministry of MSMEs	Ministry of Economy
Honduras	The Undersecretariat of the Bureau for MSMEs and the Social Sector of the Economy	Secretariat of Industry and Commerce
Mexico	Undersecretariat for SMEs	Secretariat of Economics
Nicaragua	Nicaraguan Development Program for MSMEs (PROPYMES)	Ministry of Development, Industry and Commerce
Peru	Directorate-General for Micro and Small Enterprises and Co-operatives	Ministry of Production
Uruguay	National Bureau for Crafts and SMEs	Ministry of Industry, Energy and Mining
Venezuela	Small and Medium-Sized Industry Development Institute	Ministry of People's Power for Industries

Source: Latin American Economic Outlook (OECD, ECLAC)

Table A6. Top Exports by Country, 2000 and 2013

	HS1		US$ (000)	% of Total			US$ (000)	% of Total
	2000				2013			
	ARGENTINA							
1	"2709"	Petroleum oils and oils obtained fr	2,808,667	10.7%	"2304"	Oil-cake and other solid residues,	10,660,573	13.9%
2	"2304"	Oil-cake and other solid residues,	2,169,400	8.2%	"1005"	Maize (corn).	5,848,042	7.6%
3	"1001"	Wheat and meslin.	1,218,154	4.6%	"8703"	Motor cars and other motor vehicles	4,123,377	5.4%
4	"2710"	Petroleum oils and oils obtained fr	1,163,316	4.4%	"8704"	Motor vehicles for the transport of	4,116,775	5.4%
5	"1005"	Maize (corn).	1,020,369	3.9%	"1201"	Soya beans, whether or not broken.	4,089,403	5.3%
	Total Trade (2000)		26,341,029	31.8%	Total Trade (2013)		76,633,914	37.6%
	BOLIVIA							
1	"2608"	Zinc ores and concentrates.	170,589	11.7%	"2711"	Petroleum gases and other gaseous h	6,116,792	50.1%
2	"8802"	Other aircraft (for example, helico	144,033	9.9%	"2616"	Precious metal ores and concentrate	866,497	7.1%
3	"2304"	Oil-cake and other solid residues,	140,873	9.7%	"2608"	Zinc ores and concentrates.	756,798	6.2%
4	"2711"	Petroleum gases and other gaseous h	127,154	8.7%	"2304"	Oil-cake and other solid residues,	612,241	5.0%
5	"7108"	Gold (including gold plated with pl	87,816	6.0%	"2709"	Petroleum oils and oils obtained fr	511,058	4.2%
	Total Trade (2000)		26,341,029	31.8%	Total Trade (2013)		76,633,914	37.6%
	BRAZIL							
1	"8802"	Other aircraft (for example, helico	3,446,952	6.3%	"2601"	Iron ores and concentrates, includi	32,491,531	13.4%
2	"2601"	Iron ores and concentrates, includi	3,048,240	5.5%	"1201"	Soya beans, whether or not broken.	22,810,049	9.4%
3	"1201"	Soya beans, whether or not broken.	2,187,879	4.0%	"2709"	Petroleum oils and oils obtained fr	12,956,638	5.4%
4	"8703"	Motor cars and other motor vehicles	1,768,320	3.2%	"1701"	Cane or beet sugar and chemically p	11,842,458	4.9%
5	"2304"	Oil-cake and other solid residues,	1,650,509	3.0%	"8905"	Light-vessels, fire-floats, dredger	7,735,537	3.2%
	Total Trade (2000)		55,118,914	22.0%	Total Trade (2013)		242,178,054	36.3%
	CHILE							
1	"7403"	Refined copper and copper alloys, u	4,661,480	25.6%	"7403"	Refined copper and copper alloys, u	18,862,888	24.4%
2	"2603"	Copper ores and concentrates.	2,393,662	13.1%	"2603"	Copper ores and concentrates.	17,188,786	22.2%
3	"4703"	Chemical wood pulp, soda or sulphat	1,110,350	6.1%	"7402"	Unrefined copper; copper anodes for	3,544,546	4.6%
4	"0304"	Fish fillets and other fish meat (w	597,567	3.3%	"4703"	Chemical wood pulp, soda or sulphat	2,803,381	3.6%
5	"2204"	Wine of fresh grapes, including for	580,485	3.2%	"0304"	Fish fillets and other fish meat (w	1,986,046	2.6%
	Total Trade (2000)		18,214,504	51.3%	Total Trade (2013)		77,367,263	57.4%

COLOMBIA								
1	"2709"	Petroleum oils and oils obtained fr	4,014,825	30.5%	"2709"	Petroleum oils and oils obtained fr	27,644,198	47.0%
2	"0901"	Coffee, whether or not roasted or d	1,068,571	8.1%	"2701"	Coal; briquettes, ovoids and simila	6,253,846	10.6%
3	"2701"	Coal; briquettes, ovoids and simila	873,735	6.6%	"2710"	Petroleum oils and oils obtained fr	4,364,625	7.4%
4	"2710"	Petroleum oils and oils obtained fr	745,949	5.7%	"7108"	Gold (including gold plated with pl	2,226,458	3.8%
5	"0603"	Cut flowers and flower buds of a ki	583,610	4.4%	"0901"	Coffee, whether or not roasted or d	1,922,532	3.3%
	Total Trade (2000)		13,158,401	55.4%	Total Trade (2013)		58,821,870	72.1%
ECUADOR								
1	"2709"	Petroleum oils and oils obtained fr	2,144,009	44.5%	"2709"	Petroleum oils and oils obtained fr	13,411,759	53.7%
2	"0803"	Bananas, including plantains, fresh	820,595	17.0%	"0803"	Bananas, including plantains, fresh	2,332,207	9.3%
3	"0306"	Crustaceans, whether in shell or no	272,725	5.7%	"0306"	Crustaceans, whether in shell or no	1,794,992	7.2%
4	"2710"	Petroleum oils and oils obtained fr	231,457	4.8%	"1604"	Prepared or preserved fish; caviar	1,337,900	5.4%
5	"1604"	Prepared or preserved fish; caviar	213,263	4.4%	"0603"	Cut flowers and flower buds of a ki	837,280	3.4%
	Total Trade (2000)		4,821,865	76.4%	Total Trade (2013)		24,957,644	79.0%
PARAGUAY								
1	"1201"	Soya beans, whether or not broken.	285,924	32.9%	"1201"	Soya beans, whether or not broken.	2,509,104	26.6%
2	"5201"	Cotton, not carded or combed.	78,493	9.0%	"2716"	Electrical energy. (optional headin	2,236,633	23.7%
3	"2304"	Oil-cake and other solid residues,	75,239	8.7%	"2304"	Oil-cake and other solid residues,	923,002	9.8%
4	"0201"	Meat of bovine animals, fresh or ch	54,987	6.3%	"0202"	Meat of bovine animals, frozen.	771,482	8.2%
5	"4104"	Leather of bovine or equine animals	51,686	5.9%	"1507"	Soya-bean oil and its fractions, wh	467,533	5.0%
	Total Trade (2000)		869,357	62.8%	Total Trade (2013)		9,432,252	73.2%
PERU								
1	"7108"	Gold (including gold plated with pl	1,144,191	16.7%	"7108"	Gold (including gold plated with pl	8,028,441	19.2%
2	"2301"	Flours, meals and pellets, of meat	873,789	12.7%	"2603"	Copper ores and concentrates.	7,601,503	18.2%
3	"7403"	Refined copper and copper alloys, u	742,381	10.8%	"2710"	Petroleum oils and oils obtained fr	3,301,218	7.9%
4	"2608"	Zinc ores and concentrates.	347,806	5.1%	"7403"	Refined copper and copper alloys, u	2,110,911	5.0%
5	"2710"	Petroleum oils and oils obtained fr	276,041	4.0%	"2711"	Petroleum gases and other gaseous h	1,584,863	3.8%
	Total Trade (2000)		6,866,038	49.3%	Total Trade (2013)		41,871,689	54.0%
URUGUAY								
1	"0202"	Meat of bovine animals, frozen.	242,654	10.6%	"1201"	Soya beans, whether or not broken.	1,874,522	20.7%
2	"4104"	Leather of bovine or equine animals	214,295	9.3%	"0202"	Meat of bovine animals, frozen.	939,713	10.4%

3	"1006"	Rice.	164,991	7.2%	"1006"	Rice.	507,992	5.6%
4	"0201"	Meat of bovine animals, fresh or ch	113,827	5.0%	"0402"	Milk and cream, concentrated or con	458,753	5.1%
5	"5105"	Wool and fine or coarse animal hair	111,100	4.8%	"0201"	Meat of bovine animals, fresh or ch	360,961	4.0%
	Total Trade (2000)		2,295,401	36.9%	Total Trade (2013)		9,065,754	45.7%
VENEZUELA*								
1	"2709"	Petroleum oils and oils obtained fr	18,238,024	58.9%	"2709"	Petroleum oils and oils obtained fr	60,913,164	67%
2	"2710"	Petroleum oils and oils obtained fr	8,236,475	26.6%	"2710"	Petroleum oils and oils obtained fr	27,217,929	30%
3	"7601"	Unwrought aluminum.	624,256	2.0%	"2601"	Iron ores and concentrates, includi	560,726	1%
4	"7203"	Ferrous products obtained by direct	270,677	0.9%	"7203"	Ferrous products obtained by direct	432,620	0%
5	"8708"	Parts and accessories of the motor	170,101	0.5%	"7208"	Flat-rolled products of iron or non	292,673	0%
	Total Trade (2000)		30,948,104	89.0%	Total Trade (2011)		91,338,260	98%

Source: UN COMTRADE; **Notes:** (1) Trade Value in 1,000 US$ (2) Harmonized System 1996 (HS1) *Venezuela 2013 uses data from 2011.

Table A7. Examples of IDB Financed Cluster Support Programs

Program Name	IDB Group Financing	Year Approved	Objective
Traditional Manufacturing Cluster in the Brazilian State of São Paulo	$10 million (IDB)	2007	The program supported 15 clusters and has four components: mobilize local firms and business chambers of the selected clusters; identify challenges and obstacles to cluster development, and prepare action plans; execute activities identified in action plans; and perform monitoring and evaluation. The program aims to solve coordination failures and improve the effectiveness of existing industrial policies. It emphasized public-private collaboration and bottom-up decision making, a departure from the more top-down, state-led nature of traditional policies. It is governed by a tripartite council made up of the Federation of Industries of the State of São Paulo (FIESP), SEBRAE-SP, and the Secretary of Development of the State of São Paulo.
Service Sector (Tourism) Cluster in Uruguay	$9 million (IDB)	2006	The project's goal is to contribute to the sustainable development of Uruguay's clusters and production chains. The tourism cluster in Colonia was selected in the second call for proposals (led by the Tourism Department of Colonia (ATC by its Spanish acronym)). The strategy developed with the program's support proposed several lines of action to enhance the town as a tourist destination. In order to do so, the ATC reached a consensus on 12 initiatives involving over $500,000 in resources. The program on average funded 70 percent of the 12 initiatives. These initiatives ranged from the basic (like developing a web page for the town) to more demanding ones in terms of collective action (such as developing a common brand for the destination).
The Fresh Grape Value Chain in Atacama, Chile	$20 million (IDB)	2006	Part of the Regional Development Agencies Program in Chile. The program created informal governance mechanisms with the participation of private firms from the grape industry, local universities, the regional government, and the local representatives of national ministries, in particular agriculture. The project launched initiatives in three areas: a marketing strategy to position its products in foreign markets, developed jointly with other actors in the chain, including foreign distributors and retail chains; labor training and skill development to increase the overall quality of the final product; and a joint initiative to identify new markets for the whole chain. These initiatives helped improve quality at the farm level that could support a marketing drive to higher-end markets ("FreshAtacama").
Norte Grande Competitiveness Program (Argentina)	$16 million (IDB)	2008	The goal of the program is to contribute to the sustainable development of Argentina's Norte Grande region. Its purpose is to make selected industry clusters more competitive through the development of competitiveness strengthening plans and the implementation of competitiveness strengthening projects. The project provides matching grants to fund up to 80% of priority competitive strengthening projects that directly benefit three or more clustered enterprises.
Competitiveness of the Dairy Industry of Paraguay	$1.5 million (MIF)	2010	This project, implemented in cooperation with the Federation of Dairy Production Co-operatives (FECOPROD), aims at improving the competitiveness and regional market integration of the dairy industry of Paraguay. The goal of the project is to increase the incomes of small producers through support to improve the management and profitability of their productive units. The purpose of the project is to organize and incorporate small producers into the dairy value chain.

Source: Maffioli, Pietrobelli, and Stucchi (Eds.) (2015); Notes: MIF (Multilateral Investment Fund)

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