Chapter 2

Promoting start-ups in Latin America: Progress made and open challenges

This chapter presents an overview of policies to support start-ups in Latin America, based on the experiences of Chile, Colombia, Mexico and Peru. It is an update of the first report on start-up policies in the region (OECD, 2013). The chapter identifies lessons, results and challenges for the future. Since 2012, the concept of start-ups has attracted growing attention from many stakeholders in Latin America, from media and innovation experts to investors and policy makers. During that time, several countries have adopted policies to support start-ups. Unlike more traditional methods to support innovation and competitiveness, these policies have evolved rapidly. In just a few years, they have improved their design, focus and structure. Results are beginning to emerge, especially regarding people's perceptions of the region and its image as a place for innovative entrepreneurship.

Introduction

Start-ups are no longer associated only with Silicon Valley. Today, many countries have start-up ecosystems and a growing entrepreneurial culture, and Latin America is one of the emerging regions in this area. Governments, the private sector and universities have begun to support the creation of start-ups, as they become increasingly aware of the potential of these enterprises to transform the region's economies.

Since 2010, the concept of start-ups has attracted growing attention from many stakeholders in Latin America, from the media and innovation experts to investors and policy makers. Several countries have adopted policies to support start-ups. Chile has been the pioneer, thanks to a more structured policy that it is currently building upon and strengthening, while Mexico has made the most progress in the last five years. Unlike more traditional methods to support innovation and competitiveness, these policies have evolved rapidly. In just a few years, they have improved their design, focus and structure. Results are beginning to emerge, especially regarding people's perceptions of the region and its image as a place for innovative entrepreneurship.

This chapter presents an overview of policies to support start-ups in Latin America based on the experiences of Chile, Colombia, Mexico and Peru. It is an update of the first report on start-up policies in the region (OECD, 2013). The chapter identifies lessons, results and challenges for the future. The first section briefly describes the context in which start-ups have been emerging in Latin American countries and presents data that are beginning to paint a picture of the region's start-up scene. The second section compares pro-startup policies in the four countries over time. The third and final section identifies challenges for the future and provides policy recommendations.

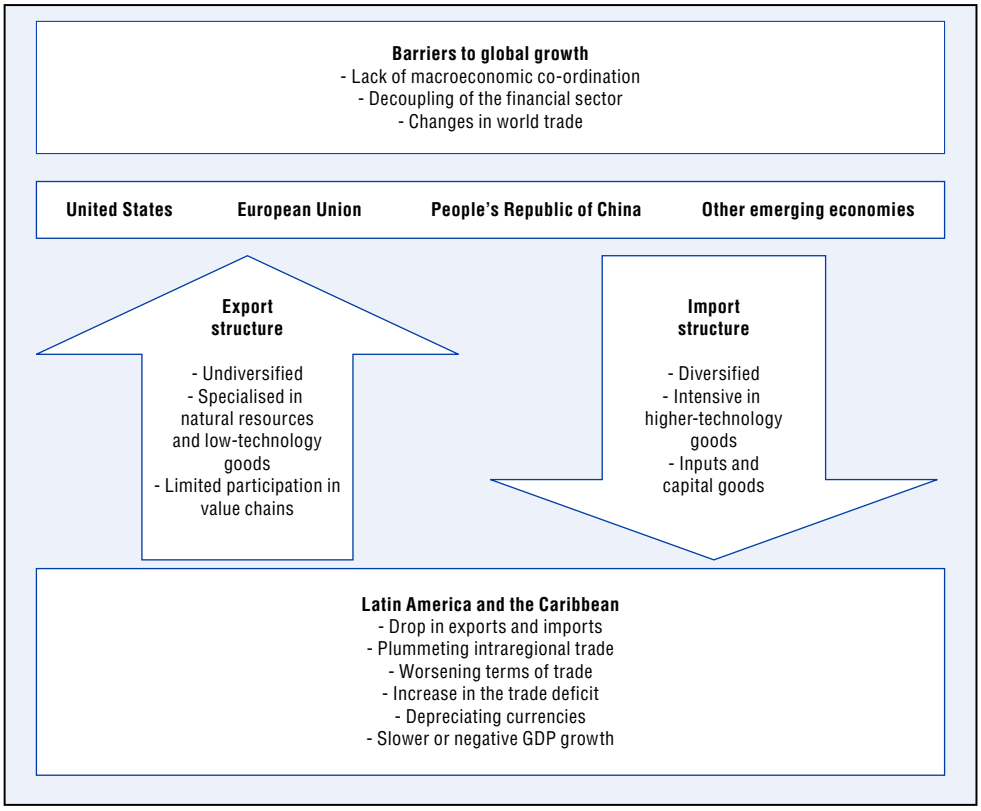
Despite the barriers they face, start-ups are shaking Latin America

This section briefly introduces the regional context in which the incipient Latin American start-up ecosystems are operating. Although the section makes it clear that there are insufficient comparable data to measure the size of the start-up scene and its impact on the region, it presents emerging evidence based on new data that are outlining the situation of start-ups and their ecosystems in the countries of Latin America.

A sluggish regional economy and major global uncertainty

Latin America faces a complex situation. Although the global economy has made some progress in finding new sources of growth, it needs to do more. The global outlook is not promising for the countries in the region as they try to overcome their structural gaps in terms of skills, productivity and innovation. Sluggish growth and global uncertainty have exacerbated the region's structural weaknesses. Following a five-year slowdown, the region went into recession in 2015, a trend set to continue in 2016, with the economy projected to contract between 0.5% and 1% before recovering slightly in 2017 (OECD/CAF/ECLAC, forthcoming 2016). With commodity prices plateauing, the Chinese economy slowing and the global economy becoming uncertain due to disruptive technological changes, the region's economies have been left with gaps in productivity, skills and technology that make it difficult for them to escape their current plight (OECD/CAF/ECLAC, forthcoming 2016). Three features of the region's economies are making them more vulnerable to the global slowdown in growth and international trade: their specialisation in national resources, their poorly diversified export baskets and their dependence on imports for high-tech goods (Figure 2.1; ECLAC, 2015a).

Figure 2.1. **Latin America and the Caribbean in the global economy, 2015**

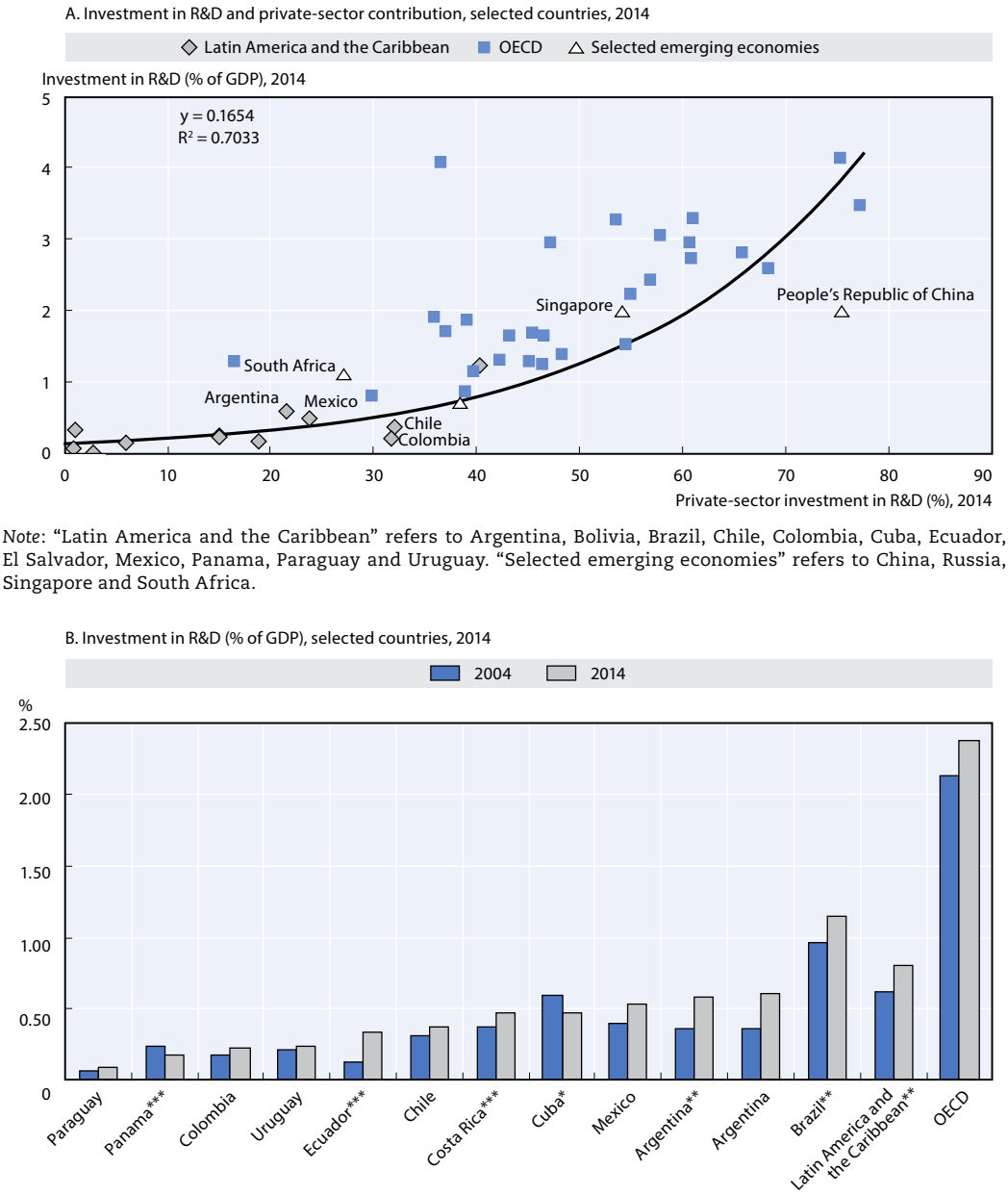


Source: ECLAC (2015a), *Latin America and the Caribbean in the World Economy 2015. The regional trade crisis: assessment and outlook*.

The digital economy has made inroads, but the innovation gap remains

Latin American countries continue to invest little in science, technology and innovation (Table 2.1). Their investment in research and development (R&D) grew from 0.63% of GDP in 2009 to 0.74% in 2014, but this figure remains well below the average for OECD countries (2.3% in 2014) (Figure 2.2; OECD, 2015b; RICYT, 2014). The dynamics of the boom period have not yet led to the kind of structural change and additional innovation that would have raised local value-added in more sectors and economic activities. Substantially higher private investment in R&D along with greater and better public-sector support is necessary to boost innovation. Latin American countries need new incentives and policies to encourage private-sector investment in innovation, including measures to support the creation of start-ups. The countries of the region have still not introduced measures to support the kind of innovation and industrial development that will capitalise on the opportunities offered by global knowledge economies (ECLAC, 2015b).

Figure 2.2. **The challenge for Latin America: Mobilising public and private investment in R&D**



Note: "Latin America and the Caribbean" refers to Argentina, Bolivia, Brazil, Chile, Colombia, Cuba, Ecuador, El Salvador, Mexico, Panama, Paraguay and Uruguay. "Selected emerging economies" refers to China, Russia, Singapore and South Africa.

Note: Data marked with a single asterisk (*) are for 2013, those with a double asterisk (**) are for 2012, and those with a triple asterisk (***) are for 2011.

Source: Based on data from the United Nations Educational, Scientific and Cultural Organization (UNESCO); *Red de Indicadores de Ciencia y Tecnología Iberoamericana e Interamericana* (RICYT); the OECD's Main Science and Technology Indicators (MSTI) database (www.oecd.org/sti/msti.htm); Brazil's Ministry of Science and Technology; Mexico's National Institute of Statistics and Geography (INEGI); Chile's Ministry of Economy, Development and Tourism; the World Bank database; and Cuba's National Office for Statistics.

Table 2.1. **Innovation indicators, OECD countries and Latin America, 2014**

Country	R&D (% of GDP)	Private-sector investment in R&D (%)	Researchers per 1 000 employees	Number of scientific publications (2013)	Number of patents granted by the United States Patent and Trademark Office in 2012-14	High-tech exports (% of manufacturing exports in 2014)
Argentina	0.61	21.44	2.64	8 053	217	2.11
Brazil	1.15*	40.35	1.35*	48 622	878	4.15
Chile	0.39	31.96	0.9	5 157	153	0.63
Colombia	0.23	31.71	0.34*	4 455	62	1.53
Mexico	0.5	23.76	0.78	13 112	555	17.21
Peru	0.2*			647	9	0.41
Australia	2.11	61.91	8.59*	47 805	5 718	3.14
United States	2.74*	60.85	8.34*	412 541	329 613	12.78
Finland	3.17	53.53	14.18	10 156	3 815	10.9
Israel	4.11	36.54	17.62*	11 300	8 393	25.11

Note: Data marked with an asterisk (*) are the most recent available.
Source: Authors' work based on data from the United Nations Educational, Scientific and Cultural Organization (UNESCO); Red de Indicadores de Ciencia y Tecnología Iberoamericana e Interamericana (RICYT, www.ricyt.org); the OECD's Main Science and Technology Indicators (MSTI) database (www.oecd.org/sti/msti.htm); World Bank indicators (http://databank.bancomundial.org/data/home.aspx); USPTO (2014), *United States Patent and Trademark Office Performance and Accountability Report 2014*; and the UN Comtrade database (http://comtrade.un.org).

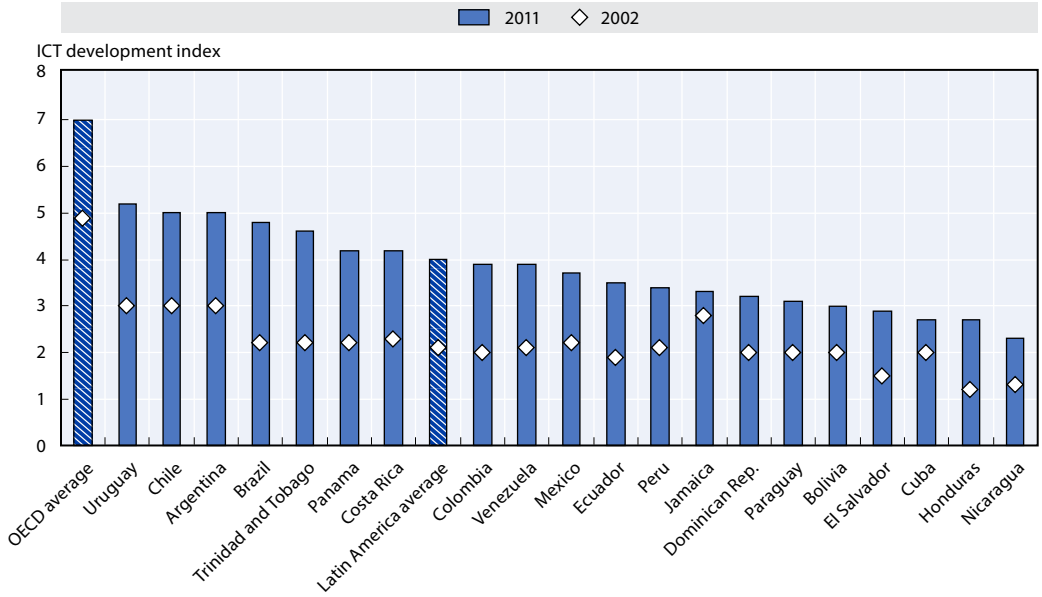
In the age of the digital economy, connectivity and access to information and communication technologies (ICTs) are basic essentials for business development. Digital infrastructure, access to ICTs and cyber-security are essential components for creating and operating start-ups, both for the businesses and for consumers. In addition to contributing to the creation of start-ups in sectors directly related to the digital age, such as the mobile apps and software development sector, ICTs also have an impact on various aspects related to the process of founding and expanding start-ups (OECD, 2015c; ECLAC, 2013; 2015b). The aspects include:

1. *Operating and managing e-commerce.* E-commerce is expanding rapidly and there are excellent opportunities for businesses in developing countries to take advantage of its lower transaction costs and global reach (ECLAC, 2013, 2015b; UNCTAD, 2015c). For start-ups to benefit from e-commerce platforms, countries need to have trustworthy online payment systems that guarantee data protection and prevent fraud. Businesses need high-quality connectivity and broadband to reach suppliers and customers.
2. *Faster procedures and access to public and private services.* By adopting ICTs, public administrations make the procedures required to start a business and pay taxes faster and more flexible. E-signatures, for instance, allowed Chile and Mexico to pass legislation that removed procedures and enabled people to start a business in a single day. Connectivity, high-quality digital infrastructure and data protection are essential to make this possible.
3. *Access to new forms of platform capitalism and crowdfunding.* One of the salient features of start-ups today is that they operate in networks and target a global market. ICTs need to be accessible and designed for productive use in order for start-ups in emerging and developing countries to operate effectively. The spread of ICTs also enables the development of new forms of service and financing for start-ups, such as crowdfunding platforms. These new forms of financing require widespread access to ICTs and the Internet, and regulations on cyber-security and data protection.

ICT uptake has grown over the last decade, but there remains a large gap with the OECD countries (ECLAC, 2013). The ICT Development Index (IDI) shows that ICT infrastructure, access and use improved in almost all of the region's economies between 2002 and 2011 (Figure 2.3). However, there are vast differences in connectivity and ICT

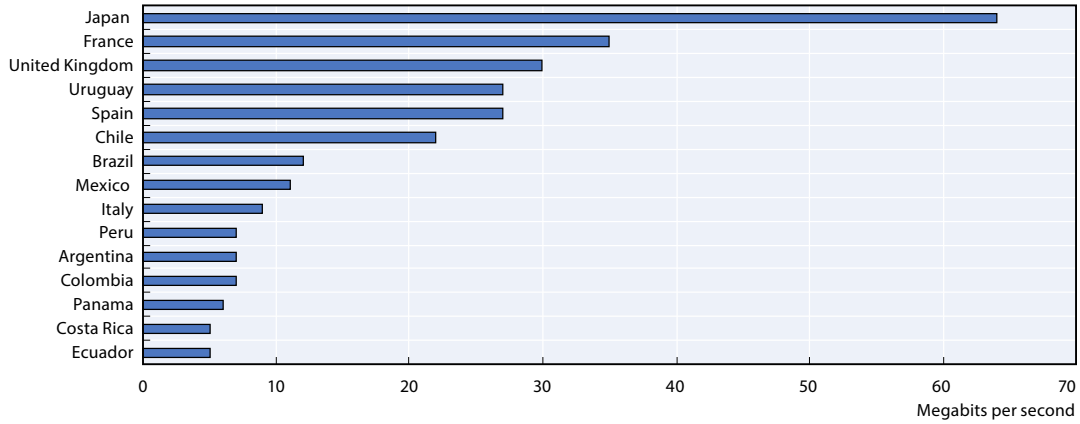
use from one country to another in the region, as well as between urban and rural areas within countries. Fast, reliable broadband is crucial for start-ups to be able to do online transactions and participate in the digital economy, but in most of Latin America, connections are much slower than in more advanced countries. The average broadband download speed at the end of 2014 was 7.3 Mbps, compared with an average of 32.2 Mbps among OECD countries. Download speeds in Brazil, Chile, Mexico and Uruguay were faster than the regional average (ECLAC, 2015b) (Figure 2.4).

Figure 2.3. **ICT Development Index: Selected Latin American and Caribbean countries and OECD average, 2002-11**



Note: ICT Development Index (ITI) by the United Nations International Telecommunication Union. A composite index based on ICT readiness (number of fixed-telephone subscriptions per 100 inhabitants, mobile-cellular telephone subscriptions per 100 inhabitants, international Internet bandwidth per user, percentage of households with a computer, percentage of households with Internet access), ICT intensity and usage (percentage of individual using the Internet, fixed-broadband subscriptions per 100 inhabitants, wireless broadband subscriptions per 100 inhabitants), and skills to use ICTs effectively (adult literacy rate, secondary-education gross enrolment ratio, tertiary-education gross enrolment ratio).
Source: ECLAC (2013), *Entre mitos y realidades. TIC, políticas públicas y desarrollo productivo en América Latina*, which uses data from the ITU's World Telecommunication/ICT Indicators database.

Figure 2.4. **Broadband download speeds, selected countries, 2014**
(megabits per second)



Source: ECLAC (2015b), *The new digital revolution: From the consumer Internet to the industrial Internet*, which uses data from the Regional Broadband Observatory (ORBA) based on the Ookla database.

In recent years, most countries in the region have implemented policies to promote ICT uptake and have updated their legislation. The purpose of most of these policies has been to strengthen infrastructure and provide training to businesses and users (ECLAC, 2015b). Nevertheless, countries need to improve infrastructure and skills for ICT uptake by businesses and individuals, close digital gaps between different territories within countries, regulate cyber-security, and adopt data protection and anti-fraud policies.

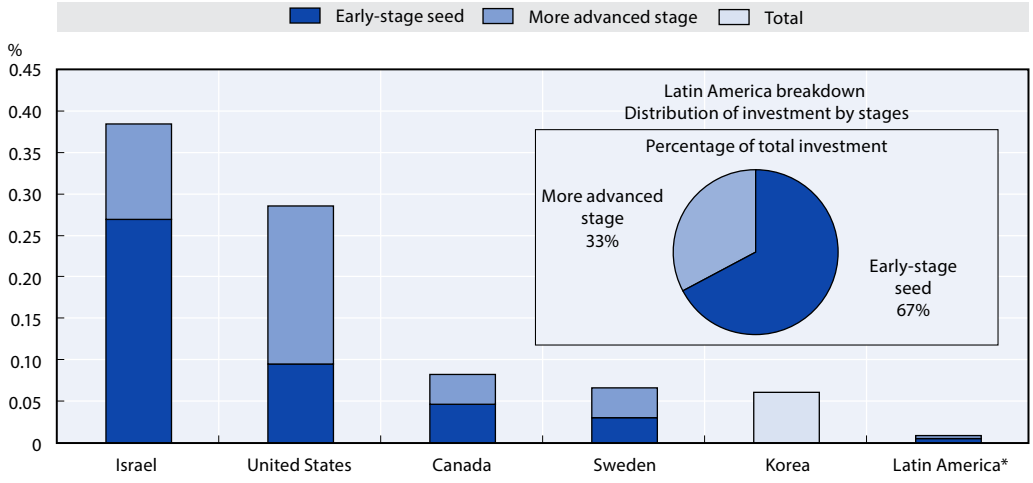
The venture-capital industry is expanding in the region

In addition to the innovation gaps, the region faces low levels of financial inclusion, especially for new firms. In the manufacturing sector, for instance, ECLAC estimates that 70% of large firms have access to the formal financial system, but that figure falls to just 40% for small businesses (ECLAC, 2015b). The lack of financial inclusion limits the ability of new businesses to grow and innovate. This is especially true of start-ups. The venture-capital industry has made a number of improvements in this area.

In Latin America, the venture-capital industry began to develop in the mid-1990s, supported by the Inter-American Development Bank and some public bodies such as the Production Development Corporation (CORFO) in Chile, the Brazilian Development Bank (BNDES), the Nacional Financiera (NAFINSA) development bank in Mexico, and the Bancóldex development bank in Colombia. Private-sector investment in investment funds traditionally comes from family offices and high-net-worth individuals (Miranda, 2012).

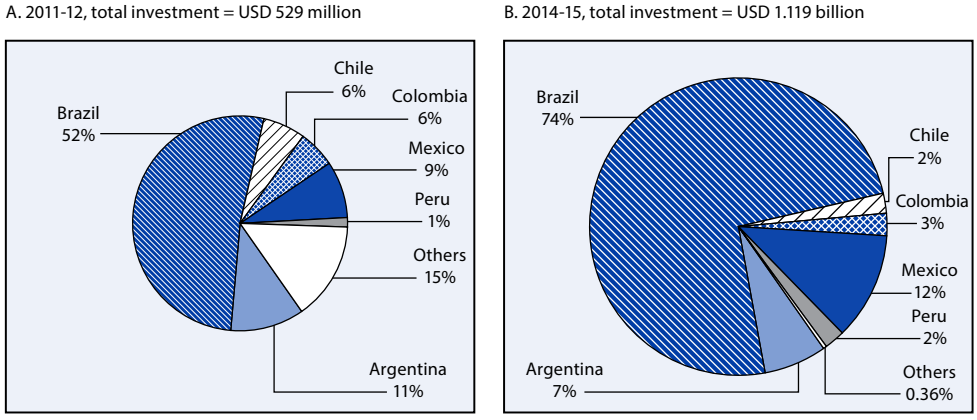
Although Latin America's venture-capital industry is still far smaller than that of the OECD countries (Figure 2.5), it is expanding. The industry's investments doubled between 2011 and 2015 (Figures 2.6 and 2.7). Brazil dominates the industry in the region, providing 74% of total investment in 2014-15. In the last five years, the industry has taken off in Mexico, which now has the second largest volume of venture-capital investments (12% in 2014-15).

Figure 2.5. **Venture-capital investments as a percentage of GDP, 2014**
(the top five countries according to the OECD's *Entrepreneurship at a Glance* and estimates for Latin America)



Note: * preliminary estimate.
Source: Figure 7.1 in OECD (2015b), *Entrepreneurship at a Glance 2015* for OECD countries. Data for Latin America are preliminary estimates based on data for investment in venture capital published in LAVCA (2016), *Latin America Venture Capital: Five Year Trends* and GDP data from the *World Bank Indicators* in US current 2014 dollars.

Figure 2.6. **Venture-capital investment in Latin America by country, 2011-12 and 2014-15**
(investment for each country in millions of USD and as a percentage of the total)



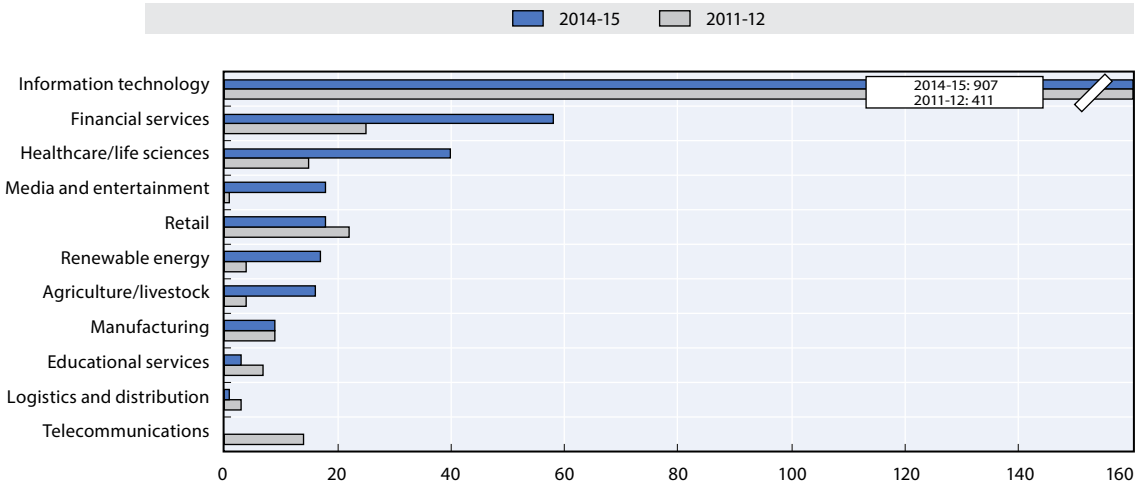
Source: LAVCA (2016), *Latin America Venture Capital: Five Year Trends*.

Figure 2.7. **Top venture-capital centres in Latin America, 2011-15**
(capital raised [USD] and number of fund closings)

Source: LAVCA (2016), *Latin America Venture Capital: Five Year Trends*.

Historically, venture-capital funds have tended to invest in ICT-related industries, and more recently they have turned to biotech and renewable energies (OECD, 2011). In Latin America, investors have followed a similar pattern. The vast majority of investment has been in information technology (83% in 2014-15) (Figure 2.8), especially in financial technology and e-commerce. Over the last five years, financial services, renewable energies, health, life sciences, the media and entertainment have recorded increases in investment (LAVCA, 2016).

Figure 2.8. **Venture-capital investment in Latin America by sector, 2011-12 and 2014-15**
(millions of USD)



Source: LAVCA (2016), *Latin America Venture Capital: Five Year Trends*.

Start-ups reveal a different, more dynamic side of the region

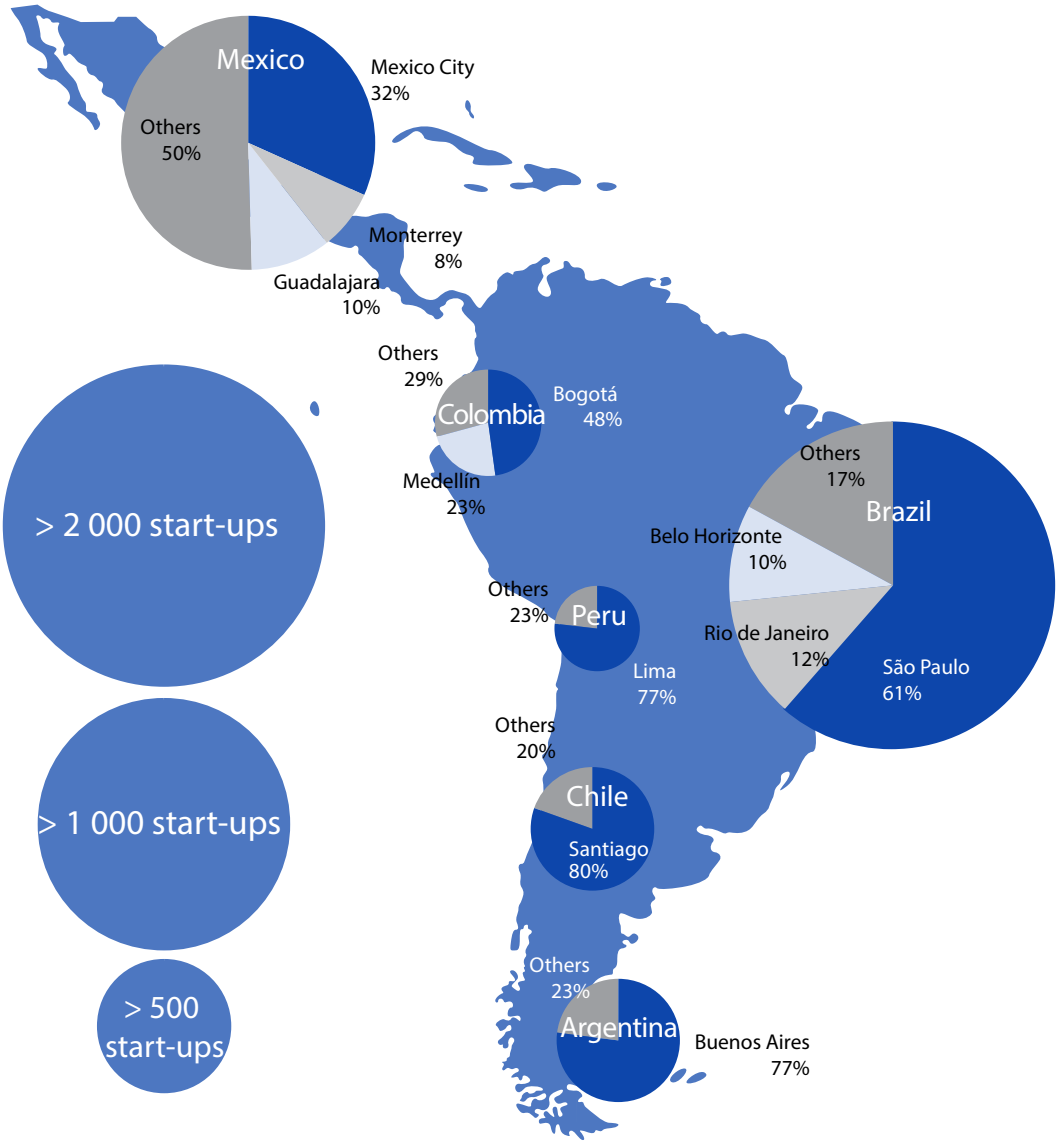
The start-up landscape in Latin America shows a region that is moving forward, a dynamic region that is capable of creating ideas and innovative businesses, a region that is in much better shape than aggregate innovation indicators suggest. And this is despite technology and innovation systems that are not very dynamic, legal barriers that make it difficult to start and grow businesses, and a financial system that tends not to invest in start-ups. There is a palpable change of mindset in the region, a growing acceptance of a business culture, and a change in how people perceive the launch of innovative enterprises. Back in the early 2010s, start-ups were seen as something alien to the region's culture, but today, there is a sense that Latin American countries have the opportunities to create and grow new, innovative enterprises. Start-ups in the region still face the same major barriers to scale-up: limited resources from funds, little appetite for risk among investors, and legislation that is still often unfavourable and complex. But there is a real sense that something in the region is changing, and quickly. The region now has more start-uppers, more large firms with open-innovation strategies and new policies to support start-ups. It also has the opportunity to position itself in the new start-up landscape by developing its own ecosystems, rather than replicating the experience of Silicon Valley. In these ecosystems, start-ups may not be able to achieve the same market values as their Silicon Valley counterparts, but they can produce real technologies, products and services that solve emerging problems.

However, success stories and the perceptions of those operating in the region's ecosystems are the only indications of this forward momentum. Hard data comparing countries in the region with each other and with the rest of the world are lacking. Neither ministries, nor the agencies that design policies to support start-ups, nor national statistical institutes systematically monitor data in order to reveal the dynamics of this phenomenon. There are no official databases on start-ups, and the myriad of definitions of start-ups makes it difficult to measure them. Despite these difficulties, because public policies have recently begun to focus on promoting start-ups and because the region's ecosystems have begun to perform well, institutions are starting to test ways to generate new data to describe the business environment and the performance of start-ups in Latin America.

Some initiatives generate information based on surveys conducted among businesses and other stakeholders in the ecosystem. Their aim is to describe ecosystems in terms of infrastructure, access to finance, entrepreneurs' attitudes and the availability of public support, among other features. Examples of these include the Global Entrepreneurship Monitor (GEM), the Global Entrepreneurship Index, and the Index of Systemic Conditions for Dynamic Entrepreneurship compiled by the Entrepreneur Development Programme (PRODEM) for the countries of Latin America. These indices show that in recent years there has been an upward trend in the number of new start-ups being founded, but the ecosystems in Latin America are still not as developed as those in other parts of the world, such as in Tel Aviv (GEDI, 2016; GEM, 2015; Kantis et al., 2015).

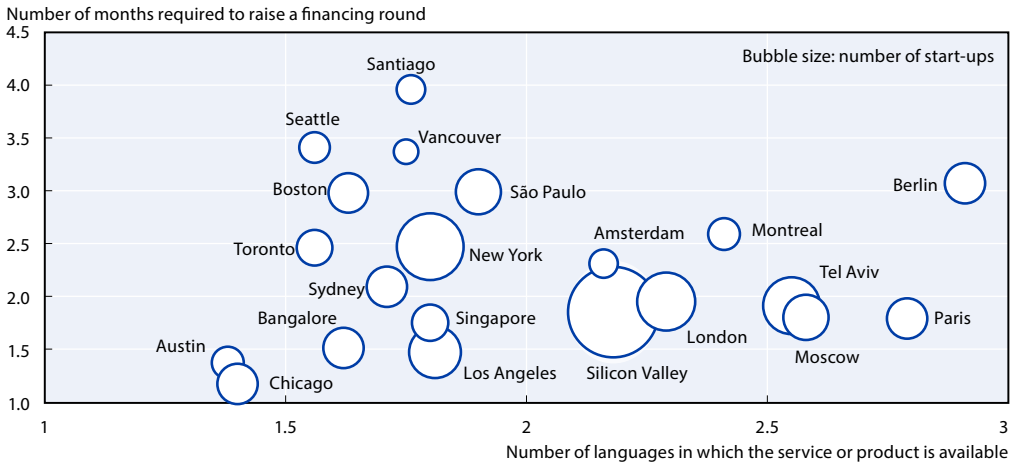
Thanks to the spread of ICTs, new data are being generated that reveal (or could reveal) the situation of start-ups in countries across the region. When investors, support service platforms, incubators and others conduct online activities, they are gathering data that, if processed, could be useful to measure the dynamics of start-ups. AngelList – a database that investors often use to find basic information about start-ups before making investment decisions – shows that in Latin America, Brazil has the largest number of start-ups, followed by Mexico. Mexico has the least concentration in a single city, with only 32% of Mexican start-ups located in Mexico City. Chile has the highest concentration, with some 80% of start-ups located in the capital, Santiago (Figure 2.9). The Global Startup Ecosystem Ranking is based on data from surveys of experts, start-ups, investors, providers of services to start-ups and others. It combines these survey data with other sources of information and ranks the top 20 start-up ecosystems around the world according to several dimensions, including funding, talent, performance, market reach and start-up experience. As of 2016, only two Latin American ecosystems appear in the ranking: São Paulo (Brazil) and Santiago (Chile). Figure 2.10 illustrates the diversity among the ecosystems in terms of: number of start-ups (indicated by the size of the bubble), access to finance (measured as the number of months required to raise a financing round) and global market reach (measured as the number of languages in which the service or product is available).

Figure 2.9. **Start-ups in Latin America and their distribution by city, 2016**
(number of start-ups and their distribution by city according to 2016 data from AngelList)



Source: Authors' work based on AngelList (2016).

Figure 2.10. **Features of selected start-up ecosystems, 2015**
(number of start-ups, months to raise a financing round, number of product/service languages)



Note: The figure shows data for the 20 ecosystems that appear in *The Global Startup Ecosystem Ranking* (Compass, 2015) and for Santiago de Chile, the only other Latin American ecosystem for which data is available (Santiago de Chile).

Source: Authors' work based on Compass (2015), *The Global Startup Ecosystem Ranking* and data provided by Compass in 2016.

As countries in Latin America started to implement pro-startup policies, they have generated more data on start-ups and could reveal who the start-uppers are. For example, in 2015, CORFO estimated that Chile had 1 unicorn, 4 centaurs and 31 little ponies, while in 2016 the Mexican Association of PE & VC Funds indicated that Mexico had 1 centaur and 26 little ponies in 2016. These figures are in line with economies like Singapore, which has 2 unicorns, 12 centaurs and 27 little ponies among its 1 000 start-ups (CORFO, 2015). At the same time, the implementation of programmes to support start-ups is generating new data that could create a more accurate picture of start-ups in Latin America. For instance, in 2016, Start-Up Chile conducted a survey to show how many start-ups responded to the call for applications and how many were successful. It found that more than 80% of the beneficiaries were men and 75% were foreigners, mostly from the United States, Argentina, India and Brazil. The survey showed that the survival rate of businesses was higher among Chileans (55%) than among foreigners (less than 50%).

Structuring policies, reforming instruments and forging partnerships

Since 2010, policies to promote start-ups have started to become more prominent in Latin American countries' development and innovation strategies. Several countries have introduced programmes to support start-ups, including Argentina, Brazil, Chile, Colombia, Mexico, Panama, Peru and Uruguay (OECD, 2013, 2015a). This section compares current policies to promote start-ups in Chile, Colombia, Mexico and Peru based on the reviews of their experiences in chapters 3, 4, 5 and 6 of this report. The national governments of all four countries have stepped up their commitment to promoting the creation and expansion of start-ups, and some local governments have also committed to this end.

Each country has its own focus in its pro-startup policies, and each designs and manages its policies under a different institutional structure.

- When Chile introduced Start-Up Chile in 2010, it made promoting entrepreneurship a priority in its national production-development strategy. Chile then reformed the policy based on the results the monitoring and evaluation it conducted, and the country now prioritises retaining more talent and businesses in the country. Chile promotes the founding of start-ups in the regions outside Santiago and supports the founding of firms that either offer innovative solutions to social problems or operate in one of the country's strategic sectors (smart mining, the food industry and engineering, for instance). Today, public policy focuses on three areas: i) closing the early-stage funding gap; ii) modernising services to entrepreneurs by introducing more flexible mechanisms tailored to the needs of start-uppers, such as collaborative workspaces and mentoring networks; and iii) simplifying regulations for starting a business (a new law actually allows people to start a business in a single day).
- Colombia's pro-startup policies prioritise financial inclusion and create incentives for the financial markets to view start-ups as potential customers and beneficiaries. The country launched the iNNpulsa Colombia programme in 2012 to promote the creation of start-ups. Today, Colombia is reforming the programme by introducing a voucher scheme to give new businesses access to financing and services managed by accredited intermediary organisations. Colombian cities play an active role in promoting start-ups. Bogotá and Medellín, for instance, promote start-ups through public-private partnerships.
- Mexico is the country that has made the most progress in promoting start-ups between 2013 and 2016. The launch of the National Institute of Entrepreneurship (INADEM) in 2013 strengthened the institutional framework for start-ups. Meanwhile, the reintroduction of seed capital has closed the early-stage funding gap, thus achieving one of the challenges identified in the 2013 review (OCED, 2013). Mexico has also improved the financial inclusion of start-ups. Venture capital has taken off in the country, which now has the second most active industry in Latin America, behind Brazil (LAVCA, 2016). Mexico has reformed regulations to make it easier to start a business, the Express Companies Act being a notable example. It has also modernised services for entrepreneurs by launching mentoring networks and collective workspaces. Finally, Mexico has invested in promoting an entrepreneurial culture in the country and creating an image of Mexico as a place for entrepreneurship with a global impact.
- Peru introduced the Start Up Perú programme in 2012. Since then, it has improved the programme design and it has increased the budget for start-ups, which now receive resources from the innovation fund. The Start Up Perú programme has been expanded, and today it includes seed capital and support for angel-investor networks. Peru also promotes the founding of start-ups based on scientific research through a competition organised by the National Science and Technology Council (CONCYTEC). Universities and the private sector are actively promoting start-ups in Peru, and the development bank COFIDE has just made promoting start-ups one of its strategic lines of action. COFIDE is looking to promote venture capital and the financial inclusion of new enterprises.

There are differences among the countries in terms of priorities and the stage of development of pro-startup policies, but all four are making progress in learning about such policies and implementing them. Latin American countries have made progress in this area, with five key achievements (Figure 2.11a and b):

1. They have strengthened the institutional framework for supporting start-ups, especially Mexico, which created INADEM in 2013, and Chile, which has made policies to support start-ups part of its national production-development strategy and has opened a unit within CORFO devoted to start-ups. The region has also reformed its development banks, with measures to promote start-ups becoming priorities for Bancóldex in Colombia, NAFINSA in Mexico and COFIDE in Peru. Chile and Mexico have completed their experimental phase and are now incorporating their pro-startup policies into their national strategies. To institutionalise these policies in such a way, they need to find ways to make these bottom-up pro-startup schemes compatible with the more selective nature of production-development policies so that they can find potential synergies in priority areas, like the automotive sector in Mexico and smart mining in Chile.
2. The countries have prioritised social and regional inclusion in their pro-startup policies and have introduced measures to enable start-ups to develop in regions beyond the capital city. These measures aim to place start-ups in a better position to transform regional economies, taking into account the specific features of production ecosystems and societies in the regions. Mexico has the most ecosystems outside the capital city, followed by Colombia; Chile is the country that most needs to increase opportunities for founding start-ups in the region.
3. The countries recognise that it is important to invest in transforming mindsets and promoting a culture of entrepreneurship. Even today, risk aversion is high in Latin American societies, and relatively few people see entrepreneurs as key contributors to national development. Measures to promote a business culture are important in the region, since they help change people's mindsets. Start-Up Chile's media impact has helped to make Chile a talking point around the world and has inspired many young people to become entrepreneurs. In Mexico, meanwhile, the launch of INADEM has raised awareness of the crucial role that entrepreneurship plays in the country's development, inspiring the Mexican youth and the diaspora to create and open up new opportunities.
4. The countries have modernised support instruments, become more aware that instruments need to take all stages of start-up development into account (seed, start-up, growth and expansion), and introduced next-generation instruments that are more flexible and in keeping with global trends. All four countries have introduced new pro-startup schemes that are more modern, more comprehensive and better suited to the needs of start-uppers. Collaborative workspaces are one example. The countries have also reformed instruments to streamline new forms of financing, such as crowdfunding. In these areas, because governments have worked together with entrepreneurs and the private sector, they have reformed instruments and improved practices more quickly than in other areas. The range of instruments tends to provide integrated support, combining access to infrastructure, finance, services and contact networks. In addition, policy makers have worked in partnership with the private sector and with research and technology institutes, which has improved the capacity to respond to the needs of the people targeted by the policies.
5. The countries have been streamlining procedures and reforming legislation to make it easier to create and expand businesses. Chile and Mexico have passed legislation enabling people to start a business in a single day, but procedures are still complex and tax incentives for new, highly innovative businesses are still insufficient.

Latin American countries began promoting start-ups only recently, and in this short span of time they have had to learn how to organise institutions and design instruments. The main lessons they have learned are as follows:

1. **They need to fine-tune their eligibility criteria** to ensure that the programmes reach the people they target and to make the procedures for selecting beneficiaries simpler and better structured. Like OECD countries, not all Latin American countries define start-ups in exactly the same way. Countries normally define them based on age and performance (growth potential, turnover or jobs) or based on their innovation and technology intensity (Table 2.2). Chile adopts performance-based criteria, with instruments geared towards high-impact enterprises that meet certain conditions in terms of turnover, jobs or both. Some of its programmes, however, only take into account the age of the company and certain aspects of the business (whether it operates in a priority sector or is "innovative"). Mexico prioritises high-impact and innovative enterprises. Like in Chile, its instruments take into account the company's age and certain performance criteria. However, this multiplicity of definitions is not helpful to policy implementation, which needs to outline the scope of support, determine who is eligible and identify impact indicators.
2. **Make programmes more flexible and dynamic.** Windows of opportunity open and close much faster for start-ups than for traditional companies, so public policies need to develop new forms of support that are in keeping with the ever-changing needs of start-ups in order to attract candidates with the greatest potential for success. Should they fail to do so, they may end up selecting projects with poor prospects. New ways of selecting beneficiaries are also necessary, which means that public institutions need to take on new roles and forge new partnerships with intermediaries that are more in touch with the realities of start-ups. Institutions have learned lessons from their recent experience, which has taught them that start-ups need public policies that are specifically geared towards them. Policies should be more flexible and dynamic, and policy makers should engage in dialogue with investors and the private sector. Start-up policies target entrepreneurs with innovative ideas, whose needs are different from those of other businesses. Such policies have reinvigorated institutions that promote production development. The management teams have become more agile and the institutions themselves are now structured in such a way as to understand the needs of the business environment and respond to them quickly, without bureaucracy. Chile and Mexico actually have specialised institutions for start-ups.
3. **Building partnerships with the private sector and internationally.** Public policies to support start-ups operate best when they create synergies with the private sector. Examples of these synergies are Telefónica's Wayra and Open Future initiatives, which are boosting the business environment in Latin America and creating opportunities to increase the scope and impact of public policies. Meanwhile, the growing importance of start-ups has led to the creation of private associations that are giving voice to the needs and visions of entrepreneurs in the region and enabling policy makers to observe the needs of new entrepreneurs in real-time. One such organisation is the Association of Latin American Entrepreneurs (ASELA), which was formed in 2013 within the context of the Pacific Alliance. Today, the entrepreneur associations of Argentina, Chile, Colombia, Mexico and Peru are members of ASELA (Box 2.1).

Table 2.2. **Definitions of start-ups used by public policy in Chile, Colombia, Mexico and Peru, 2016**

Chile						
	Two-year turnover > USD 1 million	**Potential turnover growth > 20% in 3 years**	**Innovative / technological content**	**Global target market**	**Age**	**Programmes/ Tools**
Dynamic start-up	✓	✓	---	---	---	PRAE, Seed Capital (CORFO)
Early-stage start-up (seed)	✓	✓	✓	✓	---	Startup Chile Seed (CORFO)
Scale-up stage start-up (Scale)	✓	✓	✓	✓	< 6 years	Startup Chile Scale (CORFO)
Colombia						
	Market validation / proven product momentum	**Unique market product**	**Innovative content (unique market product)**	**Technological/digital content**	**Age**	**Programmes/ Instruments**
Enterprise *(emprendimiento)*	✓	✓	✓	---	---	iNNpulsa Colombia programmes
Early-stage start-up *(etapa temprana)*	---	---	---	✓	---	Ideas APPS.co programme
Consolidation-stage start-up *(etapa consolidación)*	✓	---	---	✓	---	APPS.co Growth and Consolidation Programme
Mexico						
	Generating a new industry for the country	**High growth potential**	**Innovative content**	**Positive impacts (sectoral, societal, environmental, cultural) in its environment**	**Age**	**Programmes/ Tools**
Early-stage	---	✓	✓	✓	< 2 years	Support for high-impact enterprises (INADEM)
Scale-up stage	---	✓	✓	✓	> 2 years	
High-impact enterprise (INADEM)	✓	✓	✓	✓	> 2 years	Support for high-impact firms at the industrial and/or commercial scale-up stage (INADEM)
Generating a new industry	Pilot/research stage concluded successfully, with verifiable financial data (turnover). Innovation for global problems in which Mexico can become a leader. Entrepreneur with proven experience in the sector.					
Peru						
	Priority sectors	**Scientific/ technological content**	**Innovative content**	**Impact solutions for the country**	**Age**	**Programmes/ Tools**
Innovative entrepreneurs/ start-ups	---	---	✓	---	< 3 years	Start Up Perú
High-impact, dynamic enterprises	---	---	✓	---	1-5 years old	Start Up Perú
Technology-based firms	Health, agriculture or technological environment	✓	---	✓	---	Ideas Audaces (CONCYTEC)

Note: The table shows a non-exhaustive selection of the main programmes operating in 2016. PRAE refers to the Regional Pro-Entrepreneurship Programmes (*Programas Regionales de Apoyo al Emprendimiento*)
Source: Authors' work based on the analysis in chapters 3, 4, 5 and 6.

Box 2.1. **Uniting entrepreneurs to improve policies: The Association of Latin American Entrepreneurs and Mujeres del Pacífico**

ASELA

The Association of Latin American Entrepreneurs (ASELA) was formed in 2013. Its current members are the entrepreneur associations of Argentina, Chile, Colombia, Mexico and Peru. Created as part of regional co-operation in the Pacific Alliance, ASELA represents more than 35 000 entrepreneurs. Its aims are to be the effective representative of entrepreneurs, to promote the development of the entrepreneurial environment, to ensure gender equity, to create national and international networks for entrepreneurs, and to foster public policies to promote entrepreneurship.

Its impact objective is to increase the social capital of entrepreneurs in the region, in the sense of building linkages between people and organisations that could be financially valuable and could drive the growth of businesses. To achieve this, ASELA plans to build a new E2E (entrepreneur-to-entrepreneur) partnership model, taking advantage of online connections, which enable democratic, equitable participation at a lower cost to entrepreneurs.

In terms of its impact on businesses, ASELA hopes that as firms join entrepreneur networks, early-stage mortality will fall and consolidated micro, small and medium-sized enterprises – especially those run by women – will grow more easily. Through these measures, ASELA aims to impact 200 000 entrepreneurs in the region. Its achievements to date include:

- reforms and pro-enterprise policies in Chile (six laws) and Mexico (Express Companies Act)
- collaboration with the four Pacific Alliance countries in developing their entrepreneurship agenda
- the introduction of legal assistance for entrepreneurs in three countries, with more than 10 000 users
- the acquisition of information. In 2016, ASELA conducted a study on the profile of entrepreneurs in Chile. It intends to replicate that study in Colombia, Mexico and Peru.

Mujeres del Pacífico (Women of the Pacific)

The Women of the Pacific network has promoted and supported women entrepreneurs in Pacific Alliance countries (Chile, Colombia, Mexico and Peru) since 2013. The network organises several types of activities to create regional synergies and generate information. One such activity is the "female entrepreneurship tours", which promotes learning through exchanges among the four countries. The participating women entrepreneurs exchange knowledge and share their success stories with each other. The network has its own studies centre that focuses on generating statistics related to female entrepreneurship. Through this centre, the network works in partnership with ASELA on mapping female entrepreneurship. The network is also working in partnership with the Production Development Corporation (CORFO) on a qualitative study of 1 500 female entrepreneurs in seven of Chile's regions. Mujeres del Pacífico offers acceleration services to start-ups run by women and has an e-commerce platform called hAb America.

Source: Official ASELA information in 2016.

Figure 2.11. **Direct support for innovative start-ups in Latin America: A comparison of different countries, 2012-16**

A. 2012

Operational | Developing | Need to be created or reformed | Recently created

Categoría	Instrument	Chile	Colombia	Mexico	Peru
Financing	Seed capital	●	▨	○	▨
	Angel investors	◐	▨	○	○
	Venture capital	●	▨	◐	○
Business services and entrepreneurial training	Incubators	●	◐	◐	▨
	Accelerators	◐	○	◐	○
	Corporate spin-offs	○	○	○	○
	Technology transfer and university spin-offs	◐	○	●	○
	Business and financial training	●	◐	◐	◐
Regulatory framework	Legal framework for starting, expanding and winding up businesses	◐	◐	◐	◐
	Tax incentives and special taxes	◐	○	◐	○

B. 2016

Operational | Developing | Non-operational | Recently created

Category	Instrument	Chile	Colombia	Mexico	Peru
Financing	Seed capital	●	◐	●	◐
	Crowdfunding	◐	▨	▨	▨
	Angel investors	○	▨	●	▨
	Venture capital	●	◐	●	▨
	Prizes	◐	○	●	▨
Integrated support	Integrated public/private programmes (financing and services)	●	◐	◐	◐
Support services and business training	Incubators	●	●	●	◐
	Accelerators	●	●	●	◐
	Next-generation incubators and accelerators (coworking)	▨	▨	▨	▨
	Mentoring networks	◐	▨	◐	▨
	Support for developing commercial loans for startups	○	◐	○	○
	Technology transfer and university spin-offs	◐	▨	●	▨
	Business and financial training	●	●	●	●
Demand-oriented support & market creation	Public procurement and other	▨	◐	◐	○
Promoting a business culture	Raising awareness about the innovative business culture	◐	●	●	◐
Regulatory framework	Legal framework for starting, expanding and closing businesses	●	◐	◐	◐
	Tax incentives and special taxes	●	●	◐	▨
	Special visas for start-ups	●	○	○	○

Note: This table is not intended to classify the countries. The 2012 table is taken from OECD (2013), *Start-up Latin America: Promoting Innovation in the Region*, while the 2016 table is is based on qualitative information gathered from the country case studies presented in chapters 3 to 6 of this report. The purpose of the table is to offer an overview of the range of instruments to support start-ups, indicating what stage of development each instrument is at in each country in the region.

Source: OECD (2013), *Start-up Latin America: Promoting Innovation in the Region* for panel a (2012), and authors' work based on case studies of the countries presented in chapters 3, 4, 5 and 6 of this report for panel b (2016).

Conclusions and challenges for the future

Start-ups will not be the ultimate solution for development in the region, but creating a startup-friendly environment, channelling public investment (especially in the early stages) and private investment (at the expansion stage) towards start-ups and creating flexible, modern services for new entrepreneurs are essential parts of the transformation strategies in Latin American countries. Policies to promote start-ups do not so much need huge sums of public investment (see chapters 3, 5 and 6 of this report for data on Chile, Mexico and Peru) as they need careful thought and a flexible design. They also require simple, rapid instruments, as well as partnerships and co-operation with financial and investment institutions and with universities and technology centres.

Start-ups do not operate in a vacuum: the production and innovation ecosystem determine how likely start-ups are to succeed. For start-ups to emerge there needs to be a system of dynamic innovation, a solid base in science and technology, good skills and education, and access to good-quality ICTs. The impact of start-up policies therefore depends not only on their design and the structure of the various instruments, but also on overall co-ordination with other areas of public policy.

The current climate is marked by sluggish growth and the depletion of traditional sources of growth due to low commodity prices and low external demand, which in recent years has been driven mainly by the People's Republic of China. Diversifying production, joining the new digital economy and ensuring a bright future for manufacturing are therefore urgent objectives for the region so that it can overcome gaps and structural stagnation. If Latin American countries can achieve these objectives, they will be able to make the necessary strides towards more inclusive, long-term growth to meet the growing demands of their societies, especially young people. It is therefore important and urgent to capitalise on experiences in promoting start-ups, to strengthen the instruments and programmes that work, and to reform those that are not producing the desired results (Table 2.3). To do this, the countries in the region need to tackle several challenges, of which the following are most urgent:

1. **Map start-ups and measure their impact.** Start-ups are a recent phenomenon in the region. As countries consolidate their pro-startup programmes, they are tweaking the criteria they use to determine which enterprises are eligible to benefit from public programmes and their role in the national innovation system. It is important for countries to improve official company registries and use the broad scope of such records to generate data on the performance of start-ups, which they could then use to analyse the features of businesses that fail or cease trading. Countries could obtain additional data on the nature and behaviour of start-ups that import and export goods by combining the information in official company registries with the statistical records of customs agencies. Meanwhile, information and communication technologies, the platform economy and new policy tools provide opportunities to generate new data and to map the development of the start-up scene in Latin American countries. It is important for countries to monitor the implementation of programmes and conduct impact assessments at a reasonably early stage to ensure that they use their resources efficiently. Data from new sources, such as the platform economy, could also be used to map the profile of start-uppers in the region. These sources would reveal what impact the profile of entrepreneurs (gender, age and education) and the environment in which they operate have on the founding and expansion of start-ups, and indirect pro-startup policies would therefore be better informed. Countries could also explore to what extent start-up policies change the organisational structure of traditional policies to support innovation and production development. Programmes to support start-ups might also be modernising and invigorating traditional systems by introducing new ways of planning, managing and implementing public policies and by requiring changes to the profiles of the people in charge.

2. **Simplify and consolidate support programmes and bring them more in line with the needs of the target population.** Although initial experimentation with different programmes and mechanisms are helping to determine what works best in each context, if there are too many instruments, they are not effective for defining a policy that is easy for entrepreneurs to use.
3. **Facilitate productive investment.** Although the situation has improved in recent years, the region still adopts a conservative approach and is averse to the risks associated with productive investment. Financial institutions, private investors and investment funds could help boost investment in the region, but countries will need to reform legislation and create tax incentives to enable and facilitate productive investment. They also need to change mindsets and focus on investment.
4. **Increase regional co-operation.** The countries in the region can increase the impact of start-up development through greater regional co-operation. By co-operating with each other, countries can speed up the learning process and the transfer of best practices, as well as help regional initiatives to achieve critical masses for market opportunities and financing. The community that supports start-ups in Latin America is young, and it already meets together and co-ordinates more than traditional areas of public policy. Countries could speed up learning processes and create good practices by improving the structure of these spaces for dialogue and by introducing peer review. Regional co-operation could also help to close funding gaps and attract larger levels of investment, which would respond to the challenges that the countries face in terms of finance and target markets. Regional funds like the Pacific Alliance initiatives to promote start-ups and entrepreneurship are therefore important, and countries should do more to encourage such initiatives.

Table 2.3. **Promoting start-ups in Latin America: Progress made and open challenges**

Recommendations made in OECD (2013) to improve the design and implementation of support for innovative start-ups in Latin America	The situation in 2016 compared with 2012
Increase co-ordination between support programmes for start-ups and innovation and production-development policies.	↑
Provide incentives to promote the development of an entrepreneurial culture and mindset, especially among young people.	✓
Ensure there are financing schemes at all stages of development of new enterprises.	↑
Take advantage of the new trends of "open innovation" and corporate venture capital that are emerging in the private sector.	↑
Introduce results-oriented management criteria in incubators and in the agencies that facilitate access to public programmes to promote start-ups.	↑
Design increasingly integrated instruments that simultaneously offer financing options, consultancy services and capacity-building.	✓
Simplify the legal framework for starting a business.	↑
Invest in generating new and better indicators to improve how the dynamics of start-up creation and growth are measured.	✓
Evaluate programmes regularly and ensure there are feedback mechanisms between evaluation results and design reviews for programmes and incentives.	=
Create synergies with private initiatives to promote start-ups.	✓
Identify modalities for international and regional co-operation to enhance the impact of support for start-ups and create synergies among entrepreneurial ecosystems, taking advantage of new, region-wide spaces.	→
Identify opportunities for synergies between the potential of start-ups and the priority areas for production development in each country, and identify ways to ensure there is balance between bottom-up support and support focused on sectors prioritised in the country's diversification strategy.	→
Make progress in implementing tax incentives that are friendly towards innovation and innovative entrepreneurship.	→
Simplify the management of pro-startup programmes to make them more attractive to the private sector and to ensure they can be managed quickly, in keeping with the fast-moving nature of the markets.	→
Boost the region's image as a place for innovation.	→
Identify forms of regional co-operation.	→

Legend: = Progress has been made, but it remains a priority.
✓ The indicated reforms have been made.
↑ Improvements made between 2012 and 2016.
✓ Remains a priority objective.
→ New challenges for the future.

Source: Authors' work based on OECD (2013), *Start-up Latin America: Promoting Innovation in the Region* and on the chapters on specific countries in this report.

Box 2.2. **Boosting investment across Latin America**

Recently, some private initiatives have emerged for start-ups looking to take advantage of the benefits of operating throughout the Latin America region.

NXTP Labs investment funds. Launched in 2011, this investment fund targets businesses throughout Latin America, focusing its financing on early-stage tech start-ups. NXTP Labs provides USD 25 000 of capital in exchange for a 2-10% shareholding and an acceleration programme. In 2016, it had a portfolio of 170 start-ups in Argentina, Brazil, Chile, Colombia and Mexico in the Internet, software, e-commerce and technology for agribusiness sectors, among others.

Pacific Alliance Venture Capital Fund. In 2016, the Pacific Alliance reached an agreement with the Inter-American Development Bank (IDB) to create the venture-capital fund. The purpose of the fund is to provide capital and mentoring to high-impact start-ups that are at the early stages of development or at the scale-up stage. Managed by Angel Ventures, the fund received an initial joint investment of USD 100 million from the Inter-American Investment Bank Multilateral Investment Fund (MIF), the National Institute of Entrepreneurship (INADEM) and Bancóldex for investment in 25 growing start-ups or businesses that operate in the fintech, health, biotech or ICT sector, among others, and that have the potential to grow in the Pacific Alliance countries.

Angel investment with a region-wide focus. In 2013, Chile Global Angels, Peru Capital Network, Angel Ventures Mexico and the Capitalia Colombia Angel Investors Network formed the Ángeles del Pacífico (Angels of the Pacific) network to combine efforts and pool resources for region-wide operations. Angel Ventures was launched in 2009, and five years later it launched Angel Ventures Peru to take advantage of the growing dynamism of Peru's start-up ecosystem. The Peruvian organisation benefits from the founding partner, which transfers knowledge to Angel Ventures Peru and makes its investment portfolio and network of angel investors available to it. Finally, in 2014, with support from the MIF and the University of Montevideo's IEEM Business School, the Xcala regional initiative was launched to support angel-investor networks. Xcala offers financial support, provides training to networks and monitors angel investment in Latin America.

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