



Development Centre Studies

Start-up Latin America

PROMOTING INNOVATION IN THE REGION

Argentina

Brazil

Chile

Colombia

Mexico

Peru

Start-up Latin America

PROMOTING INNOVATION IN THE REGION

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Foreword

Supporting innovation and productive development is a key tool in the development strategies of open, global economies. Although developing countries still do not have the same capacities as OECD countries to introduce innovations into markets, they have become significantly more entrepreneurial over the last decade. This is partly because of their recent high economic growth, driven by China's entry into global markets and the growing demand of their new middle classes. Amid renewed interest in innovation, these countries are seeing an upsurge of new technology-based companies with a high growth potential, which is leaving its mark on both private-sector initiatives and public policies. Nevertheless, there is still little evidence showing the speed at which start-ups are being created in developing countries and how they are being supported by public policy.

This document is part of the OECD Development Centre's work on productive development and innovation and the initiatives to help boost a network to exchange experiences of innovation policies in Latin America. The document analyses existing mechanisms and policies to support the creation of start-ups in Argentina, Brazil, Chile, Colombia, Mexico and Peru. Based on the experiences of Latin American and OECD countries, the document proposes guidelines to improve the design and implementation of such policies to help make them more effective.

Assesment and recommendations

Start-ups are important economic agents that contribute to the creation of good-quality jobs, higher growth and innovation.

Recently, start-ups have moved further into the media spotlight, attracting growing attention from innovation experts and policy makers. The spread of information and communication technologies (ICTs) and transformation of the organisation of production throughout the world, where firms increasingly work in networks, have helped generate growing interest in start-ups both in OECD and in developing countries. Start-ups can contribute to structural change by introducing new knowledge-intensive products and services. They also help sustain innovation, drive productivity growth and create opportunities for good-quality jobs.

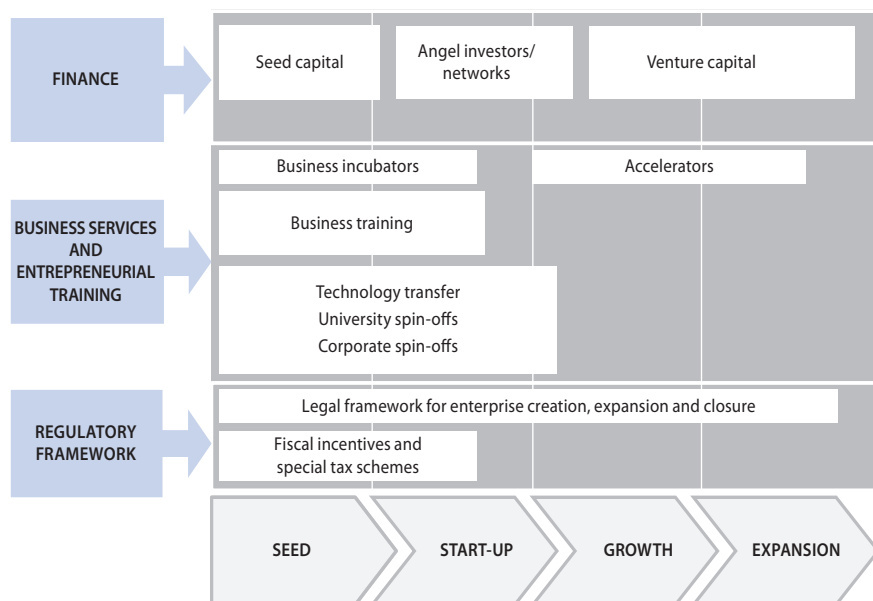
Although there is growing interest in supporting the creation of start-ups, there is no single, universal definition for this type of firm. They can be defined on the basis of their performance, i.e. their growth potential, or their innovative and technological focus. These firms are innovative and tend to provide solutions to emerging problems or create new demands by developing new types of businesses.

Different Latin American countries have different approaches in defining start-ups. Argentina and Brazil define them as new technology-based firms, Chile as potentially high-growth firms, and Colombia and Peru as ICT-based firms. This report uses the term “start-ups” to refer to new innovation-intensive or high-impact firms for which support mechanisms are being developed in Latin American countries.

In both OECD and Latin American countries there are barriers to the creation and expansion of start-ups. Public policies can play an important role in promoting the creation of these firms and in supporting them through the seed and growth stages.

Start-ups face greater challenges than traditional firms because their business is risky and uncertain, particularly during the early phases. Public policies can support them through a policy mix targeted at each stage of development, offering finance, advice and training, in addition to promoting a favourable legal framework (see Figure 1). Each country supports start-ups through a different policy mix, depending on its institutional and regional structure and on its science and production base. The institutions in charge of start-up promotion include bodies responsible for innovation policy, productive development and competitiveness and the agencies focused on supporting start-ups, such as incubators, technology parks, angel investor networks and training institutions.

Figure 1. Taxonomy of targeted policy tools to promote start-ups



Source: Based on: OECD (2011a), *Financing High-Growth Firms: The Role of Angel Investors*, OECD, Paris; InnoGrips (2011), "Policies in support of high-growth innovative SMEs", INNO-Grips Policy Brief No. 2, June 2011. LAVCA (2012); 2012 Scorecard: *The Private Equity and Venture Capital Environment in Latin America*, LAVCA, New York.

Start-ups need appropriate forms of finance for each stage of their development. In the seed and start-up phases, seed capital is vital. In the expansion phase, angel investors and venture capital act as bridges before successful firms can enter the capital markets. The experiences of OECD countries and some Latin American countries show how public policies can significantly affect the supply of seed capital and the development of angel investors and venture capital. Moreover, there are often legal barriers to the creation of these start-ups, especially in developing countries, and there are capacity gaps between researchers' and innovators' technical knowledge and their business-management skills. It is therefore important to simplify procedures, gradually improve legal frameworks, support training in business skills and provide infrastructure support (Internet access, access to physical premises to incubate innovative projects, etc.) to increase the number of start-ups in a particular production and innovation ecosystem.

Public policies can generate new forms of collaboration with the private sector to boost the impact of certain new market trends. Recently, for instance, some large firms have opted for open-innovation models in which they use corporate venture

capital to support the creation of start-ups as part of their innovation strategy. A new challenge for public policies is to tap into these new trends and create incentives to increase public-private partnerships in this area to increase policy effectiveness.

Over the past two decades most OECD countries have implemented a range of policy tools to promote start-ups. In Australia, Finland and Israel, supporting start-ups is an integral part of the national competitiveness and innovation strategies.

Most OECD countries promote the creation of start-ups. In recent years, due to the opportunities opened by the diffusion of ICTs and the search for new sources of growth in the aftermath of the 2008 economic and financial crisis, various OECD countries have made creating new businesses a central part of their strategy to boost growth, create jobs and sustain the competitiveness of domestic industries. A key feature of OECD countries is that they tend to promote access to finance at all stages of business development, from the seed stage to the expansion stage. Public policies influence the availability of seed capital and promote venture-capital funds and angel investors, often through public-private co-investment funds and tax incentives. Some countries also have mechanisms to support knowledge transfer and the creation of spin-offs and foster the use of research results by new businesses. Schemes to support knowledge transfer in OECD countries usually include advisory services in knowledge transfer, intellectual property management and business development.

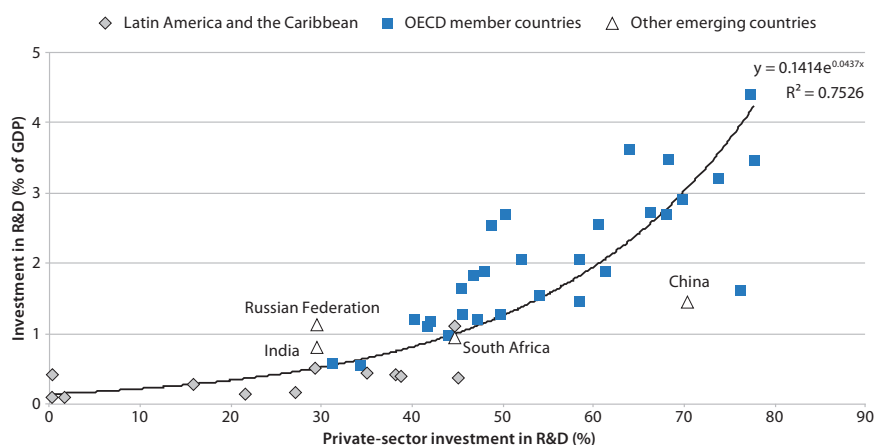
Australia, Finland and Israel offer interesting experiences related to the role that public policies play in supporting start-ups. These countries have different models and institutional structures. These experiences have shown that support mechanisms need to cover all the development stages of start-ups and that private investment in new start-ups requires targeted incentives. Seed capital typically requires permanent public-sector investment. Venture-capital investment and angel investors, however, mainly need support early on to help them move into the start-up phase. This was the role of the Yozma fund in Israel and the Venture Capital Limited Partnership scheme in Australia. As the sector develops, direct public-sector support can be withdrawn, while support for business training and the legal framework can persist.

The creation and expansion of start-ups faces higher barriers in Latin America than in OECD countries. This is due to a lack of appropriate financing mechanisms, scant dynamism of national innovation systems and a less business-friendly regulatory framework.

Innovation is growing more slowly in Latin America than in OECD countries. In Latin America, investment in research and development (R&D) grew from an average of 0.5% of gross domestic product (GDP) in 2004 to 0.63% in 2009, while in OECD

countries it grew from 2.2% to 2.4% during the same period. In a context of low R&D investment resulting from the private sector being primarily specialised in natural resources or low-technology manufacturing, together with an adverse regulatory framework for business creation, it is not surprising that fewer start-ups are created in Latin America than in OECD countries (see Figure 2). Higher private investment in R&D along with greater and better public-sector support is necessary to boost innovation in Latin America. The countries in the region therefore face the challenge of designing incentives and policies to encourage private-sector investment in innovation, including the creation of technology-based firms.

Figure 2. R&D investment and private-sector contribution, selected countries, 2009



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)* and the OECD's Main Science and Technology Indicators (MSTI) database.

Start-ups in Latin America face higher barriers to access finance than their counterparts in more advanced countries. Latin America's financial markets are less mature and the region's banks are less inclined to finance start-ups, thus limiting their growth potential. In the United States, for instance, bank loans provide 15-30% of the initial finance of high-growth start-ups, well above the figure in Latin America (7% in Brazil and close to zero in Chile and Mexico). Similarly, in the United States start-ups obtain 20-47% of their finance from venture-capital funds and angel investors, compared to 23% in Brazil, 17% in Chile and 5% in Mexico. 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 Chilean Production Development Corporation (CORFO). Brazil accounts for almost half of the venture capital industry in Latin America. Colombia and Chile follow in the ranking. In 2010, venture capital accounted for 0.27% of GDP in Brazil, 0.18% in Chile and 0.16% in Colombia. Venture capital is less developed in other countries, representing 0.05% of GDP in Peru, and 0.02% in Argentina and Mexico.

Various Latin American countries, including those examined in this report, are making start-ups a pivotal part of their innovation and productive-development strategies.

Although they are still well behind the OECD countries, Latin American countries are becoming increasingly aware of the importance of innovation for development. Over the past few years they have invested in improving the institutional structure for innovation and improving their support policies. They have also been strengthening the existing support mechanisms for start-ups and creating new ones.

Although incentives to provide access to finance are in place in many countries, a major challenge for countries in the region is to offer appropriate financing at the various stages of a business's development, from the seed stage to the expansion stage. Brazil and Chile offer the widest range of financial support mechanisms through all the stages of development. Mexico, on the other hand, still has much to do to help businesses in the early stages, while Argentina needs to improve its support during the expansion stage. Colombia and Peru are creating support mechanisms in the area of seed capital. Various countries in the region, especially Chile, Colombia and Mexico, have improved their legal framework in recent years, reducing the number of procedures, the costs and the amount of time needed to start up new businesses.

Nearly every country in Latin America has some sort of operational incentive for business training. Argentina, Brazil and Chile are notable for their business training tools, while such tools are still in the development phase in Colombia, Mexico and Peru. In addition, all countries in the region have business incubators and have accumulated considerable knowledge in the management of these schemes. The support mechanisms introduced in the 1990s suffered from significant performance limitations given the lack of results-based conditionalities for incubator management. Countries have learned they need to establish performance-based evaluation mechanisms and accredit intermediary bodies involved in the process of project selection and resource allocation. For instance, based on programme evaluations, Argentina and Chile have recently improved their incubator-support programmes. However, incubators and accelerators in Latin America still tend to work more closely with universities and research centres than with the leading innovative companies.

Latin American countries support start-ups in various ways, with different approaches and through diverse institutional arrangements. Some, like Brazil and Chile, have been accumulating experience since the 1990s; others, like Colombia and Peru, have only recently begun introducing programmes devoted to start-ups (see Figure 3).

Argentina offers support for seed and start-up phases; however, the financial and regulatory tools for expansion and acceleration are less developed. The introduction of sectoral technology funds and a good scientific and research base in sectors with a high dynamism in relation to the creation of new firms such as software, design and biotechnology, are relevant assets that the country could leverage on.





























































Brazil has a fairly comprehensive range of tools to finance start-ups from the seed to the expansion stage. It is worth highlighting the increasing role of state and local governments in supporting start-ups and the positive results of several science parks that have acted as bridges between scientific research and business generation. Nonetheless, the regulatory framework, infrastructure (such as Internet access and physical spaces for incubating innovative projects) and a low propensity for entrepreneurship among much of the society are still significant barriers to having start-ups become a relevant source of growth in the country.





Chile has accumulated relevant learning in the establishment of its framework to support start-ups. Its experience shows that it is essential to have a chain of instruments that support business at different levels (finance, management skills and legal framework) and target the different phases of their development. Lately Chile has placed a growing focus on start-ups, reforming its existing support systems to match the country's new vision, with a greater focus on the global economy. Among the challenges that Chile still faces we highlight the mobilisation of a high critical mass of innovative business projects and the need to scale up the venture capital and angel investor industries.

In 2012 Colombia designed a new policy tool, iNNpulsa Colombia, which offers seed money and training to new entrepreneurs. Colombia's regional governments are playing an ever-growing role in supporting start-ups as a stimulus for growth and employment in their territories. The national development bank (BANCOLDEX) is also showing a growing interest in sustaining the venture capital industry to facilitate start-up expansion in Colombia.

Promoting the creation of new firms is a growing priority in Mexican innovation policy. The country has improved its legal framework to facilitate the founding and expansion of businesses. However, access to credit, especially in the seed and start-up phases, is still a relevant barrier to fostering start-ups in Mexico.

Figure 3. Targeted policy tools to promote start-ups in Latin America:
A comparison between countries, 2012

Category	Tool	Argentina	Brazil	Chile	Colombia	Mexico	Peru
Financing	Seed capital						
	Angel investors						
	Venture capital						
Business services and entrepreneurial training	Incubators						
	Accelerators						
	Corporate spin-offs						
	Tecnology transfer and university spin-offs						
	Business training						
Regulatory framework	Ease of creating or closing down businesses						
	Taxation and special legislation						

 Implemented
  In development
  Recently created
  Need to be created or reformed

Note: This table is not meant to present an international classification. It is based on qualitative information gathered in the country case studies in Chapters 4 to 9 of *Start-up Latin America*. The goal is to summarise visually the variety of tools created to support innovative entrepreneurship and how developed they are in the countries in the region.

Source: Based on the country case studies in Chapters 4, 5, 6, 7, 8 and 9 of *Start-up Latin America*.

Peru is developing a public support mechanism for start-ups. The founding of Wayra, an initiative by a major private corporation, which supports young entrepreneurs as part of its open innovation strategy, has generated considerable stimulus in the country, and has induced the accumulation of management skills in incubation programmes. The country is working to create a new Start-up Peru programme to offer seed money and advisory services to new firms. It is also adding new seed money budget lines in the national fund for innovation. Strengthening these initiatives, better co-ordinating them with other existing public and private initiatives, and supporting the regions as they develop their own programmes for innovative entrepreneurship are some of the future challenges the country faces.

The experience of the OECD and Latin American countries shows that start-ups need a system of incentives targeting finance, business training and a regulatory framework in line with the stages of start-up development (seed, start-up, growth and expansion).

The creation and expansion of start-ups require finance, business training and a regulatory framework, that take into account the different stages of the businesses' development. No matter how well developed some components may be (e.g. the venture-capital industry, seed money, technology transfer offices, specialised advisory services or the regulatory framework), the absence or weakness of any component affects the overall system's performance. Poor co-ordination and synchronisation among various initiatives and the difficulty in giving potential entrepreneurs a clear view of regulatory conditions and the available incentives are some of the main barriers that hinder the development of start-ups.

In the OECD countries, it has become clear that, besides direct-support mechanisms, it is paramount to incentivise the scientific and technological base and the development of the business environment to generate a relevant flow of knowledge, technologies and linkages of high enough quality and quantity that they might translate into innovations with market impact. This requires talent, infrastructure, finance and private-sector investment in R&D and innovation, as well as a favourable regulatory framework. In OECD countries, the programmes targeting start-ups are complemented by a good level of early entrepreneurial activity with a critical mass of highly innovative entrepreneurs; availability of seed money and sufficient angel investors to generate an attractive potential flow of investment; a large enough venture-capital industry (with ideal practices and regulation); and relatively developed capital markets.

The experience of Latin America provides lessons about public policy's role in fostering start-ups in developing countries. The lessons learned in Brazil and Chile show the importance of having a policy mix targeting the various stages of business development. Argentina shows the potential impact of major scientific research projects and public-private partnerships to create new businesses and the need to have appropriate financial and regulatory mechanisms in place to support their expansion. Mexico reveals the importance of reforming the legal framework to facilitate the founding and expansion of businesses and to favour knowledge transfer between research centres and the private sector. Colombia and Peru offer interesting experiences in designing new programmes which aim to combine finance and business training services.

To progress in designing and implementing policy to support start-ups in Latin America, it is important to:

Increase co-ordination between policies for start-ups and those on innovation and productive development.

Supporting start-ups is important, especially in the new global economic context. However, fostering these companies needs to be part of a broader development and economic transformation strategy.

Provide incentives to promote development of an entrepreneurial culture and spirit, especially among young people.

Beyond the growing interest in start-ups, many countries in the region have a low propensity for productive investment and for setting up high-potential businesses. Therefore the programmes that foster an entrepreneurial culture and the spaces where young entrepreneurs can gather and exchange experiences are vital. Starting and developing businesses involves successes, but also failures and it is important to know that one advances and learns only by trial and error.

Ensure the availability of financing for all the stages of development of new companies.

The experience of the OECD countries and Latin American countries shows the importance of setting up a system where finance is available for start-ups at their different development stages. The needs in terms of the scale and types of investment vary from stage to stage. Latin American countries have strengths and weaknesses in this area. Some are weaker in seed money while others need incentives to develop venture capital, making it possible to scale up the activities of the more successful businesses. In many cases, public policy in Latin American countries pays little attention to the existence of angel investors. This is an area in which the countries could make progress with no need for heavy public investment, and which could have a positive impact in terms of finance and advising new businesses.

Take advantage of the new trends of “open innovation” and corporate venture capital that are emerging in the private sector in the region.

The dynamism of innovative start-ups also depends on the context in which they develop. It is vital to quickly recognise new trends and opportunities that may arise in the domestic or international innovation system so existing support mechanisms

can be adjusted to increase their impact. In some countries, such as Brazil and Peru, the existence of large companies that opt for open-innovation models and which can finance or incubate start-ups may represent an opportunity to bolster the scope and impact of the public support system. Hence the relevance of identifying these new trends and creating spaces for public-private discussion in this sphere.

Introduce performance-based management criteria in incubators and in the agencies that facilitate access to public development programmes.

The public sector often lacks the skills and information needed to directly select beneficiaries of start-up support programmes. Often intermediaries raise young entrepreneurs' awareness of current support mechanisms and get them to apply for the programmes. Latin American countries have learned the importance of setting up performance-based support mechanisms for incubators and for the facilitating agencies, to increase their effectiveness. In the absence of such mechanisms, these entities can often end up capturing rents and operating with low effectiveness.

Design increasingly integrated tools that combine financing with advisory and business training services.

The next-generation of policy tools tends to combine availability of financial support with specialised advisory services and training, as well as infrastructure provision. This allows to offer the beneficiaries integrated support. It can be achieved by building co-ordination among the various agencies and programmes or by designing new integrated support programmes.

Simplify the legal framework for starting a new business.

Though many Latin American countries have improved their regulatory framework to ease the financing and expansion of firms, all the countries in the region are lagging behind more advanced countries regarding time lags for opening a business and legal frameworks to favour investment in companies' different phases of development. Simplification of bureaucratic procedures is, in fact, one of the great challenges facing Latin America, both in facilitating the creation of new firms and in promoting a more dynamic business environment.

Invest in creating new, better metrics for measuring the dynamics of creation and expansion of start-ups.

Given the growing relevance of start-ups, it is necessary to create new, better indicators to monitor the progress of this phenomenon and help improve the design and targeting of public policies for Latin America. This is an area where it is important to advance and where there is room to make a contribution to the international debate, since the issue is arising in many countries and there is a lot of leeway to create new indicators to support public policy decision making.

Evaluate programmes regularly and ensure feedback mechanisms between evaluation results and the design of incentives.

Evaluation and monitoring are needed for each public policy. In the case of support for start-ups, this is particularly important given the high uncertainty in which the policies operate. Start-ups' characteristics change and evolve very quickly, so policy makers should stay alert to new trends and then adjust the ways that development measures are applied. In some cases, as with incentives to support business angel networks and venture capital, public support should be allocated for enough time to generate a critical mass of operations in the private sector, which would then take up investment leadership.

Each country faces specific opportunities and challenges in supporting start-ups. However, in this as in other policy areas, knowledge sharing of accumulated experience is a useful exercise that can help improve the design and effectiveness of policies.

Support for start-ups is becoming a new element in the innovation and productive development strategies of Latin American countries. Creating opportunities for policy dialogue and knowledge-sharing can help to promote learning and design more effective policy mechanisms. It can also help identify supranational programmes that can sometimes help overcome barriers of size and scale that prevent start-ups from becoming a major source of growth. To that end, international organisations such as the Inter-American Development Bank (IDB), the United Nations Economic Commission for Latin America and the Caribbean (ECLAC) and the OECD Development Centre, can play a fundamental role in supporting the creation of these discussion spaces, in response to a growing demand among countries in the region.

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PROMOTING INNOVATION IN THE REGION

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