### Chapter 5

### Promoting start-ups in Brazil

This chapter presents a brief overview of public policies recently introduced in Brazil to support the creation and expansion of start-ups. The chapter highlights the growing role of innovation policies in the country and the increase in the innovation policy budget. Brazil has been fostering the creation of new firms since the 1980s. It has a well-rounded range of tools to support the creation of innovative firms, with mechanisms that provide support from the seed to the expansion phases. State and local governments are increasingly involved in supporting start-ups and have contributed to set up several successful technology parks that have acted as bridges between the scientific and business communities. Nonetheless, the regulatory framework and the limited availability of infrastructures still represent important challenges for start-ups to become a relevant source of growth in Brazil.

### Growing support for innovation

Brazil's innovation policy is formulated by the Ministry of Science, Technology and Innovation (MCTI).<sup>1</sup> In recent years, the country has increased its investment in science and technology and improved its legal framework for innovation. Brazil is the Latin American country that invests most in research and development (R&D), though the intensity of its investment is far from the standards seen OECD countries (1.2% of GDP in Brazil, versus 2.4% in the OECD countries in 2009). The adoption of the Innovation Act (law 10973/2004) and the Lei do Bem (law 11,196/2005) expressed a political will to position science, technology and innovation as central elements in Brazil's economic development and social transformation. The Innovation Act aims to increase innovative activities and facilitate investment in research and development by Brazilian firms. It introduces specific measures to foster innovation in small and medium-sized enterprises (SMEs) and facilitates co-operation between universities and businesses. The law establishes a legal framework to support business incubation activities at universities, as well as new forms of licensing technologies to businesses. At the same time, the law provides mechanisms for lecturers at federal universities to take temporary leave of absence to found a start-up. The Lei do Bem facilitates investment in R&D by offering tax incentives for private-sector investment in innovation. The General Law on Micro and Small Enterprises, passed in 2007, and the Individual Microentrepreneurs Act, passed in 2008, are also recent legal reforms that foster the creation of start-ups.

Brazil has a long tradition of government support to scientific and technological development, dating back to the 1950s and 1960s, when most of the country's science and technology institutions were founded. However, interest in fostering the creation of start-ups is a recent priority of the country's innovation and industrial policies. The issue began gaining attention in the 1990s, when the National Council for Scientific and Technological Development (CNPq) launched the Softex Programme to promote technological capabilities and start-ups, and the Génesis project to foster the creation of start-ups by recent graduate university students. Nowadays, a wide array of support programmes and institutions are actively seeking to promote start-ups. However, the long time lag for creating new firms remains an important barrier to start-up development in Brazil.

### Brazil is expanding the support to start-ups

Compared to other Latin American countries, Brazil has a fairly comprehensive range of instruments to promote the creation of start-ups. Start-ups are emerging as a priority in the national innovation strategy. Several instruments cover the different phases of the entrepreneurial cycle, offering targeted support in: financing, business services and entrepreneurial training (see Figure 5.1 and Table 5.A1.1). Several federal and state-level programmes are now in place, addressing issues related to seed capital, angel and venturecapital networks. There are also initiatives to support entrepreneurs in formulating their business plans. In general, these instruments are horizontal, despite the introduction of sectoral priorities such as information and communication technologies (ICTs), biotechnology, nanotechnology and agribusiness. In recent years networks of private stakeholders have been launched as well, to foster the exchange of experiences among start-uppers and make it easier to found or expand businesses. In April 2013, the Ministry of Science, Technology and Innovation also announced the implementation of a new support programme for start-ups, called Start-up Brazil, that channels new resources to promote these businesses.

The main institutions promoting the creation and expansion of start-ups are the Brazilian Development Bank (BNDES), the Brazilian Innovation Agency (FINEP) and the Ministry of Science, Technology and Innovation (MCTI). The BNDES has a venture-capital division that implements initiatives to promote the development of venture capital through the company BNDESPAR. In 2012 the portfolio of BNDES's venture-capital division had 38 funds with an estimated total value of BRL 1.3 billion (Brazilian *reais*). BNDES's CRIATEC programme, launched in 2007, focuses on capitalisation of innovative businesses through an investment fund with a budget of USD 53.5 million (80% contributed by BNDES). Its goal is to reach 60 000 innovative micro and small enterprises by investing USD 300 000 to 600 000 per business. A second phase of the programme, CRIATEC II, is investing in 36 businesses and has a budget of some BRL 170 million (ANPEI, 2012). The new CRIATEC III programme was recently approved, also with a budget of BRL 170 million.

FINEP is a public corporation, affiliated to the Ministry of Science, Technology and Innovation, that promotes innovation and technological development and operates as a national innovation agency. In 2009 FINEP established the PRIME programme (which in Portuguese stands for First Innovative Business). This programme gives grants to start-ups through anchor incubators; the co-financing is about USD 70 000 per business and the grants are supplemented with (interest-free)

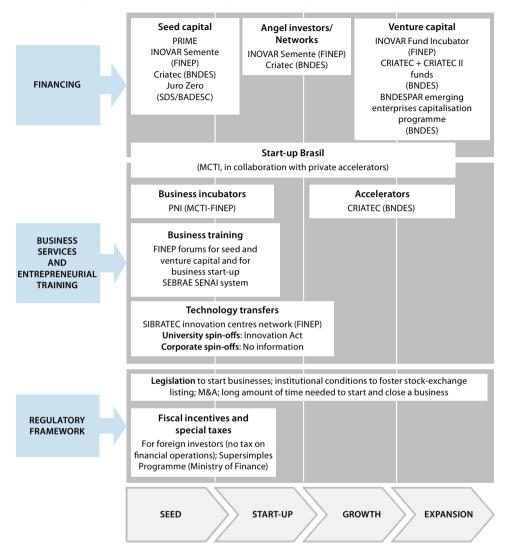


Figure 5.1. Brazil: Targeted policy tools to promote start-ups, 2012

Source: Prepared by the authors, based on: OECD (2011), Financing High-Growth Firms: The Role of Angel Investors, OECD, Paris; INNO-Grips (2011), "Policies in support of high-growth innovative SMEs", INNO-Grips Policy Brief No. 2, June; LAVCA (2012), 2012 Scorecard: The Private Equity and Venture Capital Environment in Latin America, among others.

soft loans from the *Juro Zero* programme to innovative micro and small enterprises. The INOVAR *Semente* programme contributes seed-capital funds to innovative businesses in the start-up stage, while the INOVAR programme fosters venture capital. According to Kantis and Federico (2012), since its creation, INOVAR has held more than 30 forums with over 280 participating technology firms, 70 of which have received funding. More than 100 funds have responded to INOVAR's call and its funds comprise a total of nearly USD 3 billion.

The Ministry of Science, Technology and Innovation, in turn, has just launched a new programme (in April 2013) – Start-up Brazil – as part of the National Innovation Strategy and the Software Industry and ICT Sector Strategic Programme (*TI Maior* plan). The programme's budget is about BRL 40 million and is meant to support some 150 start-ups. The programme offers a range of services to new entrepreneurs, including consulting services on markets, sales and innovation, in addition to financial support. Start-up Brazil will not only offer integrated support to start-ups but will also focus on three different phases, selecting the new businesses by stages, from seed to acceleration. The programme will operate through accredited business accelerators and up to 25% of the beneficiaries can be foreign. The selected start-up will receive support for acceleration for a period of 6 to 12 months.

States in Brazil are taking on an increasingly active role in supporting start-ups. For example, the state of Santa Catarina's Secretariat for Economic and Sustainable Development, with a budget of USD 750 million, focuses on supporting the creation of start-ups. By 2012, through the *Juro Zero* programme, the secretariat aims to have 10 000 businesses generating ten new jobs per year in their early stages. Juro Zero provides flexible financing, with no requirement for collateral, reducing bureaucratic barriers for innovative production activities and commercial exploitation. The state of São Paulo's Research and Development Support Foundation (FAPESP) has in its portfolio of instruments specific support mechanisms for R&D projects in new and small businesses. The PIPE programme was implemented in 1997 and so far has given support in the form of subsidies or funding for educational programmes for nearly 3 000 entrepreneurs. Eligibility is open to small businesses (fewer than 250 employees) with R&D laboratories located in the state of São Paulo. Companies can apply for the programme in any of the four annual application periods. A recent evaluation of the programme has shown its positive impact on creating qualified jobs in Brazil. The number of employees hired rose 29% among businesses receiving PIPE support. In particular, businesses benefiting from the programme have played a disproportionately large role in increasing the demand for qualified workers (Salles-Filho et al., 2011).

Several institutions support the development of entrepreneurial skills. The National Association of Organisations to Promote Innovative Enterprises (ANPROTEC), founded in 1987, plays an important role in promoting entrepreneurial training and the dissemination and exchange of knowledge. It brings together 20 technology parks and about 6 500 innovative businesses. Since 2011, FINEP has increased the resources for the National Support Programme for Business Incubators and Science Parks. Nearly 80% of Brazilian universities have at least one business incubator, which may or may not be affiliated with technology parks (WAINOVA, 2012). This is helping to bridge the gap between academia and industry (see Box 5.1).

In parallel with the government's growing interest in supporting the creation of start-ups, there has also been an increased involvement of foreign and domestic private-sector stakeholders. São Paulo and Rio de Janeiro are becoming dynamic hubs for entrepreneurship; for instance, the 21212 accelerator in Rio de Janeiro comprises digital-sector entrepreneurs and

### Box 5.1. Technology parks and the growing role of the states in Brazil in promoting start-ups

### 1. Porto Alegre Tecnopuc

The Pontifical Catholic University of Rio Grande do Sul in Brazil, in co-operation with the government of the state, established the Tecnopuc technology park in 2002. The purpose of Tecnopuc is to create an environment favourable to the creation of innovative start-ups (Spolidoro and Audy, 2008). A number of international companies are located in the park, which benefits from being close to the university. More than 80 businesses of various sizes have operations in the park, and some 5 500 employees are devoted to carrying out innovative projects. The park also offers legal advice and strategic-planning services, as well as infrastructure access and staff-recruitment assistance (see table below).

Businesses incubated in Tecnopuc, Brazil, 2012

Businesses incubated (RAIAR incubator)	11 in Porto Alegre and 12 in Viamão
Businesses graduated (RAIAR incubator)	More than 50 since 2002
Operations with foreign businesses with facilities in the park	77 (HP, Dell, Tlantic, Microsoft, etc.)
People affiliated with the park	5 000 (employees, researchers, etc.)
Research centres affiliated with the university	Six research centres (Nanotechnology; Molecular and Functional Biology; Solar Energy; Radiation and Energy; Petroleum, Gas and Carbon Storage; National Tuberculosis R&D Institute)

Source: ANPROTEC (2012), Tecnopuc: Apoio ao Acrescimento de Empresas Baseadas em Inovação.

### Box 5.1. Technology parks and the growing role of the states in Brazil in promoting start-ups (continued)

### 2. The Institute for Technological Research (IPT) of São Paulo

The Institute for Technological Research (IPT) is an institution attached to the São Paulo State Secretariat for Economic Development, Science and Technology that has been involved in the country's development for over 100 years (IPT, 2011a). It is one of Brazil's leading research centres and has laboratories staffed by highly qualified technical researchers. It focuses on four broad areas: innovation, R&D, technology services, and information and technology education. The IPT acts as a bridge between academia, research centres and the business sector, supplying solutions and technology services designed to increase the businesses' competitiveness.

### Technology centres and laboratories of the São Paulo Institute for Technological Research, 2011

Technology centres	13
Laboratories	40
Total area of laboratories	92 030 m <sup>2</sup>
Total area of the IPT	240 000 m <sup>2</sup>
IPT Units	São Paulo, Franca, São José dos Campos,* Piracicaba*

*Note:* \* in development.

Source: IPT (2011a), Relatório Anual, São Paulo: IPT; IPT (2011b), Institute for Technological Research: Technological Solutions.

### 3. The São Paulo Centre for Innovation, Entrepreneurship and Technology (CIETEC)

The Centre for Innovation, Entrepreneurship and Technology (*Centro de Inovação*, *Empreendedorismo e Tecnologia*, CIETEC) came about through an agreement in 1998 between the Secretariat of Development of the State of São Paulo, the São Paulo Micro and Small Enterprise Support Service and the IPT (CIETEC, 2012). For more than ten years, CIETEC has been devoted to promoting innovative start-ups through support mechanisms for early-stage technology-based firms. Its services include, among others, pre-incubation, incubation and post-incubation processes for technology-based firms. CIETEC is located on the campus of the University of São Paulo, the country's largest centre for scientific and technological education and production. The centre has two business units providing incubation services: the Technology Business Incubator and the Technology Business and Start-Ups Group. CIETEC currently has the capacity to host up to 120 technology-based firms.

### Box 5.1. Technology parks and the growing role of the states in Brazil in promoting start-ups (continued)

### 4. Porto Digital in Recife

The Porto Digital technology park in Recife was the result of a co-ordinated effort between the federal and state governments, the private sector and academia (EcoFinanças, 2012). Since its founding in 2000, it has become one of the economic keystones of the state of Pernambuco and has been recognised by ANPROTEC as the country's best technology park. Porto Digital averages BRL 900 million in sales per year and hosts nearly 500 entrepreneurs on site. The park harbours 200 institutions, which include ICT and creative-economy businesses and specialised services and development agencies (PortoDigital, 2012), generating some 6 500 new jobs in the 12 years it has been operating. Any project carried out in the park qualifies for assistance with logistics, resource distribution and financial assistance. A Human Capital Training Programme, for instance, aims to expand the qualified workforce in order to grow the local ICT sector, while an incubator project houses the CESAR incubators (Recife Centre for Advanced Studies and Systems) and CAIS do Porto. There is also the new, recently announced plan for an accelerator for innovative start-ups at Porto Digital, the first one in the North, North-West or Central-West regions (MundoBit, 2012).

Source: Based on: Spolidoro and Audy (2008); IPT (2011a); IPT (2011b); CIETEC (2012); EcoFinanças (2012); MundoBit (2012); OlharDigital (2012); PortoDigital (2012).

investors and offers support for expanding businesses with an eye towards strengthening co-operation with the United States through four- to six-month acceleration programmes. The phenomenon of start-ups in Brazil goes beyond the services and ICT sector. For example, in São Paulo a group of founders of biotech start-ups have also formed a private organisation for exchanging best practices in management and funding that are unique in Brazil (see Box 5.2).

Brazil has also invested in improving its legal framework and encouraging long-term foreign-capital investors to enter the market. The "Supersimples" system streamlines bureaucratic procedures and facilitates the start-up of SMEs, for example. However, the costs of creating and managing start-ups remain high. Among other reforms, Brazil has eliminated the tax on financial transactions for foreign investment in shares and on the flow of foreign venture capital into the country. These reforms have made it easier for foreign private capital to invest in Brazil. For instance, Redpoint Ventures and e.Ventures, two large private-equity

firms, recently announced plans to use a fund of BRL 130 million to invest in Brazilian early-stage businesses (Bloomberg, 2012).

### Box 5.2. The Campinas Startup Association: Business co-operation for knowledge sharing

The Campinas Startup Association is a non-profit organisation founded in 2010 by ten entrepreneurs who owned technology start-ups in Brazil. The association's goal is to share knowledge to create an environment more open to the founding of knowledge-based companies and business models. The organisation functions under an innovative framework that distinguishes it from business incubators and accelerators.

The members meet periodically to discuss ways to improve their business models, access funding and develop business strategies, as well as analyse and discuss the impact of changes to regulations and public policy. It operates under a co-operative model where members share knowledge and ideas with one another to support the growth and expansion of their businesses.

The association is expanding and had 30 members as of 2012. The participating businesses operate in different sectors, including artificial intelligence and biotechnology, and have average net earnings of USD 500 000. Since 2010, all the founding start-ups have continued operating and the organisation has held four major support events for innovative start-ups, promoting dialogue among entrepreneurs, the public sector and financial markets.

### Note

 The current policies are part of the National Strategy on Science, Technology and Innovation (ENCTI 2011-14) which follows on from the previous Science, Technology and Innovation Plan (PACTI 2007-10).

# Annex 5.A1. Policy tools to promote start-ups in Brazil

Table 5.A1.1. Brazil: Targeted policy tools to promote start-ups, 2012

a. Federal government financing

Instrument/ Programme	Type	Purpose	Beneficiary	Characteristics
FINEP PRIME (2008)	Grant	Create financial conditions favourable to the initial development phase of innovative businesses (seed money)	Create financial Innovative start-ups that have been conditions favourable in operation a maximum of 24 to the initial months months innovative businesses (seed money)	uSD 70 000 per firm (stage 1) through an open application process in 2009 approximately USD 7 million were allocated to each of the 18 anchor incubators or heads of PNI incubator networks, to serve approximately 1 900 incubated businesses. Additionally, USD 70 000 in soft-loan funding (at no interest and in 100 instalments) (Juro Zero programme) for stage 2
FINEP INOVAR Semente (2006)	Direct contribution Establish seed-cap to investment funds investment funds	Establish seed-capital investment funds	Establish seed-capital private investors who invest seed investment funds investment funds upon originating in R&D centres and universities, in fields related to ICTs, biotechnology and other technologies; the private (angel) investor is guaranteed to recover the face value of the investment in case of a loss	USD 300 000 to USD 600 000 per firm; 40% contribution from FINEP; 20% must be raised from a private (angel) investor; sums committed in four operational funds and in three funding stages: USD 116 million; assets per fund: USD 6-7 million

Table 5.A1.1. Brazil: Targeted policy tools to promote start-ups, 2012 (continued)

Instrument/ Programme	Type	Purpose	Beneficiary	Characteristics
Multilateral Investment Fund of the Inter-Amer- ican Development Bank (MIF-IDB)	Contribution to seed- Support seed-money capital funds investment in specifi sectors in southern Brazilian states	Support seed-money investment in specific sectors in southern Brazilian states	2C-Ventures Primus fund	MIF-IDB investment of USD 4 million of seed money; the fund plans to raise USD 46 million to invest in at least 16 firms
BNDES CRIATEC (2007)	Contribution to investment fund (divestment stage)	Foster innovative micro and small enterprises through seed money and management support	Firms with net sales of up to USD 3.5 million in specific sectors (IT, biotechnology, new materials, nanotechnology, agribusiness); at least 36 firms were supported	The fund's capital was USD 53.5 million with 80% contributed by BNDES' BNDESPAR; at least 25% invested in firms with revenue of up to USD 800 000; up to 25% invested in companies with revenue of USD 2.4 to 3.2 million; a second capitalisation is allowed; investment per enterprise ranged from USD 300 000 to 600 000; acceleration phase: additional contribution of USD 1.9 million
FINEP INOVAR fund incubator – 2000	Minority contribution to investment funds	Establish seed-capital, venture-capital and private-equity funds	Firms administering/managing funds authorised by the CVM (securities and exchange commission); current portfolio of businesses: 80	To date: 19 funds in operation, four in the funding phase and one in the divestment phase (including <i>Inovar Semente</i> ). Sums committed: seed-capital funds, USD 116 million; venture-capital funds, USD 455.2 million; private-equity funds, USD 1.26 billion
BNDES Participações BNDESPAR emerging enterprises capitalisation programme	Contribution to investment funds in collaboration with private investors, banks, pension funds, the IDB and the Brazilian Support Service for Micro and Small Enterprises (SEBRAE)	Support the establishment of venture-capital and private-equity funds. The calls for applications are by sector/priority areas	Contributes up to 25% in venture-capital funds; contributes up to 20% in private-equity funds	tal funds; contributes up to 20% in

Table 5.A1.1. Brazil: Targeted policy tools to promote start-ups, 2012 (continued)

### b. State-level funding

			)	
Instrument/Programme	Type	Purpose	Beneficiary	Characteristics
FUNDOTEC II (2007)	Fund for co-investments by FINEP with private investors	Venture-capital fund for innovative start-ups, with preference given to firms in the states of Minas Gerais and Pernambuco; FUNDOTEC I (2001) completed its investment period in 2005, investing in 12 start-ups	Technology-based start- ups, preferably within the state	The fund's committed assets total USD 60 million
Minas Biotechnology Fund (2008)	Fund for co-investments by FINEP with private investors (FIR Capital, FAPEMIG and Biominas Foundation)	Venture-capital fund for innovative start-ups, with preference given to biotechnology firms in the state of Minas Gerais	Biotechnology start-ups	The fund's committed assets total USD 6 million
ROTATEC fund (2008)	Fund for co-investments by FINEP with private investors (FIR Capital, FAPEMIG)	Venture-capital fund for innovative start-ups in the Santa Rita de Sapucaí and Itajubá regions of the state of Minas Gerais that are affiliated with the local centre for electronics, IT, industrial/commercial automation, and telecommunications firms	Technology start-ups in the electronics and IT sectors	The fund's committed assets total USD 6 million
SPTEC, the São Paulo technology parks system (2008)	Tax incentives for technology firms that move into SPTec technology parks	Technology start-ups		

Table 5.A1.1. Brazil: Targeted policy tools to promote start-ups, 2012 (continued)

Instrument/Programme	Type	Purpose	Beneficiary	Characteristics
SPTec fund (2002)	Venture-capital investment fund in which BNDES and SEBRAE hold a minority stake	Venture capital	Technology start-ups in the state of São Paulo with annual sales of up to USD 12 million in the fields of IT, biotechnology, agribusiness, the environment and health, among others	Assets of USD 14 million
Brasil São Paulo I fund (2008)	Venture-capital/private-equity investment fund	Venture-capital fund for technology-based for technology-based firms in the start-up or start-ups. Investors: FIR Capital and Valetec Capital, located in the (São José dos Campos, UNIVAP technology park (University of Vale do Paraíba)  Paraíba)  New technology-based firms in the start-up or expansion phase, locate for paraípal pare (São Carlos) in the fields paraíba)  Paraíba)  New technology-based firms in the start-up or expansion phase, locate for paraípal paraípa	New technology-based firms in the start-up or expansion phase, located in the state of São Paulo (São José dos Campos, Jundiai, Campinas and São Carlos) in the fields of aerospace, electronics and microelectronics, IT and new materials	The fund's committed assets total USD 70 million

# c. Business services and entrepreneurial training

Instrument/Programme	Type	Purpose	Beneficiary	Characteristics
FINEP INOVAR Brazilian innovation		Help transform technology from R&D centres and universities into	Entrepreneurs and researchers	Use resources from sectoral funds to
forum		businesses. Support for preincubation, incubation and technology transfer		promote R&D
3FINEP INOVAR Seed Forum	Training and networking	Training for project design. Culminating in an event where	Firms/entrepreneurs. The programme chooses up to 40 firms, checking that they fit the profile	irms/entrepreneurs. The programme chooses to 40 firms, checking that they fit the profile
		entrepreneurs present their projects to (innovation-driven businesses) potential seed-money investors	(innovation-driven busi	nesses) ,

Table 5.A1.1. Brazil: Targeted policy tools to promote start-ups, 2012 (continued)

Instrument/Programme	Type	Purpose	Beneficiary	Characteristics
FINEP INOVAR Venture   Training and	Training and	Periodic meetings between		
Forum	networking	entrepreneurs seeking funding, investors, and venture-capital funds.	Incubators registered with the MCTI.	ith the MCTI.
		s above but focused on venture	D	
		capitai.		
National Support	Grants	Support technology business	Registered business	USD 300 000 to
Programme for		incubators. Support for planning,	incubators (currently	USD 600 000 per
<b>Business Incubators and</b>		ess	55 in operation)	project
Technology Parks (MCT-FINEP PNI)		incubators and technology parks		
FINITE CIBB ATEC	11:11:11	11.1. 1 1 1		
FINE SIBKALEC	Consulting and	Help turn technological knowledge		
innovation centres	technology-transfer	technology-transfer   into commercially viable products,	Entrepreneurs and technology start-ups	nology start-ups
network - 2007	services	processes and prototypes		

## d. Regulatory framework

Instrument/Programme	Type	Purpose	Beneficiary
Tax incentives	Elimination of the tax on financial transactions for foreign industry investment in shares and on the flow of foreign venture capital into the country.	Promote the venture-capital industry	Foreign investors
Ministry of Finance Supersimples Programme	Tax incentive	Reduce the tax burden on founding and incorporating firms	g and incorporating firms

Source: Based on official data and interviews with experts.

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