



Business Incubation in Chile: Development, Financing and Financial Services

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Abstract

Business incubation in Chile is still in its nascent stages, with approximately 27 incubators supported primarily by a coalition of government and universities. Chilean business incubators tend to capitalize on regional resource strengths and have a strategic focus on high growth, high innovation, high impact businesses as a result of a government mandate to focus on developing business with high potential for economic development and job creation. The government's efforts to create the framework conditions for entrepreneurship by investing in business incubators, organizing risk capital for early stage ventures to fill capital market gaps and support for angel networks as well as incubator funding are discussed. Policy implications for the continued growth of the incubation industry are provided.

Keywords: incubation in chile; risk capital; new ventures; incubator financial services; incubator services; institutional theory; network theory

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Business incubators which provide fertile environments for new ventures are relatively new hybrid organizational entities that could be viewed as part of a country's institutional ecosystem or entrepreneurial framework conditions (EFCs) that constitute resources, as well as supporting market and regulatory institutions (Bosma et al., 2008; Isenberg, 2010) to transition Chile from an efficiency-driven to innovation-driven stage of economic growth (Porter, Sachs and Arthur, 2002) marked by knowledge spillovers (Acs and Amoros, 2008) and high growth, scalable entrepreneurship. Business incubators develop networks of multiplex ties with a range of actors that offer financial, human and social capital (Mian, 1997). These incubator networks in turn add value by creating institutionalized structures for resource and knowledge transfer that benefit the young incubatee firm (Hansen et al., 2000). A majority of business incubators around the world are run as non-profits sustained by plural sources of funds from the government as well as nominal rents and fees charged to in-house client firms. Given their non-profit business model and lack of self-sustainability, set in a context of thin or non-existent capital markets government funding and support plays a major role in incubator and incubatee financial support.

Over the past two decades, governments have viewed business incubators as tools of addressing market failure to ameliorate the twin liabilities of newness and lack of visibility for new ventures (Bollingtoft and Ulhøi, 2005), bestowing financial support for both incubator and client firms housed in incubators. Governments in Latin America and most notably in Chile, which has a nascent incubation market, are developing publicly funded programs in the context of a developing incubation market space with a view to promoting a better institutional environment for innovative entrepreneurship (Echecopar, 2004) in addition to dismantling several institutional barriers constraining equity funding (Amoros, Felzensztein and Gimmon, 2010). Age and stage of development determine a new venture's capital needs (Shane, 2008); in Chile early stage new ventures face equity gaps, that cover funds that are too large for the 3F's, but too small for formal venture capital (Amoros, Altienza and Romani, 2008). Chile, like many Latin American countries tends to have high rates of "necessity" based entrepreneurs (Bosma and Levie, 2010) which could be a function of the stage of economic development as well as a by-product of weak institutional environments that is more likely to foster the growth of survival scale entrepreneurs (De Soto, 1989).

The focus of this paper is on the business incubator market space in Chile with an emphasis on the ways in which the triple helix of government, universities and industry work

together to support incubator development. The introductory section of the paper is followed by a method section describing the qualitative data collection methods followed by a review of institutional theory and network theory as it pertains to entrepreneurship development and incubator networks. Incubator development and growth, funding structure and early stage financing available for new ventures are discussed in the following sections with an emphasis on the rich interplay of the triple helix of government, industry and academia in creating the institutional framework conditions for entrepreneurship, especially in the area of early stage risk capital for young ventures. Findings and policy recommendations regarding incubator development in Chile are discussed in the concluding section.

Method

The paper is based on research that represents findings from seven structured, on-site interviews conducted with key business incubator stakeholders in Chile. Incubator managers and staff, policy makers and academics were interviewed for this study. The interview instrument for the semi-structured, in-depth interviews was developed after a thorough literature review and revised on the basis of pilot interviews conducted in the United States, as well as the authors' experience gained from similar interviews in the United States, Thailand, China and India. The pilot interviews served as a pre-test for instrument validation and changes were made to the interview instrument based on the findings and comments. The instrument was pre-tested and adapted to the Chilean environment by scholars and consultants with extensive experience in Latin America. The instrument was first translated from English into Spanish and then translated back by a Spanish-speaking colleague. It was then proofread and modified by another native Spanish speaker from an academic environment to ensure the accuracy of translation. The semi-structured interview format was selected, since this modality provides for focused and systematic information collection, while allowing the interviewee to provide relevant contextual information appropriate to each case.

Institutional Theory and Entrepreneurship in Chile

Governments around the world support entrepreneurship through policies that are conducive to the creation of an overall environment for new venture creation (Lerner, 2009) since innovation by new ventures has been linked to economic growth and job creation (Acs and Audretsch, 1988; Thurik and Wennekers, 2004). Many new ventures fail due to paucity of risk capital, the life blood of high potential new ventures that start with voracious capital requirements particularly in their early stages when mortality rates are the

highest; hence capital markets are an integral part of creating an entrepreneurship ecosystem (Isenberg, 2010). Gaps in the market for risk capital to fuel this growth is all too common in developed and developing countries, hence this gap in the financing chain for new ventures and its impact on firm survival is well documented (Acs, 2006). Governments play a key role in shaping the institutional ecosystem for capital markets with institutional theory arguing for the importance of strong market institutions to support the growth of capital markets (Lerner, 2009). Weak, fragmented or constraining institutional environments in incipient markets may lead to market failure (Easterly, 2006) and consequent loss of positive spillovers or contagion effects from innovative young firms. Governments with deeper and more powerful resources can address market failure caused by institutional voids in risk capital markets (Mair and Marti, 2009) through public policies designed to provide early stage financing (Storey, 2005) to fill the funding gap, in spite of arguments against government intervention or government failure leading to inefficient use of funds from the public purse (Storey, 2005; De Meza, 2002).

Network Theory and Business Incubators in Chile

Business incubators in Chile focus on internal and external networking, assisting incubatees with finding funding, and connecting incubatees to a range of actors to facilitate resource and knowledge flows. Fluid, dynamic and multiplex networks between the incubator and its partners allow random and multiple points of contact creating both strong and weak ties (Granovetter, 1973) that enable access to novel ideas, knowledge transfer and learning across the network (Rangan, 2000), in addition to facilitating resource acquisition and opportunity exploitation by entrepreneurial actors by connecting them with resource providers (Aldrich and Wiedenmayer, 1993). Public-private partnerships forged by the business incubator create a web of relationships with the capacity for influencing the broader business environment. For instance, partners from the financial community may enhance client access to various types of early stage financing (Ayers and Harman, 2009). Networking benefits include knowledge spillovers as well as access to business angels, who not only provide capital, but also experience and contacts to firms crossing dangerous “death valleys” (Bygrave and Quill, 2007). In addition, a strong angel network that brings funding at the pre-venture capital stage is complementary to the more formal funding that a firm is expected to need as it matures (Harrison and Mason, 2000).

Growth and development of business incubators in Chile

Chile has a nascent, but growing business incubation industry with approximately 27 incubators (CORFO, 2012), making it the second largest incubation market in South America after Brazil. Out of the 27 incubators, 17 are operational with 10 in the process of creation. Since the early 1990s, the government has been investing heavily in business incubators to promote entrepreneurship. While government support of incubation in Chile is fairly ubiquitous, universities also play an important role by providing education and training, R&D transfer and other in-kind support, along with private investors, in creating a healthy innovation ecosystem to foster new venture creation and growth. Santiago Innova, the first incubator in Chile, was started in 1992 by the municipal government of Santiago, with the objective of creating jobs for the local economy (Santiago Innova Interview, 2009). Though still relatively small in number when compared to Brazil’s 400-plus incubators, the Chilean model of incubation represents a concerted effort by government, universities and industry to foster new ventures through a systematic and well-organized institutional infrastructure, with noteworthy attempts by government to organize risk capital for early stage financing of new ventures, as well as different types of support for incubator funding and angel network development.

Chile INCUBA, a trade association of business incubators serves as a representative voice for business incubators in Chile and the Chilean Economic Development Agency (CORFO), the government agency that deals with small business and entrepreneurship provide various types of financial support for incubators and incubatees. The focus of Chilean incubators is on a wide variety of industries, with two particular things in common: high growth (i.e. doubling its sales per year) and innovation in products, services, or business model (Octantis Interview, 2006). The incubators are distributed geographically throughout Chile, so that every region has the capacity, resources, and expertise to support a potentially high-impact and creative business. Because innovation and high growth are CORFO’s mandates (CORFO Interview, 2006), all formal Chilean incubators, which are financed primarily through CORFO, usually look for projects that will satisfy these two requirements. In this context, innovation is defined in rather broad terms and does not have to be high-tech; innovation can be demonstrated in products, services, or business models. While the primary focus is on fostering innovative companies with high growth potential, the government also looks for economic impact in terms of job creation in economically disadvantaged regions. Incubators in Chile add value to client firms by acting as intermediary between the government or private sector participants and entrepreneurs. They are currently grap-

pling with issues related to their strategic focus, nature of incubation in terms of general versus specialized focus, and questions related to self-sustainability and length of government support. Performance criteria such as the number of incubated companies, number of successful graduates and number of employees, level of sales / tax revenue generated of incubate and graduated firms are typically used to assess incubator performance (CORFO Interview, 2006).

Business Incubator Service Profile in Chile

Chilean incubators seek to promote job creation, economic development, innovation, and high growth by providing a wide variety of services that are typical to most incubators: physical space and infrastructure, business consulting and training, help with funding applications (government and private), patenting assistance and IP protection, technology transfer, and networking. All Chilean incubators provided basic administrative services (office space, infrastructure, secretarial and administrative services). However, incubators tended to emphasize high value services such as consulting, training and networking.

However, the major focus of Chilean incubators is on networking. This is often done informally as incubators host breakfast meetings with industry experts or bring in professionals to mentor their clients. Often this is of critical importance because these experts provide an objective expert assessment of the business idea. Moreover, these connections have potential to lead to new market access, supplier contacts, or even subcontracting. Internal networking among client firms as well as networking through Chile Incuba was found to be prevalent (Octantis Interview, 2006).

Sources of Incubator Support/Funding

Business incubators typically utilize a combination of three types of revenue models (infoDev Incubator Support Center, 2007). The first revenue model incorporates the revenue from rental income from tenants and other revenues derived from client fees for consulting and other services. This “landlord” model can be financially self-sufficient, given “free” buildings and minimum economies of scale. The second revenue model involves the incubator taking an equity position in its more promising client firms and has the potential to generate revenues from sharing in client success or royalty agreements on gross sales and brokerage fees on raising finance. This method however requires substantial initial investment and a great deal of patience, as it may take up to 10 years to generate revenues. The third, and most common, method is to rely on an ongoing sponsor funding, such as the university, government at the federal / state / local levels, of private foundation or industry support (Lalkaka, 2001).

Almost all business incubators in Chile are funded primarily by a coalition of the government, universities, private institutions, or research centers, with government footing the lion’s share of the costs of incubator setup and ongoing support through different dedicated lines of funding to support the life cycle financial needs of the incubators. CORFO currently offers a line of funds to support incubator operation and management that subsidizes up to 65% of total project cost or a maximum of US\$450,000 approximately at current exchange rates, that is open to new as well as existing incubators that have previously received government funding through the Development and Innovation Fund (Fondo de Desarrollo e Innovación – FDI) or from the InnovaChile committee. University sponsorship includes both tangible and intangible support in the form of physical space, infrastructure, access to faculty and students, and in-kind services. The majority of incubators are physically located on university campuses to gain access to university expertise and resources. Private funding, has been relatively rare, has been increasing of late with Octantis receiving about \$6.5 million from private funds (Rios, 2011). Private funds also come usually from companies who hope later to acquire some of the technologies developed by new ventures at the incubators (CORFO, 2012).

The Chilean incubation system utilizes a multi-tiered approach to incubator models focused on: 1) high growth, high impact, scalable ventures, 2) technological innovation, and 3) regional focus or generalist incubators whose primary emphasis is job creation and local economic development (CORFO Interview, 2006). Of late, the government through CORFO has been encouraging incubators to define their own particular profile: innovative (high entrepreneurship potential) or traditional (local impact) based on local conditions and internal criteria, such as the type of incubatee firm (Rios, 2011).

All interviewed incubator managers emphasized the tremendous role of government funding through CORFO. For instance, Octantis, the best known Chilean incubator, received as much as 80% of its budget from CORFO through a government program (Octantis Interview, 2006). In other cases there were plural sources of support, i.e. strong university sponsors, as in the case of DICTUC at Catholic University, where almost 35% is sponsored by CORFO (DICTUC Interview, 2006). In another case, the Access Nova incubator is fully owned by the University, but it still received some funding from the government (Access Nova Interview, 2006). Many incubators were able to raise other kinds of funding from various sources to complement government support, private funds in the case of Ventana at the Catholic University in Santiago, and the incubator at Arturo Prat University in Iquique, infoDev (World Bank), grants in the case AccessNova, at the University of Chile in Santiago, or

a combination of public/private support as with Octantis at the Adolfo Ibanez University in Santiago, and DICTUC at the Pontifical Catholic University in Santiago, Chile. Another incubator, the Iner los Lagos, redefined its financing strategy by the end of 2010. These changes allowed it to raise \$1 million dollars in 2011, with 70% of these funds coming from the public sector and 30% from the private sector (ChileIncuba, 2012).

The Chilean incubator funding model indicated that incubators combine various revenue streams, relying mostly on government ongoing support (in many cases for up to 80%), but they also incorporated nominal rental and incubation service fees, with some taking equity positions in their client companies to generate funds for ongoing operations. Sources of revenue for incubators in Chile included rental fees, which provided a steady source of financial support in most cases. For example, AccessNova charged tenants a monthly nominal fee equal to US\$350 for physical infrastructure and services (AccessNova Interview, 2006). Octantis also calculated direct costs and spread them into monthly payments for companies (Octantis Interview, 2006). Another revenue source for incubators, albeit a long-term one is taking an equity share in their promising incubatees. These were long-term assets, since it typically took up to 10 years to realize returns, and a portfolio of at least 20 companies to spread the risk (infoDev Incubator Support Center, 2007). Incubators in Chile often took between 10% (Ventana) and 35% (DICTUC) of an equity share. However, incubator managers realized that most of these investments may never realize a return on investment (Ventana Interview, 2006).

Financing New Ventures / Incubatees and Risk Capital Infrastructure

Entrepreneurs face a critical phase in the development of a new business during the initial stages. Early concept stage seed capital typically came from personal funds, government funds and angel investors (Amoros et al., 2010). The Chilean government in an effort to fill the gaps in the financing cycle has taken an active role by offering seed and risk capital lines through CORFO to support its broader mission of creating innovative new businesses by connecting new business opportunities with financing. Through CORFO's Innova Chile program, it provided various lines of seed capital or smart capital for new ventures sponsored by business incubators, universities or industry groups (CORFO Interview, 2006). In addition, the government has worked with banks to create the NACE fund to provide early stage funding that does not require collateral. Angel investors were another source of seed capital; however they tended to support growth stage, income generating projects that were not too risky. During the later phases of early growth and accelerated growth stages, the government has designed risk capital funds

that support these stages via co-investment instruments designed by CORFO that have effectively attracted more private capital (Amoros et al., 2010). Finally, entrepreneurs tried to access bank loans at the later stages of growth after establishing a track record.

Seed Capital for Early Stage

The seed capital program (Capital Semilla) developed by CORFO, is aimed at supporting new ventures in the idea stage for help with business plan development and activities associated with initiation of operations (Echecopar, Angelelli and Galleguillos, 2006). The two lines of funding in the seed capital program, L1 and L2, have been replaced with a single Seed Capital Program in 2011, which is based on a new policy of "rewards" that depends on the "milestones" achieved by the projects supported by the incubators, such as increase in sales (Rios, 2011). In addition, access to the seed funds is contingent on sponsorship either by an incubator or a related institution (Echecopar, Angelelli and Galleguillos, 2006).

CORFO has also created a seed fund of flexible assignment (SSFA) (Subsidio Semilla de Asignación Flexible-SSAF). This tool allowed the incubators to access funds from a sort of checking account to be used for their incubated projects. These resources are earmarked for exclusive use for incubatee projects and may not be used for the incubators' own purposes (CORFO, 2012). IncubaUC, an incubator of the Pontifical Catholic University in Chile expects this program to support innovative entrepreneurs with high risk projects to develop their business in the early stages of their creation (ChileIncuba, 2012). The government has also developed a Technology Package Program for new businesses (Empaquetamiento Tecnológico para nuevos Negocios), to support the technological development of sophisticated businesses with high growth potential and a proven commercial opportunity (CORFO, 2012).

Lack of an entrepreneurial culture in the scientific and technological community in Chile is recognized as one of the major barriers to the transfer of basic research into commercial products (Jimenez, 2011). To address this issue in Chile, the government has created other funds, including FONDEF under CONICYT (FONDEF, 2012), the National Commission for Scientific and Technological Innovation, which is focused on the development of human capital to advance technological innovation. Recently, CONICYT, through FONDEF has launched a contest to evaluate research conducted in universities with the objective of translating this research into new businesses to address the issue of paucity of entrepreneurial culture in the scientific/technological community. To further foster the environment for R&D, the government has been supporting Fundación

Chile, a “privately owned, non-profit institution, created in 1976 by the Government of Chile and ITT Corporation of the United States” (Fundación Chile, 2012). Fundación Chile has one of the initiatives to finance projects during the early growth stage through its own risk capital fund (Echecopar, Angelelli and Galleguillos, 2006).

Risk Capital for growth stage

By the time entrepreneurs have a product prototype and have started operations, the new venture requires another injection of capital for the next phase of its growth and government funds fill the gap at this stage as well (Echecopar, Angelelli and Galleguillos, 2006). Risk Capital for Innovative Businesses program was devoted to the creation or expansion of innovative projects in the growth phase, with requirements similar to the early stage that the projects have a high return potential, high demand, and market growth. This financing is a long term credit to investment funds and the amount of financing provided depended on the needs of the project and the negotiation reached (CORFO, 2012). In 1996, CORFO started its risk capital, F1 line program which matched every 1 peso of private money invested. By 2005, the results of the F1 program were disappointing as only five venture capital funds had been created and their focus was geared towards mature firms (Amoros, Altienza and Romani, 2008). The same year of 2005 a second line, F2, was started. This program provided 3 pesos for each peso invested (CORFO Interview, 2006). In 2006, a third line F3, which provided 3 pesos for each peso invested, was created. The main differentiating factor of the F3 line was a special orientation towards financing small businesses with high-growth potential. After creating these three lines, it was decided that as a new line was created the previous line would be closed (Echecopar, Angelelli and Galleguillos, 2006).

CORFO additionally promoted entrepreneurship activities for acceleration and internationalization of young firms. Young businesses (less than 4 years old) could participate in the International Acceleration of Technological Entrepreneurship- Global Connection program. Each participating business is allowed to appoint two representatives to participate in the incubation and/or internationalization program (CORFO, 2012).

Angel Investors Role

Another source of non-government early stage funds came from business angels who typically invested smaller amounts of money in the early, to early growth stages. In some cases, it may take 4-5 angels pooling their monies to meet the needs of a new venture. Octantis, located within the Adolfo Ibañez University, created an angel network initiative in 2003, and by 2006, the program had 100 angels subscribed

in the program (Echecopar, Angelelli and Galleguillos, 2006). Octantis has estimated that it has helped its incubatees get US\$1.2 million of angel capital (Verdugo, 2006), which is usually invested in only a few promising companies and not spread out across all of them. In fact, many interviewees felt that it was very difficult to get private/angel investment, mostly because of the risk-averse nature of investors. To facilitate growth and expansion of angel funding, the government has sponsored a national angel network, whose operation and administration is being financed by CORFO.

Banking System Role

The last resource for entrepreneurs is to seek bank loans. Banks in Chile have traditionally not been very friendly for start-ups, usually requiring a commercial history of activity and collateral. The government through CORFO launched the NACE (birth) program that offers bank loans to new businesses at the idea development stage, or those who have been in the market for less than two years (Bci Empresarios, 2012).

Table 1 illustrates the various types of financing available for conception, early and early accelerated growth stages of a new venture in Chile.

Interaction of Government/University/Industry in Chile

Since incubators are a tool of economic development and part of the framework conditions for entrepreneurship, governments across the world tend to invest in incubation to various degrees. Corporate incubation programs, still a new concept and the purest form of industry involvement, work with clients to meet company objectives, often to spin in innovations or to spin out companies built around their own research. In addition, the role of universities is often crucial as many incubators are either sponsored by a university or are usually physically co-located in one. Incubators in general use universities as a source of technology and many seek to leverage university research efforts by providing a path to commercialization (O’Neal, 2005).

In Chile, the government designs early stage financing instruments that are well-suited to market needs through a trial and error process of giving a new instrument about a year to study its impact and then refining it, if necessary. The agile, real time response to the market is unusual for government in most countries, but it appears to work well in Chile where the government has sought out experienced industry experts to research and develop the early stage financing instruments (Echecopar Interview, 2006). The government is trying to serve as a catalyst for entrepreneurship and innovation by starting new financing programs, restructuring

Early Stage Start-Up Life Cycle

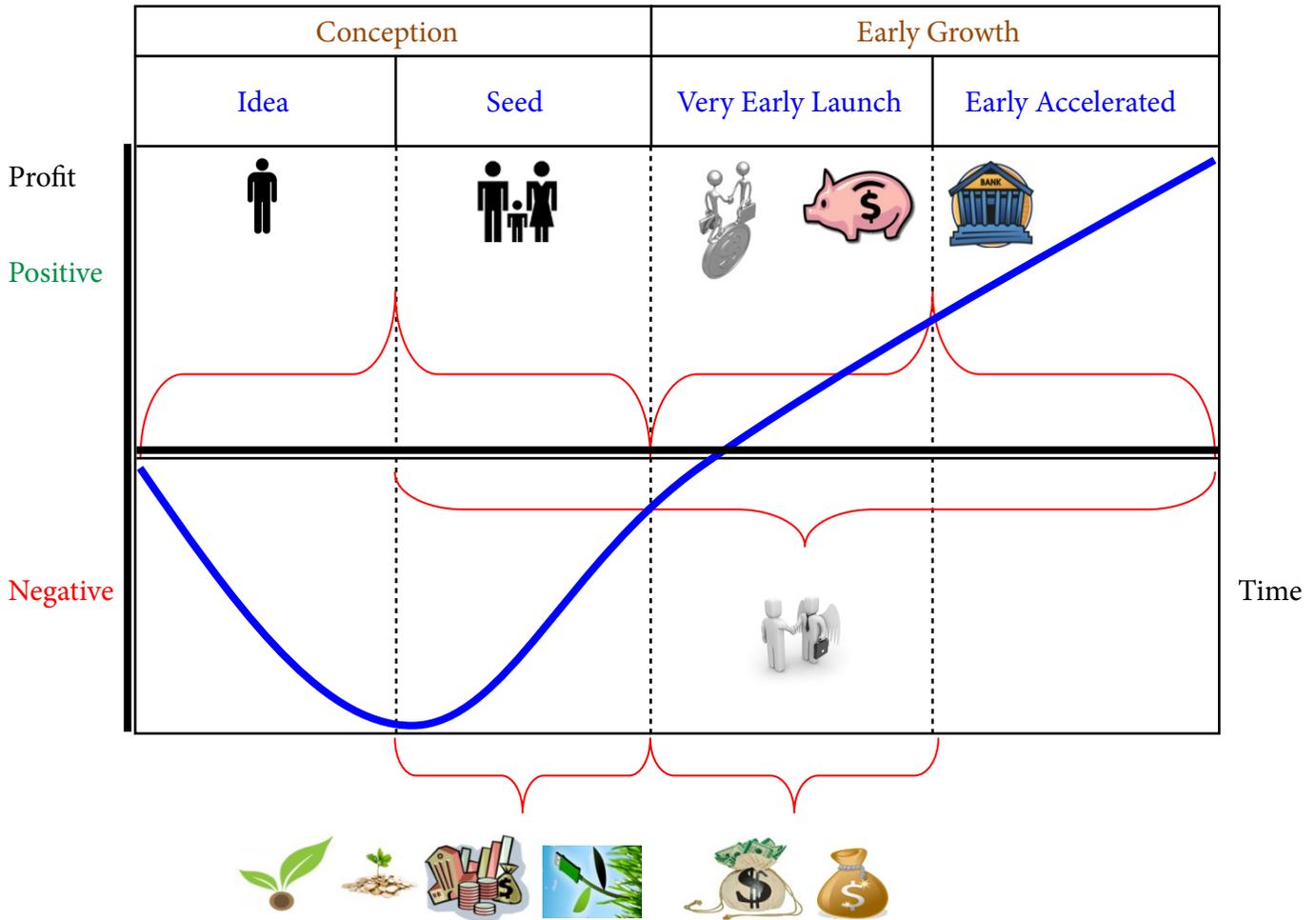


Table I: Source: Adapted from Chandra and Fealey (2009)

old ones, or acting as a facilitator between entrepreneurs and the private industry.

While there is an overall positive perception of the new lines of government financing for early stage ventures, an in-depth survey of experts in Chile conducted by the Global Entrepreneurship Monitor in 2009, indicated overwhelmingly negative views of government programs for entrepreneurship, as well as its concern for developing businesses with high growth potential (Amoros et al., 2010). In the same vein, interviewees also noted that CORFO had created a lot of bureaucracy and red tape that sometimes restrained the enthusiasm of entrepreneurs.

However, because of all of this support, CORFO is able to mandate some rules for entrepreneurs and incubators. CORFO states it supports projects that bring together high-growth potential with innovation and research (CORFO Interview, 2006). Yet, the government has not set up clear

strategic goals for incubators although it used some performance indicators to evaluate them (number of incubated companies, number of graduated companies, level of sales, number of employees, seed capital granted to tenants, taxes generated), to determine future incubator funding.

University involvement in Chilean incubation efforts has been historically very strong. All major incubators in Chile were either funded to some degree or work closely with universities. Faculty and students serve as major resources for project development and commercialization for university related incubators in many instances. Locating a business incubator on campus provides a wide variety of opportunities, like in-house technology development and commercialization, experiential learning for students, faculty engagement, fostering innovation and thus contributing to economic development and society at large, partnerships with government and industry, and finally, media attention. Universities often provided funding for incubators and infra-

Legend for Table I

Funding Type	Legend	Government Role	Amount of Funds
Personal Savings		Private funds	Approximately: \$1000-US\$4000 per investor
Family and Friends Savings		Private funds	Approximately: \$1000-US\$4000 per investor
Seed Capital		Government program-CORFO	75% of the total project cost- \$40 million pesos or roughly US\$82,000
SSFA		Government program-CORFO	75% of the project cost Maximum -700 million pesos or roughly US\$1,400,000 annually
Technology package for new projects		Government program-CORFO	80% of the program total budget -\$180 million pesos or roughly US\$370,000 divided in two stages: business design (\$20 million or around US\$41,000) and project development (\$160 million or around US\$329,000)
Angel Investors		Government has created an angel network	Usual amount invested: US\$20,000-US\$30,000
NACE Bank Loans		Program supported by government	Loans up to: \$80,000 to entrepreneurs with no commercial history
Risk Capital : F1,F2,F3		Government program-CORFO	Amounts depend on the kind of project Approximately: US\$1-US\$3 million
International Acceleration of Technological Entrepreneurship		Government program-CORFO	Covers up to: 90% of the total program cost. Maximum amount: \$20 million pesos or US\$41,000 distributed as follows: \$15 million pesos or around US\$31,000 for incubation and/or internationalization process and 5 million pesos or US\$10,000 for expenses associated with traveling
FONDEF		Government Program-CONICYT	Between 1991 and 1996, FONDEF has invested more than \$146,000 million pesos or more than US \$300 million
Fundación Chile		Program supported by government	\$60 million pesos or US\$ 120,000 from SSFA program
Banks		Private funds	Loans vary depending on the project and bank conditions

structure at little, or no cost in light of the multiple benefits that flow to them from housing an incubator.

Industry involvement in Chile is not as strong and visible when compared to university and government participation. Only few incubators, like Ventana, were able to raise private money from corporations for incubator funding. Corporate investment is usually limited mostly to investments in selected incubated companies that have potential innova-

tions in fields related to their businesses. Other industry involvement is mostly demonstrated in strategic alliances with incubators. Corporations also tend to get involved in business plan competitions by serving as judges and sponsors. In that way, they are exposed to innovative ideas and are able to promote and capitalize on new, innovative ideas and technologies.

Key Dimensions of Business Incubation	Chile
Strategic Focus	High growth, high impact entrepreneurship. Emphasis on technological innovation and entrepreneurial capability
Business Incubator Funding	Govt. main source of funds, private participation is on the increase, universities play supporting role.
Type of Incubatees Business	High tech, high growth preferred. Regional resource based businesses, i.e., salmon, wine.
Service Profile	Hard- administrative and rental; soft- networking with emphasis on the latter.
Financial Services	Incubators play linking or bridging informational role. Provide access and information on various lines of govt. funding.
Role of Government	Visible hand of government in terms of financial support; yet incubators make independent decisions. Support for angel network and for incubator trade associations.
Role of Private Industry	Increasing involvement of private industry in incubator and incubate development.
Role of Universities	Supporting role, provide intellectual capital and form part of incubator network.

Table 2: Key Dimensions of Business Incubator Design in Chile.

Conclusions

The Chilean government has developed several lines of funding to address early stage gaps in risk capital for new ventures; however not enough emphasis was placed on developing country level entrepreneurial capability. Interviewees pointed out the paucity of good ideas as a major constraint in the development of country level development of entrepreneurship. It has been noted that governments that try to grow entrepreneurship by injecting risk capital alone, when intangibles such as access to new ideas or large market access are missing will find that the prerequisites for growth are lacking (Venkatraman, 2004). The cognitive environment for entrepreneurship, which includes education that is focused on how to start and manage a new venture, and the normative framework that includes softer elements like culture and education (Spencer and Gomez, 2002) have not been emphasized as much as hard elements of the regulatory and formal risk capital market environment for new venture creation. In response to these issues, proposals to include entrepreneurship / intellectual property related courses into the scientific / technological curriculum, as well as alternative degrees focused on science entrepreneurs have been suggested (Jimenez, 2011).

Also, incubators may need to be more selective in their resource allocation to favor the high potential incubatees to help amplify the initial investment, as opposed to spreading the wealth among all incubatees equitably. For example, one incubator interviewed had about 30 projects, out of which it believes 6 have the highest potential for growth and returns on investment. However, staff in many of the incubators normally devotes an equal amount of time and resources to all projects, regardless of potential impact. This situation may need to be reconsidered, if high-growth, high performance entrepreneurship is the goal.

Currently, the average client base of Chilean incubators is between 1 and 17, with a primary focus on the high value services such as networking. Incubators in Chile appear to be moving towards the “networked” incubator model by which they are able to share resources and experience. Several interviewees mentioned the bridging role of the incubator. While the different types of networks may be viewed as intangible resources that form part of the institutional framework conditions, the key is for incubators and other stakeholders to leverage the power of these networks to realize their power and potential.

Table 2 summarizes the features of Chilean business incubators along key dimensions.

The Chilean government in its effort to foster new ventures is playing dual roles on the demand and supply sides of the

market to create the framework for early stage risk capital. The government through CORFO had created a fund to support the creation of business incubators; subsequently it created a seed capital fund to support new ventures in these incubators, thereby in essence creating a financial market for startups. The demand for funds came from the entrepreneurs sponsored by the incubators and the government created the supply of funds to meet this demand. The government also supported the creation of an angel network in 2005 to help jump start the creation of an angel market, a key source of funds for early stage ventures (Echecopar et al., 2012).

However, in spite of these efforts at risk capital market creation by stoking both demand and supply of capital, there is no clear and firm innovation policy at the macro-level, with each successive government pushing its own support programs that change with the arrival of a new president (Jimenez, 2011). In addition, government financing opportunities are dispersed through several institutions with very little coordination amongst them, creating a confusing array of options (Amoros et al., 2010). At the incubator level, there is no clear system for evaluating the performance of incubators in terms of the number of businesses incubated and their levels of success, since formal data is lacking in these areas (Jimenez, 2011). Over time, the question of incubator self-sustainability and performance need to be addressed, as government support wanes in the context of a growing incubation market space in Chile. Chilean incubation is still in its nascent stages with much support from the triple helix of government, academia and industry. Yet, and in order to support the growth of innovative, high impact new ventures these critical issues may need to be addressed in the short term to ensure robust growth of incubation in Chile.

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