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FORMAL AND INFORMAL EQUITY FUNDING IN CHILE*

CAPITAL DE RIESGO FORMAL E INFORMAL Y EL FINANCIAMIENTO DE LAS 3F'S EN CHILE

JOSÉ ERNESTO AMORÓS**

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Abstract

This paper explores the state of formal and informal equity sources currently available for financing entrepreneurial activity in Chile. By integrating theoretical perspectives regarding formal and informal equity funding and information gathered from the Global Entrepreneurship Monitor (GEM) surveys, the paper argues that despite the favorable environment existing in Chile for equity investment, these markets are still incipient and strongly dependent on public policies. In this respect it is proposed that public intervention to address equity gaps in Chile should also adopt a demand-side perspective, aimed at improving the quality of investment opportunities, and should incorporate a geographical dimension, considering the particularities and financial needs of non-metropolitan regions.

Key words: *Entrepreneurship, Venture capital, Business angels, Informal investment, Equity gaps.*

Resumen

Este artículo explora el capital de riesgo formal e informal y el financiamiento de las 3F's, actualmente disponibles para financiar la actividad emprendedora en Chile. Con el apoyo de la teoría relacionada al Capital de Riesgo formal e informal, el financiamiento de las 3F's y la información obtenida de la encuesta GEM, el artículo argumenta que, a pesar del contexto favorable para la inversión de capital de riesgo existente en Chile, este mercado es todavía incipiente en el país y fuertemente dependiente del apoyo del gobierno. A este respecto, se

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propone que la intervención pública dirigida a reducir las brechas de capital en Chile debería adoptar, también, una perspectiva desde el lado de la demanda con el objeto de mejorar la calidad de los proyectos, e incorporar una dimensión geográfica que tenga en cuenta las particularidades y las necesidades de financiamiento de las regiones no metropolitanas.

Palabras clave: *Emprendimiento, Capital de riesgo, inversionistas ángeles, inversionistas informales, brechas de financiamiento.*

JEL Classification: *G24, M13.*

1. INTRODUCTION

Availability of equity finance is one of the main obstacles that entrepreneurs face when trying to initiate and consolidate their business. The identification of this equity gap, that the traditional financial system is unable to fill, can be traced back to the Macmillan Enquiry of the Committee of Finance and Industry of the British Government in 1931 and has been the object of growing attention in the past decade due to the recognition of the relevance of entrepreneurship in economic growth (Acs, 2006; Bygrave and Quill, 2007; Martin *et al.*, 2005). Banks and other lending organizations partially furnish entrepreneurs' short term capital needs but are generally reluctant to supply long term and equity funding owing to high transaction costs in dealing with small business resulting from the size of the credits and the existence of information asymmetries related to the high failure rate of seed and nascent firms (Pollard, 2003). In this context, entrepreneurs' access to equity funding has to be achieved by means of formal and informal sources out of the traditional financial system. The aim of this paper is to analyse the available formal and informal equity financing sources for entrepreneurs in Chile and to estimate the existing equity gap.

This paper consists of two sections: the first analyses the role played by formal and informal equity funding to finance entrepreneurship, while the second describes the evolution and supply of formal and informal equity sources oriented towards the first stages of the life cycle of firms in Chile, placing particular emphasis on public policies aimed at reducing the equity gap. Finally, our conclusions discuss implications for policy and future research.

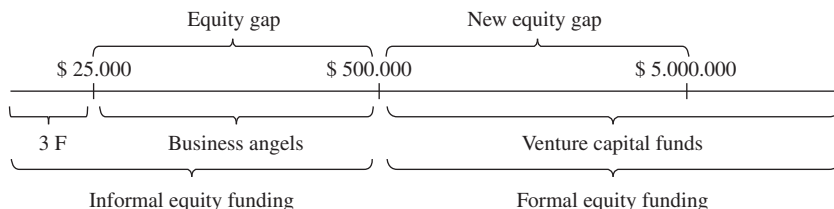
2. FINANCING ENTREPRENEURSHIP: THE ROLE OF FORMAL AND INFORMAL EQUITY FUNDING.

According to Mason (2006), it is possible to identify two basic sources of informal equity funding: (i) funds supplied by the founders themselves, their families and friends (often termed either 3Fs or "love money"); and, (ii) financing coming from strangers, the so-called business angels, who invest their own money, along with their time and expertise, in unquoted firms in the hope of any financial gain. Business angels' activity constitutes what is also known as the informal venture capital market, in contrast to the formal source of equity funding, namely the institutional venture capital industry made up of private partnerships or closely-held corporations funded by pension funds,

endowments, foundations, wealthy individuals, foreign investors, and venture capitalists themselves.

The role of the different forms of formal and informal equity funding varies according to the size of the investment and the stage of business development. In terms of the size of investment (Figure 1), 3Fs provide, on average, modest amounts of money per business, normally below USD 25.000. At the other extreme of the equity funding spectrum, most formal venture capital funds are currently investing a minimum of USD 500.000 per business. The range between USD 25.000 and USD 500.000, known as the equity gap, covers funds that are too large for the 3Fs but too small for formal venture capital. This gap is filled, in principle, by the business angels, i.e., the informal venture capital market, but it is also a field for active public policies (Storey, 2005). Recently, some authors (Mason, 2006) have identified the emergence of a new equity gap prompted by the consistent increase in the minimum size of venture capital funds investments. This new gap would range between USD 500.000 and USD 5.000.000 and it seems that currently only syndicates of angels would fill it (Figure 1).

FIGURE 1
FORMAL AND INFORMAL EQUITY FUNDING AMOUNTS AND EQUITY GAPS



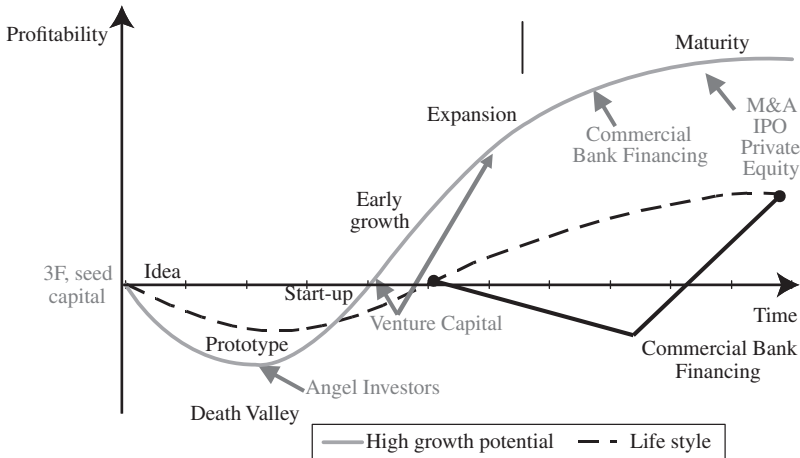
Source: Authors based of Mason, 2006.

In terms of the stage of business development, it is generally accepted that firms, during their life cycle, follow the so-called “financial chain” whereby each stage of an entrepreneurial life cycle requires particular types of financing which also depend on where a start-up sits on the entrepreneurship spectrum. The amount of funds required by an entrepreneurial venture generally increases as the entrepreneurial life cycle proceeds, while risk and financial problems decrease in the mature stages (Wetzel and Wilson, 1985; Berger and Udell, 1998). Figure 2 shows how financial alternatives vary at different stages of business development for two kinds of firms: life style and high-growth potential firms.

During the first stages of life, the sources of financing of any new venture are predominantly informal: first, seed capital provided by the 3Fs and some public resources, and later on, specifically for high-growth potential firms, business angels, which provide not only capital, but also experience and contact networks, helping entrepreneurs to overcome the so-called “death valley”, in which the majority of firms cease to exist (Bygrave and Quill, 2007). After the first stages, the funding alternatives for surviving firms differ according to the risk and expectations involved in each type of business. Life style businesses

are mainly dependent on bank loans, whereas high-growth potential firms, with higher risk and higher expected returns, have to gain access to non-traditional formal equity sources, venture capital funds which provide funding mainly for post start-up stages in which risks are still high. As risks decrease, traditional financing options emerge, such as commercial banks or the stock market, through an initial public offering (IPO).

FIGURE 2
FINANCIAL ALTERNATIVES VERSUS ENTREPRENEURIAL LIFE CYCLE



Source: Adapted from Venture-Financing, 2005.

Until recently, studies on entrepreneurship have mainly stressed the importance of formal venture capital due to (i) its impact on economic and business development by providing financing to innovative companies seeking to exploit significant growth opportunities (Gompers and Lerner, 2005; Harrison and Mason, 2000a; Martí *et al.*, 2007; NVCA, 2007; CVR, 2007; Mason, 2007), and, (ii) the relatively successful experience of the United States where formal venture capital represented 0.2% of GDP in 2006 and the revenue of companies created by the industry stood for 17.6% of GDP (NVCA, 2008). Accordingly, public policies aimed at supporting business financing have generally privileged the promotion of this type of funding, both indirectly by setting up appropriate institutional frameworks and developing favorable fiscal regimes in order to create incentives for equity funding and suitable stock market exit routes, and directly either by setting up government-sponsored venture capital funds or by public investments in private companies. However, the institutional venture capital market, especially in North America and Europe, is becoming less oriented towards seed and start-up businesses and is increasingly raising their minimum investment size and shifting their investment focus to later stages of the “financial chain”.

Informal equity funding, both business angels and especially love money, have received limited attention compared to formal venture capital. In both

cases, the lack of information has constrained both academic research and more active public intervention.

The importance of the informal venture capital, however, is widely recognized not only because angel investors are the main funding source to fill in the equity gap of high-growth potential business, but also due to the complementarities of formal and informal venture capital. Several authors (Harrison and Mason, 2000b; Madill *et al.*, 2005; Mason, 2006) have pointed out that the development of a healthy institutional venture capital industry depends on the existence of a vigorous business angels market. In this respect, it is usual that the majority of firms that have enjoyed angels support go on to raise institutional venture capital. Despite the lack of official data, there are size estimations of the informal venture capital market that confirm the important role that this funding source can play. According to Mason and Harrison (2000), in the United Kingdom business angels make eight times as many investments in nascent firms as institutional venture capital funds, while in the United States informal venture capital investments are thirteen times the formal ones (Sohl, 2003). Furthermore, this source of financing can also play a major role in promoting entrepreneurship in peripheral regions where access to the traditional financial system and to formal equity funding is restricted.

Informal investment made by family members and friends does not constitute a proper market on account of its informal nature and, consequently, has hardly been analyzed at all. However, recent studies (Bygrave *et al.*, 2003; Bygrave and Hunt, 2005; Bygrave and Hunt, 2007; Bygrave and Quill, 2007), predominantly based on the Global Entrepreneurship Monitor (GEM) survey, have stressed the relevance of this equity source both in terms of its size (on average, it represents 1.5% of the combined GDP of the 42 GEM nations) and in terms of the huge number of new firms informally financed compared to institutional venture capital and to angel investment (Bygrave and Quill, 2007). Though the average amount invested by the 3Fs is small, it can be said that most of the available funding for nascent ventures is, in fact, of a private informal nature.

Until recently, research and public policies supporting entrepreneurship financing have generally adopted a supply-side perspective concerned with the availability of risk capital, especially the formal one, and with the design of advantageous institutional frameworks for investors. However, the existence of an equity gap has also a demand-side component related to the lack of sufficiently attractive projects able to raise funds and to the reluctance of some entrepreneurs to the participation of external agents in their business management, the so-called "equity aversion". In this respect, public policies are increasingly aiming at enhancing what has been called the "investment readiness" of projects (Mason and Harrison, 2001), by raising the quality of investment opportunities, first by confronting entrepreneurs with the criteria used by investors and second by helping entrepreneurs to meet these standards. Unfortunately, data on "ready" equity demand are hardly available due to its qualitative nature.

Equity financing has also a geographical dimension. Studies on the regional disparities in the access to equity funding are still scarce although it is becoming a matter of growing interest, especially in developed countries (Martin, Sunley and Turner, 2002; Klagge and Martin, 2005; Martin *et al.*, 2005; Acs and Armington, 2006; Mason, 2007). Research in less developed areas like Latin America, where regional unevenness is higher, is practically non-existent. One

of the main traits of equity funding is its high degree of spatial concentration, except in the case of love money that can be considered ubiquitous. The degree of concentration of venture capital varies according to its formal or informal nature. In this respect, business angels are normally less concentrated than the institutional venture capital funds whose headquarters are predominantly located in the main metropolitan regions.

This spatial pattern restricts access to equity funding in peripheral regions since both business angels and venture capital funds tend to invest locally due to the distance decay of information flows about investment opportunities and to the investors' desire to minimize agency risks by close involvement in financed business (Mason, 2007). Furthermore, Martin *et al.* (2005) identifies the existence of a regional "herd effect" that characterizes the location of venture capitalists around the main technological clusters, strengthening at that point the demand of funding by high-growth potential new ventures in winner regions. In contrast, non-metropolitan regions are likely to suffer both low supply and low demand of formal and informal venture capital.

The impact of the geographical distribution of equity funding on entrepreneurship and regional economic growth is still a matter of controversy. Some authors stress the need for local capital markets as a means of reducing regional funding gaps both in terms of equity and efficiency (Klagge and Martin, 2005; Acs and Armington, 2006), whereas others consider syndication and the formation of angel networks as a substitute for spatial proximity (Fritsch, 2006). In any case, it is generally agreed (Mason and Harrison, 2003; Martin *et al.*, 2005; Mason, 2007) that artificially creating a regional supply of formal or informal venture capital will be ineffective and that public policies should concentrate on the demand-side trying to develop the investment readiness of local ventures as a means to attract venture capitalists.

3. FORMAL AND INFORMAL EQUITY FUNDING IN CHILE

This section describes the evolution and the current situation of the different equity funding sources in Chile and presents and estimation of the equity gaps of the country and the regions where representative information is available.

3.1. Formal venture capital

According to the Latin American Venture Capital Association Scoreboard (LAVCA, 2008), Chile has the region's most friendly business environment to formal venture capital and, remarkably, Chile ranks ahead of countries such as Spain and Taiwan. This result is a reflection of the legislative and regulatory efforts that the Chilean government has been making since 1989 to promote this funding source, creating, in principle, a favourable institutional framework for investors.

The formal venture capital in Chile is operated by the investment funds created in 1989 (Law 18815). This law classified investment funds into three types: Real Estate Investment Funds, Securities Investment Funds and Firm Development Investment Funds (FIDEs). The latter were oriented towards investment in high-growth potential Small and Medium Enterprises (SMEs), and, in principle, should

have worked as venture capital funds. However, since their inception, the main source of FIDEs has been pension funds. Consequently, their investments have been directed to well-established mature enterprises and to less risky sectors such as infrastructure and services (Romani *et al.*, 2001).

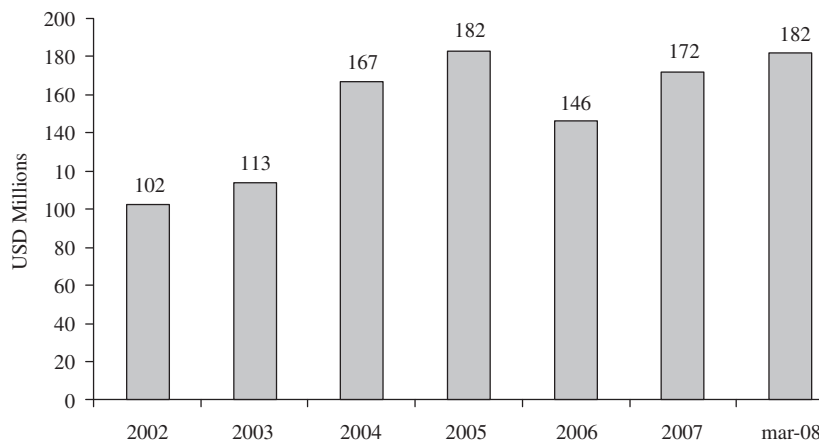
After various reforms of the 1989 law, which aimed at reinforcing the incentives for institutional venture capital investment, the IPOs law, enacted in December 2000, eliminated the existing classification of funds in order to render the Chilean investment fund industry more flexible. After this new law, all funds were called Investment Funds regardless of their orientation or objectives and a distinction was made between public and private investment funds. The latter could not conduct IPOs of their quotes and were set up at the investors own risk, while the former must have fifty or more investors, which may comprise institutional investors (banks, insurance companies, pension funds), and are allowed to carry out IPOs of their quotes.

Afterwards, law 19.769, known as the Reform Law I of the Capital Market (MK1), passed in 2001, created an Emergent Stock Exchange Market and established a three-year tax exemption on capital gains for enterprises making transactions in that market in order to increase high-growth potential small-firms financing. This measure, however, was not able to become a real incentive for developing venture capital funds. Accordingly, a new reform of the capital market was made through law 20.190, known as the Reform Law II of the Capital Market (MK2), approved in May 2007. One of the main objectives of this law was to promote the development of the venture capital industry and the access of small firms to financing. Some of the more notable aspects of MK2 in respect of venture capital activity include the following: (i) tax exemption on capital gains for investors financing venture capital funds; (ii) eight additional years of tax exemption in Emergent Stock Exchange operations; (iii) allowed the Chilean Economic Development Agency (CORFO) to invest up to 40% of venture capital fund quotes; and (iv) allowed Banks to invest up to 1% of their assets in investment funds.

Despite Chile's relatively favorable environment to formal venture capital, in March 2008 only 8 out of the 59 currently existing public funds are classic venture capital funds that manage USD 146 million, which represents 0.17% of national GDP and 2.6% of total assets managed by Chilean public investment funds (ACAFI, 2008). The assets managed by public venture capital funds have almost doubled in the past seven years. However, this growth took place between 2002 and 2004, and since then formal venture capital investment has not significantly grown (Figure 3).

Regarding private investment funds, detailed information about managed assets is unavailable since these are managed by special corporations that are not obliged to provide public information. CORFO has been the main promoter of this type of funds. In 1997, when the division between public and private funds did not exist, CORFO created the program named "*Financing investment funds for the promotion of venture capital*", initially known as line F1 because CORFO co-financed the same amount invested by the fund through a 15 years loan. By 2005, the results of this program had proved disappointing: only five venture capital funds were created and their investments were concentrated in mature firms. As a result of this, CORFO designed, in the same year, a new program named "*Venture Capital to Expand SMEs*", line F2, co-financing up to

FIGURE 3
EVOLUTION OF ASSETS MANAGED BY PUBLIC VENTURE CAPITAL FUNDS



Source: ACAFI (2008).

two times the amount invested by the private investment funds. This program contributed to the creation of six funds that to date have invested in the expansion stages of small business. CORFO's efforts were intensified in 2006 with the implementation of the program "*Venture Capital to Innovative SME*", line F3, co-financing up to three times the amount invested by the private investment funds and specially oriented towards financing small businesses with high-growth potential. In this respect, private venture capital funds created since 2006 have been more oriented towards innovative projects.

Between 1997 and March 2008 CORFO has promoted the creation of 19 investment funds whose resources are USD 373 millions considering both public and private contributions. 12 of these 19 funds are currently in operation, while the rest have been terminated (CORFO, 2008). In short, currently there are 20 venture capital funds, both public and private venture capital funds financing SMEs with high-growth potential in Chile. According to these data, it can be stated that the Chilean formal venture capital industry is undergoing a slow consolidation process. Despite the public efforts made to foster investment fund development, results have not been those expected. Moreover, institutional venture capital activity is still predominantly dependent on public initiatives. In this respect, it is expected that the recently approved MK2 reform will give a considerable impetus to this industry.

The promotion of entrepreneurship in Chile, by means of formal venture capital funds, faces various obstacles among which the following stand out:

- The absence of an embedded venture capital culture. Chilean investors are still shortsighted and risk-averse while entrepreneurs, especially those outside the Santiago Metropolitan Region, are still reluctant to open their equity to outside investors for fear of losing control of their business (Romaní *et al.*, 2001). Furthermore, national experts declare that investors are not able to invest as frequently as they would like to, due to the low quality of the

projects and that there are far more business opportunities than entrepreneurs (Amorós, Guerra and Carrillo, 2008).

- The lack of liquidity in the Chilean stock market is cited by investment fund managers and scholars as the main constraint to exit an investment (Cifuentes, Desormeaux and González, 2002; FMI, 2004; Hernández and Parro, 2004). Currently, Chilean investment funds generally exit their investment by selling their participation to the major stock holder, and only one of the existing funds reported an IPO. Fund managers further argue that the Emerging Stock Exchange, which was created to incorporate small enterprises, is not attaining this objective; on the contrary, it is mainly enabling large companies to raise their capital and to take advantage of the tax reduction offered to enterprises operating in this market.
- The high degree of spatial concentration of venture capital activity. According to Romani (2007), over the past three years, 89% of existing venture capital funds invested in the Metropolitan Region and 55.6% invested solely in this region. By contrast, only one of the funds invested exclusively in a non-metropolitan region. Moreover, the regional investment of these funds is also concentrated in a reduced number of regions, namely Bío-Bío and Antofagasta. This situation, which is mainly due to the fact that the investment fund headquarters are located in Santiago Metropolitan Region, seriously hampers non-metropolitan entrepreneurial activity, since the identification of investment opportunities, according to experts, is strongly influenced by spatial proximity and mediated by personal references.

The removal of these obstacles will require explicit policies not only aimed at stimulating investors supply but also entrepreneurs' investment readiness. Furthermore, market participants also perceive some non-regulatory factors constraining the future growth potential of formal venture capital in Chile such as market size and maturity (LAVCA, 2008).

3.2. Informal venture capital

Data about business angels are almost non-existent since “the angel market operates in almost total obscurity” (Prowse, 1998, p. 786). In Chile, it is possible to make a rough estimation of the size of this market using the GEM 2007 Adult Population Survey. According to this source, one out of 1.000 Chilean adults invests in business run by strangers while one out of 4.000 adults invests more than USD 25.000, the lower bound of the equity gap.

Curiously, in Chile, angels have not preceded the consolidation of formal venture capital activity, the main goal of public policies, and the complementarity that should exist between these two equity funding sources has not yet taken place. Consequently, angel investment is incipient and precarious in Chile and predominantly dependent on private initiative. Obstacles to the development of angel investment in Chile are similar to those for formal venture capital: a lack of informal venture capital culture as well as an absence of investment incentives, coupled with no angel investor-related education for entrepreneurs and investors.

The creation of angel networks is also a recent phenomenon in the country. The first network was created in Santiago in 2003 around the business incuba-

tor Octantis located within the university Adolfo Ibáñez, as part of a project financed by the World Bank. This network, based in Santiago, was the first real “matching” service between new businesses and angel investors. At present, this angel network operates under the name of Southern Angels¹ and is independent of the incubator Octantis as a result of a recent CORFO program established for the creation of angel networks. This network has approximately one hundred members who are either entrepreneurs or experienced industrial executives aiming to invest in newly created enterprises in exchange for profits over the market average². This network’s net equity is over US\$200.000 and its investment procedures are less rigid than those applied to investment funds. Angels provide not only capital but experience, strategic and financial management, and contact networks. Angel member investment ranges between US\$25.000 and US\$150.000. Since its inception, Southern Angels has invested in ten projects, totaling USD 3 million. This modest number cannot be compared to that of the angel investor networks in the USA and is indicative of the fledgling status of angel investment in Chile.

In 2004, the second network, called the Angel Investor Club, was set up at the incubator GeneraUC³, also situated in Santiago. The explicit aim of this network is to finance high- growth potential projects emerging from this incubator. The Angel Investor Club has a membership of more than 30 businessmen; however, no other statistics are available.

As previously mentioned, CORFO started at the end of 2005 a new line for the creation of angel networks through the Comité Innova Chile. Up to March 2008, CORFO has financed three business angel networks: Southern Angels, Incured⁴ and Angeles de Chile⁵.

The last two networks, also located in Santiago, were created in 2007 and currently there is no available information about the projects that they are financing. Since all Chilean business angels networks are based in Santiago, the transaction costs for non-metropolitan entrepreneurs is high and their chance of getting funds greatly reduced. Indeed, only one of the projects financed by this network is located outside the metropolitan region. Accordingly, the creation of regional angel investment networks may be an effective way to promote regional entrepreneurship.

A recent private initiative in the Chilean informal venture capital market is the case of Angeles Inversionistas⁶, an on-line platform part of the Angel Investment Network Ltd., an investment company based in London. This web site is connected to local, national and international networks of investors and entrepreneurs in North America, Latin America, Europe and Australia.

In short, at this moment, in Chile there are three business angel networks, an angel club and a web site matching investors looking for projects with en-

¹ <http://www.southernangels.cl>

² Expected investment return rate is between 30% and 40% (Diario Financiero, March, 26, 2007).

³ <http://www.ganerauc.cl>

⁴ <http://www.incured.cl>

⁵ <http://www.angelesdechile.cl>

⁶ <http://www.angelesinversionistas.cl>

trepreneurs trying to get funds. Some recent projects, ready to be presented to CORFO, are geared to creating regional business angel networks. The network Angeles del Sur⁷, in the Region of Bío-Bío, aimed at financing new ventures in Southern Chile is especially advanced. .

3.3. Love money

Data from the GEM 2007 Adult Population Survey in Chile show that, as in other countries, love money financing (family, friends and founders) is essential to consolidate an entrepreneurial society. According to GEM 2007 estimations, 13.4% of the Chilean adult population is trying to develop a new business, the average financial needs of which are USD 13,414. The financing of these projects depends fundamentally on the founders themselves. More than 55% of entrepreneurs finance their projects entirely, while the entrepreneurs who consider acquiring external sources of financing are willing to provide 38% of the investment with their own resources.

Regarding family and friends, in the last three years, 7% of the Chilean adult population Chile invested money in new businesses started either by relatives or friends. The amount of this investment during that period represents 27.1% of entrepreneurs needs and is equivalent to 2.3% of Chilean GDP in 2006. On this question, Chile ranks among the first ten GEM countries, which indicates the significant importance of informal investment for the country. On average, each one of these informal investors has provided USD 4,151, while half of them invest less than USD 1,516. This finding is consistent with other studies (e.g. Szerb *et al.*, 2007; Bygrave *et al.*, 2003), which show that informal investments generally involve small amounts and that there are few informal investors who invest large sums of money.

According to the information provided by the 2006 APS in Chile, the majority of Chilean informal investors are persons who work autonomously or on their own (57.3%); are male (62.4%); with a complete level of university education or with complete technical studies (53.4%); who invest less than UDS 5,000 (72.6%) in activities oriented to services for the final consumer whose innovative potential, in principle, is low (70.8%); who expect to recover their capital in six months (34.2%) or one year (20.2%); with a nil benefit or with losses (52.7%). This investor profile is far from the classic risk capitalist or angel investors. This could lead one to think that the relative importance of informal investment for the development of the country is limited. Nevertheless, as was mentioned above, informal investment in Chile over the recent past three years reached 2.3% of the GDP of 2006. Also, these businesses are supposed, from their beginning, to provide an impulse to the national economy insofar as they create employment and spend the resources received in the purchase of goods and services and the payment of salaries to their workers (Bygrave and Quill, 2007; Bygrave and Hunt, 2005). Until now, however, public policies in Chile have ignored informal financing as a means of promoting entrepreneurial activity in the country.

⁷ <http://www.angelesdelsur.cl>

3.4. Equity gaps

According to Figure 1, the equity gap is defined as the range between USD 25.000 and USD 500.000, that covers funds that are too large for the 3Fs but too small for formal venture capital. In this article, information of the GEM 2007 Adult Population Survey about the total amount of money that nascent entrepreneurs declare that they need to start their business is used as a proxy of the demand for equity⁸, while the total amount of investment that family and friends declare they make is used as a proxy of the supply of informal equity. In accordance with this source, Chilean entrepreneurs are able to finance, on average, 64.1% of their financial needs with their own money and receive funding for 27.1% of these needs from relatives, friends and work colleagues. Consequently, approximately 91.2% of the Chilean nascent businesses could be financed with funds that the founders of these businesses are prepared to make available and with love money, while there exists an equity gap that corresponds to 8.8% of entrepreneurs' financial needs, that could be filled up, either by business angels or by public entrepreneurship financing policies⁹ (Figure 4).

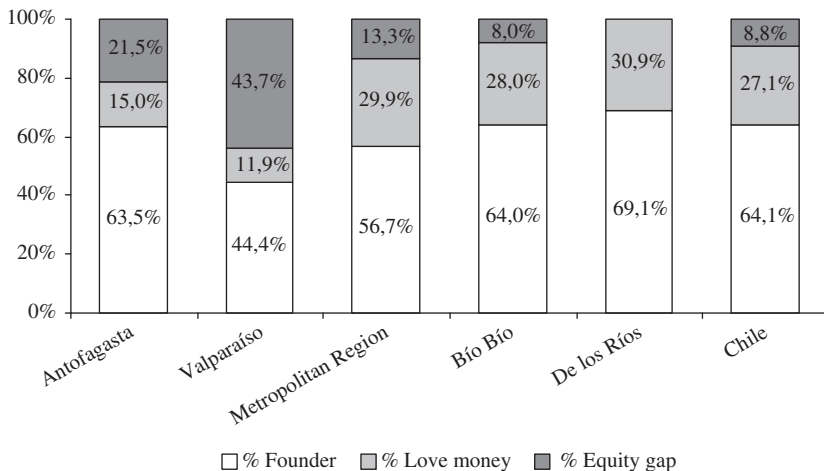
The equity gap differs significantly among the Chilean Regions. Given that representative information is not currently available for all of the regions, equity gaps have been estimated for the Metropolitan Region, Antofagasta, Valparaíso, Bío-Bío and Los Ríos where the GEM Adult Population Survey is carried out to a representative sample since 2007. This calculation is based on the assumption that informal investors mainly support others people ventures within their own geographic area. This assumption, while not always the case, is considered reasonable given the localized nature of informal investment (Mason, 2007) that is predominantly provided by the immediate family, friends and neighbors and co-workers.

Regional equity gaps range from zero in the Region De los Ríos to 43.7% in the Region of Valparaíso (Figure 4). On the one hand, the lowest equity gaps are to be found in the southern regions of the county, Bío-Bío and Los Ríos. On the other hand, the regions of Antofagasta, and especially Valparaíso, present the more significant gaps of the country, 21.5% and 43.7%, respectively. In both cases informal investment is significantly lower than in the rest of the country while Valparaíso also stands out for entrepreneurs' lack of capacity to finance their own business (Figure 4). The Metropolitan Region equity gap is slightly higher than the national average also due to entrepreneur's relatively smaller capacity to finance their business. These results may depend on several variables such as the local family structure and productive specialization, regional growth, existence of business opportunities, access to different financial sources and others. Taking into account the current scarcity of regional data, it is difficult to make sound hypothesis in this respect and further research is needed.

⁸ In this case, demand for equity is considered in gross terms since there is no available information about the investment readiness of the new ventures that are demanding funds.

⁹ According to Amorós, Aienza and Romaní (2009) in 2006 the size of the gap was 7,6%.

FIGURE 4
NATIONAL AND REGIONAL EQUITY GAPS



Source: GEM Adult Population Survey, 2007.

4. CONCLUSIONS

Financing has been one of the key concerns of public policies aimed at supporting entrepreneurship in Chile. However, according to GEM National Experts Survey, entrepreneurs’ access to equity funds has not improved over the past four years. In this respect, both formal and informal venture capital investment have been growing at a very low rate and available funding sources for nascent ventures has predominantly come from founders themselves, their relatives and friends and from public subsidies. Most public initiatives during the past decade have adopted a supply-side perspective, focused on expanding formal venture capital and, more recently, business angels. In this respect, it is not yet possible to observe the complementariness that in principle should exist between these two sources of equity funding and informal venture capital supply is still highly dependent on public support.

These results are disappointing especially taking into account that the government efforts during the past two decades have contributed, in principle, to the formation of the most favorable environment for venture capital investment in Latin America. In this respect, it is necessary to recognize that the currently existing equity gap in Chile has a significant demand-side component and that a shift in the nature of public financing policies is needed in order to increase the quality of the investment opportunities and to reduce equity aversion among entrepreneurs.

On the supply-side it is also relevant to pay more attention to the role that love money plays in the promotion of entrepreneurship. Despite the significant size of this equity source in Chile public policies in this field are almost non-existent. Public intervention in this field, however, is difficult on account of its informal

nature. However it is possible to allow tax deductions for private investment in new ventures at the time an investment is made such as it is now the case in donations to non-profit organizations (Bygrave and Hunt, 2007).

Policies promoting entrepreneurship equity funding in Chile also require an explicit geographical dimension. Due to the high degree of spatial concentration of formal and informal venture capital around the Metropolitan Region, it is not clear how other regions such as Antofagasta and Valparaíso will fill up their equity gaps. Furthermore, apparently smaller equity gaps in southern regions have to be considered with caution since these regions could be trapped in a low demand-low supply of equity funding equilibrium. The experience of regional business angel networks in the USA, Europe and other Latin American countries such as Brazil, México and Argentina, has shown that regional business incubators and technological parks can play a major role in the formation of regional networks focused on either a particular geographic area or an economic activity. In this respect, the current trend of promoting regional clusters across the country needs to be coordinated with the creation of regional financial communities.

Research on formal and, especially, informal equity funding is still incipient and very limited due to the difficulty of identifying business angels and other informal investors and to the current scarcity of systematic databases. Future research studies demand better quality statistical information in order to enable us to improve our knowledge in aspects such as the determinant of friends and family investment, the equity readiness of entrepreneurs' projects, the geographical patterns of investment and entrepreneurship in Chile and the determinants of regional equity gaps.

REFERENCES

- ACAFI (Asociación Chilena de Administradoras de Fondos de Inversión) (2008). "Estadísticas Fondos de Inversión Públicos". <http://www.acafi.com> (accessed July 2008).
- Acs, Z. J. (2006). "How is Entrepreneurship Good for Economic Growth?". *Innovations Journal*, Vol 1; 97-107.
- Acs, Z. J., and C. Armington (2006). *Entrepreneurship, Geography and American Economic Growth*. Cambridge: Cambridge University Press.
- Acs, Z. J., and D. Audretsch (2005). *Handbook of Entrepreneurship Research An Interdisciplinary Survey and Introduction*. New York: Springer.
- Amorós, J. E.; M. Atienza, and G. Romani (2009). "Financing Entrepreneurial Activity in Chile: Scale and Scope of Public Support Programs". *Venture Capital. An International Journal of Entrepreneurial Finance*. Forthcoming.
- Amorós, J. E.; M. Guerra, and J. M. Carrillo (2008). *GEM Reporte Nacional de Chile 2007*. Santiago: Ediciones Universidad del Desarrollo.
- Berger, A., and G. Udell (1998). "The Economics of Small Business Finance: The Roles of Private Equity and Debts Markets in the Financial Growth Cycle". *Journal of Banking and Finance*, Vol. 22; 613-73.
- Bygrave, W.; M. Hay; E. Ng, and P. Reynolds (2003). "Executive Forum: A Study of Informal Investing in 29 Nations Composing the Global Entrepreneurship Monitor". *Venture Capital*. Vol 5; 101-16.

- Bygrave, W., and S. Hunt (2005). *Global Entrepreneurship Monitor. 2004 Financing Report*. Wellesley-London: Babson College and London Business School.
- Bygrave, W., and S. Hunt (2007). "For Love or Money? A Study of Financial Returns on Informal Investments in Businesses Owned by Relatives, Friends and Strangers". *AGSE Entrepreneurship Research Conference*.
- Bygrave, W., and M. Quill (2007). *Global Entrepreneurship Monitor. 2006 Financing Report*. Wellesley-London: Babson College and London Business School.
- Cifuentes, R.; J. Desormeaux, and C. González (2002). "Capital Markets in Chile: From Financial Repression to Financial Deepening". *Documento de Política Económica*, N° 4. Santiago. Banco Central de Chile.
- CORFO (2008). "Fundación Copec-UC crea fondo de inversión de capital de riesgo". www.corfo.cl (accessed July, 2008).
- CVR, Center for Venture Research (2007). The angel investor market in 2006: The angel market continues steady growth. Available in the Internet: www.unh.edu/cvr
- Fritsch, M. (2006). "Does Venture Capital Really Require Spatial Proximity? An Empirical Investigation". *Discussion Papers on Entrepreneurship, Growth and Public Policy*. Max Planck Institute of Economics. Jena, Germany.
- Gompers, P., and J. Lerner (2005). "Equity Financings". In Acs and Audretsch 2005, 267-98.
- Harrison, R., and C. Mason (2000a). "Editorial: The role of the Public Sector in the development of a regional venture capital industry". *Venture Capital* Vol. 2; 243-53.
- Harrison, R., and C. Mason (2000b). "Venture Capital Market Complementarities: The Links between Business Angels and Venture Capital Funds in The UK". *Venture Capital*, Vol. 2; 223-242.
- Hernández, L., and F. Parro (2004). "Sistema Financiero y Crecimiento Económico en Chile". *Working Paper*. Santiago. Banco Central de Chile.
- LAVCA (Latin American Venture Capital Association) (2008). "2008 Scorecard on the Private Equity and Venture Capital Environment in Latin America and the Caribbean". <http://www.lavca.org> (accessed June 2008)
- Klagge, B., and R. Martin (2005). "Decentralized versus centralized financial systems: is there a case for local capital markets?" *Journal of Economic Geography* Vol. 5; 387-421.
- Madill, J.; G. Haines, and A. Riding (2005). "The Role of Angels in Technology SMEs: A Link to Venture Capital". *Venture Capital*, Vol. 7; 107-129.
- Martí, J.; L. Alemany; N. Zieling, and M. Salas de la Hera (2007). *Economic and social impact of venture capital and private equity in Spain 2007*. Madrid: ASCRI.
- Martin, R.; P. Sunley, and D. Turner (2002). "Taking risks in regions. The geographic anatomy of Europe's emerging venture capital market". *Journal of Economic Geography* Vol. 2; 121-50.
- Martin, R.; C. Berndt; B. Klagge, and P. Sunley (2005). "Spatial Proximity Effects and Regional Equity Gaps in the Venture Capital Market: Evidence from Germany and the United Kingdom". *Environment and Planning A*, Vol.37; 1207-1231.

- Mason, C., and R. Harrison (2000). "The Size of the Informal Venture Capital in the U.K: An Exploratory Study of Investors Attitudes". *Small Business Economics* Vol. 15; 137-148.
- Mason, C., and R. Harrison (2001). "Investment Readiness: A Critique of Government Proposals to Increase the Demand for Venture Capital". *Regional Studies* Vol. 35; 663-668
- Mason, C., and R. Harrison (2003). "Closing the Regional Equity Gap? A Critique of the Department of Trade and Industry's Regional Venture Capital Funds Initiative". *Regional Studies* Vol. 37; 855-868.
- Mason, C. (2006). "Informal Sources of Venture Finance". In S. Parker (ed.) *The Life Cycle of Entrepreneurial Ventures. Volume 3. International Handbook on Entrepreneurship*. New York: Springer; 259 – 299
- Mason, C. (2007). "Venture Capital: A Geographical Perspective". In *Handbook of Research on Venture Capital*. Ed. Landström, H. Chapter 3; 86-112. Boston, MA: Edward Elgar Publishing Limited.
- NVCA (National Venture Capital Association) (2007). *Venture impact. The economic importance of venture capital backed Companies to the U.S. economy*. Third Edition, Arlington,VA: NVCA.
- NVCA (National Venture Capital Association) (2008). *Yearbook 2008*. New York, Thomson Financial.
- Pollard, J. (2003). "Small Firm Finance and Economic Geography". *Journal of Economic Geography*. Vol. 3; 429-453.
- Prowse, S. (1998). "Angel Investors and the Market for Angel Investment". *Journal of Banking and Finance*. Vol. 22; 785-792.
- Romaní, G.; M. Atienza; P. Aroca (2001). "Análisis del Capital de Riesgo Regional". *Final Report*. FACEA UCN. Antofagasta: CORFO.
- Romaní, G. (2007). "Caracterización de los Fondos de Capital de Riesgo en Chile". *Final Report*. Antofagasta: Universidad Católica del Norte/ DGIP/FACEA.
- Sohl, J. (2003). The Private Equity Market in the U.S.: Lessons from Volatility. *Venture Capital*. Vol. 5; 29-46.
- Storey, D. (2005). "Entrepreneurship, Small and Medium Sized Enterprises and Public Policies". In Z. J. Acs and D. Audretch (eds.) *Handbook of Entrepreneurship Research An Interdisciplinary Survey and Introduction*. New York: Springer; 473-511.
- Szerb, L.; G. Rappai; Z. Makra, and S. Terjesen (2007). "Informal Investment in Transition Economies: Individual Characteristics and Clusters". *Small Business Economics*. Vol. 28; 257-71.
- Wetzel, W., and I. Wilson (1985). "Seed Capital Gaps: Evidence from High-Growth Ventures". In J. Hornaday, E. Shils, J.A. Timmons and K. Vesper (eds.), *Frontiers of Entrepreneurship Research*, Babson Park, Mass.: Babson College; 221-40.