AN EXPLORATORY STUDY OF ENTREPENEURIAL VENTURES IN ARGENTINA, THEIR FINANCING AND FIRST YEARS' GROWTH

N° 2012/10

September, 2012

Pasquini, Ricardo A.
Mastroscello, Laura
Valli, Fenando L.
Segovia, Rodrigo A.

LA ESTRUCTURA FINANCIERA DESDE EL COMIENZO HASTA LA NIÑEZ: UN ESTUDIO DE INICIATIVAS EMPRESARIALES EN ARGENTINA

Pasquini, Ricardo; Mastroscello, Laura; Valli, Fenando y Segovia, Rodrigo
CAF Documento de Trabajo N° 2012/10
Septiembre, 2012

RESUMEN

Este trabajo estudia a los emprendimientos en Argentina, en particular en cuanto a su estructura de financiamiento y el crecimiento en los primeros años de vida. Para ello se tomó una muestra de PYMEs de manufacturas con un promedio de 6 años de vida y un máximo de 10 años, y se entrevistó a sus socios fundadores. Los emprendedores reportaron cómo fueron financiados sus emprendimientos durante la fase de puesta en marcha y primeros años de operatoria. Se examina cómo la estructura financiera cambia en los primeros cinco años, el grado de homogeneidad de dichas estructuras entre emprendimientos, y la viabilidad de acceso a las fuentes alternativas según el reporte de los socios fundadores. El trabajo también investiga las características determinantes del crecimiento de los emprendimientos, y para ello se probó econométricamente cuáles son los efectos de ciertas características de los emprendimientos y de sus socios fundadores sobre el crecimiento del empleo – incluyendo la estructura de financiamiento inicial – tomando en cuenta también características psicológicas salientes de los socios fundadores. Entre los resultados, se encontró que las estructuras de financiamiento durante la puesta en marcha de los emprendimientos están altamente y casi exclusivamente concentradas en capital aportado por la sociedad, representando aproximadamente el 80% del total del financiamiento. Las deudas con terceros – incluyendo recursos bancarios y no bancarios – alcanzan el 10% del total del financiamiento. El capital aportado por terceros representa un porcentaje mayor del financiamiento, y efectivamente es percibido como más viable que el préstamo bancario. Pasados los primeros 5 años de operación, la estructura de financiamiento se concentra aún más en capital aportado por la sociedad y, aunque mejora la percepción de los empresarios respecto a la viabilidad de acceder a préstamos bancarios, esto no se traduce en una mayor participación del financiamiento bancario sobre el total del financiamiento. En relación con los determinantes del crecimiento, se encontró que aquellos emprendedores que también son dueños o socios de otros emprendimientos, y aquellas empresas con un mayor número de socios explican una mayor tasa de crecimiento del empleo. No se encontró ningún efecto de las variables de la estructura de financiamiento inicial en el crecimiento. En términos de características psicológicas, y salvo algunas excepciones – una evidencia débil de efectos negativos de la aversión al riesgo y efectos positivos para la característica de autoeficacia –, los factores que en la literatura parecen explicar la decisión ocupacional del cuentapropismo no son corroborados aquí como determinantes del crecimiento.

Palabras clave: Finanzas de los Emprendedores, Acceso al Financiamiento, PYMES, Restricciones de Crédito.

AN EXPLORATORY STUDY OF ENTREPERNURIAL VENTURES IN ARGENTINA,
THEIR FINANCING AND FIRST YEAR´S GROWTH
Pasquini, Ricardo; Mastroscello, Laura; Valli, Fenando y Segovia, Rodrigo
CAF Working paper N° 2012/10
September, 2012

ABSTRACT

This is a study of entrepreneurial ventures in Argentina, in particular regarding their finance and growth in their early years. We sample young manufacturing SMEs (i.e., with an average of six years and a maximum of ten years old), and interview their founding partners. The entrepreneurs reported on how their ventures were financed during the startup and subsequent years of operations. We first examine the financing structure, how it changed in the first five years, the degree of similarity of financing structures across ventures, and the feasibility of access to alternative sources as reported by the founding partners. We then focus on the determinants of venture's growth, and for this purpose we econometrically test the effects on employment growth of several characteristics of the venture -including the startup financing structure- and of their founding partners, notably including a set of psychological traits. We find that financing structures at startup are highly and near exclusively concentrated on owners' equity, accounting for approximately 80% of total financing. Outsiders' debt -including bank and non-bank sources- reach 10% of total financing. Outsiders' equity accounts for a higher percentage and is actually perceived as more feasible than bank lending. After the first five years of operations, the financing structure concentrates even more in owners´ equity and, although there is an improvement in the perceived feasibility of access to bank lending as reported by entrepreneurs, this is not translated into a higher participation in bank financing as percentage of total financing. In relation to growth results, we find some evidence that those entrepreneurs that also own or partner in other businesses, and those firms with a higher number of partners explain a higher employment growth rate. No effects are found for initial financing structure variables. In terms of psychological traits, and with some exceptions –a weak evidence on negative effects of risk aversion and positive effects for the Self-Efficacy Trait- we find that the factors that in the literature are seen to explain entrepreneurial career choice are not corroborated here as determinants of growth.

Key Words: Entrepreneurship Finance, Access to Financing, SMEs, Credit Constraints.

Ricardo Pasquini	Laura Mastroscello	Fernando L. Valli	Rodrigo A. Segovia
IAE Business School	Fundación Observatorio PYME	Fundación Observatorio PYME	Fundación Observatorio PYME
rpasquini@gmail.com	lau.mastroscello@gmail.com	fernandoluis.valli@gmail.com	rodaleseg@yahoo.com.ar

An Exploratory Study of Entrepreneurial Ventures in Argentina, their Financing and First Years´ Growth

Ricardo A. Pasquini[1]
Laura Mastroscello
Fernando L. Valli
Rodrigo A. Segovia

This version: September 2012

Abstract

This is a study of entrepreneurial ventures in Argentina, in particular regarding their finance and growth in their early years. We sample young manufacturing SMEs (i.e., with an average of six years and a maximum of ten years old), and interview their founding partners. The entrepreneurs reported on how their ventures were financed during the startup and subsequent years of operations. We first examine the financing structure, how it changed in the first five years, the degree of similarity of financing structures across ventures, and the feasibility of access to alternative sources as reported by the founding partners. We then focus on the determinants of venture's growth, and for this purpose we econometrically test the effects on employment growth of several characteristics of the venture -including the startup financing structure- and of their founding partners, notably including a set of psychological traits. We find that financing structures at startup are highly and near exclusively concentrated on owners' equity, accounting for approximately 80% of total financing. Outsiders' debt -including bank and non-bank sources- reach 10% of total financing. Outsiders' equity accounts for a higher percentage and is actually perceived as more feasible than bank lending. After the first five years of operations, the financing structure concentrates even more in owners´ equity and, although there is an improvement in the perceived feasibility of access to bank lending as reported by entrepreneurs, this is not translated into a higher participation in bank financing as percentage of total financing. In relation to growth results, we find some evidence that those entrepreneurs that also own or partner in other businesses, and those firms with a higher number of partners explain a higher employment growth rate. No effects are found for initial financing structure variables. In terms of psychological traits, and with some exceptions –a weak evidence on negative effects of risk aversion and positive effects for the Self-Efficacy Trait- we find that the factors that in the literature are seen to explain entrepreneurial career choice are not corroborated here as determinants of growth.

Key Words: Entrepreneurship Finance, Access to Financing, SMEs, Credit Constraints, Psychological Entrepreneurial Traits.

Contents

I.   Introduction

Entrepreneurial ventures are an important engine for the economic development of countries. But not all entrepreneurial ventures translate themselves into significant increases in employment or achieve successful innovations. A great number of ventures do not even survive the first years. For example, recent evidence for survival rates of entrepreneurial firms in developed countries show that only 71% of the firms (OECD countries average) reach the second year of age and only 64% reach the third year (OECD, 2011)[2]. Another evidence for the United States shows about half of the entrepreneurs failing in the first five years (Shane, 2008). Without much questioning one could argue that these high levels of mortality are part of the risky nature of entrepreneurship. Nevertheless, it seems vital to increase our understanding on the factors determining ventures´ growth and the survival of entrepreneurial firms.

Moreover, a second source of concern has been mentioned, which seems to be especially prevalent for firms and managers in developing countries such as those in Latin America (LATAM). Entrepreneurship in these countries seems to be plagued by projects that merely subsist, in contrast to exploiting their full potential. The entrepreneurship literature has distinguished between "transformative" projects - which have the potential to become in the future productive and large firms- from those "subsistence" projects – which merely subsist- (Schoar, 2010)[3]. This literature also stresses that subsistence projects generally do not become transformative ones, and that in developing countries such as those in LATAM, the share of entrepreneurial projects is far below transformative ones. Are entrepreneurial projects' managers pursuing strategies that lead them to remain in the mere subsistence? Is this a result of entrepreneurs' motivations or lack of development opportunities?

A third observation on entrepreneurship in emerging markets is related with the problem faced by entrepreneurial managers in terms of access to finance. Indeed, a well-known phenomenon is that enterprises –particularly small and medium sized- claim facing serious difficulties in their access to external financing. Indeed, the availability of sources of external financing -measured in terms of the deepness of financial intermediation- has been shown to potentiate economic growth in numerous studies[4]. However, these institutions seem not to be available in these markets. As an approach in order to assess the magnitude of the problem, we can compare a proxy of the size of the financial system across countries, given by the total financial intermediaries´ deepness[5] as reported by the Financial Structure Database (Demirgüç-Kunt & Beck, 2009). Figure I and II[6] show that LATAM countries –though this is less severe in the cases of Chile and Brazil- lag behind developed countries such as United States and the United Kingdom in their level of development

---

[2] Only considering firms in the manufacturing sector. For comparative purposes the countries included where: Austria, Estonia, Finland, Hungary, Israel, Italy, Lithuania, Luxembourg, Netherlands, New Zealand, Romania, Slovak Republic, and Spain. There are significant differences across countries and sectors.

[3] The concept is closely related with the differentiation of motives behind entrepreneurship proposed by the Global Entrepreneurship Monitor (De Torres Carbonell, 2010; Kelley, Singer, & Herrington, 2011). "Necessity" motives -pushed into starting businesses out of necessity because they have no other work options and need a source of income- are different from "opportunity" motives - where people with opportunity motives also seek to improve their incomes or independence in their work-.

[4] Demirguc-Kunt & Levine, (2001) reviews this literature.

[5] This measure of financial intermediaries deepness is proxied by the sum of: private credit by banks, the capitalization of private and public bonds and stock market capitalization as percentage of GDP.

[6] Included in the appendix.

of financial markets. In the particular case of Argentina, which is the case of study in this paper, the depth of the financial system is even lower than that of most of the other countries in the region.

Figure I: Financing Sources as % of GDP (2009). Selected Countries
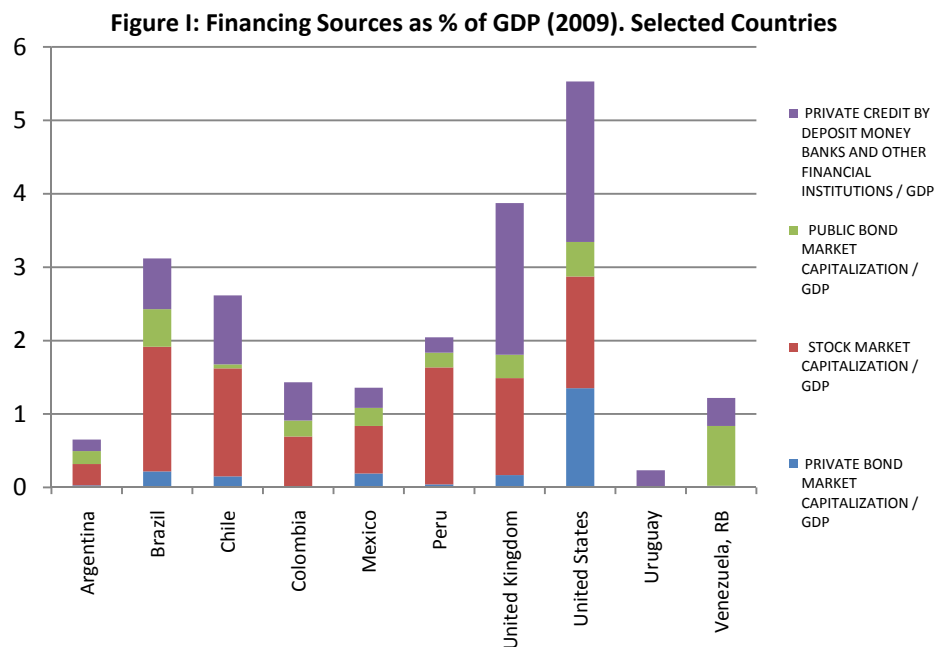
Source: Financial Structure Database, World Bank. Beck and Demirgüç-Kunt (2009)

In this scenario of scarce aggregate supply of funding, entrepreneurs in emerging markets –in particular LATAM- are expected to have fewer opportunities to access external funding for gestation, startup and development of early years of the ventures. We should be able to observe the consequences of this phenomenon in the financial structure of ventures (i.e., composition and depth of ventures' financing sources). Available evidence on how entrepreneurial firms finance themselves is scarce because of lack of information sources. The following questions seem to remain without empirical support: How do entrepreneurial firms (in their very early stages) finance themselves in LATAM? Does the financing structure change as firms grow in their first years? How feasible is the access to the alternative sources as reported by partners? How much are they constrained?

The first objective of this research is then to provide evidence on the financing structure of entrepreneurial ventures during their first years. In this case, we present the case of SME ventures in Argentina.[7] With that purpose we survey a sample of these ventures their early years -with less than 10 years and an average of 6 years- and ask their founding partners on their startup and subsequent financing. We focus on small (i.e., at least 1 employee) and industrial-activity registered businesses, therefore leaving aside micro-survival entrepreneur projects (i.e., the typical clients of micro-lending organizations).

---

[7] We focus on entrepreneurial firms (or ventures) in the sense that they have raised the necessary financing, and took all the steps into generating a new organization.The appropriate definition of an entrepreneurial firm has been debated in the economic literature (See for instance, the early contributions of Carland et al, 1988; 1984; and Gartner, 1988).

In order to address the mentioned concern on the growth of ventures, the second objective is to provide preliminary analysis on the factors determining first year's ventures growth. In this case we will focus on the ability of ventures to increase employment so we will estimate an econometric model of the growth rate of employment. In particular, we test for the effects of the startup financing structure on later growth, and also examine other relevant variables such as founding partners' characteristics including psychometric variables.

Our results show that the financing structure of startups in Argentina is highly and nearly exclusively concentrated on owners' equity, accounting for nearly 78% of total financing. Outsiders' debt, including bank and non-bank sources, reach 10% of total financing. This financing pattern differs severely from what is found for comparable evidence for the US, where owner's equity accounts for a remarkably lower percentage of total financing (40% on average) and outsiders' debt climbs up to 40% of total financing (Robb & Robinson, 2010).

The results on the ventures' growth show few variables with significant explanatory effect. The startup financing structure, in particular, seems not to account explanation for the growth rate of survivors of the first five years of operations. Other characteristics of ventures and their founding partners such as the founder´s education and years of experience in the sector, the number of hours devoted to work in the venture, and the previous ownership of other businesses, show no econometric relationship. The exceptions are the variables indicating those entrepreneurs which also own others firms, and the numbers of partners, which both do show positive effects on employment growth. Finally in terms of psychometric characteristics, we find some –though still statistically weak- evidence that risk aversion (the second proxy we use) might have a negative effect on ventures growth, that the self-efficacy trait has a positive effect, and that a conservative time preference (delayed decision making) has a negative effect.

The paper is organized as follows: In Section II we review the theoretical framework that is present in the most well-known entrepreneurial financing literature. Section III presents the methodology, including the characteristics of the survey and our tests of changes in the financing structure of ventures. We also compare the degree of homogeneity of these structures among ventures, and examine the subjective evaluations of founding partners regarding the feasibility of access to financing. Finally, the section presents the econometric methodology for the model of employment growth. In particular it includes a brief description of the psychometric variables that we use to analyze the psychological traits of entrepreneurs. Section IV presents the results and conclusions follow.

II.   Entrepreneurial Financing Theoretical Framework

Once we have moved away from a world of perfect capital markets, complete information and no-taxes, mainstream finance theory[8] predicts that there will be a preference for certain financing sources of finance -a "pecking order" (Myers, 1984) or "financing hierarchy"[9] When firms and potential investors have asymmetric information about firms' prospects, for example, it is possible that some sources of external finance might have higher costs or even be completely unavailable to certain categories of firms. Myers & Majluf, (1984) and Greenwald, Stiglitz, & Weiss, (1984) explain why asymmetric information either eliminates any reliance on external equity finance in the market or causes suppliers of new equity to demand a large premium.

Information asymmetries are expected to be more pronounced for small sized firms (e.g. firms with lower availability of fixed assets to be used as collateral, or firms less known and with less connections with bank managers), and especially strict for new ventures. The theory therefore predicts that entrepreneurial ventures will face higher costs to external financing.

The entrepreneurship finance literature, as it is present in some of the main textbooks (e.g.,(Leach & Melicher, 2012); Smith, Smith and Bliss, 2011), recognizes that there are differences in the feasibility of accessing to financing sources as a firm matures, as it is shown, for example, in Figure III.

The theory recognizes that in the first years, the own entrepreneur, their friends or their relatives -also known as *bootstrap sources of financing*- are the prime source of financing; also that the composition is expected to change as the firm matures. Bootstrap financing (self, friends and family) does not depend on investors' assessment of the merits of the opportunity or the assets of the venture (Smith, Smith, & Bliss, 2011). Interestingly the model implicitly proposes a hierarchy of financing preferences. It assumes, for example, that angel investors and venture capital play a role in the R&D and startup financing stage. It also suggests, although without an explicit description of the relative importance, that commercial bank lending plays a distinctive role in those ventures that follow a rapid growth strategy. Other sources such as factoring and franchising are also proposed as options for entrepreneurial ventures financing.

---

[8] More precisely, information asymmetry models can be considered within economics' contract theory. In particular, the decisions of agents in transactions when one part has more or better information than the other are examined. Examples of asymmetric information problems are *adverse selection* and *moral hazard*. (Mas-Colell, Whinston, & Green, 1995)

[9] Under perfect capital markets and no taxes, there is no cost differential between internal and external finance.

<<

Figure III: Sources of new ventures financing: black shading indicates primary focus, and grey shading indicates secondary focus, or focus of a subset of investors. (Smith, Smith and Bliss, 2011)

	R&D	Startup	Slow growth	Rapid growth	Exit
Entrepreneur	■	▨			
Friends and Family	■	■			
Angel investors	■	■	▨	▨	▨
Corporate strategic partner	■	■	■	■	
Venture capital	▨	■	■	■	
Asset-based lender		■	■	■	
Venture leasing		■	■	■	
Government programs		▨	■	■	
Trade credit/ vendor financing		■	■	■	
Factoring			■	■	
Franchising			■	■	
Commercial bank lending			■	■	
Mezzanine lender				■	■
Public debt					■
IPO					■
Acquisition					■
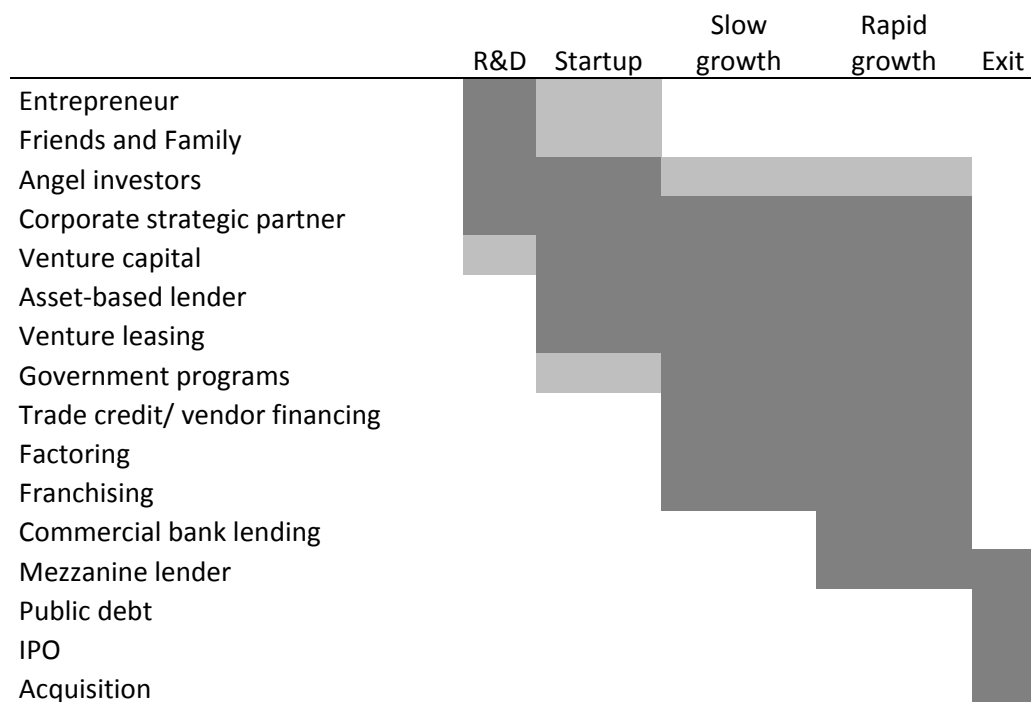
Once the feasibility of alternative financing sources is assumed, the literature recognizes that there will be a decision by the entrepreneur in choosing the desired financial structure, and that this decision will be made on the basis of the nature of the project and the growth strategies to be pursued. "The suitability of each source of financing depends on several factors, including, for example, the type of venture (expected growth, riskiness, etc.), extent of financial need, and duration of the need" (Smith, Smith and Bliss, 2011)

On the basis of these arguments, we can conclude that the mainstream entrepreneurial finance theory proposes a financial hierarchy between sources on the basis of information problems. It implicitly assumes the availability of certain financial intermediaries. In other words the theory does not take into account the differential existence of financial intermediaries in different markets. This fact suggests that the theory might not hold in the context of emerging markets.

Financing effects on management strategies

An emerging literature is pointing towards the characteristics of the financing available to entrepreneurs and how these (e.g., financing composition including capital contributions from partners or loans, flexibility, immediateness or grace period in the repayment obligations) might have an effect on the behavior of entrepreneurs.

For example, Field, et al (2011), examine the repayment obligations of the classic microfinance contracts, in particular in relation to their repayments mechanisms. They find that softening the requirement of begin payments immediately after loan disbursement can stimulate

entrepreneurship, by making high-return investments less risky. Although this finding cannot be extrapolated to larger business ventures, it suggests that managers decisions are affected by the characteristics of their financing (and therefore the observed dispersion of returns), and it is therefore desirable to better understand not only the access of financing but also the access conditions.

Entrepreneurs seem also prone to the use of non-financial sources, especially suppliers' credit, but also reduce their capital requirements through the purchase of used equipment or minimization of current expenditure. This confirms the important role of entrepreneurial behavior designed to minimize financial needs (bootstrapping), highlighted by the International evidence (Winborg, 1997)

III.   Methodology

i.   Survey

Our data collection comes from a specific survey that was designed and targeted to business with less than 10 years of age. The survey was targeted to Argentinean manufacturing small and medium enterprises (SMEs) of 10 or less years of age (that is, founded since 2002), and designed to be conducted by telephone. The initial sample, comprised of 200 firms, was drawn from the population of firms comprised in the database of Fundación Observatorio PyME[10], and with the condition that the firm should have surveyed at least once in the period 2004-2011 (by its national or regional surveys). The condition of having surveyed this firms at least once was imposed in order to guarantee the access to complementary data.

Because of a low representation of very young firms in the Observatorio's survey, all firms in the records with 0 to 5 years of existence were included in the sample (83 firms). There are no priori-reasons to think that this sample has differential characteristics. A sample of 117 firms was drawn for the firms between 6 to 10 years of existence. This subsample has been stratified by activity sector (by ISIC Rev 3.1. classification) and, because of sample size concerns, focused only in four sectors –therefore guaranteeing a better statistical representation- plus a fifth sector which random samples all the remaining sectors.

Table I describes the strata and the results. Firms in the 0-5 year's category had a response rate of 79.5%, but this was compensated with a greater response rate, than the pre-established in the sample design, in the 6-10 years category, obtaining a total response of 209 firms -slightly greater than the original sample size of 200 firms. Each of the strata displays a final total response rate that is slightly higher than the one that has been originally were planned.

The telephone survey was conducted between May 16th and June 18th, 2012. The survey has 19 questions classified in three sections: a) respondent characteristics, b) financing structure, and c) personality of the entrepreneur.

---

[10] The Fundación Observatorio PyME is a is a nonprofit organization, and Its mission is to promote cultural enhancement of the role of small and medium enterprises in society, applied microeconomic research and public policy development support, mainly trough the production of statistic data on SMEs through surveys (www.observatoriopyme.org.ar)

ii.   Ventures´ financing structure and first five years changes

Next, our objective of analysis is to provide insights on the following questions: How do entrepreneurial firms finance themselves in their conception years? How much of each financing source is used? How (in which directions) and how much does the financing structure change in the first five years?

The survey asked respondents to classify their sources of financing and report the percentage of each source of total financing according to six categories: i) Owner Equity (from the founder or co-founders); ii) Insider Equity (i.e., from nearby people such as wife / husband / partner, parents, relatives); iii) Outsider Equity (Including third parties such as other informal investors, companies, government, non-repayable grants, venture capital or venture capitalists, others); iv) Insider Debt (e.g., Loan requested on behalf of the owner or the company to family, nearby people, or to the owners themselves); v) Outsider Bank Debt (including respondent's credit card, or other owners, bank loan request on behalf of the owner or the company, line of credit); vi) Outsider Non-bank Debt (including non-bank loan taken by the company with the government, loan from non-bank financial institutions, other loans). The number of categories was chosen in order to ease the survey implementation.

Importantly, the survey retrospectively asked for the structure of financing existent at the moment of startup, at the fifth year of life (in case it had at least five years of age), and at the present time. We analyze changes by testing the differences of the percentages reported for the startup and the fifth year financing structure. A similar test is provided comparing the start-up financing with the current-date financing of firms with more than 5 years of age[11].

We additionally incorporate economic sectors and cohort variables as controls. The purpose here is to clean the analysis out from possible sector level and time-related macroeconomic effects. For this purpose we estimate an econometric model as the following:

$$FS_{i,t}^s = \gamma^s + \lambda_t + \beta_j + \delta_c + \varepsilon_{i,t} \tag{1}$$

Where the dependent variable is the percentage of total financing that is financed from source s ($FS_{i,t}^s$) and s stands for each of the six sources that have been mentioned above. γ^s is the constant term, which is expected to capture the average level of financing for each source s. λ_t, β_j and δ_c are fixed effects for the period under consideration (start-up, 5th year or current year), the sector, and the age cohort respectively. Each sector dummy takes the value of 1 for the specific sector and 0 otherwise, and the fifth stratum -which samples different sectors as explained above- is used as the baseline.

---

[11] These tests differ from a standard panel data analysis in the sense that all the information was gathered at one moment in time. For the purpose of the estimation an initial cross-section database is reshaped to panel structure in order to display the retrospective information in three time periods. The total number of observation reported in the tables will therefore reflect the fact that for each firm there are 3 observations.

iii. Homogeneity of financing structures

We are also interested in how much financing structures resemble between firms, and if there is increasing resemblance in the financing structures as ventures mature. The question seems particularly relevant, for example, in light of theories arguing that firms will imitate others in the presence of uncertainty. We can obtain insights to this question by observing the degree of homogeneity/heterogeneity of financing sources across firms. In order to empirically evaluate the changes in the degree of homogeneity/heterogeneity, we also present comparisons of the variance of financing sources using a variance ratio test.

iv. Reported degree of feasibility of access to financing sources

A third issue is related with the feasibility of access to the different financing sources. In order to understand the actual structure of financing a significant issue is whether the structure is the reflection of the severity in access as might result because of credit rationing, from the actual preference of individuals. We would like to know if there is a subjective ordering in the degree of feasibility of access to financial sources, and if this ordering changes. In order to pose light on this issue we asked respondents to provide subjective evaluations. The survey asked founding partners to evaluate the degree of feasibility of access from 1 to 5. We provide tests and econometric estimations of these evaluations in order to examine if these have changed during the first five years.

v. Explaining ventures' performance

One important objective of analysis is the performance of ventures. Because of data limitations, in this case we will restrict our analysis of performance to the analysis of ventures growth. In particular, we are interested in the effects of financial availability, but we will also be able to tests additional factors such as psychological traits of entrepreneurs and other characteristics. We also explore the effects of these factors in two additional dependent variables: startup size, and export condition.

We follow the discussion of growth determinants in Parker (2004) and take Gilbrat's Law as a basis for an econometric specification of the growth equation. If we denote q_{it} as a measure of size of venture i at time t -we use the total number of employees-, then a baseline lognormal specification is:

$$\ln q_{it+1} = \beta + \ln q_{it} + u_{it}$$

A more general specification is:

$$\ln q_{it+1} - \ln q_{it} = \beta + \gamma_1 \ln q_{it} + \gamma_2 [\ln q_{it}]^2 + u_{it}$$

In these equations, β -the constant term- is expected to capture the average (exponential) growth rate. The advantage of the last specification is that allows testing a regression to the mean in venture's size (i.e., whenever $\gamma_1 < 1$).

Our retrospective data allows the estimation of two related specifications:

$$\frac{\ln q_{i5} - \ln q_{i1}}{4} = \beta + \gamma_1 \ln q_{i1} + \gamma_2 [\ln q_{i1}]^2 + \delta_c + \eta' FS + \theta' X + \vartheta' PSI + u_i \tag{2}$$

$$\frac{\mathrm{Ln}\, q_{it} - \ln q_{i1}}{(t-1)} = \beta + \gamma_1 \ln q_{i1} + \gamma_2 [\ln q_{i1}]^2 + \gamma_3 \ln a_i + \gamma_4 [\ln a_i]^2$$
$$+ \delta_c + \eta' FS + \theta' X + \vartheta' PSI + u_i \tag{3}$$

In Equation 2 we examine growth rates during the first five years of venture's life. In Equation 3 we examine growth rates between the period 1 (start-up) and period t (survey date). In these specifications we allow for size and age regression to mean. As before, δ_c controls for the age-cohort. Both equations add variables that are of special interest for our research, in particular variables that will allow testing the effects of the start-up financial structure on growth. In order to examine these effects we additionally incorporate a vector of financial structure explanatory variables (FS). In this case we use the financing percentages that have been previously examined as well as dummy variables signalling if ventures report a positive financing from each source have been added.

Also we include a set of explanatory variables that account for characteristics of the founding partners (X), and a set of indicators of psychological traits (*PSI*, discussed in the next subsection). The founding partner's characteristics include: i) the age of the founding partner, ii) his years of experience in the sector, iii) the number of partners, iv) the condition of owner or partner of other firms, v) the number of hours of work devoted to the venture, and vi) dummy variables accounting for the partner´s level of education. Summary statistics of all the explanatory variables are available in Table III and discussed in the Results Section.

We also explore the effects of the financing structure, and the mentioned characteristics on startup size (the number of employees at startup) and the export condition (whether the firm exports a positive amount of sales). For the exports data we use the survey results of the Observatorio Pyme's National and Regional surveys and match those with our specific survey. Precisely, the variable measures whether has exported a positive amount of sales in the year of the survey and in the immediate previous year. Our model is therefore aimed to identify if startup characteristics have results into later (not necessarily immediate) exports.

vi.   **Psychological Traits**

As reviewed for example in Parker (2004), there is a vast literature exploring the personality characteristics of entrepreneurs, this is, the existence of psychological *traits* that might explain the decision of an individual to become an entrepreneur. The literature is less comprehensive on the study of the characteristics required to succeed as an entrepreneur. Indeed, the characteristics to start a business may not be the same as those needed to succeed in it over time (Acharya, Rajan, & Schoar, n.d.). We will explore this relationship by incorporating psychological metrics as

explanatory variables into the venture´s growth model (see the previous sub-section on this model).

The psychological traits we examine are quite standard in the entrepreneurial psychology literature, and in order to construct the metrics we use a set of –also standard- questions in that were administered as part of the survey to the founding partners of the ventures.

Following is a brief description of the psychological traits that are most commonly explored in the literature and on the basis of which survey questions have been designed:

- *Need of Achievement (NACH):* It refers to a typical attitude of entrepreneurs that shows the need to succeed. Achievement-motivated individuals set achievable goals that they can reach with effort.

- *Internal Locus (LOCUS):* This trait refers to the entrepreneurs' belief that the source of their performance is their own actions, rather than external factors affecting lesser extent. People that believe they control their destiny have an "internal locus of control". This kind of people is most likely to take initiative and be independent, qualities related to entrepreneurs.

- *Love of Independence (INDEP):* It is considered a distinct psychological characteristic of entrepreneurs, preferring to be self-employed than employees, yet earning less or working more hours. This means that entrepreneurs enjoy independence even having to give up certain advantages of being employed. Sometimes this can also result in entrepreneurs to have more stress than employees.

- *Meta-Cognitive Activity (MC):* This trait is the entrepreneur's ability of thinking and learning by progress. It involves monitoring and evaluating the tasks and strategies of the business from a critical standpoint, and to be able to make changes if it finds that is not doing so well.

- *Need of Dominance (ND):* Involves the individual's need to have control or power over other people or things. The need of dominance is related to entrepreneurs, who control their own work, while employees respond to a boss or superior. This is why people who can't tolerate being controlled by others tend to be self-employed.

- *Passion of Work (PW):* This variable involves the self-motivation to work for the satisfaction of achieve goals constantly, leading to an insatiable need to reach excellence. This quality is very important among entrepreneurs, as they must constantly develop new strategies to expand the business, which can't be sustained over time if they do not enjoy their work.

- *Self-Efficacy (SE)*: This feature is related to the assurance of having the necessary skills to achieve a certain level of desired performance. This characterizes entrepreneurs, who accept the challenge of starting their own business considering that they are capable of success in it.

- *Risk Aversion (RA):* There is notion that entrepreneurs are less risk averse, since starting a business from scratch involves taking the risk of failure. However, it is less clear that business success is associated with risk tolerance. This quality may be reversed after the start-up business, as very risky decision-making in the business could lead to failure.

- *Time Preference (TP):* It is related to the notion of the need for entrepreneurs to be more patient than other people, and making decisions only after they have taken all the necessary considerations before.

Table II (in the Appendix) shows the questions that were used to construct each indicator. As all questions have the same 1-5 scales, we average construct the indicator by simple averages[12].

---

[12] An alternative in order to aggregate questions would have been to average the standardized values of each variable. Table IV shows that the correlations between the simple average indicators and the standardized versions are close to one, therefore in this case no differences are expected if using the alternative standardized indicators instead of the simple average versions.

IV.   Results

i.   Respondent´s descriptive statistics

Table III shows a set of descriptive summary statistics that illustrate the main characteristics of the ventures in our sample.
According to the specific features of the sample, the average age of the firms is nearly seven years old. As result of the sample design, all firms have less than ten years of existence. At the time of their foundation these ventures had on average about 11 employees, and at their fifth year they increased the average to nearly 17 employees.
The results of the survey indicate that ventures are led by two partners on average, and the average age of the responding founding partners is near 48 years old - ages ranging from 23 to 80 years-.
Regarding the level of education, 84% completed secondary education, 49% completed some tertiary level education and one third completed the university. The entrepreneur partners show a full-time dedication to their businesses, as they work on average about 45 hours a week in the company, i.e. around 9 hours a day. The majority only owned the venture which is studied in this survey (i.e., only 12% of the respondents also own or are themselves partners of other firms or businesses).

The founding partners of these ventures have on average 20 years of accumulated experience in the same business sector, which is nearly three times the average years old of the ventures in the sample –which is seven years-. This suggests that prior to the founding of these young firms, the partners have already made experience in the activity, and as we show below, they have benefited from it to start their own businesses.
In relation to the origin of the venture, 45 percent of the founding partners started their own business from scratch. Another 32% took leadership of a family business already in operation. Only 19% of the entrepreneurs said that they had owned another company prior to become partners of their current business, which point out that previous experience in the field of activity was not acquired through their own company, but working in other businesses that were not owned.

ii.   Ventures' financing structure and first five years changes

Table V shows financing structure of the ventures at the start of their operations, and compares it with the structure at the fifth year. Recall both figures were estimated by respondents and are mostly retrospective. The table presents the figures for all respondent firms (bottom panel) as well as restricted only to firms that have reached the fifth year (upper panel) in order to identify possible survival biases in the comparison.

Results indicate that the main and leading source of finance at the time of their founding is their own equity (i.e., equity provided by the own founder or their co-founders). On average, the 78% of the founding required in the gestation period until the startup operations of the firms comes from the owner equity of the founder or founding partners. In second place, 6.4% of the initial financing is explained by insider equity (i.e., from nearby people such as wife / husband / partner, parents, relatives) showing no substantial difference versus the share of the outsider

equity (Including third parties such as other informal investors, companies, government, non-repayable grants, venture capital or venture capitalists, and others) which accounts for 6%; or versus the (outsider) bank debt (including respondent's credit card, or other owners, bank loan request on behalf of the owner or the company, line of credit) representing another 6% of the total financial structure.

If we restrict the comparison to ventures that have reached their fifth year of life, we can see that owner equity still remains the primary source of founding (75,6% at the start-up), and increases its share even more after the first five years of operatios (85% on average). The statistical test suggests that this increase is statistically significant at 0,1% confidence level. The counterpart of this increase is twofold: on one side the equity that is invested by insiders diminishes in percentage terms from 7 to 2 percent; and the equity invested by outsiders also losses relative importance –from 6.3 to 2.7 percent. The other sources that were examined present no changes between periods, which suggest no increased access to debt financing after the first five years.

If we would have considered all ventures at their startup –instead of only those that have reached the fifth year- the percentage found for owner equity participation would have been just slightly higher (78%) -than the 76% for the restricted the sample- . If any, there might be a slighter less percentage of owner equity among survivors.

On the other hand, as we have said, total debt (including from insiders, plus banks and non-banks) taken by the ventures is marginal in their financial structure, accounting by approximately 11% of total funding at the time of the startup, and no significant changes appear after these years.

Econometric Results

In order to further analyze the first years' changes in the financial structure; we estimate an econometric model for each funding source, where we control for sectorial and cohort effects that might affect the finance structure over time. In other words, the model controls for possible effects arising from the activity sector, and any macroeconomic effects that might drive financing structure changes.

Results are displayed in Table VI. Notice that since we are working with a pool of observations and three time periods (startup, fifth year, and current year), the total number of observations in the regression represents the number of ventures that have reached five years old exactly (20) times two periods (i.e., startup and fifth year) plus the number of ventures that have reached more than 5 years old (143) multiplied by three time periods (i.e., startup, fifth year and current period). The results therefore eliminate any survival bias by excluding those firms with age less than five years old.

The results corroborate that the average percentage of total financing structure from owner's equity (first column) increases in the first five years. As displayed by the fifth year dummy coefficient, the results indicates an increase of approximately 10 percentage points (pp.) between the time of startup (baseline) and the fifth year of existence. We can also corroborate that the counterpart of this increase is driven by reductions in outsiders and insiders equity participation. On one side, the share of insider equity (second column) decreases on average by 5.2 pp. during the first five years of life of the firms. While in the same span decreases by a similar proportion (4.1 pp.) the percentage of the finance structure corresponding to outsider equity (third column).

Notably no changes in the percentages of debt sources are found for the first five years. In particular, it is interesting to note that external sources of debt (bank and non-bank) do not become more important as ventures overcome the first years.

The coefficients for the dummy "current year" show the estimations of changes in the financial structure from startup until the response year which in this case comprises firms between six and ten years old. Therefore the coefficient signals the change of the financial structure between the startup and an average between the 6th and 10th year. The pattern found for the fifth year seems to reinforce as firms continue to grow up: The percentage of owner equity increases by 12 pp. between startup and the current year, with a counterpart given by a reduction in the participation of insider and outsiders' equity by 6 and 5 pp. each. Once again, no changes are found for the other sources.

Finally, sectorial and cohort effects have been found non-significant in most cases, with some exceptions: Textiles and clothing sector display an average of 5% more participation of outsider equity, and those ventures born in the years 2002-2003 present higher participation of bank debt.

Comparing the results with USA's Kauffman Firm Survey

In what is probably the only source of financial structure of entrepreneur's information of its type, the Kauffman Foundation has collected a sample of more than 3,000 firms from the USA that started their activities in 2004. Robb & Robinson (2010) reports the characteristics of the financial structure of these firms.

Notably, in their analysis they conclude that: "Contrary to many accounts of startup activity, the firms in our data rely heavily on external debt sources, such as bank financing, and less heavily on friends and family-based funding sources" (Robb & Robinson, 2010). Moreover they state that "If we interpret the magnitudes as an indication of relative importance, then we see a clear pecking order emerge: first outside debt, then owner equity, then debt from insiders. Fourth in the pecking order is outside equity, followed by owner debt; the least used source is insider equity."

This pattern seems remarkably different in Argentina. Table VII compares the startup financing structure across both studies. Even when considering the differences in the methodologies that were employed in each case, the results still show deep differences: the importance of owners' equity (78%) in our sample more than doubles the percentage found for US firms (35%). The counterpart is the remarkably low percentages of debt. While our sample reports that owner + outsider debt constitutes only 8.4% of total financing; in the US this figure climbs up to 44%. These are remarkably different figures.

Insider equity is slightly higher in the case of our sample (6.4% in our sample against 2% in the Kauffman case), and outsider equity is -although comparable in magnitude- lower with nearly 6% in our sample and 9% in the USA.

iii. Degree of Homogeneity/Heterogeneity of Financing Structures and Changes at the Fifth Year

We now measure the changes in the degree of homogeneity of financing structures across ventures by focusing on the variance of financing structures percentages and testing the changes in time.

Table VIII presents the results. As before, the upper panel shows the results when excluding from the sample those firms that have not reached their fifth year in order to avoid any survival bias. The lower panel includes all firms for the purpose of comparison. The variance ratio tests indicate that between startup and the fifth year of operations the financing structure becomes more homogeneous across firms. This is because the variance of most percentages of financing is smaller after the first five years of operation.

Most sources reduce their variability among firms: The share of the main source of financing, the owner equity, reduces its' variability. As we saw above it also increases it percentage in relation to the total of the funding, suggesting that over time funding is further concentrated in owners' capital.

The insider and outsider equity and insiders' debt also reduce their variability in time. The only exception is the debt from outsiders' sources, which maintain in the fifth year a degree of variability among firms that is comparable from the startup level.

iv. Reported degree of feasibility of access to financing sources

Table IX shows the results on the evaluation of the feasibility of access to the alternative sources of financing that we consider. In this case recall that the survey asked founding partners to evaluate the degree of feasibility and these answers were translated into number grading from 1 to 5,-being a value of 1 the highest difficulty and 5 completely feasible-

Table IX shows an implicit ordering in the degree of difficulty of access to the alternative sources: Owners equity is qualified as being the most feasible source with an average value of 3 points in the 1-5 scale (bottom panel including all ventures). The sources of insiders funding including both equity and debt appear in a second place, with similar figures of 2.7 and 2.6 each. Bank financing is evaluated as having a similar degree of feasibility with 2.6. Non-bank financing sources obtain an average evaluation of 2.5 and finally outsiders' equity is the source evaluated as relatively with most difficult access with a value of 2.4.

When comparing the evaluations of feasibility at the moment of startup and at the fifth year of operations, it is worth noting that, with the exception of bank debt, which is perceived to improve; all the remaining sources do not change in their degree of feasibility. In other words, with the exception of bank financing, respondents do not appear to be improving their chances of accessing to alternative sources of financing. In the case of bank financing, there is a significant improvement in the qualification from nearly 2.6 to 2.9 (upper panel). This improvement seems to change the relative ordering of sources with bank financing increasing to the second position in terms of financing.

In Table X we provide econometric regressions of these evaluations in order to control for sector and cohort controls. The results found for the changes in evaluation during the first five years are maintained with two exceptions: the access to owner equity improves in 0.25 points (Column 1) and outsiders´ non-bank debt also improves in 0.21 points (Column 6). The remaining results, including the improvement in the perceived feasibility of access to bank lending (0.31 points, Column 5) and no changes in the rest of the sources are maintained.

In conclusion, there seems to be an improvement in the feasibility of access to some of the financing sources after the first five years. The major improvement is in bank lending, but also there is some evidence on the feasibility of own equity and outsiders' non-bank sources. No changes are found for the remaining sources.

v. Explaining ventures' growth

Tables XI and XII display the econometric results for the estimation of the venture´s growth model. In the tables, Columns I to III display the startup to fifth year growth rate (Equation 2, we call it 5 year growth rate for brevity), and Columns IV to VI shows the startup to current year growth rate (Equation 3, we call it current year growth rate).

For presentation, variables were grouped according to: i) ventures and their funding partners´ characteristics, ii) the psychometric metrics, and iii) financing structure variables results.

Ventures and funding partners´ characteristics

First, we find that those ventures that started their operations with a higher number of employees have achieved a lower rate growth rate. This result holds for the 5 year period based annual growth rate and for the startup-to-current-date based annual growth rate. A duplication of the number of employees of a venture is associated with 21pp less in the annual growth rate. Notably, as suggested for the estimation of the constant term, the average growth rate for the sample - once incorporating all controls – is not different from 0.

In terms of founding partners' characteristics, we find positive effects for the dummy variable indicating that the founding partner is also owner of others firms (significant at 1%). This result might suggest that achievement in other ventures matter. However, when examining the current year growth rate the result no longer holds.

There is weaker but significant (at 10%) relationship found for the variable number of partners. The 5 year growth rate seems to be higher in those ventures with more partners. Once again this result does not hold in the current year growth rate regression.

We do not find effects for several of the ventures variables we examine: First, there are no effects for the age of the firm, which might suggest that there is no bias in respondents answers related with the years that have passed since the startup. We do not find effects for other variables including the founder's years of experience in the sector, the number of working hours, the educations variables, and the previous ownership of other businesses.

Psychometric Variables

In terms of psychometric variables, we do not find significant results for most of the traits we examine. There is some, despite somewhat weak however, evidence of significance in some of them. Between these last, we find that risk aversion (the second proxy we use) might have a negative effect on ventures growth. The coefficient is significant at the 10% level in the 5 year growth rate case and significant at a 5% level in the current year growth rate case.
We also find a positive effect for self-efficacy and a negative effect for a conservative time preference.

Financing Structure

In terms of financing structure, the estimations do not suggest any evidence in favor of effects of the initial financing structure on first five years or for current year growth. Not any of the variables we have tested have been found to display a significant effect. We suspect that these results might be driven by the excessive concentration in the financing structure. For the moment we conclude that the initial financing structure has no relationship with the growth in subsequent years.

Further Results on Startup Size and on the Export Condition

The econometric results for these models are presented in Tables XIII and XIV. In the case of startup size, there is a positive effect on the current number of partners (significant at 5%) suggesting that larger ventures are associated with a higher number of partners. Although with less significance -at 10%- positive effects are observed for the dummy variable measuring whether the founding partner is owner or partner of another firm, and if it has completed university education. Therefore there is only weak evidence associated with these results. No significant coefficients are found for variables related with the financing structure of the startup, or for the psychometric variables, with the exception of a weak effect for risk aversion (a higher aversion is associated with a larger startup size) and a negative effect for the need for dominance indicator (a higher need for dominance is associated with a smaller startup size, significant at 5%).

In the case of the export condition, only 15% of the firms in the sample have exported a positive amount of sales during the year of the survey or during the previous year. The estimation of a Probit model for theexport condition, does not exhibit any significant relationships among the mentioned explanatory variables (Table XIV).

Conclusions

The financing structure of startups in Argentina is highly and nearly exclusively concentrated on owners' equity, accounting for approximately 80% of total financing. Outsiders' debt, including bank and non-bank sources, reachs 10% of total financing. Indeed, in terms of entrepreneurs' subjective evaluations on the degree of feasibility of access to the different sources of financing, owners' equity is qualified as being the most feasible source at the startup period, followed in second place by sources of funding from insiders -including both equity and debt-, and bank financing in the third place in terms of difficulty.

After the first five years of operations, there is an improvement in the feasibility of access to bank lending as reported by entrepreneurs (also in access to own equity and outsiders' non-bank sources). However, this is not translated into a higher participation in bank financing as percentage of total financing. Also, after the first five years, the financing structure concentrates even more in owners´ equity: the percentage of owners' equity financing increases significantly, by slightly more than 10 percentage points of total financing. As result, the financing structure becomes more homogeneous across firms. The greater concentration in owners' equity and the reduction in the participation of insiders and outsiders lead variances of financing sources across ventures to become smaller.

We have also seen that the financing pattern of entrepreneurs in Argentina seems to differ severely from what is found for US firms, where owner's equity accounts for a remarkably lower percentage of total financing (40% on average) and outsiders' debt climbs up to 40% of total financing. As suggested in the introduction, this result might probably be related with the lack of a developed financing market and of an institutional background for ventures financing.

Are startup's financing sources playing a role in the ability of ventures' to grow –at least in terms of employment growth-? The results in this paper do not show much effect. We need to point out that we have only explored here the effects of startup financing on later growth, and growth might well come from later opportunities of financing. As far as this research, the startup financing did not condition subsequent growth. We also acknowledge that our retrospective approach (based on survivors at a given moment in time) does not allow addressing the determinants of exits, and financing could have played a role in death rate which, as we previously mentioned, might account for as much as 40% for the first three years. A related problem, though less severe, is that since the financing structure is so concentrated, this provides less variability for the financing sources to explain growth. Further research will seek to improve these estimations.

Our analysis of the growth of ventures has also shown few significant patterns among ventures founding partners´ characteristics, including their psychological traits. However, we highlight that a variable indicating that the founding partner is also owner of others firms, as well as the total number of partners have been found positively associated to the growth during the first five years. In relation to the psychometric indicators, we have found some –though still statistically weak-evidence that risk aversion might have a negative effect on ventures growth, a positive effect for the Self-Efficacy Trait and a negative effect for a conservative time preference (i.e., delayed decision making). It is important to remember that while many of the traits that we have considered are commonly used in the literature that examines the decision of becoming an entrepreneur, here we are examining these variables in explaining growth, and in particular we are studying a sample of (at least five year) survivors. Therefore, we are probably examining a sample that, because of its self-selection has scarce variability.

The analysis of ventures´ growth determinants and of their financing in particular remains as an important matter of research. If we could attribute how much failing and growth is related to observable characteristics in general and finance in particular we could also be able to better understand why many firms remain in subsistence, and better characterize the transition between subsistence entrepreneurship into the development of small, medium and large highly productive and dynamic firms.

References

Acharya, V., Rajan, A., & Schoar, A. (n.d.). What Determines Entrepreneurial Success? — A Psychometric Study of Rural Entrepreneurs in India.

Carland, J.W., Hoy, F., & Carland, J. A. (1988). Who is an entrepreneur? Is a question worth asking. *American Journal of Small Business*, *12(4)*, 33-39.

Carland, James W., Hoy, F., Boulton, W. R., & Carland, J. A. C. (1984). Differentiating Entrepreneurs from Small Business Owners: A Conceptualization. *The Academy of Management Review*, *9*(No. 2), 354-359.

De Torres Carbonell, S. (2010). IAE Business School Global Entrepreneurship Monitor Report Argentina 2009.

Demirguc-Kunt, A., & Levine, R. (2001). Financial Structure and Economic Growth: Perspective and Lessons. *Financial Structure and Economic Growth A CrossCountry Comparison of Banks Markets and Development*, 3–14.

Demirgüç-Kunt, A., & Beck, T. (2009). Financial Institutions and Markets Across Countries and over Time: Data and Analysis.

Field, E., Pande, R., Papp, J., & Rigol, N. (2011). Debt Structure, Entrepreneurship, and Risk : Evidence from Microfinance. *Working Paper*. Retrieved from http://www.povertyactionlab.org/sites/default/files/publications/345 Debt Structure, Entrepreneurship, and Risk Sep2011_0.pdf

Gartner, B. (1988). Who is the entrepreneur? Is the wrong question. *American Journal of Small Business*, *12*, 11-32.

Greenwald, B., Stiglitz, J. E., & Weiss, A. (1984). Information Imperfections in the Capital Market and Macroeconomic Fluctuations. *American Economic Review*, *74*, 194-199.

Kelley, D. J., Singer, S., & Herrington, M. (2011). *The Global Entrepreneurship Monitor 2011 Global Report*.

Leach, C. J., & Melicher, R. W. (2012). *Entrepreneurial Finance*. (S.-W. C. Learning, Ed.) (4th ed.). Mason, USA.

Mas-Colell, A., Whinston, M. D. ., & Green, J. R. (1995). *Microeconomic Theory*. New York, NY: Oxford University Press.

Myers, S. C., & Majluf, N. S. (1984). Corporate Financing Decisions When Firms Have Investment Information That Investors Do Not. *Journal of Financial Economics*, *13*(2), 155-295.

OECD. (2011). *Entrepreneurship at a Glance*.

Parker, S. C. (2004). *The Economics of Self-Employment and Entrepreneurship*. Cambridge, United Kingdom: The Press Syndicate of the University of Cambridge.

Robb, A. M., & Robinson, D. T. (2010). The Capital Structure Decisions of New Firms. *Finance*, (November), 1-34. Kauffman, the foundation of Entrepreneurship. Retrieved from http://www.nber.org/papers/w16272

Schoar, A. (2010). The Divide between Subsistence and Transformational Entrepreneurship. (J. Lerner & A. Schoar, Eds.)*Innovation Policy and the Economy*, *10*(1), 57-81. University of Chicago Press. doi:10.1086/605853

Shane, S. (2008). *Illusions of Entrepreneurship.The Costly Myths That Entrepreneurs, Investors, and Policy Makers Live By*. Yale University.

Smith, J., Smith, R. L., & Bliss, R. (2011). *Entrepreneurial Finance* (1st ed.). Stanford, California: Stanford Economics and Finance, Stanford Univiersity Press.

Winborg, J. (1997). Finance in Small Business: A widened approach to small business managers handling of finance. *Scandinavian Institute for Research in Entrepreneurship. Halmstad, Sweden.*

Appendix

Figure II: Financing Sources as % of GDP (2002 -2009). Selected Countries

Legend:
- PRIVATE CREDIT BY DEPOSIT MONEY BANKS AND OTHER FINANCIAL INSTITUTIONS / GDP
- PUBLIC BOND MARKET CAPITALIZATION / GDP
- STOCK MARKET CAPITALIZATION / GDP
- PRIVATE BOND MARKET CAPITALIZATION / GDP
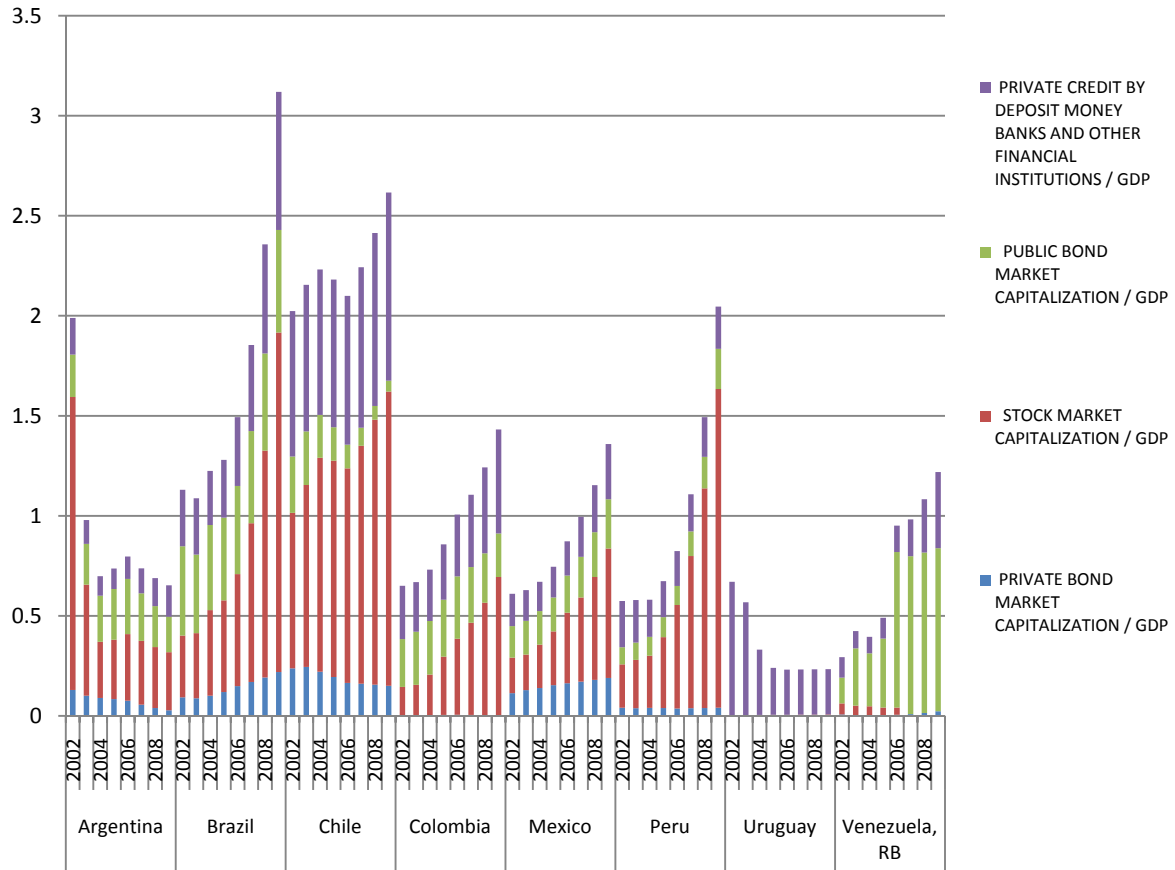
Table I: Sample Design and Final Response Rate (as June 26th 2012)

Stratum	ISIC Rev 3.1. division	Description	Sample Design			Results: Available data as 26 June 2012			Response rate
			Between 0 and 5 years	Between 6 and 10 years	Sample Design Total	Between 0 and 5 years	Between 6 and 10 years	Total Responses	
1	15	Food and Drink	28	25	53	24	33	57	108%
2	17-18-19-25	Textiles, clothing, leather and footwear	8	24	32	7	28	35	109%
3	27-28	Manufacture of basic metals and metal products	11	19	30	9	21	30	100%
4	29	Machinery and equipment	7	17	24	5	20	25	104%
5	16-20-21-22-23-24-26-30-31-33-33-34-35-36-37	Other Sectors	29	32	61	21	41	62	102%
Total			83	117	200	66	143	209	105%

Table II: Questions used in the Definition of Psychometric variables

Psychometric variables		Questions*
NACH	1	When I face a challenge, I think more in the results of successful than in the consequences of failing
	3	I find it hard to start a task from scratch
	4	I prefer demanding challenges than those things I can do easily
	1	To finish special duties, I do not mind to get up early, stay late or skip meals
	14	I prefer to think about future possibilities than about past achievements
	18	I do not mind having an unchallenging and routine work if the salary is good
	19	Compared to others, I have not achieved all I deserve
	21	It bothers me when things are not done properly
LOCUS	2	The results I get in my life depend on my actions / decisions
	5	Get what I want has little to do with luck
	2	Many of the hard times in people's life are the result of bad luck
INDEP	7	I'm not comfortable when others decide for me
MC	15	I find harder adapt to the changes, than maintain a routine
ND	7	I'm not comfortable when others decide for me
	13	I usually defend my point of view when someone disagrees with me
PW	3	I find it hard to start a task from scratch
	1	To finish special duties, I do not mind to get up early, stay late or skip meals
	18	I do not mind having an unchallenging and routine work if the salary is good
SE	1	When I face a challenge, I think more in the results of successful than in the consequences of failing
	3	I find it hard to start a task from scratch
	8	I can learn anything if I commit myself entirely to it
	11	I fulfil every promise I make
RA	4	I prefer demanding challenges than those things I can do easily
	17	Before making a decision, I like to count with all the relevant information, no matter how long it takes to get it
	18	I do not mind having an unchallenging and routine work if the salary is good
TE	17	Before making a decision, I like to count with all the relevant information, no matter how long it takes to get it

* Respondents were asked to qualify these statements according to their degree of agreement. A numeric scale is then used, for example where complete agreement is given a value of 5 and 1 to complete disagreement. The inverse value is used depending the variable for which is used.

Table III: Venture and founding partner summary statistics

Variable	N	Mean	Median	p25	p75	Min	Max
Age of the firm	209	6.684	7	5	9	0	10
Age of the founding partner	209	47.837	47	38	57	23	80
Years of experience in the sector	209	19.593	20	10	25	1	50
Number of partners	209	2.713	2	1	3	1	49
Owner or partner of other firms (dummy)	209	0.124	0	0	0	0	1
Number of working hours	209	45.467	45	45	55	5	60
Number of employees at startup	208	11.418	6	3	12	0	160
Number of employees at fifth year of age	143	16.986	10	6	20	2	135
Education							
Complete primary school level education (dummy)	209	0.995	1	1	1	0	1
Complete secondary school level education (dummy)	209	0.842	1	1	1	0	1
Complete tertiary level education (dummy)	209	0.488	0	0	1	0	1
Complete university level education (dummy)	209	0.335	0	0	1	0	1
Previous ownership of other business (dummy)	209	0.187	0	0	0	0	1
Origin of Ownership							
Started from scratch	209	0.455	0	0	1	0	1
Bought the firm where worked previously	209	0.033	0	0	0	0	1
Bought business where didn´t work previously	209	0.062	0	0	0	0	1
Became partner in the firm where previously worked in	209	0.053	0	0	0	0	1
Became partner in the firm where didn´t previously worked in	209	0.029	0	0	0	0	1
Took the lead / inherited a family business	209	0.316	0	0	1	0	1
Other	209	0.053	0	0	0	0	1

Table IV: Explanatory Variables Correlation Matrix

	age	age_of_fp	yearsofexp	npartners	d_owneroth~s	workinghours	edu_prim	edu_sec	edu_ter	edu_univ	previous_ o~p	Ownership Origin 1
Age_of _firm	1											
age_of_fp	0.0298	1										
yearsofexp	0.0645	0.6376*	1									
npartners	0.131	-0.0266	0.0312	1								
d_owneroth~s	0.1162	0.0309	0.0671	-0.0602	1							
workinghours	-0.12	-0.0911	-0.1105	0.0693	-0.0101	1						
edu_prim	-0.0087	-0.0798	0.0702	0.0266	0.0261	-0.0727	1					
edu_sec	0.0655	-0.2509*	-0.2357*	0.0192	0.0439	-0.0493	0.1601	1				
edu_ter	-0.0485	-0.2274*	-0.2728*	0.0028	-0.049	-0.0329	0.0677	0.4228*	1			
edu_univ	-0.0237	-0.1718	-0.2164*	0.0207	-0.0525	0.0273	0.0492	0.3073*	0.7268*	1		
previous_o~p	-0.0715	0.0762	0.0631	-0.0793	0.2288*	0.1035	0.0332	-0.0284	-0.0254	-0.0016	1	
ownership_origin1	0.0724	0.1940*	0.1697	-0.0511	0.0926	0.0785	-0.076	-0.0264	-0.0839	-0.1388	0.1547	1
ownership_origin2	-0.0611	-0.0235	-0.041	-0.0357	0.0104	-0.131	0.0129	-0.0653	0.0843	-0.0194	-0.0892	-0.1699

Table V.b: Correlation Between Base Line Definition Indicators and Version where Components have been Standarized

	Need for Achievement	Locus of Control	Self Efficacy	Passion for Work	Risk Aversion	Risk Aversion 2	Need for Dominance	Meta-Cognitive	Time Preference
Need for Achievement (std. components)	**0.9751***	0.2772*	0.6507*	-0.1358	-0.3749*	0.0238	0.1356	0.1384	0.1373
Locus of Control (std. components)	0.2834*	**0.9919***	0.3349*	-0.0882	-0.1837*	-0.1363	0.0611	0.2150*	-0.0145
Self Efficacy (std. components)	0.6334*	0.3451*	**0.9660***	-0.2618*	-0.16	-0.0369	0.0572	0.2109*	0.094
Passion for Work (std. components)	-0.1639	-0.0601	-0.3035*	**0.9721***	0.4078*	0.0163	0.1692	-0.4474*	0.0991
Risk Aversion (std. components)	-0.4177*	-0.1759	-0.1614	0.4190*	**0.9863***	0.0192	0.0317	-0.2943*	0.5974*
Risk Aversion 2 (std. components)	0.0223	-0.1483	-0.0224	0.0122	0.0159	**1.0000***	0.0714	-0.1508	0.0146
Need for Dominance (std. components)	0.1041	0.0546	0.0114	0.1790*	0.0423	0.0598	**0.9869***	-0.1098	0.0779
Meta-Cognitive (std. components)	0.2099*	0.2102*	0.2586*	-0.4707*	-0.3147*	-0.1508	-0.0979	**1.0000***	-0.1037
Time Preference (std. components)	0.0994	-0.011	0.0368	0.126	0.4692*	0.0146	0.0609	-0.1037	**1.0000***

*Significant at 1%

Table V: Difference in Means Test: Financing structure of firms at the start of operations date, and during the fifth year. Respondent's estimation.

	Start up			Fifth year			Diff. in Mean	
	Mean	Std. Err.	N	Mean	Std. Err.	N	t statistic	pvalue
(Only) Firms that have reached their fifth year								
Owner Equity	75.594	2.935	143	85.070	2.089	143	-3.541	0.001
Insider Equity	7.413	2.303	143	2.063	2.089	143	3.042	0.003
Outsider Equity	6.294	1.908	143	2.692	0.955	143	2.717	0.007
Insider Debt	1.259	1.424	143	0.874	0.955	143	0.889	0.376
(Outsider) Bank Debt	6.853	1.774	143	7.552	1.038	143	-0.494	0.622
(Outsider) Non-Bank Debt	2.587	1.431	143	1.748	1.038	143	0.883	0.379
Including ventures with less than 5 years old								
Owner Equity	77.679	2.303	209	85.070	2.089	143	-2.255	0.025
Insider Equity	6.364	1.424	209	2.063	0.955	143	2.270	0.024
Outsider Equity	6.077	1.431	209	2.692	1.038	143	1.752	0.081
Insider Debt	1.435	0.678	209	0.874	0.566	143	0.595	0.553
(Outsider) Bank Debt	6.196	1.227	209	7.552	1.398	143	-0.721	0.471
(Outsider) Non-Bank Debt	2.249	0.770	209	1.748	0.758	143	0.446	0.656

Table VI: Econometric Results: Testing changes in the financing structure of firms at the start of operations date, and during the fifth year. Respondent's estimation

Dependent Variable: Source s as % of total financing	(1) Owner Equity	(2) Insider Equity	(3) Outsider Equity	(4) Insider Debt	(5) Bank Debt	(6) Non-Bank Debt
Fifth year	10.368098***	-5.184049***	-4.079755**	-0.644172	0.582822	-1.042945
	(3.125)	(1.737)	(1.710)	(0.915)	(1.978)	(1.064)
Current year	12.149552***	-5.632166***	-4.945892***	-0.904557	0.509185	-1.176123
	(3.246)	(1.804)	(1.777)	(0.951)	(2.054)	(1.105)
SIC 15 - Food and Drink	-5.725259	1.143196	2.017455	2.673404**	0.724886	-0.833682
	(3.594)	(1.998)	(1.967)	(1.053)	(2.275)	(1.224)
SIC 17,18,19 - Textiles, clothing, leather and footwear	-3.997375	0.453245	4.896262**	-0.292731	-0.717789	-0.341611
	(3.913)	(2.175)	(2.142)	(1.146)	(2.477)	(1.332)
SIC 27, 28 - Manufacture of basic metals and metal products	5.365607	1.622696	-1.272333	-0.236481	-4.469964*	-1.009526
	(4.225)	(2.348)	(2.313)	(1.238)	(2.674)	(1.439)
SIC 29 - Machinery and equipment	-1.094323	0.055140	-1.404294	0.002152	-3.357030	5.798355***
	(4.311)	(2.396)	(2.360)	(1.263)	(2.728)	(1.468)
cohort 2002-2003	-5.169089	2.215703	0.106528	-2.761866***	6.450129***	-0.841406
	(3.279)	(1.822)	(1.795)	(0.960)	(2.075)	(1.116)
cohort 2004-2005	-5.891459*	3.012676	1.082111	-1.842175*	2.718981	0.919865
	(3.455)	(1.921)	(1.891)	(1.012)	(2.187)	(1.177)
Constant	80.513731***	4.728495**	5.171541***	2.777585***	4.528697**	2.279951*
	(3.589)	(1.995)	(1.965)	(1.051)	(2.272)	(1.222)

Observations	469	469	469	469	469	469
R-squared	0.055	0.033	0.039	0.044	0.033	0.062
r2	0.0551	0.0333	0.0392	0.0439	0.0330	0.0618
F	3.351	1.979	2.345	2.639	1.963	3.788
df_r	460	460	460	460	460	460
df_m	8	8	8	8	8	8

Standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Table VII: The Financial Structure at Startup: Comparing the results with Kaufffman Foundation's US Ventures Survey

	Our sample	Kauffman Foundation's US sample*
Owner Equity	77.679	34.9
Insider Equity	6.364	2.16
Outsider Equity	6.077	8.9
Insider Debt	1.435	9.7
Owner + Outsider Debt**	8.445	44.33

Notes: * Calculated on the basis of average figures reported by Robb & Robinson, (2010)

**Our Owner Debt and Outsider Debt categories have been defined differently from Kauffman's. However they are comparable if they are added up as shown in the table.

Table VIII: Variance Ratio Test: Testing changes in homogeneity in financing structures. Respondent's estimation

	Start up		Fifth year		Diff. in variance	
	Sd	N	Mean	N	f statistic	pvalue
Firms that have reached their fifth year						
Owner Equity	35.103	143	24.986	143	1.776***	0.000
Insider Equity	27.545	143	24.986	143	3.251***	0.000
Outsider Equity	22.812	143	11.419	143	2.775***	0.000
Insider Debt	17.032	143	11.419	143	2.092***	0.000
(Outsider) Bank Debt	21.219	143	12.415	143	1.126	0.450
(Outsider) Non-Bank Debt	17.109	143	12.415	143	1.510	0.009
Including ventures with less than 5 years old						
Owner Equity	33.300	209	24.986	143	1.776***	0.000
Insider Equity	20.589	209	11.419	143	3.251***	0.000
Outsider Equity	20.682	209	12.415	143	2.775***	0.000
Insider Debt	9.797	209	6.773	143	2.092***	0.000
(Outsider) Bank Debt	17.739	209	16.719	143	1.12	0.450
(Outsider) Non-Bank Debt	11.135	209	9.062	143	1.510***	0.009

Table IX: Feasibility of Access to Financing Sources. Subjective Evaluations (1-5). Difference in Means Test

Variable	N	Start up Mean	S.E.	N	Fifth year Mean	S.E.	Difference t-statistic	pvalue
(Only) Firms that have reached their fifth year								
Owner_Equity	143	2.902	0.099	143	3.189	0.089	-2.152	0.032
Insider_Equity	142	2.655	0.092	142	2.634	0.092	0.162	0.871
Outsider_Equity	141	2.383	0.096	141	2.525	0.091	-1.074	0.284
Insider_Debt	141	2.610	0.090	141	2.716	0.089	-0.838	0.403
Outsider_Bank_Debt	141	2.560	0.097	141	2.879	0.096	-2.338***	0.020
Out_sider_Non_Bank_Debt	141	2.475	0.091	141	2.688	0.088	-1.673	0.096
Including ventures with less than 5 years old								
Owner_Equity	209	3.010	0.079	143	3.189	0.089	-1.480	0.140
Insider_Equity	208	2.707	0.079	142	2.634	0.092	0.598	0.550
Outsider_Equity	207	2.391	0.081	141	2.525	0.091	-1.081	0.280
Insider_Debt	207	2.638	0.075	141	2.716	0.089	-0.674	0.501
Outsider_Bank_Debt	207	2.628	0.079	141	2.879	0.096	-2.025**	0.044
Out_sider_Non_Bank_Debt	207	2.517	0.078	141	2.688	0.088	-1.432	0.153

Table X: Econometric Regression: Testing changes in the evaluations of the degree of feasibility/restrictiveness to financing sources. Ordinal Probit

	(1)	(2)	(3)	(4)	(5)	(6)
Dependent Variable: Feasibility of Access to Financing Source s. Subjective Evaluations (1 completely unreachable - 5 completely feasible).	Owner Equity	Insider Equity	Outsider Equity	Insider Debt	Outsider_Bank_Debt	Outsider Non-Bank Debt
Fifth year	0.259089**	-0.022067	0.133297	0.108595	0.308345**	0.212594*
	(0.125)	(0.126)	(0.127)	(0.128)	(0.128)	(0.128)
SIC 15 - Food and Drink	-0.303633*	0.364201**	0.121642	0.501333***	0.248689	0.164726
	(0.175)	(0.178)	(0.177)	(0.181)	(0.178)	(0.180)
SIC 17,18,19 - Textiles, clothing, leather and footwear	-0.120981	0.274460	0.038335	0.287297	-0.084521	-0.059167
	(0.184)	(0.188)	(0.190)	(0.192)	(0.191)	(0.191)
SIC 27, 28 - Manufacture of basic metals and metal products	-0.491572**	-0.081535	-0.173213	-0.171252	-0.336704	-0.051271
	(0.203)	(0.207)	(0.208)	(0.209)	(0.209)	(0.208)
SIC 29 - Machinery and equipment	-0.072186	-0.012936	-0.080142	-0.017789	-0.079858	0.196777
	(0.204)	(0.208)	(0.207)	(0.209)	(0.208)	(0.208)
cohort 2002-2003	-0.183962	-0.035390	0.130135	-0.362862**	-0.036475	0.031348
	(0.169)	(0.171)	(0.174)	(0.176)	(0.174)	(0.175)
cohort 2004-2005	0.079731	-0.032501	-0.093049	-0.240137	0.136749	-0.101344
Observations	286	284	282	282	282	282
r2_p	0.0184	0.00981	0.00755	0.0241	0.0192	0.00770
k_aux	4	4	4	4	4	4
k_cat	5	5	5	5	5	5
N_cd	0	0	0	0	0	0
p	0.0282	0.352	0.532	0.0105	0.0336	0.554
chi2	15.68	7.783	6.070	18.36	15.20	5.878

Standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.1

Table XI: Econometric Results. Growth rate in Employment Regressions (extract)

Dependent Variable	(1) Growth rate (start-up-fifth year)	(2) Growth rate (start-up-fifth year)	(3) Growth rate (start-up-fifth year)	(4) Growth rate (start-up-current year)	(5) Growth rate (start-up-current year)	(6) Growth rate (start-up-current year)
Employment at start-up (in logs)	-0.211781***	-0.210914***	-0.209027***	-0.316114***	-0.302070***	-0.308321***
	(0.034)	(0.034)	(0.034)	(0.052)	(0.052)	(0.052)
Square of employment at start-up (in logs)	0.031126***	0.031049***	0.030843***	0.044060***	0.041712***	0.041312***
	(0.008)	(0.008)	(0.008)	(0.011)	(0.012)	(0.011)
Firm age(in logs)	1.151212	1.562071	1.140043	-0.390893	-0.364565	-0.425144
	(1.094)	(1.120)	(1.084)	(0.385)	(0.391)	(0.384)
Square of firm age(in logs)	-0.267528	-0.374968	-0.268502	0.032606	0.026907	0.046177
	(0.285)	(0.292)	(0.282)	(0.159)	(0.161)	(0.159)
Age of the founding partner (FP)	-0.000451	-0.000452	-0.000689	0.000148	-0.000080	0.000715
	(0.001)	(0.001)	(0.001)	(0.002)	(0.002)	(0.002)
FPs years of experience in the sector	-0.000130	-0.000008	0.000125	-0.000213	0.000067	-0.000252
	(0.001)	(0.001)	(0.001)	(0.002)	(0.002)	(0.002)
Current number of partners	0.003163*	0.003345*	0.003195*	0.003164	0.003729	0.003853
	(0.002)	(0.002)	(0.002)	(0.003)	(0.003)	(0.003)
FP is owner or partner of other firms	0.114305***	0.102619***	0.108362***	0.063551	0.064030	0.054577
	(0.028)	(0.028)	(0.027)	(0.047)	(0.048)	(0.047)
Weekly number of working hours	0.000356	0.000493	0.000261	0.001091	0.001312	0.001212
	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)
Complete secondary school level education (dummy)	0.004846	0.002966	0.006830	0.021408	0.024538	0.011248
	(0.026)	(0.027)	(0.026)	(0.045)	(0.045)	(0.045)

Complete university level education (dummy)	-0.012166	-0.023942	-0.012298	0.034743	0.029071	0.025680
	(0.020)	(0.021)	(0.020)	(0.034)	(0.035)	(0.034)

Table XI: Econometric Results. Growth rate in Employment Regressions (Cont.)

Dependent Variable	(1) Growth rate (start-up-fifth year)	(2) Growth rate (start-up-fifth year)	(3) Growth rate (start-up-fifth year)	(4) Growth rate (start-up-current year)	(5) Growth rate (start-up-current year)	(6) Growth rate (start-up-current year)
Previous ownership of other business (dummy)	-0.011910	-0.021739	-0.022269	-0.001422	-0.021137	-0.007157
	(0.024)	(0.024)	(0.024)	(0.041)	(0.042)	(0.043)
Ownership how: Started_from_scratch (dummy)	0.007021	0.008889	0.003040	0.015524	0.033734	0.020667
	(0.019)	(0.020)	(0.019)	(0.032)	(0.033)	(0.033)
Psychometric Indicator: Need for Achievement		-0.001497			0.016949	
		(0.025)			(0.042)	
Psychometric Indicator: Locus of Control		-0.000154			-0.035679	
		(0.014)			(0.026)	
Psychometric Indicator: Risk Aversion		-0.005327			-0.038298	
		(0.018)			(0.027)	
Psychometric Indicator: Risk Aversion 2		-0.014999*			-0.030596**	
		(0.008)			(0.013)	
Psychometric Indicator: Need for Dominance		0.003090			0.000500	
		(0.012)			(0.019)	
Psychometric Indicator: Meta-Cognitive		0.008041			-0.004101	
		(0.007)			(0.013)	
Psychometric Indicator: Self Efficacy			0.031167*			-0.021895
			(0.018)			(0.032)
Psychometric Indicator: Passion for Work			0.005907			-0.053315**
			(0.013)			(0.024)
Psychometric Indicator: Time Preference			-0.017329*			0.003360
			(0.010)			(0.016)

Table XI: Econometric Results. Growth rate in Employment Regressions (Cont.)

Dependent Variable	(1) Growth rate (start-up-fifth year)	(2) Growth rate (start-up-fifth year)	(3) Growth rate (start-up-fifth year)	(4) Growth rate (start-up-current year)	(5) Growth rate (start-up-current year)	(6) Growth rate (start-up-current year)
Constant	-0.815148	-1.178633	-0.856972	0.925029***	1.149397***	1.159771***
	(1.040)	(1.070)	(1.030)	(0.262)	(0.350)	(0.323)
Sector Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes
Cohort Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes
Observations	162	161	161	182	181	181
R-squared	0.470	0.500	0.500	0.420	0.451	0.438
r2	0.470	0.500	0.500	0.420	0.451	0.438
F	6.641	5.400	6.280	5.837	4.861	5.322
df_r	142	135	138	161	154	157
df_m	19	25	22	20	26	23

Standard errors in parentheses
*** $p<0.01$, ** $p<0.05$, * $p<0.1$

Table XII: Econometric Results. Growth rate in Employment Regressions (extract)

Dependent Variable	(1) Growth rate (start-up-fifth year)	(2) Growth rate (start-up-fifth year)	(3) Growth rate (start-up-current year)	(4) Growth rate (start-up-current year)
Employment at start-up (in logs)	-0.210083***	-0.209355***	-0.323496***	-0.320998***
	(0.033)	(0.033)	(0.053)	(0.053)
Square of employment at start-up (in logs)	0.030982***	0.030727***	0.044366***	0.044477***
	(0.008)	(0.007)	(0.012)	(0.012)
Insider_Equity positive % of FS at start-up (dummy)	-0.008379		0.023533	
	(0.026)		(0.051)	
Outsider_Equity positive % of FS at start-up (dummy)	0.015951		0.025219	
	(0.029)		(0.055)	
Insider_Debt positive % of FS at start-up (dummy)	0.030446		0.092234	
	(0.053)		(0.111)	
Outsider_Bank_Debt positive % of FS at start-up (dummy)	-0.006704		0.036526	
	(0.025)		(0.045)	
Insider_Equity % of FS at start-up		-0.000193		0.000197
		(0.000)		(0.001)
Outsider_Equity % of FS at start-up		0.000134		0.000569
		(0.000)		(0.001)
Insider_Debt % of FS at start-up		-0.000160		0.002744
		(0.001)		(0.002)
Outsider_Bank_Debt % of FS at start-up		-0.000345		0.000118
		(0.000)		(0.001)
Constant	0.290945**	0.292085**	0.709246***	0.720195***
	(0.123)	(0.123)	(0.224)	(0.222)
Ventures Characteristics Variables	Yes	Yes	Yes	Yes
Psychometric Variables	Yes	Yes	Yes	Yes
Cohort Fixed Effects	Yes	Yes	Yes	Yes
Sector Fixed Effects	Yes	Yes	Yes	Yes
Observations	161	161	183	183
R-squared	0.497	0.497	0.395	0.399
r2	0.497	0.497	0.395	0.399
F	5.880	5.889	4.292	4.366
df_r	137	137	158	158
df_m	23	23	24	24

Standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Table XIII: Econometric Results. Startup Size Model. OLS Method

Dependent Variable: Log of Startup Number of Employees	(1)	(2)	(3)
Age of the founding partner (FP)	-0.006055	-0.004247	-0.003284
	(0.007)	(0.007)	(0.007)
FPs years of experience in the sector	0.004871	0.006680	0.005665
	(0.007)	(0.007)	(0.007)
Current number of partners	0.033681**	0.033942**	0.034827**
	(0.015)	(0.015)	(0.015)
FP is owner or partner of other firms	0.391096*	0.368538*	0.333620
	(0.218)	(0.216)	(0.217)
Weekly number of working hours	-0.002376	-0.000114	0.000982
	(0.005)	(0.005)	(0.005)
Complete secondary school level education (dummy)	-0.280930	-0.249967	-0.217642
	(0.195)	(0.198)	(0.197)
Complete university level education (dummy)	0.330820**	0.256865*	0.247624
	(0.151)	(0.151)	(0.150)
Previous ownership of other business (dummy)	-0.108159	-0.078339	-0.080689
	(0.177)	(0.178)	(0.177)
Psychometric Indicator: Need for Achievement	-0.106228		
	(0.180)		
Psychometric Indicator: Locus of Control	-0.003761		
	(0.105)		
Psychometric Indicator: Risk Aversion	-0.151360		
	(0.117)		
Psychometric Indicator: Risk Aversion 2	0.097878*		
	(0.057)		
Psychometric Indicator: Need for Dominance	-0.186545**		
	(0.079)		
Psychometric Indicator: Meta-Cognitive	-0.034524		
	(0.055)		
Psychometric Indicator: Self Efficacy		-0.140258	-0.135330
		(0.138)	(0.139)
Psychometric Indicator: Passion for Work		-0.107131	-0.120168

		(0.104)	(0.104)
Psychometric Indicator: Time Preference		0.038158	0.047277
		(0.075)	(0.074)
Insider_Equity positive % of FS at startup (dummy)	-0.242403	-0.213324	
	(0.210)	(0.212)	
Outsider_Equity positive % of FS at startup (dummy)	-0.185055	-0.215043	
	(0.226)	(0.225)	
Insider_Debt positive % of FS at startup (dummy)	0.068503	0.022482	
	(0.403)	(0.409)	
Outsider_Bank_Debt positive % of FS at startup (dummy)	0.336344*	0.246083	
	(0.191)	(0.193)	
Insider_Equity % of FS at startup			-0.005394
			(0.003)
Outsider_Equity % of FS at startup			-0.002535
			(0.003)
Insider_Debt % of FS at startup			-0.005974
			(0.007)
Outsider_Bank_Debt % of FS at startup			0.003439
			(0.004)
Constant	3.766332***	2.837180***	2.735633***
	(1.041)	(0.885)	(0.887)
Cohort Controls	Yes	Yes	Yes
Sector Controls	Yes	Yes	Yes
Observations	207	207	207
R-squared	0.204	0.165	0.169

Standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Table XIV: Econometric Results. Export Condition Model. Probit Estimation. Marginal Effects.

Dependent Variable: Firm exports when surveyed (dummy)	(1)	(2)	(3)
Firm age(in logs)	-0.297731	-0.345008	-0.292962
	(0.226)	(0.224)	(0.231)
Square of firm age(in logs)	0.113431	0.125155	0.105675
	(0.080)	(0.079)	(0.081)
Age of the founding partner (FP)	0.004522	0.003845	0.003851
	(0.003)	(0.003)	(0.003)
FPs years of experience in the sector	-0.000862	-0.000186	-0.000108
	(0.003)	(0.003)	(0.003)
Current number of partners	-0.004789	-0.008330	-0.008990
	(0.010)	(0.010)	(0.010)
FP is owner or partner of other firms	0.119796	0.098596	0.099539
	(0.120)	(0.110)	(0.111)
Weekly number of working hours	0.002357	0.001557	0.001602
	(0.002)	(0.002)	(0.002)
Complete secondary school level education (dummy)	0.011728	0.011153	-0.001170
	(0.081)	(0.082)	(0.085)
Complete university level education (dummy)	-0.038768	-0.023959	-0.021299
	(0.058)	(0.061)	(0.061)
Previous ownership of other business (dummy)	-0.014750	0.003219	0.001806
	(0.069)	(0.073)	(0.072)
Psychometric Indicator: Need for Achievement	0.007155		
	(0.083)		
Psychometric Indicator: Locus of Control	-0.026247		
	(0.046)		
Psychometric Indicator: Risk Aversion	-0.046652		
	(0.047)		
Psychometric Indicator: Risk Aversion 2	-0.039820*		
	(0.023)		
Psychometric Indicator: Need for Dominance	-0.015138		

	(0.035)		
Psychometric Indicator: Meta-Cognitive	-0.020207		
	(0.022)		
Psychometric Indicator: Self Efficacy		0.061053	0.079273
		(0.061)	(0.063)
Psychometric Indicator: Passion for Work		0.052031	0.055878
		(0.044)	(0.045)
Psychometric Indicator: Time Preference		-0.023809	-0.029283
		(0.028)	(0.029)
Insider_Equity positive % of FS at startup (dummy)	-0.088928	-0.084942	
	(0.056)	(0.060)	
Outsider_Equity positive % of FS at startup (dummy)	-0.057130	-0.041700	
	(0.076)	(0.090)	
Insider_Debt positive % of FS at startup (dummy)	0.457173	0.428299	
	(0.287)	(0.291)	
Outsider_Bank_Debt positive % of FS at startup (dummy)	-0.060435	-0.047072	
	(0.061)	(0.070)	
Insider_Equity % of FS at startup			-0.001540
			(0.002)
Outsider_Equity % of FS at startup			0.000432
			(0.001)
Insider_Debt % of FS at startup			0.006480*
			(0.004)
Outsider_Bank_Debt % of FS at startup			0.000533
			(0.002)
Cohort Controls	Yes	Yes	Yes
Sector Controls	Yes	Yes	Yes
Observations	152	152	152

Standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1