Factors determining the entrepreneurial consolidation in Latin America

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Accepted 6 July, 2010

In this paper, we analyze the factors determining the entrepreneurial consolidation in Latin American countries participating in the Global Entrepreneurship Monitor project (GEM). We include in our research both the entrepreneur and social characteristics that lead to business consolidation. Our research is based on the analysis of such characteristics in a sample of seven Latin American countries during years 2006 and 2007 by developing a multi-equation model with panel data.

Key words: Entrepreneurial motivation, business consolidation, Latin America.

INTRODUCTION

Faced with the inability of the state to generate adequate levels of employment, as frequently encountered in the context of Latin America—the creation of new business appears to be the choice of a significant part of a country’s population. During the last few years, the issue of the creation of business and the subsequent consolidation of it has raised interest among researchers, governments and those who are in charge of conceiving regional development policies, for their role in the economic development and the generation of employment (Erogul and McCrohan, 2008; Alam et al., 2010). However, up till now, few studies on the creation of business are developed on a transversal way, from a multicultural perspective based upon the environment of the entrepreneur. Therefore, after making a critical overview of what has been already published on the creation of business, we aim at analyzing the factors of the entrepreneur’s environment which could determine the consolidation of the creation of business in Latin America.

What has been written on the creation of business stresses as determinant factors of the creation of new business and their consolidation: the detection of business opportunities having an innovative potential (Drucker, 2000; O’Connor and Rice-Hao, 2001; Ardichvili, Cardozo and Ray, 2003; Eckhardt and Shane, 2003; Arenius and De-Clercq, 2005; De-Carolis and Saparito, 2006), the entrepreneur’s perception of risks (Drucker, 1985; Miner and Raju, 2004; Stewart and Roth, 2004; Briggs, 2009) and the social image it enjoys (Wilken, 1979; Davidsson and Honing, 2003; Nikolaus and Christian, 2004; Instituto de Empresa, 2006, 2007, 2008, 2009; Bosma et al., 2009; Sadi and Al-Ghazali, 2010).

The data used for our analyses was selected from Latin American countries participating in the GEM project. Given that from year to year, some countries can be included in or excluded from the project, we selected a group of countries as large as possible and for them the longest time span available (Ozturk1 and Acaravci, 2010). We select years 2006 and 2007 and the countries Argentina, Brazil, Chile, Colombia, Peru, Uruguay, and Venezuela, all of them belonging to the group middle-and low-income countries: Latin America and the Caribbean in the GEM global report.

We apply panel data analysis, which combines times series analysis with cross section analysis to develop a model compound of two equations. These two equations account for different entrepreneurs’ characteristics and social characteristics that help in explaining the
consolidation phenomena.

We find that those entrepreneurs in Latin America that get their firms consolidated typically initiate their businesses due to a need to change the status quo, which basically constitutes an unconformity with the status of things. This is complementary information to the commonly known fact of necessity being the major motivation to start up a business.

Also remarkable is our finding that entrepreneurs who succeed in consolidating their firms fear for failure. This fear seems to act as a deterrent, possibly motivating entrepreneurs to get more involved with their businesses and making extra efforts to make them succeed.

This work is structured in five sections. The first one is an introduction; following, in the second one is defined the conceptual outline of the study; the third one presents the econometric methodology used in the analysis; the fourth one submits the results of the study; and lastly, the fifth presents the conclusions which can be drawn from this work.

CONCEPTUAL BACKGROUND

Individuals’ and societal motivations for entrepreneurs

In this section we briefly review some key concepts on what are the drivers of entrepreneurship activity. We start by classifying in two different groups; we recognize then individual motivations and societal motivations.

Individual motivations refer to a set of personal principles and beliefs that drive the individual’s behavior and, in this context, lead him to the creation and management of their own business. Societal motivations refer to community codes, moral, rules and beliefs that boost the business creation (Alam, 2009a).

GEM distinguishes two branches of entrepreneurial motivations; the first one is opportunity and the second one is necessity. Opportunity includes those cases in which entrepreneurs look for either a higher degree of independence or an increase in their level of income. Necessity includes those cases in which individuals become entrepreneurs pushed by some unsatisfied need of themselves, basically the lack of chances of making a living in an alternative way (Alam, 2010b).

In high income countries opportunities could be expected to be more abundant (Instituto de Empresa, 2007, 2008, 2009) given a higher purchase power in the economy, which increases consumption levels and allows new needs to be satisfied or known needs to be satisfied in a better way.

Opportunities and entrepreneurship

A basic trigger for business creation is the existence of opportunities of doing business. Business opportunities can be found where there is an unsatisfied need in the market, or a latent need that has not been discovered yet and hence there is no a product or service that satisfies it (Mambula and Agwamba, 2009). Also for an opportunity to make economical sense it is necessary the consumers to be able to afford its costs, making business sustainable overtime.

In order to discover opportunities, entrepreneurs need to count not only with a good degree of perception and common sense, but also with accumulated experience that allow them to detect opportunities where other people cannot do it (Kirtzner, 1995; Venkataraman, 1997; Bell, 2001; Ardichvili et al., 2003; Eckhardt and Shane, 2003; Arenius and De-Clercq, 2005; De-Carolis and Saparito, 2006).

Craig and Lindsay (2001) also point out that intuition plays a role while recognizing opportunities in the market. The opportunity driver has typically been linked to the high income countries, where individuals are not pushed into entrepreneurship by necessity. When the relationship opportunity driven businesses to necessity driven businesses is computed for high income countries, the ratio is generally higher than for middle and low income countries.

The opposite tends to be true for medium and low income countries in the GEM universe. Necessity tends to play a much more important role than opportunity in developing countries.

Risk perception and entrepreneurship

Certain authors refer that entrepreneurs have a higher risk propensity than non-entrepreneurs. Entrepreneurs have often been described as risk-takers who attempt to achieve fast growth rates and above-average profits.

On the other hand, authors like Palich and Bagby (1995) maintain that entrepreneurs are actually not risk-takers but individuals who see the business reality with “rose-colored glasses”; they perceive present and future in a different way. To support this position, it has been shown that in a sample of entrepreneurs and non-entrepreneurs risk propensity level is similar for both groups and the first group associate business situations with more positive cognitive structures than the second.

But letting apart the entrepreneur risk aversion, we can be interested in analyzing the implications of perceiving risks and acting in such a way this perception has positive implications (Miner and Raju, 2004; Stewart and Roth, 2004).

It is clear that entrepreneurs risk not only capital when they start up a business. They also risk their reputation (Schumpeter, 1963) -which depending on the country can be more tightly linked to success-, their welfare, and social relationships, among other things.

Considering all these factors we can fairly expect entrepreneurs not only to rationally assume risks, but also to dedicate a great deal of effort to see their
businesses succeed. Hence we could also expect that those who perceive risks and fear for failure achieve a higher degree of success in their firms, which translates into higher levels of consolidation.

**Social perception and entrepreneurship**

The degree to which the entrepreneurship is a recognized activity in the society can also play a role in stimulating the activity. In turn, recognition is linked to culture and social values inherited and developed over time.

Instituto de la Empresa (2005, 2006, 2007, 2008 and 2009) has signaled in the past this relationship and other authors have pointed it out (Wilken, 1979).

The entrepreneurial attitude and its perception in a community is social perception and can be also modified over time by immigration and immigration (Instituto de Empresa, 2006; 2007, 2008, 2009; Bosma et al., 2009).

The social legitimacy is an essential element to motivate entrepreneurship and the individual’s motivation increases when the level of legitimacy does so (Shapero, 1982). The opposite also holds, so a negative perception towards entrepreneurship attempts against firms creation.

In terms of the economic theory Institutions form the incentive structure of a society and the political and economic institutions, in consequence, are the underlying determinant of economic performance (North, 1993). In this sense, entrepreneurship can be thought of as an institution and, the higher the presence and appreciation of such institution in the society, the higher the incentives and the level of entrepreneurial activity that can be expected.

**ECONOMETRIC METHODOLOGY**

In order to contrast the theoretical elements developed in the sections above, we use the following equations for a sample of 7 countries (Argentina, Brazil, Chile, Colombia, Peru, Uruguay, and Venezuela) for the period 2006 - 2007.

\[
\log \text{ESTBB}_i = \alpha + \beta \log \text{TEAFN}_i + \delta \log \text{TEAFQ}_i + \gamma \log \text{TEAMNQ}_i + \eta \log \text{TEAMQ}_i + \epsilon_i
\]  

(1)

\[
\log \text{ESTBB}_j = \alpha + \beta \log \text{NBGOO}_j + \delta \log \text{FRFAI}_j + \gamma \log \text{NBMED}_j + \eta \log \text{NSTAP}_j + \epsilon_j
\]  

(2)

The econometric methodology applied to equations (1) and (2) is a panel data analysis. This econometric method is appropriate and very useful with equations that relate different entities' or individuals' behavior -in this case consolidated entrepreneurs from different countries- since it provides the possibility of improving the estimations, if there was unobserved heterogeneity specific to each country or over time.

Not all consolidated entrepreneurs take their decisions in the same way in all countries; even though they shared the same observable characteristics (that is, the explanatory variables of the analysis), the decisions could be different. This analysis lets us deal with the existence of individual effects specific to each consolidated entrepreneur, invariant to time, and which affect the way each one takes decisions. If there are these latent effects, and they have not been taken into account in the analysis, there will be a problem of omitted variables and the estimator of included explanatory variables will be biased. Therefore, one of the advantages of using panel data is the ability to control individual effects specific to each individual (consolidated entrepreneur), in contrast to cross section data analysis that cannot control or identify such individual effects. Unobserved effects specific to consolidated entrepreneurs are usually related to matters of entrepreneurial capability, operative efficiency and experience capitalization, (Haussman and Taylor, 1981; Novales, 1993).

Apart from these individual differences, invariable in time, temporary effects can also be controlled by means of panel data. They are those which affect all individuals the same but vary with time.

Panel data analysis is usually interpreted through its error components, as explained below. The specification of a regression with panel data is as follows:

\[
Y_{it} = \alpha + X_{it} \beta + \epsilon_i \text{ with } l = 1, \ldots, N; \quad t = 1, \ldots, T
\]  

(3)

Where “i” refers to the country (cross section); “t” to time dimension; \( \alpha \) is a scalar; \( \beta \) is a vector of K parameters; and \( X_{it} \) is the nth power observation at moment t for explanatory variables K. The error term \( \epsilon_{it} \) can be broken down in the following way:

\[
\epsilon_{it} = \mu_i + \delta_i t + \omega_{it}
\]  

(4)

The first term on the right, \( \mu_i \), represents unobserved effects that differentiate countries but do not evolve over time, it is related to the entrepreneurial capability of consolidated entrepreneurs in each country. The second component, called \( \delta_i t \), refers to non-measurable effects that vary over time but not among countries. The third component, \( \omega_{it} \), refers to the purely random error term.

Most applications with panel data use the error component model \( \epsilon_{it} = \mu_i + \delta_i t \), known as “one way”, where \( \delta_i = 0 \). In our paper, \( \epsilon_i \) represents a fixed effect and is different for each country, so the linear model is the same for all consolidated entrepreneurs but each originate at the origin is specific to one country. Consequently, in this case unobserved heterogeneity is incorporated to the constant of the model. The specification is as follows:

\[
Y_{jt} = \alpha + \beta J_{jt} + \mu_j + \mu_{N+1} + \ldots + \mu_{N+1} \mu_{N+1} + \epsilon_{jt}
\]  

(5)

Where for each country \( j \), \( dit = 1 \) si \( i = j \), y \( dit = 0 \) si \( i \neq j \). Estimator \( \beta \) in (5) is known as within or fixed-effects estimator.

Data used to estimate equations (1) and (2) correspond to annual information, to the periods 2006 and 2007, for 7 countries members of the GEM Project. The GEM Global Report groups the 42 participating countries according to both their economic welfare and regional location. In this way, it determines three groups: High-Income Countries, Middle- and Low-Income Countries: Europe and Asia, and Middle- and Low-Income Countries: Latin America and the Caribbean. All the countries analyzed in this work belong to this last group.

The information has been obtained from international databases of the different years of the GEM Project and the description of the variables is as follows:

ESTBBUj = Represents the percentage of active population who is Owner-Manager of a consolidated activity (over 3.5 years) in the country \( j \) in the year \( t \).

TEAMOPj = Male Total Entrepreneurial Activity Index because of opportunity. It represents the percentage of male active population, in country \( i \) in the year \( t \), which is Nascent Entrepreneur (up to
Table 1. Estimation of ESTBBUt as a function of the opportunities.

Dependent variable: LOG (ESTBBUt)
Method: Pooled EGLS (Cross-section weights)
Sample: 2006 2007
Included observations: 2
Cross-sections included: 7
Total pool (balanced) observations: 14
Linear estimation after one-step weighting matrix

<table>
<thead>
<tr>
<th>Variable</th>
<th>Coefficient</th>
<th>Std. Error</th>
<th>t-Statistic</th>
<th>Prob.</th>
</tr>
</thead>
<tbody>
<tr>
<td>C</td>
<td>1.529908</td>
<td>0.211866</td>
<td>7.221098</td>
<td>0.0055</td>
</tr>
<tr>
<td>LOG (TEAMOPt)</td>
<td>-0.554559</td>
<td>0.105128</td>
<td>-5.275061</td>
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</tr>
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<td>LOG (TEAFOPt)</td>
<td>-0.058949</td>
<td>0.085622</td>
<td>-0.688480</td>
<td>0.5406</td>
</tr>
<tr>
<td>LOG (TEAMNEt)</td>
<td>0.780842</td>
<td>0.137315</td>
<td>5.686522</td>
<td>0.0108</td>
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<tr>
<td>LOG (TEAFNEt)</td>
<td>0.523065</td>
<td>0.048678</td>
<td>10.74538</td>
<td>0.0017</td>
</tr>
</tbody>
</table>

Effects specification
Cross-section fixed (dummy variables)

Unweighted statistics
R-squared 0.933277  Mean dependent var 2.199556
Sum squared resid 0.076650  Durbin-Watson stat 3.500000

RESULTS

In Tables 1 and 2, we can observe the relationship between enterprise consolidation and the different factors discussed. Table 1 states the consolidation as a function of opportunities related variables, as explained in the previous section. Table 2 states consolidation as a function of both social perception and risk perception related variables, as also explained in the previous section.

The results indicate that the firms that achieved consolidation were mostly created because of the necessities of the entrepreneurs, and this result is valid both for men and women. The observed elasticity levels show that about 80% of those firms started by men out of need will consolidate, and an also high value is observable for women, with above 50%.

These results are significant and consistent with generalized perceptions of specialists who indicate that a large number of start ups are created because of unsatisfied needs of the entrepreneurs and also allows us to think that these necessities help entrepreneurs devote a big deal of effort.

Set in context, we can interpret that many entrepreneurs depend on the success of their start ups to satisfy basic needs. This is in line with what we stated before, and has repeatedly been observed in the GEM reports, that is, needs play a much more important role in middle and low income countries than in high income countries.

3 months of activity) or Owner-Manager of a new venture (up to 3.5 years), being the recognition of business opportunity the motive of the venture.

TEAFOPit = Female Total Entrepreneurial Activity Index because of opportunity. It represents the percentage of female active population, in the country i in the year t, who is Nascent Entrepreneur (up to 3 months of activity) or Owner-Manager of a new venture (up to 3.5 years), the recognition of business opportunity the motive of the venture.

TEAMNEit = Male Total Entrepreneurial Activity Index because of need. It represents the percentage of male active population, in country i in the year t, who are Nascent Entrepreneurs (up to 3 months of activity) or Owner-Manager of a new venture (up to 3.5 years), the need to change the status quo being the motive of the venture.

TEAFNEit = Female Total Entrepreneurial Activity Index because of need. It represents the percentage of female active population, in country i in the year t, who are Nascent Entrepreneurs (up to 3 months of activity) or Owner-Manager of a new venture (up to 3.5 years), the need to change the status quo being the motive of the venture.

NBGOODit = Variable that represents the percentage of "yes-answers", in country i in the year t, to the item question: In your country, do most people believe that entrepreneurial activity is a good option for a professional career?

NBSTATit = Variable that represents the percentage of "yes-answers", in country i in the year t, to the item question: In your country, are successful entrepreneurs associated to high status?

NBMEDIt = Variable that represents the percentage of "yes-answers", in country i in the year t, to the item question: In your country, do the media pay a lot of attention to the entrepreneurial phenomenon?

FRFAILit = Variable that represents the percentage of "yes-answers", in country i in the year t, to the item question: In your country, would fear of failure stop you from starting a new venture?
Table 2. Estimation of ESTBBUt as a function of social perception and the perception of risk.

<table>
<thead>
<tr>
<th>Dependent variable: LOG (ESTBBUt)</th>
<th>Method: Pooled EGLS (Cross-section weights)</th>
<th>Sample: 2006 2007</th>
<th>Included observations: 2</th>
<th>Cross-sections included: 7</th>
<th>Total pool (balanced) observations: 14</th>
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<tbody>
<tr>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>Variable</td>
<td>Coefficient</td>
<td>Std. error</td>
<td>t-Statistic</td>
<td>Prob.</td>
<td></td>
</tr>
<tr>
<td>C</td>
<td>-2.570521</td>
<td>4.629145</td>
<td>-0.555291</td>
<td>0.6174</td>
<td></td>
</tr>
<tr>
<td>LOG (NBGOODt)</td>
<td>-0.372700</td>
<td>1.281363</td>
<td>-0.290862</td>
<td>0.7901</td>
<td></td>
</tr>
<tr>
<td>LOG (FRFAILt)</td>
<td>1.364624</td>
<td>0.313578</td>
<td>4.351791</td>
<td>0.0224</td>
<td></td>
</tr>
<tr>
<td>LOG (NBMEDIt)</td>
<td>4.292266</td>
<td>1.512875</td>
<td>2.837159</td>
<td>0.0658</td>
<td></td>
</tr>
<tr>
<td>LOG (NBSTATt)</td>
<td>-3.84949</td>
<td>1.663570</td>
<td>-2.311264</td>
<td>0.1039</td>
<td></td>
</tr>
</tbody>
</table>

Effects specification

Cross-section fixed (dummy variables)

<table>
<thead>
<tr>
<th>Unweighted statistics</th>
<th>R-squared</th>
<th>Mean dependent variable</th>
<th>Durbin-Watson stat</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>0.827915</td>
<td>2.199556</td>
<td>3.500000</td>
</tr>
<tr>
<td>Sum squared resid</td>
<td>0.197686</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Compatible also with these findings, an important part of the interviewed persons in countries analyzed have signaled that either they do not have an alternative job or they have a certain job but perceive that are close to lose it.

It is also observable that the number of women consolidating business created out of opportunities is so low that turns to be insignificant for explaining business consolidation.

On the other hand, the number of males starting up because of opportunity shows to be relevant, but the level of failure of such businesses is so high that its relationship with consolidation is negative. In fact, the elasticity -0.55 means that more than half of those companies do not consolidate.

Those enterprises initiated to improve income or obtain a higher degree of independence tend to fail much more than those initiated out of need. This may be due to several factors, and among them that individuals, in their search of increasing income or acquiring a higher level of independence enter new businesses which not necessarily constitute actual market opportunities. Also the lack of compromise or effort with the venture is a possible explanation for this high level of failure.

The model indicates that consolidated firms have being typically ed by entrepreneurs fearing failure. As we stated before, the fear of failure could act as a failure deterrent provided that it can drive entrepreneurs to a higher degree of commitment with the project and a higher management performance.

The media factor plays a key role paying attention to entrepreneurs and new firms, consequently becoming a powerful explicative variable of the firm consolidation. The media’s role could be understood as an indicator of social values and countries beliefs and institutions.

Actually, it shows the highest elasticity in the model. Entrepreneurs owning a consolidated business do not think that their success grant them any status benefit. This is in line with our finding of entrepreneurs starting up their companies mainly due to necessity, which can imply that they have no other alternative options to choose. Nevertheless, the significance level of this variable is dubious for the period analyzed.

There can be a linkage between opportunity and status as motivation, given that those who start up out of opportunity look for an improvement in their social situation.

In this sense, the negative signs of the status variable and the opportunity variable would complement themselves in explaining the consolidation process.

We observe also in the model above that entrepreneurs owning consolidated firms do not consider starting up a company as a good carrier option. Probably those who do consider that entrepreneurship is a good career option might not be under pressure enough to definitely pursue their businesses objectives and achieve the firm consolidation. However, we have to point out that this variable shows to be not statistically significant.
Conclusions

In this paper, we have analyzed individual and societal factors that determine the consolidation of firms in Latin American countries. We have applied panel data analysis for this purpose, which allows us to capturing the variations of variables both through time and individuals.

Our key findings indicate that those enterprises that achieve the consolidation were typically initiated due to the need of individual of changing the status of things. Compatible with this result, we find that entrepreneurs who reach consolidation have not been motivated for considering that entrepreneurship is a good career option, which directly implies that they were pushed into entrepreneurial activities, by unsatisfied personal needs, we infer.

Also those entrepreneurs who succeeded in consolidating their firms felt fear of failing in their projects. This is understandable once all the results are analyzed from a need perspective. This fear, in turn, may have boosted their efforts to succeed in doing businesses, resulting thus a determinant factor for consolidation.

The results presented here get further with a generally recognized idea of a high level of enterprises being started out of necessity in middle and low income countries, because these results provide key variables for understanding the reasons why firms do consolidate, which means getting an explanation for a posterior stage in the business cycle.

Last, another important result is that both individual and social factors have been analyzed at once in a multi-equation model, getting results statistically significant.

REFERENCES


