**Key elements of the Entrepreneurial Ecosystem facilitating the growth of ICT Entrepreneurs in Brazil**

*Renata Lèbre La Rovere[[1]](#footnote-1)*

*Leonardo de Jesus Melo[[2]](#footnote-2)*

**Introduction**

The elements that form an entrepreneurial environment have been the object of discussion as the decline of Fordism and the emergence of the knowledge society took place. There are several studies studying the main actors of entrepreneurship that can be divided in entrepreneurs, organizations and the entrepreneurial milieu (Julien, 2007). The research on entrepreneurship in emergent countries such as the BRICs and the comparison of this country with a developed country notorious for the prevalence of SMEs (BRICs) can provide interesting insights to understand how these main actors interact.

According to the Global Entrepreneurship monitor, Brazil has a high rate of early-stage activity and a high rate of established business ownership as well. Also, entrepreneurship is mostly improvement-driven. Although GEM data on Brazil are not very reliable due to methodological issues, it is reasonable to suppose that entrepreneurship activity in the country is growing, as the economy has been growing at steady rates in the last five years. In fact, the financial crisis that hit developed countries last year had little effect on the Brazilian economy, because growth at present is mostly based in the expansion of the internal market. In the last years social policies allowed for a huge expansion of the middle class: in 2003, Brazil had 13.3 million people at the higher class, 65.8 at the middle class and 96.2 at the lower class. In 2009, the lower class had 73.2 million, the middle class 94.9 million (50.5% of total population) and the higher class 19.9 million. This expansion created new opportunities for entrepreneurs as it paved the way for the growth of the internal market. Revenue of Brazilian households grew at a 5.3% yearly rate in this same period (CPS/FGV, 2010).

Opportunities for Brazilian entrepreneurs in the ICT sector are also growing, as the middle class expansion is leading to a growth in digital inclusion. The share of the ICT sector in Brazilian GDP was 7% in 2009 and the total employment in the sector grew 21% between 2003 and 2009 (BRASCOM, 2010). Today the ICT sector employs around 1.7 million people.

This paper presents the findings of a study conducted among 108 entrepreneurs from the ICT sector in Brazil. The study involved the application of a questionnaire that aimed to identify challenges and opportunities that entrepreneurs face during the creation and the consolidation of enterprises. The questionnaire focused on the following elements:

1. Individual personality traits
2. Socio-culture context
3. Government programs and policies
4. Access to finance
5. Access to information, opportunities for knowledge and skill building
6. Exposure to global markets
7. Critical factors for success and for failure

We applied a pilot in-depth questionnaire to a group of five ICT enterprises chosen between the 200 SMEs that had the largest growth rates in Brazil between 2007 and 2009 and five start-ups located in Rio de Janeiro. We then proceeded to apply a similar questionnaire to 120 ICT enterprises that were contacted more superficially, in large ICT conferences, by email and through social networks. Out of those we collected 98 valid questionnaires. This paper compares the answers from this group of 98 enterprises with the original (control) group.

The larger sample provided several answers concentrated in the “medium” range of answers. So, to divide answers in positive and negative we added the answers classified as “none” and the answers classified as “medium” and compared this number with the number provided by the addition of “medium” and “strong”. For analysis purposes we are considering negative those answers where the sum of “none” and “medium” is larger than the sum of “medium” and “strong”, and “none” is more than 30%. Conversely, we are considering positive those answers where the sum of “medium” and “strong” is larger than the sum of “none” and “medium”, and “strong” is more than 30%. Answers that do not fit into these two situations are considered “medium”.

**1. Individual traits**

The answers to the questions related to individual traits revealed a strong perception among Brazilian entrepreneurs that individual and personal characteristics are critical to success. 92% of interviewees considered they had medium/strong abilities to recognize new business opportunities, to run risks and to organize the necessary resources to start a business.

However, there were some important differences among the answers. 60% of interviewees mentioned they had strong abilities to recognize new business opportunities and run risks, but only 48% mentioned strong abilities to organize the necessary resources to start a business. This result is in tune with the answers of the control group, that showed that most entrepreneurs had difficulties to select employees, get financial resources and establish networks.

**2. Socio-cultural context**

The interviews with the control group revealed a conservative attitude of the families towards entrepreneurship; most families of the entrepreneurs of this group did not support or did not understand the involvement of entrepreneurs with their business. This attitude is linked to a high value attributed to financial stability. Brazilians faced high inflation for a very long period; therefore they prefer sure earnings that come with stable jobs. The fact that interest rates are historically high for structural reasons also explains the aversion to risk in Brazilian society.

However, the answers of the larger sample considered that presence of entrepreneurial families was important as a socio-cultural trait, although less important than individual traits (79% of answers medium/strong). Other socio-cultural traits considered relevant, with similar ratios, were culture to promote new business, to support innovation, entrepreneurship viewed as a desirable career, opportunities for young people and gender-related opportunities.

It is interesting to note that gender-related opportunities surpassed opportunities for young people in answers rated “strong”. This indicates that women have been conquering more space in the Brazilian society.

Overall, answers seem to be very optimistic about the socio-cultural context, reflecting the good economic period that the country has been going through and the related perception that are several opportunities for business creation in the ICT sector.

**3. Government Policies and Programs**

Among the control group, all considered that Government policies did not help. Three of the five companies specifically mentioned taxation as an obstacle to business growth. Among the start-ups, three recognized the benefits associated with Government policies to help high-technology research or support to start-ups, one stated that Government policies did not help but also were not obstacles and one also mentioned taxation as an obstacle.

The larger sample seemed to confirm the unfavorable view companies have of public policies, because all questions in this block had medium or negative answers. As for support policies, 78% answered that policies in general had none or medium importance, although answers rated “none” were only 27% of the total. In addition, 77% answered that policies for start-ups had none or medium importance, but again answers rated “none” were only 28% of the total.

Therefore, differently from the findings of the control group, policies for start-ups were not considered relevant for success. This difference may be explained by the fact that the control group had relatively more start-ups than the larger sample.

Regarding the opinion about tax policies, while the control group emphasized the relevance of strong taxation as an obstacle to business growth, 69% of the firms from the larger sample did not consider favorable tax policies as a factor for success.

In addition, interviewees were divided about whether availability of tax rebates from the Government were important: 33% considered not important, 53% considered of medium importance and 12% considered important. However, this factor was cited by interviewees of the larger sample as the third more important factor for success.

Therefore what seems to prevail in the conception of interviewees is that state policies may help but are not important. The question on infrastructure had the highest ration of negative answers (81%).

Brazilian SMEs are indeed wary of Government. They were penalized by high taxes for a long time in the past. In recent years the Government has been trying to solve this problem by creating tax rebates for small companies, but these rebates are conceded according to turnover, so companies that grow end up losing them. Also, regulations to open new businesses are still complex despite all efforts of the federal Government to simplify procedures, since they include licenses at the federal, state and local levels.

Although the Government is also making a significant effort to support research in high-technology, the policies to support high-tech companies are also restrictive because they are linked to traditional concepts of industry (telecommunications, informatics, new materials etc.). As the ICT companies produce a mix of products of these sectors, sometimes they fail to qualify to the rigid calls for support that the Government produces according to Brazilian law.

Finally, infrastructure is a general problem of Brazil, and ICT companies also suffer with difficulties related to the fact that broadband penetration is restricted to metropolitan areas. This fact limits their possibilities of growth.

**4. Access to Finance**

The fact that in Brazil interest rates are very high leads entrepreneurs to seek alternative ways of finance. Among the control group, most had used money from relatives and friends to start their businesses and just one company had access to private equity. Today the control group does not view financial institutions as important and try to keep growing with their own resources or by partnerships with customers and suppliers.

This finding was not confirmed by the larger sample. All forms of finance were considered not relevant for success, and the only form that had a prevalence of “medium” answers was private bank funding. This might be associated with the fact that bank loans are the most common form of getting credit and with the fact that interest rates in Brazil are in a trajectory of descent.

**5. Access to information, opportunities for knowledge and skill building**

Education, hard work and honesty were the values most cited as essential values by entrepreneurs of the control group. Knowledge related to experience on the job is considered essential. All established companies have in-job training courses. Concerning the knowledge necessary for planning of activities, most companies in the control group cited technical knowledge, knowledge of competitors and of costumers as the essential elements of a good strategy. All established enterprises from the control group also consider that it is very important to provide their experience to younger entrepreneurs. They do this by presenting seminars, posting success cases in their homepages, teaching at Universities and taking part of social programs to stimulate entrepreneurship conducted by NGOs.

This positive attitude to education was revealed by answers of the larger sample but with some differences concerning the type of education. For instance, 36% of interviewees considered that an educational system favorable to entrepreneurship was not important for success of enterprises. But at the same time this factor was mentioned by 8% of interviewees as the second more important factor for success.

We also found that interviewees do consider relevant other types of training that are more related to learning by doing and learning by associating. Thus the entrepreneurs from the larger sample consider more important formal training in entrepreneurial best practices, which had 68% medium/strong answers. Other types of education considered relevant were start-up counseling, support from entrepreneurial associations for networking, access to incubators, technology parks and universities. Interviewees do not deem relevant specific support policies for start-ups, and also do not view opportunities of collaboration between the public and the private sector as important success factors.

**6. Internationalization of firms**

Results obtained in the larger sample were substiantally different from the control group. The latter considered that going global is important to acquire experience and consolidate their businesses. All established companies that had national markets answered that they were “still national”, indicating their desire to go global in the future. One of the companies located in the incubator already has Latin American clients and another expressed a desire to go global. Global insertion is viewed by companies of the control group as a way to face new challenges, learn and bring new quality standards to the company and to the market.

In the larger sample, 50% of companies said that internationalization was not relevant. When we add this ration to 30% of medium answers, we have a clear indication that Brazilian entrepreneurs do not focus on international markets at this moment. This explains why 48% of interviewees considered information and abilities required for internationalization, access to financial resources linked to internationalization and support policies to enter new markets (local and global) not relevant as well.

In the group of variables that measured attitudes towards internationalization, the only one considered relevant was access to foreign languages, although it was mostly considered of medium relevance (40% of interviewees). However, this seems more related to the present economic and social context of the country, that expects to attract more foreign investments due to the scenario of crisis in developed countries.

**7. Factors of success and failure**

The key success factors more mentioned were individual: ability to recognize opportunities was mentioned as the more important factor by 26% of interviewees. After this, ability to run risks and to organize resources were also mentioned. The key failure factors mentioned were tax rebates and public policies, confirming the perception that entrepreneurs consider public policies a hindrance and fail to acknowledge efforts made by Government in this area.

Finally, one factor linked to milieu had mixed results. Educational system favorable to entrepreneurship was cited by 8% of interviewees as the second more important factor to success, and by 9% of interviewees as the third more important factor for failure. As the relevance of education to ICT entrepreneurs is evident, more research on how they perceive benefits of formal education is needed.

**CONCLUSION**

If we follow the division proposed by Julien (2007) op.cit., we may state that the interviews showed the relevance of both individual traits (entrepreneurs) and of the environment (milieu) in setting up successful organizations, either consolidated or inside incubators. Individual traits of the entrepreneurs are important to start the company because, as showed by the interviews of the control group, some entrepreneurs faced obstacles such as uncertainties of the economic environment and opposition from their families to set up their enterprises. Milieu is important as it sets up the parameters for decisions: the use of own resources to start, the importance attributed to knowledge and the criticism of Government are all important in decision making about investments and search of new markets.

**References:**

BRASSCOM (2009) Alavancando TIC para Crescimento Econômico. Rio de Janeiro, Fundação Getúlio Vargas

CPS/FGV (2010) A Nova Classe Média: o Lado Brilhante dos Pobres. Rio de Janeiro, Fundação Getúlio Vargas. Available at www.fgv.br/cps

DELLOITE (2010) As PMES que mais crescem no Brasil. Um estudo sobre as empresas que cultivam as bases de sua expansão. São Paulo, Delloite/EXAME PME

JULIEN, P.A. (2007) A Theory of Local Entrepreneurship in the Knowledge Economy. Cheltenham, UK, Edward Elgar

**ACKNOWLEDGEMENTS**

The authors wish to thank Pablo Diego Pereira, Vanessa Huback and Bruna Azevedo, undergraduate students of the Institute of Economics of the Federal University of Rio de Janeiro, for their valuable help in collecting and organizing the data.

1. Associate Professor, Institute of Economics, Federal University of Rio de Janeiro [↑](#footnote-ref-1)
2. Institutional Relations Manager, Technological Park, Federal University of Rio de Janeiro [↑](#footnote-ref-2)