

The Supportive Environment for New Ventures: a Comparative Study of Brazil and Estonia

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Abstract: Several researchers have studied the effect of environment on entrepreneurship. Most of these studies have covered a specific region. In this paper we study two orthogonal cultures: Estonia in Northern Europe and the state of Rio de Janeiro in the Brazilian Southeast region, comparing the factors that influence the creation and early activity of companies in both places. This study focuses on the software segment. However, our exploratory analysis can also be applied to other segments, especially in the service sector. Our secondary data embrace six categories: demography, segment structure, infrastructure, education system, regulation and culture. The relevance of these data was validated through interviews with software companies' owners from Brazil and Estonia. This comparative analysis leads to a discussion of the relevance of the chosen predictors for new venture promotion, and what can be learned for entrepreneurship promotion in each of the regions studied.

Key Words: Entrepreneurship, New Ventures, Environment

1 INTRODUCTION

National and regional environmental characteristics, together with government policies, are among the factors that stimulate entrepreneurship (Reynolds et al., 1999; Stevenson et al., 2007). The positive function of entrepreneurship in job creation and economic growth is well recognized in most of countries (Reynolds et al., 1999). The process of starting a new company, whether or not it succeeds, requires goods and services and generates employment, contributing to GDP growth and competition development, crucial to innovation and economic vitality of regions (Stevenson et al., 2007).

This study maps the environmental influences on new software ventures in the state of the Rio de Janeiro, Brazil, and in Estonia, one of the European Baltic countries, now member of the European Union. We identify and compare the national conditions in both places that contribute to early-stage entrepreneurial activity. In the development of this paper we gave special attention to the software segment, although many of our findings can be generalized to most service companies.

Comparative studies are relevant and encouraged in the literature, as they can provide an alternative point of view for the regions being analyzed.

Our work is focused on the environmental characteristics that foster entrepreneurial activity in both countries. We do not analyze personal factors such as motivation, abilities or opportunities.

The data on the business environment came from international databases on Brazil and Estonia. We then selected different software companies in both regions and conducted personal interviews with their owners. Finally we collated and examined all the data to identify the factors that matter most for our research questions.

Two different literature models were used to guide our research: the Gartner (1985) model of four dimensions and the Reynolds et al. (1999) Global Entrepreneurship Monitor model.

This article is divided into four chapters. The first chapter reviews the literature on entrepreneurship and national policies. The second chapter presents our methodological

strategy, the sample selection and data collection procedures for primary and secondary data. In the third, we give an overview of the environment for new software ventures in Rio de Janeiro, Brazil and in Estonia. The last chapter presents our conclusions.

2 LITERATURE

Among the many suggestions of an adequate **definition of entrepreneurship**, some authors summarize it as just “creation of new enterprises” (Low & MacMilan, 1988; Gartner, 1985) and propose “that entrepreneurship research seeks to explain and facilitate the role of new enterprise in furthering economic progress.” We also highlight some policy researchers, such as Stevenson et al. (2007), who said that a definition of entrepreneurship should involve the institutions, organizations and individuals that support entrepreneurial activity.

As proposed by Gartner (1985), the entrepreneurship phenomenon can be represented by a four-dimensional model, detailed below, where each of the dimensions interact with all others: (i) the entrepreneur who starts the company; (ii) the process of opening the company; (iii) the new company itself; and (iv) the environment where the new venture creation takes place.

The **individual or entrepreneur** is the center of new venture creation. There is no evidence in the literature about traits that differentiate natural-born entrepreneurs from non-entrepreneurs (Learned, 1992; Davidsson et al., 2001, Sarasvathy, 2004). On the other hand, evidence shows that entrepreneurial behavior is a product of the interaction of the individual and the environment. However, some personal variables (e.g. need for achievement, risk-taking propensity, tolerance for ambiguity, energy level, intelligence, creativity, health), when interacting with the environment enhances the motivation to engage in entrepreneurial behavior (Learned, 1992), confirming the importance of family education as well as environmental support (Forbes, 1999).

Studies of the thoughts of entrepreneurs (cognition theory) identify three main cultural behavior aspects that lead to entrepreneurship: (1) innovation and creativity - the tendency to be creative in thought and action; (2) risk-tolerance - the propensity of individuals to engage in risky activities and believe that their chances of success are higher than others; (3) need for achievement – which can be summed up in locus of control (belief that one can influence others’ lives) and individual energy level (Forbes, 1999; Thomas et al., 2000; Shane, 2001).

The early-stage phases of the **entrepreneurial process** begin when the intention to open a firm arises, the resources are gathered, plans are made, networks prepared and the business idea is put into practice. The early-stage phases goes on during the process of the newborn company’s creation, up to when the “liability of newness”, a definition that embraces the main threats facing a new venture, is overcome. It is said that mortality risk is strongly related with newness; new companies face the novelty of marketing, a new operational process and novelty of management (Shepherd et al., 2000). Usually a venture becomes stable after three to four years of operation (Reynolds et al., 1999; Stevenson et al., 2007).

Some strategies can reduce mortality risk. The most important personal characteristic of the entrepreneur is the knowledge/ability of the individual to learn and change his/her behavior during the startup phase, and to develop a feasible strategy (Gartner et al., 1998; Chrisman et al., 1998). A niche strategy is recognized as most likely to succeed. Management of costs, finding reliable suppliers and analysis of competitors are also of high importance (Gartner et al., 1998). Entrepreneurial education reduces the novelty of management and also diminishes other novelties (Shepherd, 2000).

The **emerging organization** can be seen as the product of an “entrepreneurship factory”. New ventures rely mainly on business *opportunities* (Shane, 2001; Smith, 1967,

cited in Lasch et al., 2007). Nevertheless, opportunities alone lead nowhere; entrepreneurs must have *motivation* to open their own company as well, and they also must have *skills* to manage and run the venture (Lundstrom, 2001, cited in Stevenson et al., 2007).

Opportunities set the basis for an entrepreneurial **environment**. Urban agglomerations and level of small firms (Reynolds et al., 1994, cited in Davidson 2001; Tödtling et al., 2003) together with access to capital and research and development (Shane, 2001) act as spillovers for new venture creation. Unemployment is also related with entrepreneurship. Findings show that new ventures are created under high uncertainty and ambiguity (Knight 1921, cited in Forbes 1999, Audretsch et al., 2007). Also, other national conditions act to promote entrepreneurship: culture, legislation, tax systems, education system and infrastructure (Davidson, 2001).

The social, cultural and political context (demographic structure, education system, cultural characteristics and social norms) together with some entrepreneurial conditions, such as the role of government and financial institutions in entrepreneurial promotion, levels of R&D, technological transfer from universities, the quality of the physical business infrastructure, labor market efficiency and the robustness of legal and social institutions (Reynolds, 1999) can foster the development of new private institutions in a country.

Stevenson et al. (2007) proposed five relevant policy areas for entrepreneurship promotion: (1) regulation, which means administrative conditions, entry barriers, labor market, bankruptcy legislation, income tax and risk reward policies; (2) financing, understood as debt and equity capital and tax policy; (3) guidance: government policies and programs, infrastructure; (4) entrepreneurship education; and finally; (5) entrepreneurial culture and risk taking. In turn, Smallbone et al. (2001) suggested that governments in transition economies should avoid proliferation and fragmentation of support agencies so as not to confuse business owners. The concept of enterprise should be valued within the society. Also, low government corruption is important to develop acceptance of entrepreneurial activity, since corruption contributes to a negative image of private business.

Reynolds et al. (1999) emphasized some factors that capture what environmental elements matter most to foster entrepreneurial activity: (1) infrastructure, (2) demography, (3) education and (4) the culture.

In the area of **infrastructure**, Reynolds et al. (1999) highlighted four aspects that seem to have a strong relationship with entrepreneurship: (1) availability of equity financing, (2) availability and costs of suitable professional services, (3) potential R&D transfer and (4) flexibility of internal labor markets. Other authors, however, have said that the availability of capital is the most important variable in the infrastructure dimension (Shane, 2001; Stevenson et al., 2007).

Several **demography** aspects contribute to promote entrepreneurship. Agglomeration level as one of the most important demographic aspects put forward in the literature that promotes new venture creation (Davidson, 2001; Tödtling et al., 2003). Agglomerated areas normally have more demand and more opportunities. Other variables are also critical: the age structure of the population and population growth (Reinolds et al., 1999).

Some authors say that together with agglomeration level, the **sector's structure** has a strong influence on new venture promotion. The number of existing small firms creates a positive environment for entrepreneurs to open their own companies and is another very relevant predictor of entrepreneurship (Davidson, 2001; Shane, 2001; Tödtling et al., 2003). High unemployment was also proposed by Rotefoos (2005) as a good predictor of entrepreneurial activity. The reason is that unemployment generate necessity and necessity pushes people into risky activities.

We studied the **education system** through three different perspectives: long-term education (primary and secondary schools and universities), technical education (ICT

education) and entrepreneurship education (entrepreneurial and managerial). Although we are inclined to believe that long-run education has the greatest positive effect on entrepreneurship, Reynolds et al. (1999) postulated that there is just a modest relationship with educational attainment beyond the level of completed secondary school.

Culture is like an iceberg: just a small part of it can be seen above the surface but the biggest portion lies underwater. This metaphor captures the importance of national culture.

Hofstede (1980) published a classic study about international culture. In his work he provided four main dimensions to explain the cultural behavior of different groups. These dimensions are: (PDI) power distance – the extent to which a society accepts unequal distribution of power; (UAI) uncertainty avoidance – the level of a society's tolerance for uncertainty and ambiguity; (IDV) individualism - versus its opposite, collectivism, measures the degree to which individuals are integrated into groups; and (MAS) masculinity - versus its opposite, femininity, refers to the distribution of roles between the genders. Later, a fifth dimension was added to his original study: (LTO) long-term orientation – the values associated with this dimension are thrift and perseverance.

Analyses of how Hofstede's cultural dimensions can influence entrepreneurship have found that entrepreneurship is most likely to emerge in cultures with low PDI, low uncertainty avoidance, high individualism and high masculinity (Rusell, 2004). These are closely related with Anglo-Saxon cultures, which are frequently seen as the most entrepreneurial in the world. Other authors add that high LTO also positively influences entrepreneurship. On the other hand, they disagree about the PDI dimension's influence, arguing that a high power distance can positively influence entrepreneurial activity (Busenitz et al., 1996, cited in Forbes, 1999).

The relation of Hofstede dimensions with entrepreneurship is controversial in the literature. For example, Bouncken et al. (2009) found a negative impact of PDI on entrepreneurial activity and that the general assumption about collectivism and individualism does not hold. Other researchers (e. g. Busenitz et al., 1996; Minoti, 2001; Mitchell et al., 2000; Morris et al., 1994) have suggested that only individualism has a positive impact on entrepreneurship. These controversial findings show that the literature is not yet conclusive about the bearing of Hofstede's dimensions on entrepreneurship.

3 DATA AND METHODOLOGY

To select the best strategy for data collection and to compare both regions we organized six authors' findings of best predictors for entrepreneurship in a spreadsheet. The predictors were organized separating the entrepreneurial triggers and the national conditions. Table 1 below shows the selected dimensions.

	Reynolds et al, 1999	Davidson, 2001	Shane, 2001	Tödting et al, 2003	Rotefoos, 2005	Stevenson et al 2007
Triggers	Opportunities		Opportunities			Opportunities
	Capacity					Skills
						Motivation

National Conditions	Culture	Culture			Political ethos (Entrepreneurial culture)	Culture	
		Legislation				Regulation	
		Tax systems					
	Education	Education System				Entrepreneurship Education	
	Infrastructure	Infrastructure	Access to capital				Financing
			R&D Intensive				
							Guidance
	Demography	Agglomeration		Agglomeration	Urban Agglomeration		
		Population growth					
		Growth of demand		Sectoral structure			
					Unemployment		
		Concentrated industries					
	Level of other small firms	Number of small firms					

Table 1 – Environment dimensions that influence entrepreneurial activity

We shaded in gray our compilation of the main national conditions for entrepreneurship promotion. Our compilation of six predictors was done comparing the authors' works and looking for dimensions that were reported by two or more papers. Still, some dimensions are more general than others. In this case, we chose the most general one. For each of these six predictors we chose the following proxies:

- demography: population data;
- sector's structure: data about employment and company profiles;
- infrastructure: public and private institutional reports;
- education system: educational statistics;
- regulation: Doing Business world ranking;
- culture: Hofstede's cultural indexes.

To validate and scrutinize the relevance of our secondary data, we conducted six interviews with software company owners, half from Rio de Janeiro and half from Estonia. We completed the interviews with a long conversation with the head of the Entrepreneurship Center of the University of Tartu, Estonia, one of the most active centers in the country. Data collection through interviews is recommended by Ghauri (2002) as a suitable method for exploratory studies.

We conducted the interviews between January and March 2009. The interview processes were guided by the six chosen predictors, with questions about our collected data and also about the respondents' perception of how those factors matter for them. We also asked about the supportive entrepreneurial institutions and about behavior.

4 RESULTS AND INTERPRETATION

Brazil is a huge developing nation with large metropolitan areas where the population density is high, with hot weather and an internal market that cushions it from global turbulences. It is often grouped with Russia, India and China as among the leading emerging economies (BRIC nations). Actually, nowadays Brazil has a developed internal market with big multinationals. But the country also suffers from stark inequalities and social problems.

Estonia is a new nation. It obtained its independence just 15 year ago from the Soviet block and has developed very fast since then, attracting strong FDI flows and achieving almost double-digit GDP growth in the past five years. In this context, Estonians have created state-of-art policies and services. Most government services are accessible online. Still, at the moment innovation is too expensive and risky for most Estonian companies. The problem is that the Estonian market is still weak with low exports and lack of specialization, and so are its software companies (Kattel et al., 2006).

The TEA index measures the number of people who are trying to start their own business or are owners of a young company. Brazil has approximately twice the Estonian entrepreneurial activity. On the other hand, companies in Estonia are solidier than Brazilian ones. Just 10% of Brazilian firms survive after the pos-startup phase while approximately 40% of Estonian companies stay alive. Table 2 presents macro data about both regions.

	Estonia	Rio de Janeiro	Brazil
Population	1.341 M ^(a)	15.420 M ^(d)	183.987 M ^(d)
Area	45 226 km ² ^(a)	43 910 km ² ^(d)	8 514 877 km ² ^(d)
GDP	US\$ 20.7 B ^(a)	US\$ 190 B ^(b)	US\$ 1 314 B ^(c)
GDP per capita	US\$ 15 446 ^(a)	US\$ 12 030 ^(b)	US\$ 6 941 ^(c)
Real GDP growth rate	6.3 % ^(e)	3.29 % ^(b)	5.4 % ^(c)
Average monthly wage	US\$ 983	US\$ 633 ⁽²⁾	US\$ 480
TEA Index	5% ^(f)	n/a	12.7% ^(g)
Company mortality rate	54.6% ⁽ⁱ⁾ in first 4 years	90% ^(h) in first 5 years	n/a

Table 2 - Brazilian and Estonian economic data – Base year 2007

Sources: (a) Statistics Estonia, 2008 (b) CIDE, 2009 (c) Banco Central do Brasil, 2007 (d) IBGE, 2008 (e) Eurostat, 2009 (f) Minniti et al., 2005, cited in Mets, 2005 (g) Grecco et al., 2006 (h) CIDE, 2009 (i) Ettevõtlus, 2008 - Remark: (1) 2nd quarter 2008, (2) Metropolitan area

The **demography** in Rio is much better for business than in Estonia. The differences are high. While Rio has 351 inhabitants per square kilometer, Estonia has only 30. It is much easier to find market opportunities in Rio than in Estonia. Also, the population in Rio is still growing while in Estonia it is decreasing slowly. Table 3 also shows that Rio's big cities are not just bigger than Estonian ones, but also concentrated – the three biggest centers presented are all located in the capital metropolitan area.

	Estonia	Rio de Janeiro, Brazil
Population	1.34 M	15.42 M
Area	45 226 m ²	43.910 m ²
Density	29.6 /km ²	351.2 /km ²
Population growth rate	-0.29%/year ^(b)	1.3%/year ^(a)
Population of the three biggest centers	Tallinn (396 852), Tartu (101 965), Narva (66 712)	Rio de Janeiro (6 093 472), São Gonçalo (960 631), Duque de Caxias (842 686)
Agglomeration level	Tallinn (30%), Tartu (8%), Narva (5%)	Rio de Janeiro (40%), São Gonçalo (6%), Duque de Caxias (5%)

Table 3 - Population of Estonia and Rio de Janeiro, Brazil

Sources: (a) IBGE – average 1991-2000 (b) Stat.ee average 2000-2008

While Brazilians get most of their opportunities from their own city or state and struggle more with local competition, Estonians have to think more internationally to seek customers. Not only are customers scarce in Estonia, employees are as well. Some company owners believe that ventures should be fully internationalized in Estonia, with international employees and selling to the international market. This pressure from the market has a positive consequence, inducing more productive industries.

Sector structure means growth of demand, level of other small firms, unemployment and concentrated industries. A high density of small and medium enterprises (SMEs) in a region is able to provide role models, as well as skills and experience for active entrepreneurship (Fritsch 1992, cited in Tödtling & Wazemböck, 2003).

Rio de Janeiro has around four times more service SMEs than Estonia. In both regions, small and medium companies represent the biggest part of the market (Table 4). These data seem contradictory to the entrepreneurship TEA index, which puts Brazil in a stronger position in entrepreneurship activity than Estonia. This can be explained by the high informality of Brazilian ventures, not described in official indexes.

	Estonia	Rio de Janeiro, Brazil
Total Service SMEs	19 196 ^(a)	76 942 ^(b)
Service SMEs / inhabitant	0.014	0.005
Density (service SMEs/total service firms)	87.3% ^(a)	98.8% ^(c)

Table 4 - Service SMEs in Estonia and Rio de Janeiro

Sources: (a) Ettevõtlus, 2006 (b) IBGE, 2001 (c) Moraes et al., 2002 (Southeast region)

Regional factors like growth of demand (Reynolds et al., 1994, cited in Davidson, 2001) and unemployment (Rotefoos, 2005) can influence firm creation activity. Table 5 shows some data about these topics, providing a proxy for growth of demand through the growth of income in both regions. Entrepreneurship is spurred by necessity. Economic crises and unemployment can positively influence entrepreneurial activity.

	Estonia	Rio de Janeiro
Inflation 2008 (consumer price index)	10,4 %	6,8 % ⁽²⁾
Unemployment rate – 2007	4,7%	6,1% ⁽³⁾
Unemployment rate – 2008	6,2% ⁽¹⁾	6,2% ⁽³⁾
Average monthly wage – 2007	US\$ 983	US\$ 633 ⁽³⁾
Average monthly wage – 2008 ⁽¹⁾	US\$ 1 125	US\$ 670 ⁽³⁾
Wage variation	14,4 %	5,8 %

Table 5 - Brazilian and Estonian economic data – Source: IBGE, Stat. ee, FGV

Remark: (1) 3rd quarter 2008 (2) IPC-RJ (3) Rio de Janeiro metropolitan area

As can be seen, the unemployment rate is similar in the metropolitan area of Rio and in Estonia; both were 6.2 % in 2008. Because of this similarity, we believe that entrepreneurship as a necessity does not by itself explain the higher entrepreneurial activity in Rio de Janeiro.

Something remarkable in Estonian economic structure is the high level of personal loans during the years of high FDI and the economic bubble. In some aspects this worked against entrepreneurship, as young people with loans to pay need a more stable life, which inhibits risk taking (Mets Interview, 2009).

Infrastructure is defined in the literature as the availability of financing, availability and costs of professional services, R&D transfers, flexibility of labor markets (Reynolds et al.,

1999) and guidance (Stevenson et al 2007). The public infrastructure for service company development is clearly better in Estonia than in Rio de Janeiro.

The availability of financing appears in the literature as the most important variable of the infrastructure dimension that explains entrepreneurial activity. Estonian businesspeople gave a very good mark to financing availability in Estonia. Banks are the most common source of financing for Estonians. In Brazil the opposite holds, where bank loans are almost impeditive for small companies.

Business associations are generally frowned on by Estonians and by Brazilians. These institutions seem to be too politicized for young entrepreneurs. Young entrepreneurs normally prefer informal sources of data and work hard to fulfill customers' needs, showing little interest in business associations.

Communication services are very good in Estonia, at affordable prices. Estonian internet and cellular coverage is equal to developed-country standards. In Rio de Janeiro and the entire Southeast of Brazil there are good quality services, but availability is spotty and often not affordable for all entrepreneurs.

The telecom infrastructure coverage is excellent in Estonia. Mobile phone service is available in 99.9% of the country. The internet connection rate is one of the highest in the world, with 91% of the dwellings connected. Among schools there is a 100% rate of internet connection. In public places there are more than 1100 free wi-fi access points around the country (RIA, 2008). SMSs services are quite common: car parking, loans and public transport tickets are just a sample of high-tech phone based services in Estonia.

Transportation services are not outstanding in either Estonia or Rio de Janeiro, but they are satisfactory. Estonia suffers from a lack of routes to the West, as these were not developed during the Russian period. Brazil, as most developing countries, suffers from poor road quality and maintenance.

The difference of government support is also striking. While the Estonian government works with a modest budget to create modern services and infrastructure has policies and laws to foster entrepreneurial and business activity, the Brazilian government levies high taxes to support a heavy and inefficient public administration. In the state of Rio de Janeiro, entrepreneurs see the government almost as a rival. Some even say that they root for the government not to make things even worse. The recommendations of Smallbone (2004) to avoid proliferation of agencies and fight against corruption is definitely ignored in Brazil.

A secondary **education** is described by Reynolds et al. (1999) as enough for entrepreneurial activity. Our findings lead us to believe that higher education is important for entrepreneurs in high-tech industries such as software. To run a specialized firm a university level is helpful. While we believe that a higher education does not have much influence on entrepreneurial activity, it is important to guide companies through the initial pitfalls and become established.

The divergence of the distribution of education between Rio and Estonia is gaping. Estonia is a highly educated country while Brazil has a very low educational level. Around 90% of the Estonian labor force has secondary or college education, while in Rio de Janeiro these numbers are virtually inverted: 90% have at most secondary education (Table 6).

	Estonia	Rio de Janeiro
% of labor force with at most primary education (through 8 th grade)	0.1%	68%
% of labor force with secondary education	13%	22%
% of labor force with college degrees	66.5%	9%
% of labor force with postgraduate study	20.4%	1%

Table 6 - Comparative education. Year 2000 - 25 years or older Source: Stat.ee; IBGE

One important consequence of a good education system is the quality of employees. Hiring is a common problem: while Estonians complain about the availability of human resources, Brazilians complain about their quality. This is understandable, since around 90% of the Brazilian population does not hold a university diploma.

If **regulation** was relevant for entrepreneurial activity, Estonia would be a heaven for entrepreneurs. The country's regulatory climate is certainly attractive to foreign companies, but not that much for emerging young entrepreneurs. Not all authors agree that regulation is highly important to foster entrepreneurship. It might have a greater effect on bringing stable companies to the region and boosting economic activity. On the other hand, it does work to keep companies out of informality and saves money and time of entrepreneurs.

Regulatory barriers, bankruptcy laws, labor laws (Stevenson et al 2007) and tax systems (Davidson, 2001) are important policies for entrepreneurship. Labor law in Estonia is still outmoded and inflexible, though it is set to change this year. None of our respondents were concerned about bankruptcy. Regulations on starting companies and the tax system are much better in Estonia.

National regulations for business promotion have been analyzed by the World Bank in its *Doing Business* ranking. If we compare the Stevenson policy recommendations with the World Bank dimensions we can obtain a good proxy to evaluate the regulatory environment in both regions. Table 7 presents the dimensions we believe most relevant for our research theme.

Estonia		Brazil
22.0	Score (smaller is better)	125,0
23rd	World ranking	127th
23.0	Starting a business	127.0
163.0	Employing workers	121.0
43.0	Getting credit	84.0
34.0	Paying taxes	145.0
5.0	Trading across borders	92.0
58.0	Closing a business	127.0

Table 7 – Doing Business Ranking, 2008

Estonians can legally start and close their business entirely through the internet. With the national ID-card and the digital signature facilities, filings with the National Registry Office can be done electronically. In Brazil, the legacy of bureaucracy and several different institutions make starting a business a complex puzzle of procedures. It can easily take more than two months to start a company in Rio de Janeiro. Much worse than opening a company in Brazil is closing one. Most of people prefer just to abandon a failed company than to try to officially close it.

Comparison of the “paying taxes” and “trading across borders” indexes of the Doing Business ranking exposes the bureaucracy of the Brazilian system against the efficiency of the Estonian. While operating a medium firm in Estonia takes 81 hours a year in taxation procedures, Brazilian accountants need an incredible 2,600 hours of work to accomplish the same feat.

The literature is controversial when correlating Hofstede's **cultural** dimensions with entrepreneurial activity. The individualist model is one advantage for Estonian entrepreneurial society. Individualism is the only Hofstede cultural dimension that is strongly supported in the literature as an entrepreneurship predictor.

Table 8 presents Hofstede's dimensions for Brazilian and Estonian societies. Estonia is a much more individualistic society. Power distance is the second biggest difference among both cultures. While Estonia has a more egalitarian society, Brazil has a big power distance and an unequal society.

Dimension	Estonia	Brazil	Cultural Distance
Power Distance (PDI)	43	69	26
Individualism (IDV)	74	38	36
Masculinity (MAS)	60	49	11
Uncertainty Avoidance (UAI)	60	76	16
Long-Term Orientation (LTO)	N/A	65	n/a

Table 6 – Hofstede's culture dimensions. Sources: Hofstede (2009), Vadi and Meri (2005)

Most findings in the literature point to a positive influence of high PDI on entrepreneurial culture. (Russel, 2004; Busenitz et al., 1996, cited in Forbes 1999; Bouncken et al., 2009) This can be deduced because in low PDI societies, individuals feel comfortable being subordinates, while in high power distance cultures people might have a stronger desire to escape from the lower level of society.

Cognition theorists identify three behaviors that lead to entrepreneurship: innovation, risk-tolerance and need for achievement. (Forbes, 1999; Thomas et al., 2000; Shane, 2001). Our interviewees from Estonia and Brazil, most of them young entrepreneurs, in general demonstrated these characteristics.

Comparing our analyzed dimensions for entrepreneurship, we believe that demography and sector structure should head the list of entrepreneurship predictors (Reynolds et al., 2004, cited in Davidson, 2001; Tödting et al., 2003). This proposition is strongly aligned with the literature. We propose also that infrastructure and education system have an average level of influence on entrepreneurial activity (Davidson, 2001). These are the factors where the government can be more active. Finally, we believe regulation and culture are the worst predictors of entrepreneurial activity. Regulation is important to keep companies out of informality but it does not seem to keep people from doing business. Culture does not really matter for entrepreneurship promotion. Individual characteristics are more important and can emerge in any of the studied cultural environments.

5 CONCLUSIONS

After several months as a Brazilian living and working in Estonia, the first author has been asked the following question several times: "Which is better? Brazil or Estonia?" It is really hard to answer, as the regions are so different, not just with respect to our studied dimensions, but also the history, weather and other cultural influences.

We have to admire the Estonian government, which constantly works on policies and infrastructure for IT development. Technological infrastructure, education and regulation in Estonia are remarkable. Despite the country's size and small internal market, the country has developed very fast in just a decade got international recognition with an enviable 13th in the Heritage Foundation Economic Freedom ranking. Even with lower entrepreneurial activity

and a smaller market, Estonian companies are more likely to survive after three to four years than Brazilian ones.

Brazil, being a big country with huge urban agglomerations, has a higher entrepreneurial dynamic and internal market to provide opportunities for new ventures. Our research suggests that demography and sector structure are the most important factors among environmental influences for entrepreneurship. The high concentration of Rio de Janeiro's area and the proximity to even stronger markets such as São Paulo are the biggest attractions, with big multinational companies in the region demanding even more services.

It is important to observe the market orientation of both places. Brazil is very self-oriented and it is difficult for companies to look for international penetration. On the other hand, Estonia is more internationally oriented.

Finally, we believe that a government's active support is really worthwhile, both for prosperity and entrepreneurship. This is the main lesson Brazilian policymakers need to learn from the Estonian example. Nonetheless, Estonian entrepreneurs could learn much by living and working in Brazil for some time. The competitive environment and uncertainty can be a great school for them.

As research limitations, we highlight the decision to use our chosen proxies for the six dimensions studied. This decision, though based on the literature, was arbitrary and did not necessarily capture the entire range of each dimension. Another restriction is the small number of interviews given to validate our documental research.

Much of the data interpretation was done based on the first author's own experience as a software company manager. Although we took care to base our findings on the literature and to check this through interviews, we cannot discard the possibility of biased conclusions.

Further work on this theme is still needed. New studies about the relation of environment and entrepreneurship, with other methodological approaches or a larger sample covering more cultures and variables could give more robustness to our findings and to the literature itself.

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