

Entrepreneurial Education as a Strategy for Global Competitiveness: Entrepreneurship Challenge in Puerto Rico

Moraima De Hoyos Ruperto / moraimad@yahoo.com
University of Puerto Rico
Mayagüez Campus

Carmen I. Figueroa Medina / carmen.figueroa11@upr.edu
University of Puerto Rico
Mayagüez Campus

■ ABSTRACT:

Entrepreneurial education is important as a diffusion mechanism to foster mind-sets, skills, and behaviors on the entrepreneurship context in Puerto Rico. Entrepreneurial challenges were denoted by interviewing governmental, private and civic sectors' leaders as well entrepreneurs. Qualitative analysis demonstrates a successful entrepreneurial strategy should be anchored in an inter-organizational process that could build up the adequate entrepreneurial mindset through a formal interdisciplinary educational curriculum. Results suggest the necessity of change from the traditional business education hub to an entrepreneurial education able to develop creative thoughts as a strategy for global competitiveness and sustainable entrepreneurial growth.

Keywords: entrepreneurship, entrepreneurial education, entrepreneurial environment, entrepreneurialism

■ RESUMEN:

La educación empresarial es importante como mecanismo de difusión para promover mentalidades, aptitudes y conductas necesarias para el contexto empresarial en Puerto Rico. Los retos empresariales fueron señalados al entrevistar a líderes de sectores cívico, gubernamental y privado, en adición de empresarios. El análisis cualitativo demuestra que una estrategia empresarial exitosa debe basarse en un proceso integral organizativo que pudiera construir la mentalidad emprendedora mediante un currículo educativo formal interdisciplinario. Los resultados sugieren la necesidad de un cambio en la efigie tradicional de la educación de negocios hacia una educación empresarial que pueda desarrollar un pensamiento creativo como estrategia para la competitividad global y el crecimiento empresarial sostenible.

Palabras clave: empresarismo, educación, ambiente empresarial, espíritu emprendedor

INTRODUCTION

Studies conducted over the last ten years illustrate the multiple challenges that country administrators face on designing a sustainable and competitive entrepreneurial environment in Puerto Rico. These challenges encompass a low rate of early-stage entrepreneurial activities (Bosma, Jones, Autio, & Levie, 2008) limited market structure (Cortés, 2006), structural problems (Aponte, 2002), in addition of excessive public debt, bureaucracy, and lack of independent trade, since Puerto Rico is subject to U.S. trade laws and restrictions (Collins, Bosworth, & Soto-Class, 2006; Davis & Rivera-Batiz, 2006). Since, a country's global competitiveness depends on native entrepreneurial factors (Casson, 2003) built within their political, social, and historical context (Reynolds, Hay, & Camp, 1999); entrepreneurs, institutions, and governments play strong and specific roles in fostering a nationwide entrepreneurial climate (Lundström & Stevenson, 2005). This explains why some national economies are stronger and grow more rapidly than others (Reynolds et al., 2002).

In 1994, the Puerto Rico government joined other private and civic sectors of the Island to propose an initiative to jumpstart native entrepreneurial development as part of the "New" National Economic Development Model (Economic Productivity Council, 1994). To accomplish this objective the private and public sectors are expected to provide external support to the "native" small business enterprises. In addition, the public sector must become more effective and efficient providing the private sector with policies and regulations that can enable the economic development of Puerto Rico (Economic Productivity Council, 1994).

Despite this attempt, reports from worldwide organizations such as the Global Entrepreneurship Monitor (GEM), the World Economic Forum (WEF), and the World Bank (WB) confirm that entrepreneurialism has failed to flourish in Puerto Rico. For instance, the 2007 GEM report revealed that among high-income countries Puerto Rico, at 3.1%, has one of the lowest rates of early-stage entrepreneurial activity, compared to 9.6% in the United States, 10% in Hong Kong, and 26%, 23%, and 27%, respectively, for the low to medium income countries of Peru, Colombia, and

Thailand. Likewise, the 2007 GEM adult population perception survey indicates Puerto Rico is average or above average in terms of entrepreneurial potential, capabilities, and intention, but lower in opportunity than other high-income countries.

To better our understanding about the reasons for the low level of entrepreneurial activity in Puerto Rico, we performed a qualitative research study based on interviewees with local entrepreneurs and civic, private and governmental leaders throughout the Island. We theorize that the way in which leaders perceive entrepreneurial climate may influence decisions they make and subsequently affect new business start-ups. Our study seeks to identify the unique factors that may impact Puerto Rico entrepreneurial environment with the purpose of providing useful information to guide decision makers.

Our data suggests that Puerto Rico's low rate of entrepreneurship stems from the lack of adequate entrepreneurial education regarding the general educational curriculum and the linkages of the university with the outsiders. In addition, higher education programs follow the traditional business education programs, rather than a creative one. While, on the other hand, the limited linkages among the university and other business trade organizations, as well as with entrepreneurs, restricted the flow of valuable information.

A striking deficit of adequate entrepreneurial education and linkages between educational institutions and entrepreneurs has been well documented in the literature as vital to supporting venture creation and sustainability. In Puerto Rico this has been identified as a factor deteriorating entrepreneurship. Our findings call for strategic initiatives from educational institutions and entrepreneurial support organizations—public, private, and civic—and entrepreneurs themselves to foster educational network development and utilization.

THEORETICAL BACKGROUND

Entrepreneurship is considered a key element for a sustainable economic growth (Levie & Autio, 2007; Audretsch & Thurik, 2001; Gartner et al., 2004; Kantis et al., 2002; Lundström & Stevenson, 2005). However, the literature is not entirely consistent about the factors that drive it. Thus, as Van de Ven (2007) suggests, we need

to continue evaluating the entrepreneurship process and its causal mechanisms to advance the understanding of its dynamics and development over time.

Entrepreneurship is not solely defined by entrepreneurs, but by the relationships between entrepreneurs, enterprises, and the environment (Lundström & Stevenson, 2005). Enterprise might be involved inside an innovative process within existing firms, new venture creation (Audretsch & Thurik, 2001), or through replication (Baumol et al., 2007); but all with the final purpose of generating economic activities for the development of a sustainable economy (Gartner et al., 2004; Kantis et al., 2002). Environmental factors may include the economic system, institutional arrangements such as the collaboration between university and business trade organization with entrepreneurs, and the role of government on legal, political, and social structures, among others (Saxenian, 1994; Lowrey, 2003; Lundström & Stevenson, 2005).

The Global Entrepreneurship Monitor (GEM), a leading international research program intended to enhance understanding of the role of entrepreneurship in the national economic growth, created a conceptual model summarizing the major causal mechanisms affecting national economies – the general (GNFCs) and the entrepreneurial (EFCs) contextual factors. Among the GNFCs, the GEM model (2007) includes; external trade openness, the role of government, financial markets' efficiency, technology intensity, physical infrastructure, management skills, labor market structure, and institutional regulations. These factors are considered primarily on a macroeconomic level. The GEM model also recognizes ten different EFCs, that primarily work at a microeconomic level, which may affect the creation and development of new firms. They are: 1) financial support, 2) government policies, 3) government programs, 4) education and training, 5) research and development (R&D) transfer, 6) commercial and professional infrastructure, 7) international market openness, 8) access to physical infrastructure, 9) cultural and social norms, and 10) intellectual property rights protection.

Essentially, Todaro (1981) stated that the structure of the educational system is linked to the particular economic and social character of the society in which it is contained, as well as to its history.

Furthermore, he claimed that the educational system influences social development, thus the link between education and country development is a two-way process. In the case of entrepreneurship, the educational system is considered one of the principal influencing factors of the venture creation process since it is strongly related to the overall attitude of society (Levie & Autio, 2007; Aponte, 1999). However, the GEM 2010 expert survey report suggests that entrepreneurship education and training in school and outside of school are inadequate in most countries (Corduras-Martinez, Levie, Kelley, Sae-mundsson, & Schott, 2010). Moreover, Kirby (2003) affirmed that educational systems need to focus not simply on what is taught but how it is taught.

Therefore, as Varela (2003) argues, our function as a nation is to educate our citizens within the bounds of ethics and social responsibility to make human beings capable of acting independently, innovatively, and with the capacity for achieving goals and taking risks to create new sources of wealth and employment. This contrasts dramatically with the traditional “mass-production” educational system that has dominated for decades, even in the United States, that tends to “teach students how to become proficient employees instead of successful business person” (Solomon, 1989). Even when entrepreneurship in higher education has grown significantly over the past 5-10 years, and strong growth is expected to continue; researchers agreed that more needs to be done. Entrepreneurship in higher education needs to expand particularly in the areas of curriculum development, training and development of teachers, funding entrepreneurship, cross disciplinary research collaboration and facilitation of spin-outs from higher education institutions (Twaalfhoven & Wilson, 2004).

Moreover, Gavron et al. (1998) established that to promote an entrepreneurial culture, the nations need collaborative policies between public and private sectors that encourage educational systems and business support schemes. Recently, the WEF 2009 report expressed it in the following way: “While the contexts around the world vary dramatically, entrepreneurship education, in its various forms, can equip people to proactively, pursue those opportunities available to them based on their local environments and cultures” (p.12).

In that sense, Lundström & Stevenson (2005) recognized the importance of the role of government on the adequacy to set policies, joint with the role of universities and other educational organizations in the emergence of entrepreneurship culture. Hence, the connection between the educational organizations and outsiders is particularly important in order to build an overall understanding of the entrepreneurship domain through the society's education and build awareness about the value and support of entrepreneurship on the country's development (Gavron et al., 1998). Similarly, universities play a key role as entrepreneurial hub, connecting researchers, students, entrepreneurs, companies and other stakeholders (Saxenian, 1994; World Economic Forum, 2009). Furthermore, the connection between universities and the rest of the entrepreneurial stakeholders generally provides key players in the processes of invention, innovation and commercialization (Wright, 2007). The WEF (2009) highlighted the importance of entrepreneurship education and training on the development of entrepreneurial capabilities in the following way:

... while education is one of the most important foundations for economic development, entrepreneurship is a major driver of innovation and economic growth. Entrepreneurship education plays an essential role in shaping attitudes, skills and culture from the primary level up. We believe entrepreneurial skills, attitude and behaviors can be learned, and that exposure to entrepreneurship education throughout an individual's lifelong learning path, starting from youth and continuing through adulthood into higher education-as well as reaching out to those economically or socially excluded-is imperative. (p. 7-8)

Furthermore, Gibb & Hannon (2006) recognized the fundamental of training students in the skills they will need to develop the entrepreneurial ability of creating business ideas, identifying and recognizing opportunities, setting up a business and managing its growth. Typically, skill-building courses in entrepreneurship education are creativity, new venture creation, business planning, leadership, entrepreneurial marketing, entrepreneurial finance and growth management as well as soft skills such as negotiation. However, the GEM 2010 special report on education recommends the

evaluation and encouragement of creativity, self-sufficiency, and innovation as well as the study of entrepreneurship since primary and secondary schools.

RESEARCH OBJECTIVES

Our study seeks to identify the unique factors that may impact Puerto Rico's entrepreneurial environment with the purpose of providing useful information to guide decision makers. Based on the prominent themes that emerged through the interviews, the entrepreneurship challenge under consideration is education. Also, this study aims to address the unexplained stagnant entrepreneurial environment in Puerto Rico, even when new venture creation is positively perceived (Aponte, 2002) and indicators points' to average or above conditions, in terms of entrepreneurial potential, capabilities and intentions, compared with other high income countries (GEM 2007). Entrepreneur's understandings of environmental barriers to and enablers of business creation may, we reasoned, affect how and to what extent they launch new firms. For a future project, others areas like individual networking and systemic networking will be included in order to obtain a better understanding of the entrepreneurship challenge in Puerto Rico.

METHODOLOGY

While there are many qualitative methods available to researchers, a grounded theory approach was preferred for this study. This method intersects disciplines and subjects, providing the opportunity to develop an in-depth understanding of the Puerto Rico's entrepreneurial condition through governmental private and civic sectors leaders as well entrepreneurs. Semi-structural interview comprised of open-ended questions (as the Appendix A shows) were performed to maximize the opportunity for respondents for free expression while allowing the authors to guide the general direction of the interview.

Methodologies are "neither appropriate nor inappropriate until they are applied to a specific research problem" (Downey & Ireland,

1979). A researcher's choice of methodology should take into account the research objective, the research question, and the problem to be addressed. As Van Maanen (1979) points out, the choice of research methodology is situated "in the overall form, focus and emphasis of study." We believe the qualitative inquiry method was well suited to address the subject of this study: the unexplained failure of a sustainable entrepreneurial environment in Puerto Rico. We were interested in discerning how key figures in Puerto Rico—entrepreneurs as well as policy makers and influential leaders who may directly or indirectly affect entrepreneurial efforts—perceive the Island's current entrepreneurial movement or atmosphere. Our intent was to gather "rich" data from these individuals based on their personal experiences and backgrounds as well as their understanding of entrepreneurialism and what it means to them (Babbie, 2007; Maxwell, 2005).

Suddaby (2006) suggests that grounded theory is more appropriate when wanting to learn how individuals interpret reality—in our case how leaders and entrepreneurs perceive the entrepreneurial environment and its socio-economic role in Puerto Rico. Grounded theory emphasizes the observation of patterns in the data that help us to build theories directly from "the actual meanings and concepts used by social actors in a real setting" (Gephart, 2004: 457). Grounded theorists aim to remain "open" to the data by resisting commitment to a prior theory or assumption. The grounded theorist's commitment to "openness" is also reflected in the data collection process.

The conducted semi-structured interviews comprised of open-ended questions that maximized respondents' opportunities for free expression while allowing us to guide the general direction of the interviews. Considering the same way, trying to avoid implicit hypothesis-testing and instead allows for inductive reasoning to prevail. Nevertheless, this knowledge implies the possibility of a bias on the part of the author, since a theory-free individual, without expectations when collecting and analyzing data is unrealistic. Two important characteristics of grounded theory are constant comparison and theoretical sampling. Constant comparison refers to the researcher's continual examination and comparison of data or a simultaneously

collected and analyzed process. This implies immediate active immersion in the data rather than its post-collection management. Theoretical sampling also refers to the researcher's recognition that the data, rather than a prior design decision, dictates when the data collection terminates. Consequently, the size and composition of the sample may be suggested, but not dictated by prior design. Two main principles under the theoretical sampling are appropriateness and adequacy (Glaser, 1967). Appropriateness was achieved by carefully selecting participants who were knowledgeable about the area being explored, while adequacy was addressed by continuing the sampling and coding until theoretical saturation was reached.

SAMPLE

Fifteen organizational leaders in Puerto Rico—five from each sector; the civil, governmental, and private sector—and fifteen entrepreneurs were selected to take part in this study. The civic, public, and private sector participants were selected through the following process. We identified key agencies and organizations from several available sources, including the Puerto Rico Official Government's Web site, which details the government agencies involved in business start-ups, and the Puerto Rico Industrial and Commercial Directory and its respective Web site. Then, relying on the researcher's personal network and experience and those of several business experts, the list was narrowed to twenty-five organizations chosen based on their public intervention in policy matters. From those twenty-five, fifteen initial representatives were identified. Criteria for selection were their business/industrial sector and the geographical area they cover. A careful selection was made to reflect a wide range of knowledge about Puerto Rico's entrepreneurial efforts. Since we were seeking to understand the entrepreneurial environment as perceived by those who have the ability to encourage change in Puerto Rico's entrepreneurial policies, the leaders selected for this study were in top management positions, such as presidents, directors, and executive directors of those organizations with public policy influence. If any one of the first fifteen selected was

unavailable, he or she was substituted by another similar and/or related organizational leader. In this manner the total of available organizational leaders that were interviewed was fourteen, including four from the private sector, five from the public sector and five from the civic sector.

Entrepreneurs were chosen from among those mentioned in interviews with the above-mentioned leaders and based on their availability; eleven entrepreneurs were interviewed. The list included both newly established and experienced entrepreneurs. Since these entrepreneurs were named during conversations with the organizational leaders, factors such as industry diversity and the type and/or business size were not controlled. In accordance with the principles of theoretical sampling, which permits decisions about sample size and composition to change during the process of data collection, a decision was made to extend the sample to Puerto Rican entrepreneurs doing business outside the Island. These entrepreneurs were selected from the Hispanic Chamber of Commerce directory and, because of the information at our disposal and the access to it, all were from the state of Ohio. We later decided not to include those four Ohio interviews in the analysis because the conversations did not fit the study's purpose.

DATA COLLECTION

The primary data collecting method was semi-structured interviews that lasted about one hour and were conducted between June and August 2009. Respondents were contacted via phone or e-mail to determine if they were willing to be interviewed. Twenty one face-to-face interviews and four telephone interviews were conducted. All were audio recorded with the permission of the interviewee. The recorded interviews were electronically stored and professionally transcribed. An interview protocol was used to ensure consistency even when the semi-structured methods followed intuitive leads during the interview process (Spradley, 1979).

The interview questions were broad and open-ended to allow respondents to narrate experiences and understandings rather than be questioned solely on specific details (Maxwell, 2005). The ques-

tions were aimed toward individual experiences and sought to avoid theoretical or hypothetical assessments. They also encouraged substantial responses from interviewees and allowed them to emphasize ideas and issues most relevant to the events they described.

We began by asking respondents to describe their personal and professional background. This gave us the opportunity to understand how their academic fields, years of experience, and their specializations, for example, influenced each one's perspective and the various issues they discussed during the interview. Second, we asked respondents to talk about the organization or business they represent. This question gave us a broader understanding of the organization's purpose or agenda and the business environment to which each is related. Next we asked participants to describe a successful entrepreneurial venture they witnessed or experienced firsthand in Puerto Rico during the last five years. The purpose of this question was to identify what the informant saw as the most relevant factors to entrepreneurial success. Thereafter, we asked the participants to describe an unsuccessful venture they directly experienced or witnessed in Puerto Rico during the last five years, with the same purpose, and to help identify the factors they consider detrimental to the entrepreneurial environment. Finally, we gave each interviewee an opportunity to discuss what he or she thinks are the most important factors driving entrepreneurship, negatively as well as positively, in Puerto Rico. This question was meant to provide the interviewees the opportunity to freely express what he or she would do to change the environment in Puerto Rico without limitations, as if with a "magic wand." One question was added for those Puerto Ricans doing business abroad to explore why they decided to leave instead of remaining on the Island.

DATA ANALYSIS

Qualitative data analysis often involves a coding process during which raw data is raised to a conceptual level. We used techniques recommended by Corbin and Strauss conducted open, axial, and selective coding that allowed us to make comparisons between data and, in doing so, derive ideas to stand for the data and develop

properties and dimensions of the concepts (Corbin & Strauss, 2008). This kind of analysis involves a process of generating, developing, and verifying impressions by continual comparison of similarities and differences against the next set of data and/or revising previous concepts.

Recordings of the interviews were listened to multiple times and the transcripts read repeatedly in an attempt to develop tentative ideas about categories and relationships (Emerson, Fretz, & Shaw, 1995). The coding process was conducted as soon as the transcribed interviews were available and was accomplished through the use of manual techniques. Using the inductive process followed by the theoretical sampling approach helped us identify relevant concepts, patterns, and themes. Under the theoretical sampling approach we were able to gather follow-up data based on those relevant concepts and to be more sensitive during subsequent interviews with regard to questions, observations, and listening. We began by conducting open-coding, a line by line analysis of every transcript to identify “codable moments” (Boyatsis, 1998) or fragments of text with potential significance. We captured 2,352 such “moments” in the twenty-one interviews. These were compared and assigned to 122 labeled categories. Next we considered the categories independently for each of the two subsets of our sample—leaders and entrepreneurs—nothing first level similarities and differences between them. During the second phase of coding (axial coding), re-examination of our codes and the text they represented resulted in refining and combining related themes and concepts emerging from the data (Corbin and Strauss, 2008) and moving back and forth between the data and the literature. This process reduced the substantive codes earlier generated from 2,352 to 210 and into 10 labeled categories (Boyatsis, 1998).

Our third phase of analysis involved selective coding such is a process in which the integration of categories and conceptualization moved us from substantive to formal theory. The theory building process allowed us to derive an explanatory framework to describe the phenomenon the participants were explaining and, more importantly, look at the implications and relevance of this theory in more than one substantive area (Glaser & Strauss, 1967). As part of

the above data analysis process, several memos, interview outlines, and notes were written. These memos and notes were constantly reviewed, revised, and organized as data collection and analysis continued.

FINDINGS

The finding suggests that two major challenges related to education should be addressed in order to be competitive in the global arena. First, the requirement of a transformation on entrepreneurial education that might promote the creative thought as a strategy for a sustainable entrepreneurial growth in Puerto Rico. Second, the urgency of collaboration agreements among several institutions, such as the university and other private, public, and civic organizations, in order to expand entrepreneurial opportunities.

FINDING 1: Entrepreneurial education is recognize as strategy for global competitiveness

1.1. Changes in educational curriculum is one of the most urgent requirements for the flourishing of entrepreneurial environment

Twenty out of twenty-one respondents are aware that the country's lack of formal entrepreneurial education is a limitation for entrepreneurship in Puerto Rico. An entrepreneur expressed it in the following way:

Look at education. For example, in my MBA, they never talked about entrepreneurship. From 1993 to 1997, they taught me about business, but more about how to work within a company and rise up as a manager in the company. But the fact was [I was educated] to be a worker, not an entrepreneur. There wasn't [entrepreneurial] preparation or an ecosystem.

Even when members of all groups recognized the necessity to make changes on the educational curriculum, private and public leaders were the groups who suggested this was the most urgent requirement for the entrepreneurial environment change.

1.2. Successful entrepreneurs recognize their entrepreneurial education experience as a key factor for their success

Successful entrepreneurs recognize their entrepreneurial education experience as a key factor in their success. Moreover, four of them narrated the process of self-education on business and entrepreneurial issues as a key step for their business starting process. These four entrepreneurs mention that even when they had their respective field of education, the absence of entrepreneurial education was a deficiency recognized by them during the start-up process. Four out of five civic leaders point out the great amount of short term entrepreneurial educational programs available that include seminars, individual consulting service for starting a business, as well as other matters like financing options and business requirements on the island. The aforementioned issue suggests that the acknowledgment of the importance of entrepreneurial education by entrepreneurs might be a key element for the venture success.

1.3. The limited formal entrepreneurial education linkages among institutions restrict the development of a competitive entrepreneurial environment in Puerto Rico

Members of all groups recognize the limited formal linkages among university, government, private and civic organization as a barrier for the local entrepreneurial to flourish as the following quotes exemplify:

What we need to do is strategize with the universities and the private sector to work toward entrepreneurial development. To do that we must break the kiosk mentality in which each one wants control and are looking to grab the other's prestige and respect.

Three civic leaders and seven entrepreneurs' affirm the importance of the university as a source of information, knowledge and experience that can rebound in opportunities for entrepreneurs as the following interviewee said: "An opportunity was provided to utilize technological knowledge along with education, and I took advantage of it."

1.4. Entrepreneurial education helps to develop the creative thought among other competencies required for venture success

Some of the benefits mentioned by interviewees regarding entrepreneurial education were; the development of an open mind to attempt new things, the assistance in increasing the level of self-confidence, and the tools provided for innovative thoughts' development. For example one entrepreneur reported how having taken a course in entrepreneurship during his college years at the university helped him to take affirmative actions to start a business. Today, this entrepreneur is the owner of a successful company.

I was studying engineering but I took an entrepreneurship course... That course really helped me expand my vision and understand that the sky was the limit... I started selling baskets of candy, cookies and coffee at the University... today I have a successful international manufacturing company...

1.5. Traditional business “mass-production” education, limited the development of the entrepreneurial mindset

Four entrepreneurs, two private leaders and three public and civic leaders mentioned the employee mindset created by the rapid industrialization process with Foreign Direct Investment (FDI) was a barrier for the development of an entrepreneurial mindset. Almost every respondent agreed that the educational approach given during the era of industrialization was to prepare good employees and that it remains to this day. Respondents agree that we need to give a “360” turnaround to education in order to provide space for creativity, critical thinking and sharing experience, among others things. One of the entrepreneurs articulated it this way:

...most important business lessons I've had come from shared experiences with other entrepreneurs, not from my business degree... At the university, they taught me accounting, finance... but, did not teach me how to deal with the challenges you face as an entrepreneur every day... They definitely taught me to be a good follower-employee... not a visionary-an entrepreneur.

Table 1 shows some additional quotes on the aforementioned conditions expressed by responders.

Table 1: Necessity of Changes on P.R. Entrepreneurial Education

Interviewee	Quotes
Entrepreneur (15), pages 10-11	"We need to do as they do in Israel. They took private equity to create an entrepreneurship center...almost like a university of entrepreneurship...I'm sure if we create that academy, we will get entrepreneurs to create businesses with 50 or 60 employees each. Then, that would be much more productive than leaving things to chance."
Civic Org Leader (3), page 11	"Thinking in long-term, government and educational institutions should establish collaborative linkages in a way that could provide formal entrepreneurial education for everyone since primary grades....needs to show the importance of entrepreneurship."
Private Org. Leader (5), page 16	"They teach us a lot in schools ...but what is not being taught is that you can study to create a business and you are going to work for yourself...those areas of entrepreneurship are not cultivated. We should dedicate more time early in the school process in creating that business culture...it's planting the seed."
Governmental Org. Leader (10), page 6-8	"To work in the future, we have to educate those that are in the system now...the way of teaching should engage the imagination and the problem solving. This is extremely important for entrepreneurs...thus; education has to be restructured at all levels."
Entrepreneur (15), pages 6-12	"The most important factor of entrepreneurship is education. It's what gives you the confidence that you can do it... But the fact is that they are preparing 8:00AM to 5:00PM employees not entrepreneurs...I think that universities should change to an entrepreneurial focus."

DISCUSSIONS AND CONCLUSION

Puerto Rico, which has long fostered an employee mindset, faces a challenge to move to an entrepreneurial one. During the past decade a number of universities and business trade organizations have created educational programs to promote a new entrepreneurship culture.

However, our interviewees still emphasized the necessity of change from a traditional environment to an entrepreneurial education. Those changes should be focus on educational curriculum, exposure to entrepreneurial experiences, inter-organizational relationships, entrepreneurial competencies and mindset.

The findings of this study support Guiso, Sapienza, & Zingales (2006) argument that prior beliefs, values and preferences will directly impact economic outcomes. Cultural capital, or the mindset such as attitudes, values, aspirations and sense of self-efficacy, may influence the individual behavior and the decision-making process over time. Therefore, our research suggests the building of a strong entrepreneurial environment which encourages a change on a cultural mindset through formal education might be a key piece to the puzzle. According to the United Nations Conference on Trade and Development (UNCTD) (2010, p.3) focusing on entrepreneurship education policies facilitates the creation of an entrepreneurial culture and supports the entrepreneurs' development in pursuing the identification of opportunities.

Moreover, this research reveals the necessity of collaboration among private, civic and governmental business trade organizations to accelerate the entrepreneurship education in order to spur an entrepreneurial environment. The development of entrepreneurial networks across sectors will provoke partnerships, share of experiences, information and knowledge which is vital to develop a sustainable education system. Gibb (2005) highlighted about the existence of a broad consensus that universities have become more entrepreneurial. Hence, universities, institutions, and entrepreneurs as well, need to be actively involved to play a key role to promote a formal curriculum transformation. These changes might be address to emphasize the necessity of interdisciplinary knowledge, social competence and the creative thought.

LIMITATIONS AND FUTURE RESEARCH

Our sample size was small, but ample and consistent with similar qualitative inquiries using a grounded-theory approach. While the sample included successful and unsuccessful entrepreneurs, they

were not pre-selected purposefully to represent specific types of business or industry sectors. The strong patterns revealed across our sample cannot, therefore, be strictly interpreted as representative of all or a particular industry set of firms. Moreover, since the sample was limited to small-and-medium sized businesses in Puerto Rico, our findings may not be generalizable to large companies.

We relied on each entrepreneur and leader's memory and interpretation of past and current decisions and experiences, which may have been influenced by the effect of time on memory (Park, Hertzog, Kidder, Morrell, & Mayhorn, 1997). To minimize this risk, we asked for very specific examples and encouraged rich detail in their telling. However, we recognize that respondents are apt to consider and report their activities in a manner that reflects well upon their own view of themselves (Pasupathi, 2001).

Our findings are most certainly not a comprehensive explanation of the lack of entrepreneurship in Puerto Rico; rather, they offer a perspective about potentially critical factors that may affect it. Also, the results points to additional research opportunities, both qualitative and quantitative, that would further our understanding of Puerto Rican educational institutions, business trade leaders and entrepreneurs and the effects of them on entrepreneurial performance. Our provision of evidence about the necessity of an educational restructuring in Puerto Rico should be followed by more targeted research on educational institutions to determine if the problem is cognitive, structural or relational. Case studies of entrepreneurial educational programs that have overcome the old structures and that are helping flourish the entrepreneurial environment would provide practical guidance for a new entrepreneurial paradigm.

REFERENCES

- Aponte, M. (2002). Start-Ups in Puerto Rico: Poor entrepreneurial spirit or structural problem? Paper presented at the International Council for Small Business, Puerto Rico, June 16-19.
- Aponte, M. (1999). Entrepreneurship education: An institution for development University of Puerto Rico's model. Paper presented at the 44th World Conference of the International Council Small Business, Naples, Italy, June 20-23.
- Audretsch, D. B., & Thurik, R. (2001). *Linking entrepreneurship to growth*. OECD Science, Technology and Industry Working Papers, 2001/2, OECD Publishing. doi:10.1787/736170038056.
- Babbie, E. (2007). *The practice of social research* (11th Edition). Belmont, CA: Thomson Higher Education.
- Baumol, W., Litan, R., & Schramm, C. (2007). *Good capitalism, bad capitalism, and the economics of growth and prosperity*. Michigan: Yale University Press.
- Bosma, N., Jones, K., Autio, E., & Levie, J. (2008). *Global entrepreneurship monitor: 2007 executive report*. Babson Park, MA and London: Babson College, London Business School and Global Entrepreneurship Research Consortium.
- Boyatzis, R. E. (1998). *Transforming qualitative information: Thematic analysis and code development*. Thousand Oaks, California: SAGE Publications, Inc.
- Casson, M. (2003). Entrepreneurship, business culture and the theory of the firm. In Z. Acs & D. Audretsch (Eds.), *Handbook of entrepreneurship research* (pp. 223-246). Great Britain: Kluwer Academic Publishers.
- Collins, S. M., Bosworth, B. P., & Soto-Class, M. A. (2006). *Restoring growth in Puerto Rico: Overview and policy options*. Washington, D.C.: Brookings Institution Press.
- Corbin, J., & Strauss, A. (2008). *Basics of qualitative research* (3rd Edition). Thousand Oaks, California: Sage Publications, Inc.
- Corduras-Martinez, A., Levie, J., Kelley, D. J., Saemundsson, R. J., & Schott, T. (2010). *Global entrepreneurship monitor special report: A global perspective on entrepreneurship education and training*. GERA.

- Cortés, F. (2006). The development of entrepreneurial networks in Puerto Rico: A global perspective. *Inter Metro Business Journal*, 2, 16-38.
- Davis, S. J., & Rivera-Batiz, L. A. (2006). The climate for business development and employment growth. In S. M. Collins, B. Bosworth & M. A. Soto-Class (Eds.), *The economy of Puerto Rico: Restoring growth* (pp. 255-318). Washington, DC: Brooking Institution Press.
- Downey, H., & Ireland, R. (1979). Quantitative versus qualitative: Environmental assessment in organizational Studies. *Administrative Science Quarterly*, 24(4), 630-637.
- Economic Productivity Council. (1994). *New economic development model*. San Juan, P.R.: Commonwealth of Puerto Rico, Governor's Office.
- Emerson, R. M., Fretz, R. I., & Shaw, L. L. (1995). *Writing ethnographic fieldnotes*. Chicago: The University of Chicago Press.
- Gartner, W. B., Shaver, K. G., Carter, N. M., & Reynolds, P. D. (2004). *Handbook of entrepreneurial dynamics: The process of business creation*. California: Sage Publications, Inc.
- Gavron, R., Cowling, M., Holtham, G., & Westall, A. (1998). *The entrepreneurial society*. London: The Institute for Public Policy Research.
- Gephart, R. (2004). Qualitative research and the Academy of Management Journal. *Academy of Management Journal*, 47, 454-462.
- Gibb, A. (2005). *Towards the entrepreneurial university: Entrepreneurship education as a lever for change*. NCGE Policy paper on their website www.ncge.org.uk.
- Gibb, A., & Hannon, P. (2006). *Towards the entrepreneurial university?* Durham, Birmingham: National Council for Graduate Entrepreneurship.
- Glaser, B., & Strauss, A. (1967). *The discovery of grounded theory: Strategies for qualitative research*. New York: Aldine.
- Guiso, L., Sapienza, P., & Zingales, L. (2006). Does the culture affect economic outcomes? *Journal of Economic Perspectives*, 20(2), 23-48.

- Kantis, H., Ishida, M., & Komori, M. (2002). *Entrepreneurship in emerging economies: The creation and development of new firms in Latin America and East Asia*. Washington: Inter-American Development Bank.
- Kirby, D.A. (2003). Entrepreneurship education: Can business schools meet the challenge? In E. Genesca, D. Urbano, J. Capellera, C. Guallarte & J. Vergés, *Creación de empresas: Entrepreneurship: Homenaje al profesor José María Veciana Vergés* (pp. 359-375). Bellaterra: Universidad Autónoma de Barcelona.
- Levie, J., & Autio, E. (2007). Entrepreneurial framework conditions and national-level entrepreneurial activity: Seven-year panel study. Paper presented at the Third International Global Entrepreneurship Conference, Washington, D.C., October 1-3.
- Lowrey, Y. (2003). The entrepreneur and entrepreneurship: A neoclassical approach. Paper presented at the ASSA Annual Meeting, Washington, D.C: Office of Advocacy, Small Business Administration, January 5.
- Lundström, A., & Stevenson, L. A. (2005). *Entrepreneurship policy: Theory and practice*. New York: Springer Science + Business Media, Inc.
- Maxwell, J. A. (2005). *Qualitative research design: An interactive approach* (2nd Edition, Vol. 42). Thousand Oaks, CA: Sage Publications, Inc.
- Park, D., Hertzog, C., Kidder, D., Morrell, R., & Mayhorn, C. (1997). Effect of age on event-based and time-based prospective memory. *Psychology and Aging*, 18, 314-327.
- Pasupathi, M. (2001). The social construction of the personal past and its implications for adult development. *Psychological Bulletin*, 127(5), 661-672.
- Reynolds, P., Camp, S., Bygrave, W., Autio, E., & Hay, M. (2002). *Global entrepreneurship report: 2001 executive report*. Babson Park, MA and London, UK: Babson College and London Business School.
- Reynolds, P., Hay, M., & Camp, M. (1999). *Global entrepreneurship monitor: 1999 executive report*. Babson Park, MA and London: Babson College and London Business School.

- Saxenian, A. (1994). *Regional advantage: Culture and competition in Silicon Valley and Route 128*. Cambridge: Harvard University Press.
- Solomon, G. (1989). Youth: Tomorrow's entrepreneurs. *ICSB Bulletin*, XXVI, 5, 1-2.
- Spradley, J. P. (1979). *The ethnographic interview*. Belmont, CA: Wadsworth Group/Thomson Learning.
- Suddaby, R. (2006). From the editors: What grounded theory is not. *Academy of Management*, 49(4), 633-642.
- Todaro, M. (1981). *Economic development in the Third World*. New York: Longman.
- Twaalfhoven, B., & Wilson, K. (2004). *Breeding more gazelles: The role of European universities*. Hilversum: European Foundation for Entrepreneurship Research.
- United Nations Conference on Trade and Development. (2010). *Entrepreneurship education, innovation and capacity-building in developing countries*. New York and Geneva: UN Trade and Development Board.
- Van de Ven, A. (2007). *Engaged scholarship: A guide for organizational and social research*. Oxford: Oxford University Press.
- Van Maanen, J. (Ed.). (1979). *Reclaiming qualitative methods for organizational research: Qualitative methodology*. Newbury Park: Sage Publications.
- Varela, R. (2003). La cultura empresarial como estrategia de desarrollo para América Latina. In E. Genesca, D. Urbano, J. Capelleras, C. Guallarte & J. Verges, *Creación de empresas: Entrepreneurship: Homenaje al profesor José María Veciana Vergés* (pp. 471-489). Bellaterra: Universidad Autónoma de Barcelona.
- World Economic Forum. (2009). *Educating the next wave of entrepreneurs: Unlocking entrepreneurial capabilities to meet the global challenges of the 21st century: A report of the Global Education Initiative*. Switzerland: World Economic Forum.
- Wright, M. (2007). University-industry links: Regional policies and initiatives in the United Kingdom. In S. Yusuf & K. Nabeshima, *How universities promote economic growth* (pp. 151-162). Washington: World Bank.

APPENDIX A

Interview Protocol

1. What is your background?
2. Can you describe your organization?
3. Can you tell me about successful entrepreneurial events that you remember from the last five years? Explain what happened and how it came about.
4. Can you tell me about any unsuccessful entrepreneurial events that occurred in the last five years? Tell me what happened and how they came about.
5. If you were given a magic wand that would allow you to add or change something in regard to the entrepreneurial or business environment in Puerto Rico, what would you wish for?

