

Entrepreneurship and Regional Development: The case of Business and Innovation Centre in Portugal

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Summary

This research aims at studying the determinants of entrepreneurship, focusing on the special case of firms created within *Business and Innovation Centre* (BIC) in Portugal. For that purpose, we developed a survey to the firms created within Portuguese BICs. Our results show that the respondent firms were quite different from the Portuguese typical firms, as in our case, most firms have a medium or high technological intensity and the entrepreneur has a higher education level. However, there is some parallel with most Portuguese firms, as in both cases there is evidence of an endogenous entrepreneurship, either spatial or functional. From our results, we were able to conclude that entrepreneurs welcome BICs' support when starting the firm but also during its growth. Finally, most entrepreneurs classified BICs' services as being above their expectations.

Keywords: Entrepreneurship; Entrepreneurship Policies; Business Innovation Centre

Abstract

This research aims at studying the determinants of entrepreneurship, focusing on the special case of firms created within *Business and Innovation Centre* (BIC) in Portugal. These institutions integrate the European Business and Innovation Centre Network and are considered as a significant tool of regional development. We start by looking to the concept of entrepreneurship and its main determinants and then proceed with a brief discussion over the relevance of entrepreneurship policies for regional and national development. Next, and for our purposes, we proceed with a survey to the firms created within Portuguese BICs in order to evaluate the role of those entities on supporting starting firms. Our results show that the respondent firms were quite different from the Portuguese typical firms, as in our case, most firms have a medium or high technological intensity and the entrepreneur has typically a higher education level. However, there is some parallel with most Portuguese firms, as in both cases there is evidence of an endogenous entrepreneurship, either spatial or functional. From our results, we were able to conclude that entrepreneurs welcome BICs' support when starting the firm but also during its growth. Additionally, new starting entrepreneurs appreciate BICs' support in areas such as the development of the business plan, the personal assistance support and other infrastructures. Finally, most entrepreneurs classified BICs' services as being above their expectations.

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1. Introduction

Nowadays, entrepreneurship is one of the most appealing topics in economic research, while attracting researchers from other scientific fields, such as management, psychology and sociology, as well as politicians and entrepreneurs. In fact, despite entrepreneurship is not a new subject, it has gained a renewal interest, due to its relevance for the society, which is recognized both by researchers and politicians. Entrepreneurs encourage the economic development, by introducing and implementing new ideas or innovations that stimulate economic growth.

Given the importance of entrepreneurship, we therefore ask: What are the determinants of entrepreneurship? Can national or local governments influence the promotion of entrepreneurship? Are local institutions efficient on supporting entrepreneurship?

The main goal of this research is to evaluate the relevance of psico-social, economic and institutional factors for stimulating entrepreneurship, focusing on the role played by *Business and Innovation Centre* (BIC).

In Portugal, there are several entities that intend to promote and support entrepreneurship and, thorough this via, promote the regional and national development, such as the IAPMEI (*Instituto de Apoio às Pequenas e Médias Empresas e ao Investimento*), CFE (Centro de Formalidades de Empresas), ANJE (*Associação Nacional de Jovens Empresários*), CACE (*Centro de Apoio à Criação de Empresas*), among others.

In this study, we will focus on *Business and Innovation Centre* because these entities are strongly oriented to support the creation of innovative firms and, therefore, to promote regional development.

In fact, and according to the *European Business & Innovation Centre Network* (EBN, 2009), BICs are organizations serving both the public interest and private sector, which employ a dynamic system of detection/ selection/ monitoring/ management of entrepreneurs and projects. They aim at creating and developing innovative businesses, by offering a wide range of business support services within a professional cost-effective structure.

For our purpose, we developed a survey to the firms created within Portuguese BICs in order to study the determinants of entrepreneurship and the role of those entities on supporting starting firms. To the best of our knowledge, despite existing an abundant research on the determinants of entrepreneurship, studies on the role of BICs on the promotion of entrepreneurship are absent from literature.

In the next section, we briefly revise the concept of entrepreneurship, focusing both on the economic and behaviourist approaches. We then look at the relevance of entrepreneurship policies in the context of the European Union and in Portugal. In section 4, we describe the methodology and main results from our survey to the firms created within Portuguese BICs. We end with some brief remarks.



2. What is Entrepreneurship?

Despite being widely recognized that entrepreneurship is a crucial force for the economic development, there is little consensus about what actually is entrepreneurship. Literature is fruitful of definitions of entrepreneurship that focus on different aspects of the phenomenon and that come from different disciplines.

The origin of the concept in economics is owed to Richard Cantillon (1755), who identifies the entrepreneur as a speculator that searches profits from buying at a certain price and selling at an uncertain price. Also, Adam Smith (1776) depicts the entrepreneur in three different forms - the adventurer, the projector, and the undertaker – but focus on the adventurer who searches for hazard and assumes risks. As well, Jean-Baptiste Say (1816) addresses this concept by considering the entrepreneur as the agent who unites all means of production (managerial skills).

Since these preliminary contributes, several definitions have been proposed within economics. Herbert and Link (2006) identified three main traditions in the development of the entrepreneurship literature. These traditions are the German tradition, based on Von Thünen and Schumpeter contributes, the Chicago tradition, based on Knight and Schultz, and the Austrian tradition, based on von Mises and Kizner.

Von Thünen (1966 [1875]) is best known for his contributions to the location theory, but he also distinguished the return of the entrepreneur from that of the capitalist and claimed that the entrepreneurial gain incorporates a return to entrepreneurial risk.

But it was Schumpeter (1934, 1942) the first author to identify the role of the entrepreneur as the major agent of economic development. Schumpeter proposed a theory of creative destruction, where new innovative firms displace less innovative incumbent firms. According to Schumpeter, the concept of innovation covers:

- the introduction of a new good or of a new quality of a good;
- the introduction of a new method of production;
- the opening of a new market;
- the conquest of a new source of supply of raw materials or half-manufactured goods;

- the carrying out of the new organization of any industry.

Therefore, Schumpeter describes the entrepreneur as an innovator and a leader.

Knight (1921) generalized Cantillon's theory of entrepreneurship by explicitly distinguishes between risk and uncertainty. According to him, the economic function of the entrepreneur is bearing uncertainty, which comprises a specific type of probability that can only be defined subjectively through judgments, while risk involve an objective probability that derives from past events.

T. W. Schultz (1975)'s theory of entrepreneurship is among his least known work. In Schultz's formulation, entrepreneurship is the ability to adjust, or reallocate resources, in response to changing circumstances. Moreover, Schultz conceives the entrepreneurial ability as a form of human capital. Like other forms of human capital, this ability can be increased through education, training, experience, health care, and so on.

Kirzner (1973), in the Austrian tradition of von Mises, focused on the concept of entrepreneurship as "alertness" to profit opportunities. Therefore, the entrepreneur is alert to discover and exploit a new product or a superior production process and steps in to fill this market gap before others. As in Schumpeter's vision, Kirzner's entrepreneur is different from the capitalist, who own the capital, and seeks to identify potential profit opportunities. Unevenly, Kirzner states that the entrepreneur may promote the equilibrium.

As sum, the economic approach to entrepreneurship focus on the entrepreneur's ability to innovate, explore profit opportunities or bearer uncertainty and risk.

The psychological approach to entrepreneurship focuses on personality factors and believes that entrepreneurs have unique values and attitudes toward work and life. Three personality characteristics have received considerable attention in the research: (1) the personal values such as honesty, duty, responsibility, and ethical behavior; (2) risk-taking propensity; and (3) the need for achievement.

According to Cunningham and Lischeron (1991), the *personal values*' school believes that much of the entrepreneur's ability relates to a personality or style of behavior which develops over time, primarily through relationships with parents and teachers early in

life. Also, the *risk-taking propensity* was first presented in Stuart Mill's work and later developed in Knight's writings and in most managerial approaches.

A quite different but appealing school is the *need for achievement* approach that claims that the individual who has learned the value of industriousness in the process of growing up is most likely to have a high need to work hard and achieve something meaningful. Weber (19830)'s classic text on *The Protestant Ethic and the Theory of Capitalism* concluded that the development of capitalism is largely due to the cultural values which are dominant amongst the protestant religion. But the most prominent author is McClelland (1961) who emphasized the relationship of achievement motivation or need for achievement to economic development via entrepreneurial activities. According to him, one would expect a relatively greater amount of entrepreneurship in a society if the average level of need achievement in a society is relatively high. Also, entrepreneurs are activated by the high extent of achievement motivation and the desire to do well, not so much for the sake of social recognition or prestige, but for a feeling of personal accomplishment. He also suggests that the n-achievement could be increased in an individual through training and by creating appropriate culture.

3. Entrepreneurship Policies in the European Union and in Portugal

According to Lundström and Stevenson (2005), the *entrepreneurship policy* is primarily concerned with creating an environment and support system that will foster the emergence of new entrepreneurs and early-stage growth of new firms.

In recent years, the European Union has devoted a great attention to the promotion of entrepreneurship. In the European Council Meeting in Lisbon in 2000, entrepreneurship was identified as a crucial element for achieving a more competitive and dynamic knowledge-based economy. Also in 2000, the European Commission presented the *European Charter for Small Enterprises*, (European Commission, 2000) which seeks to improve the business environment for small enterprises in areas such as education and training for entrepreneurship, better legislation and regulation, improving on-line access, among others. Later in 2003, the European Commission presented the *Green Paper on Entrepreneurship Policy for the European Union* (European Commission, 2003), where the Commission explains the importance of entrepreneurship and assesses

the state of entrepreneurship in Europe. The Green Paper aims to stimulate debate amongst policy makers, businesses, representative organizations, journalists and experts on how to shape entrepreneurship policy for the future.

In Portugal, and since the 80's, the development of entrepreneurship policies has been in line with the successive *Community Support Frameworks* I, II, III and at the moment with the *National Strategic Reference Framework 2007-2013*. Programs such as PEDIP I and II, Ciência, Praxis, POCTI, POSI and PRIME promote the entrepreneurship. Currently, the *National Strategic Reference Framework (NSRF, 2007)* aims at promoting the qualification of the Portuguese people through an emphasis on knowledge, science, technology and innovation, as well as the promotion of high and sustained levels of economic and socio-cultural development and territorial qualification within a framework of expanding equal opportunities and increasing the efficiency and quality of public institutions. The achievement of this main strategic aim is ensured via the concretisation of three major Thematic Operational Agendas: the *Operational Agenda for Human Potential*, the *Operational Agenda for Competitiveness Factors* and the *Operational Agenda for Territorial Enhancement*.

4. The BIC's and the promotion of Entrepreneurship

This work aims to understand and evaluate the role of the Business and Innovation Centres (BIC) in supporting the creation of new firms, with a special emphasis on the role of institutional factors.

The analysis focuses on the new firms created within the Portuguese's BIC and evaluates the support and services provided by this institution.

4.1. Methodology

The methodology adopted for this research is the survey method for a sample of about 80 firms created within the BICs.

Given the difficulties and high costs of conducting a random sampling, we chose a convenience sampling (Reis et al, 1996; Guimarães and Sarsfield Cabral, 1997). This method allows us to develop a detailed and extensive questionnaire, but doesn't let us to generalize the results.

We contacted 80 firms, 50% of them has their headquarters in Região Norte of Portugal. The response rate obtained is 40% with a total of 32 valid answers. The companies were contacted by e-mail and the data collection was made in the 2nd semester of 2007.

Table 1. Sample distribution by BIC

<i>BIC</i>	<i>Sample (number of firms)</i>	<i>Answers (number of firms)</i>
BIC of Beira Interior	14	1
BIC of Lisboa	13	3
BIC of Minho	24	5
BIC of Porto	29	23

The questionnaire takes into consideration the purpose of this study – to evaluate the BIC's role in the entrepreneurial dynamic – while controlling for other psycho-socio-cultural determinants of entrepreneurship. In this research, we take into account some previous works, such as the studies *Indicadores de Empreendedorismo e Inovação* (DEEP/MSST, 2003) and *Observatório da Criação de Empresas* (IAPMEI, 2007).

The questionnaire includes 34 questions, divided in 5 groups. The first group of questions seeks to achieve a general characterization of the firms created within the BIC's support. The second group aims to assess the motivations that led these entrepreneurs to create their own firm and understand which factors could influence this choice. The third group aims to draw the psycho - socio - cultural profile of the entrepreneur/businessman who chose to create its company within the BIC support. The questionnaire also seeks to determine the types of relationships that entrepreneurs/firms usually retain at the institutional level. The last group of questions is the main issue of this work by focusing on the importance given by the promoters to the BIC during in the creation of their businesses.

In the next section, we will we present some results of the survey.

4.2. Results

4.2.1. General description of the firms

In order to proceed our goal, we first intended to characterize the firms created within BIC's support.

We observed that 94% of the surveyed companies were *private limited companies* (consisting of two or more members) while 6% were *single-member private limited companies* (consisting of one member), which accords with the Portuguese trend. In fact, according to the *Observatório da Criação de Empresas* (IAPMEI, 2007), the *private limited company* is the dominant legal form for start-ups in Portugal (62.9%), while being also frequent the establishment of *single-member private limited companies* (36, 4%).

When considering the sector of activity (table 2), we may conclude that most firms are engaged in *services*, thus following a Portuguese tendency (IAPMEI, 2007). On the contrary to Portuguese evidence, the surveyed firms belong mainly to technology-based sectors, mainly the *Computer and related activities* (40,6%), *Other business activities* (37,5%) and *Research and development activities* (3,1%). This is due because the BIC (Business and Innovation Centres) are structures whose main purpose is to support the creation of innovative firms, generating added value and wealth in their regions.

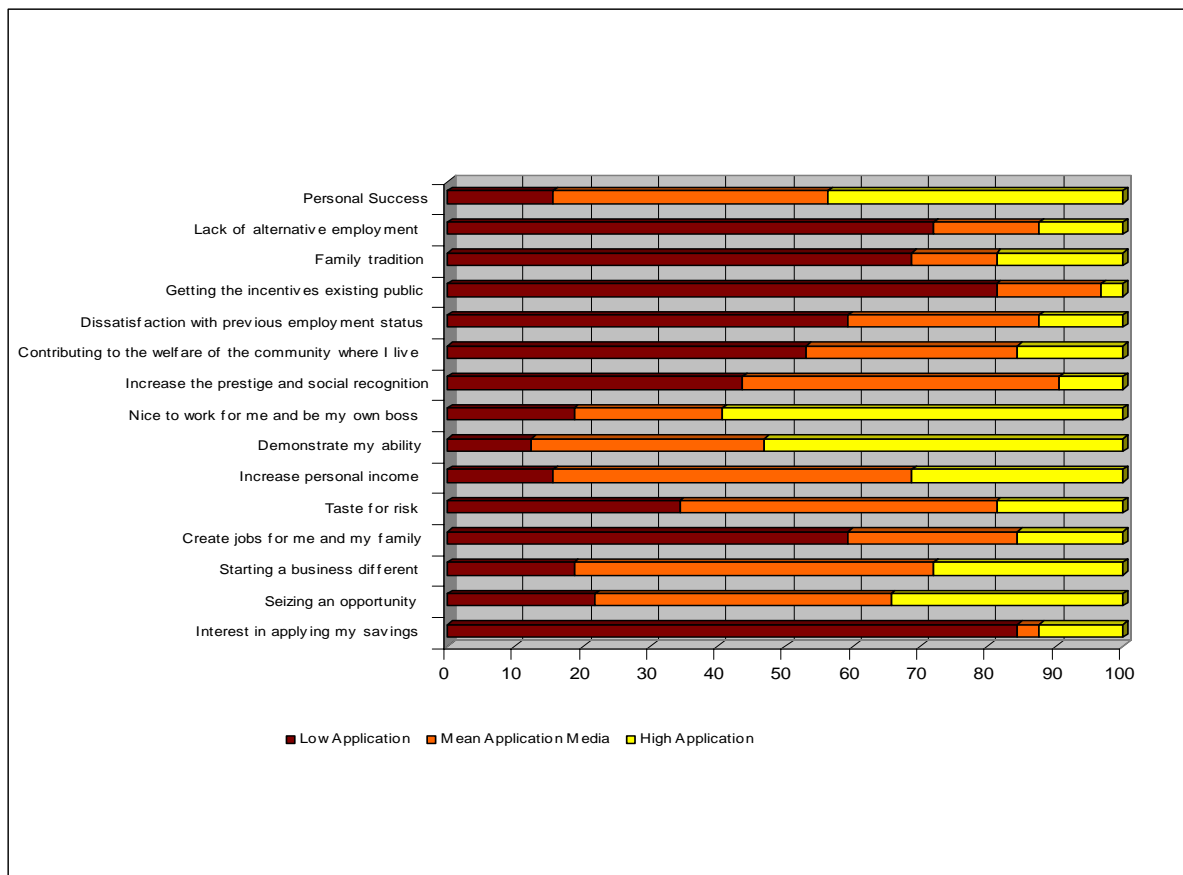
Table 2. Sample Distribution, According to the Economic Activity

CAE – Portuguese classification of economic activities – REV.2.1	Firms (%)
25 - Manufacture of rubber and plastic products	3,1
27 - Manufacture of basic metals	3,1
29 - Manufacture of machinery and equipment n.e.c.	6,3
52 - Retail trade, except of motor vehicles and motorcycles; repair of personal and household goods	3,1
71 - Renting of machinery and equipment without operator and of personal and household goods	3,1
72 - Computer and related activities	40,6
73 - Research and development	3,1
74 - Other business activities	37,5

4.2.2. Motivations to create a new firm

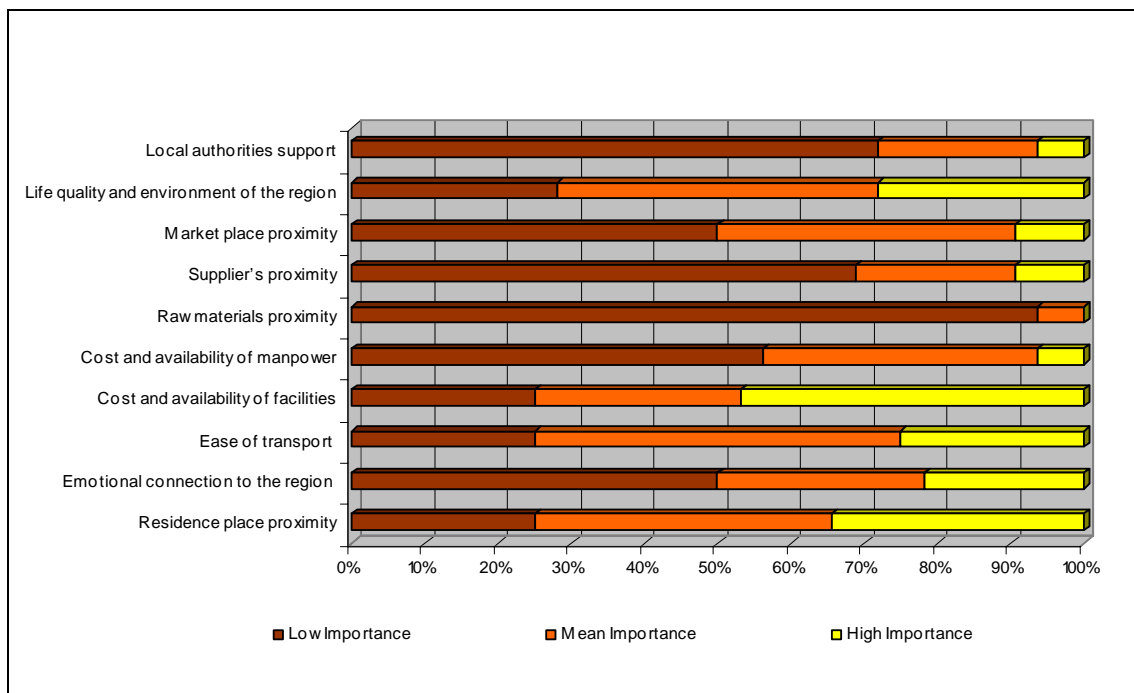
The second group of questions relates to the motivations that led entrepreneurs to create a new firm. According to the answers given by the entrepreneurs, the main motivations for the creation of a company are (figure 1): "Desire of autonomy", "Demonstration of capabilities" and the "Personal Success". Moreover, the least important reasons were the "Relevance in applying my savings" and "To create jobs for me and my family".

Figure 1. Reasons for the establishment of a firm (%)



The results (figure 2) also show that the firms created within BICs' support have some similarities with the Portuguese general businesses, namely the territorial endogeneity of entrepreneurship. In fact, entrepreneurs give as most important reasons to choose the location of the company the "Cost and availability of equipment", the "Proximity to the entrepreneurs' residence" and the "Life quality and region environment". On the contrary, the less important reasons are the "Proximity to raw materials" and the "Cost and availability of the labour-force".

Figure 2. Reasons for the choice of firm's location (%)



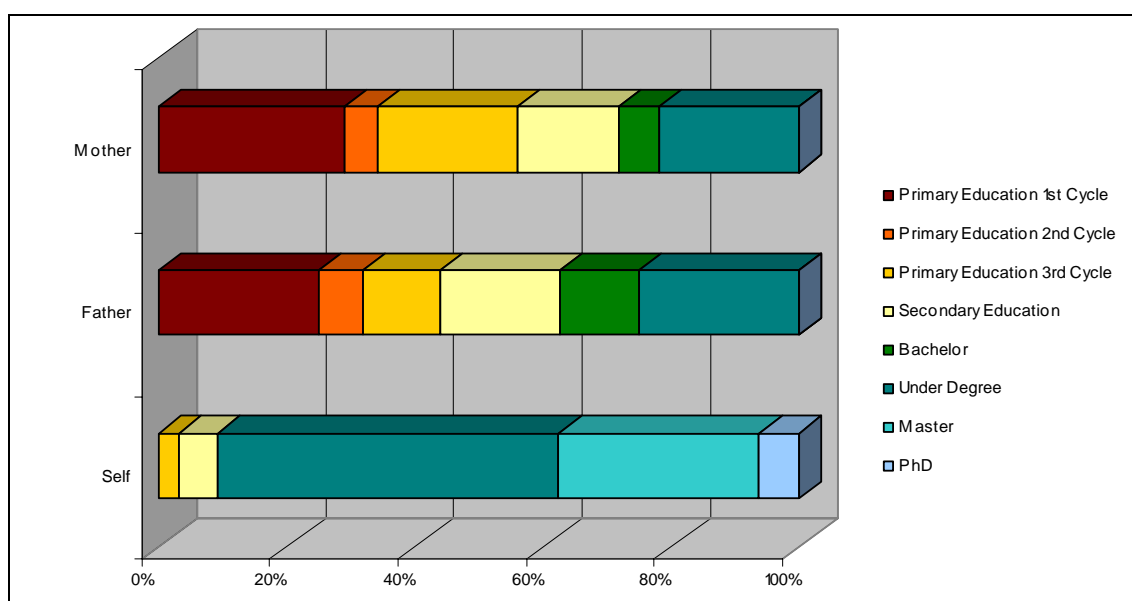
4.2.3. Psycho-socio and cultural determinants of entrepreneurship

We than focus on the psycho-socio and cultural determinants for the establishment of the firms.

Unlike typical Portuguese businessmen that have a low level of education, BICs' entrepreneurs have a higher level of education (figure 3). In fact, we observed that more than half (53%) completed his under-graduation program, and 31% of these completed the masters and 6 % the PhD. Thus we can conclude that the creation of firms with an innovative or technology base is closely linked with the academic level of their promoters.

Additionally, the parents academic degree seems to be relevant for 38% of entrepreneurs, as their father had a under graduate degree (25%) or bachelor (13%), and the mother had under graduate degree (22%) or bachelor (6%).

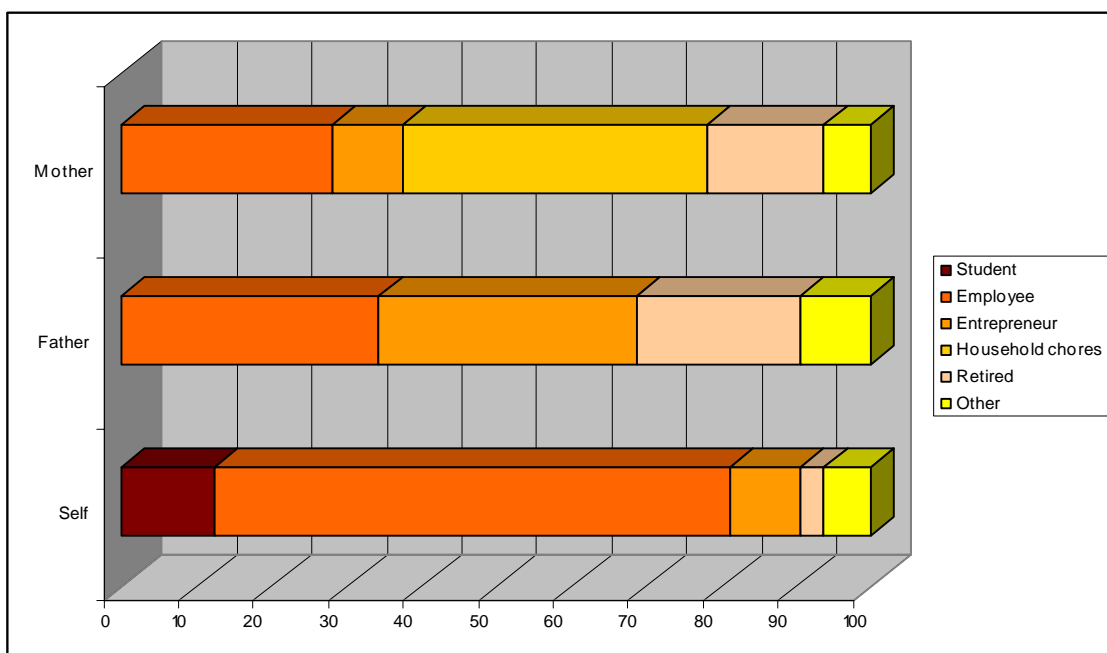
Figure 3. Education degree of the entrepreneur and his parents (%)



Another result of this study, which is confirmed in several empirical studies, is the importance of past experience within business (figure 4). In fact, we found that 69% of surveyed entrepreneurs were employees on behalf of others before the creation of the firm, while for 9% of the entrepreneurs this was not their first entrepreneurial experience.

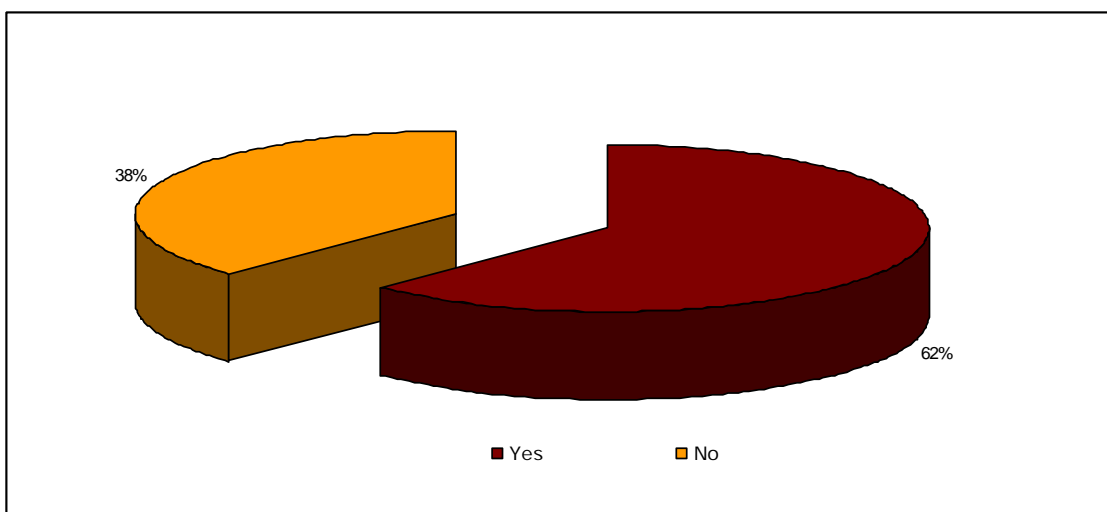
Also, we noted that there is an association between the occupation of the entrepreneur and their parents' one, namely the father's job. In fact, we observed that the condition of the entrepreneur as a businessman and the condition of the entrepreneur's father as a businessman were not independent.

Figure 4. Occupation before the establishment of company (%)



Also, when comparing the economic sector of the actual firm and the one where the entrepreneur previously worked (figure 5), we observed that there is a strong endogeneity, as the connection to the previous economic activity is relevant in 62% of the respondents.

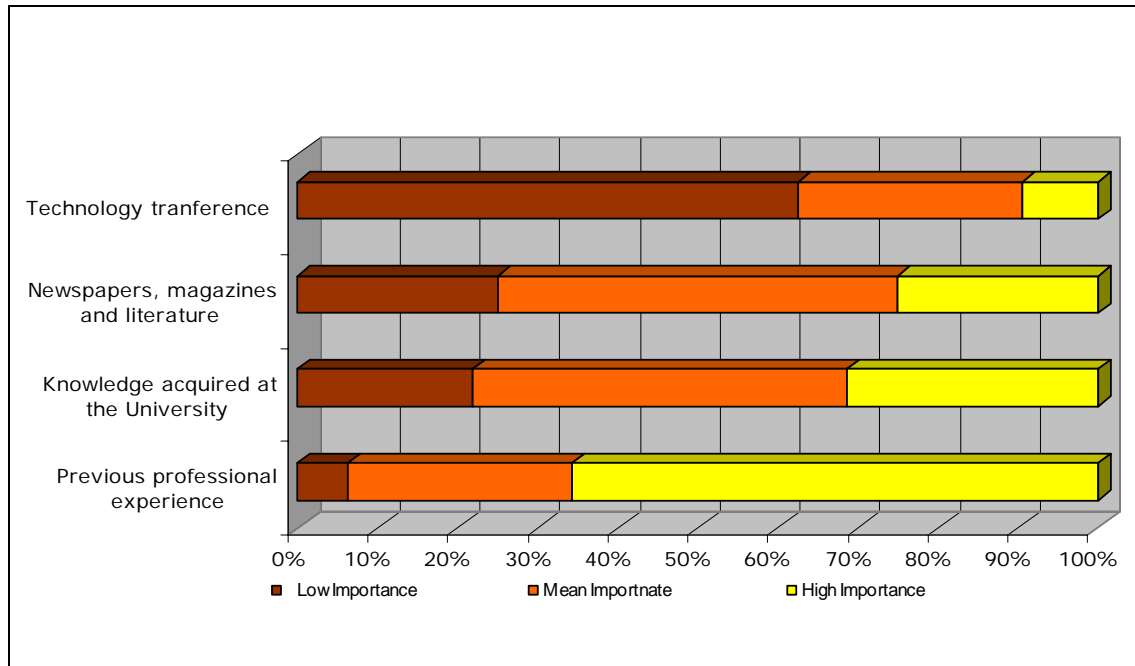
Figure 5. Connection to the previous activity (%)



We then ask the entrepreneurs what were the main factors that contributed to the genesis of the idea and the creation of new company (figure 6). Not surprisingly, most

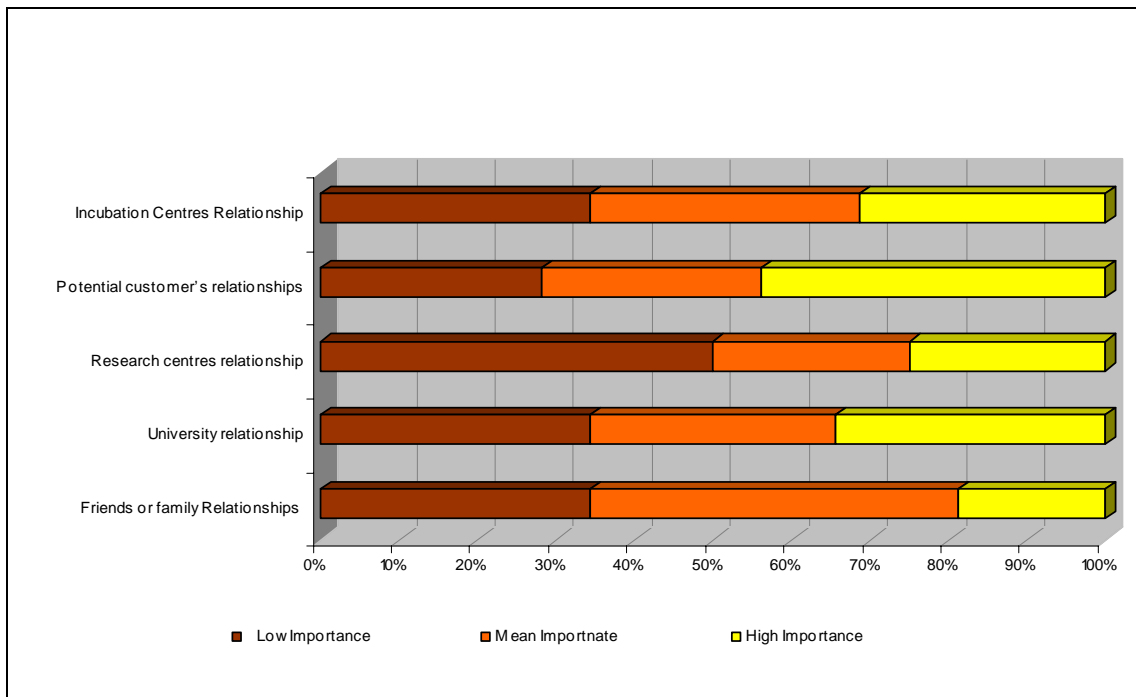
respondent say the “Previous job experience” but also, and distinct from typical Portuguese entrepreneurs, they state the “Knowledge acquired at the University”.

Figure 6. Factors that influenced the creation of the firm: entrepreneur’s capabilities (%)



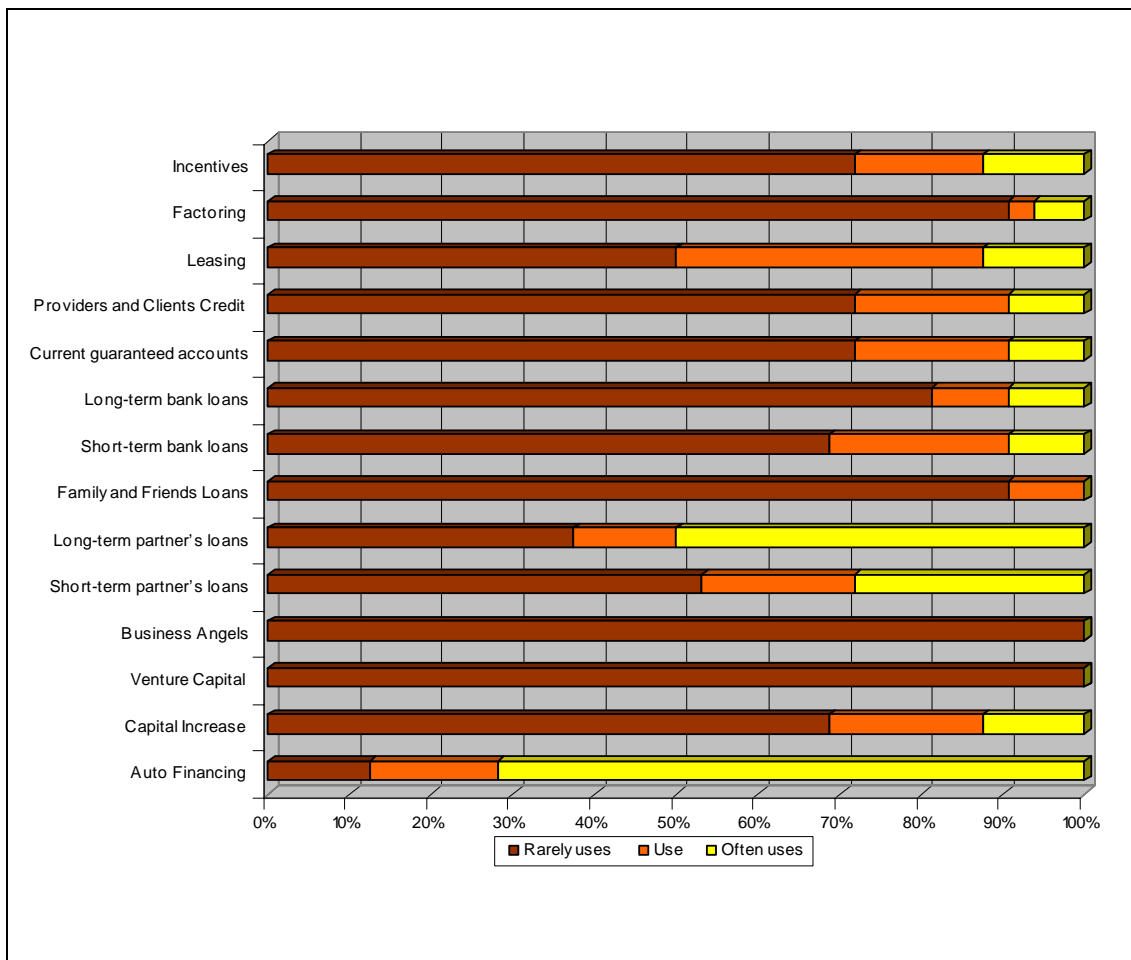
When considering the influence of the entrepreneurs’ relationships on the creation of firm (figure 7), we observed that they frequently identify the "Relationship with potential customers", which also reinforces the endogeneity of the business function. They also refer the “Relationship with the University” (34%), and also the "Relationship with research centres", which may derive from the characteristics of the firms companies, mainly technology-based companies.

Figure 7. Factors that influenced the creation of the firm: entrepreneur's relationships
(%)



When we asked to the entrepreneurs about what kind of funding sources they used (figure 8), they refer to the “Auto-financing” as the main financial support to the company, a just like the majority of Portuguese entrepreneurs. Furthermore, the surveyed firms, which were mainly technology-based companies, don’t recognize the importance of financing instruments such as “venture capital”, “business angels” or “family and friends loans”.

Figure 8. Financing Sources (%)



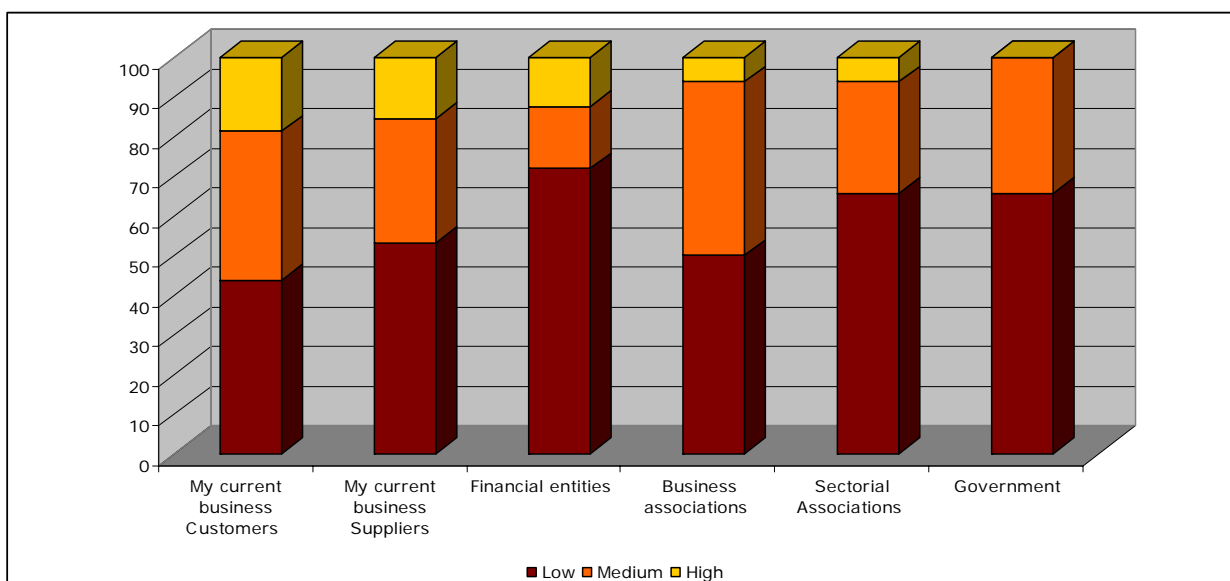
4.2.4. Institutional determinants for entrepreneurship

At last, we tried to evaluate the importance of institutional determinants of entrepreneurship by asking entrepreneurs with which entities they were related.

Most promoters claim to have a low level of relationship with most of the entities involved in the business before the creation of the firm (figure 9). In fact, 72% of the respondents had a very limited relationship with financial entities, while 66% referred to have very low contact with business associations and sectorial associations.

Moreover, most promoters refer that the relationship with its actual costumers was a key determinant for firm's birth. Therefore, it seems that demand variables are more relevant to the business dynamics than the supply side variables.

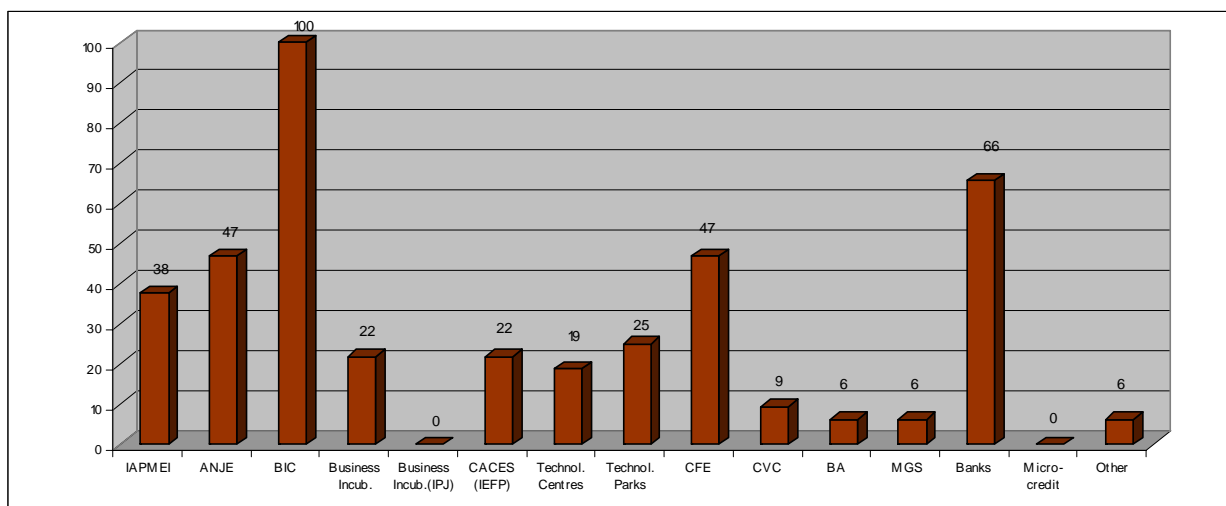
Figure 9. Relationship with Institutions before firms' birth (%)



During the firm foundation, and due to the sampling process, we observed that all (100%) entrepreneurs contacted with the BIC (figure 10). They have also contacted with other agents, including Banks (66%), ANJE (47%), CFE (Business Centers Formalities) (47%) and IAPMEI (38 %).

The less contacted entities by the promoters were the Corporate Venture Capital (9%), Business Angels, Mutual Guarantee Associations (6%), and they never contacted Micro-credit.

Figure 10. Relationship with Institutions during firms' birth (%)



We also ask to the promoters to discriminate the type of services that they used when they contacted the different entities to support the creation of their firms (table 3).

The most promoters refer the support from BIC in areas such as the creation and development of the firm's business plan. The banks (66%) were mainly contacted in order to search for financing support (47%) and advice. Also, 47% of the promoters got in touch with the ANJE, for other reasons than the company creation (37.5%) and to support the development business plan and consultancy (3.13%). The contacts with IAPMEI were mainly to obtain funding (12.5%) or consulting services (9.4%). Given the nature of this entity, the CFE were contacted mainly by promoters for the juridical creation of their company. The technological parks, CACES and the Incubation Centres were sought to support the creation of firms and to develop the business plan. Finally, the technological centers were contacted in order to get support in the area of consultancy.

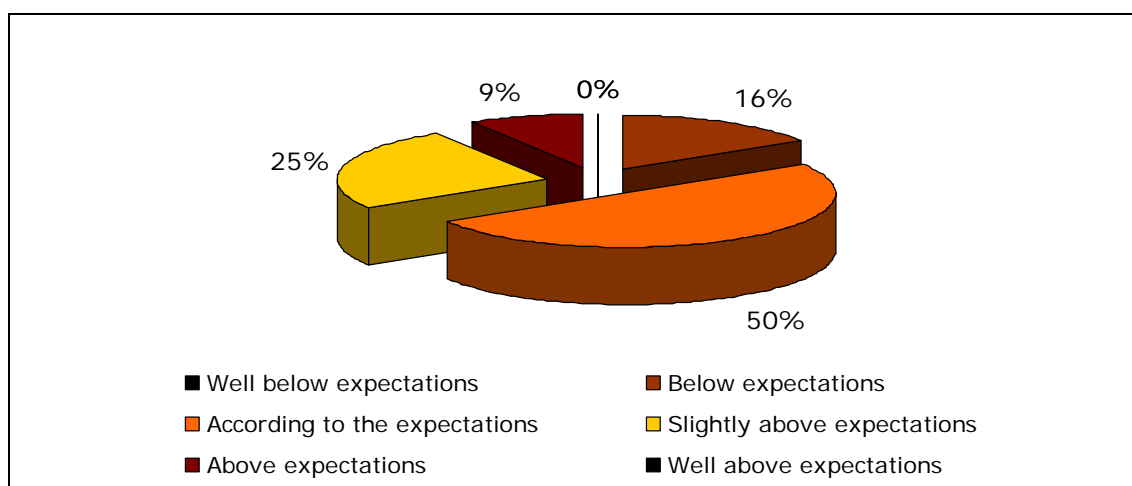


Table 3. Supporting services during firms' birth (%)

	Financing	Firms Creation	Business Plan Development	Consultancy	Other
ANJE	0	3,13%	3,13%	3,13%	37,5%
BIC	0	90,63%	44,88%	12,5%	18,75%
Banks	46,88%	0	3,13%	15,63%	0
CACES	3,13%	3,13%	0	3,13%	12,5%
Incubation Centres	0	9,38	9,38	0	3,13
Technological Centres	3,13%	0	0	6,25%	9,38%
CFE	0	46,88%	0	0	0
IAPMEI	12,5%	0	3,1%	9,4%	12,5%
Technological Parks	0	6,25%	6,25%	0	18,75%

Finally, we ask entrepreneurs to classify the services provided by BICs (figure 11). We have that 50% of the promoters classified the services provided by BICs as being in line with their expectations, 25% as being slightly above their expectations and 9% as being above expectations. However, 16% of respondents rank the services provided by the BIC as below their expectations.

Figure 11. Classification of the services provided by the BICs (%)



We then try to understand which services were correlated with BICs' classification. And we have that the entrepreneurs' evaluation of BICs is mostly related with services such as:



- Personal assistance
- Support on accessing financing
- Support on the development of technical projects
- Marketing support
- Support on the enrolment in national and international projects
- Auditor services
- Support on firms' modernization
- Identification and development of new business areas

At the end, we ask entrepreneurs if they contacted the BICs after the firm's birth. We therefore observed that most promoters still use BIC's infrastructures, which evidence the relevance of BIC's not only for firm birth but also during its growth.

5. Final remarks

The main goal of this research was to study the determinants of entrepreneurship, focusing on the special case of firms created within BICs in Portugal.

At a first glance, we may note that this sample has some similarities with overall Portuguese firms: there is a clear endogenous entrepreneurship, either territorial as well as sectoral. In fact, we observed that most entrepreneurs create their own business in the local where they live and in the sector where they previously worked.

However, there are some noteworthy differences between the respondent firms and the representative Portuguese companies. Particularly, most inquired firms belong to technology-based sectors while in general, Portuguese firms belong to traditional sectors (low intensive technology sectors). Also, in this sample the entrepreneur has, on average, a higher education level than the typical Portuguese entrepreneur. These characteristics might therefore explain the importance given to the contacts with universities and technological centres and reveal the importance of the firms created within BICs for regional development.

As in previous research (DEEP/MSST, 2003; IAPMEI, 2007), most entrepreneurs create their firm in order to be autonomous or for personal achievement. Also, the self-

financing and bank loans are the most frequent financing sources for the creation of new firms.

When considering the institutional support for firms' creation, most firms consider that it is very important, namely focusing the support of BICs, banks, CFE as well as technological parks. BICs' support is mainly relevant for the creation of the firm by offering supporting infrastructures (secretariat services, meeting rooms ...), in the development of the business plan and consultancy.

From our results, we were able to conclude that entrepreneurs welcome BICs' support when starting the firm but also during its growth. Also, most entrepreneurs classified BICs' services as being in line or above their expectations, which is mainly due to the personal assistance given to each entrepreneur.

Research on the relevance of BICs for entrepreneurship is far from being concluded. A very stimulating research topic is the study of the relevance of BICs for the promotion of education for entrepreneurship at the basic and secondary education level.

6. References

- Cantillon, R. (1755), *Essay on the nature of Commerce*, traduzido por H. Higgs, 1931, London: Macmillan
- Cunningham, J. B. e J. Lischeron (1991), "Defining entrepreneurship", *Journal of Small Business Management*, Vol.29, p.45-61
- DEEP/MSST (2003), *Indicadores de Empreendedorismo e Inovação – Relatório Final*, Coleção Cogitum, Centro de Informação e Documentação (CID/DEEP), Lisboa
- EBN (2009), *European Business & Innovation Centre Network*,
<http://www.ebn.be/DisplayPage.aspx?pid=17> (30/04/2009)
- European Commission (2000), *A charter to support Europe's small firms*,
http://ec.europa.eu/enterprise/entrepreneurship/charter_en.htm (30/04/2009)
- European Commission (2003), *Green Paper on Entrepreneurship Policy for the European Union*,
http://ec.europa.eu/enterprise/entrepreneurship/green_paper/index.htm (30/04/09)
- Guimarães, R. C. e J. A Sarsfield Cabral (1997), *Estatística*, McGraw-Hill de Portugal, Amadora

- Hébert, R. F. and A. N. Link (2006), “Historical Perspectives on the Entrepreneur”, *Foundations and Trends in Entrepreneurship*, Vol. 2, Nº 4: 261–408
- IAPMEI (2007), *Observatório da Criação de Empresas – Resultados do Inquérito 2006*, Direcção de Planeamento e Estudos, Lisboa.
- Kirzner, I.M. (1973), *Competition and entrepreneurship*, University of Chicago Press, Chicago
- Knight, F.H. (1921), *Risk, uncertainty and profit*, University of Chicago Press, Chicago
- Lundström, A., L.A. Stevenson (2005), *Entrepreneurship policy: theory and practice*. Springer Science & Business Media Inc.
- McClelland, D. C. (1961), *The Achieving Society*, Princeton, N. J
- NSRF (2007), *National Strategic Reference Framework*, http://www.qren.pt/item3.php?lang=1&id_channel=44&id_page=312 (30/04/2009)
- Reis, E., P. Melo, R. Andrade e T. Calapez (1996), *Estatística Aplicada*, Edições Sílabo, Lisboa
- Say, J.B. (1816), *England and the English People*, 2nd edition (1816), trans. by John Richter, London: Sherwood, Neely et Jones
- Schultz, T. W. (1975), “The Value of the Ability to Deal with Disequilibria.” *J. Economic Literature*, 13, no. 3: 827–46
- Schumpeter, J.A. (1934), *The Theory of Economic Development*, Cambridge, MA: Harvard University Press.
- Schumpeter, J.A. (1942), *Capitalism, Socialism, and Democracy*, New York: Harper and Brothers
- Smith, A. (1776), *An Inquiry Into the Nature and Causes of the Wealth of Nations*, New York: Modern Library
- Von Thünen, J. H. (1966 [1875]), Von Thünen's Isolated State, trans. by P. Hall, *Der Isolierte Staat In Beziehung auf Landwirtschaft und Nationaökonomie*, Oxford: Pergamon Press
- Weber, M. (1930), *The Protestant Ethic and the Spirit of Capitalism*, trans. T. Parsons. New York: Scribner's Sons.