

Environmental determinants of firm creation across Portuguese regions

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ABSTRACT:

This work begins with a study of the bibliography published on the importance of entrepreneurship in the economies of the century XXI, when four areas of relevance deducted. Entrepreneurship assumes in the development of the current savings an importance added by four motives: contribute to the creation of job, contribute to innovation, increase the creation of wealth and contribute to the development of the economy and of the society and, finally, it constitutes a more and more important career option for a good part of the workforce.

In the second part of the work, an analysis of the situation of entrepreneurship in Portugal is presented, using the available data from GEM (Global Entrepreneurship Monitor) and a short description of firm creation throughout the NUT III Portuguese regions in the second half of last decade is presented, using data of the fiscal authorities.

To try to determine the factors that explain the differences found between these regions, a simple analysis of regression is developed, following similar studies published for other countries. From the obtained results, political recommendations can be developed for the local entities to stimulate and develop the creation of new firms.

In view of the low levels of entrepreneurial activity registered in the country, conclusions are proposed. These conclusions show that this is a highly asymmetrical country, with a high concentration in the regions of the coast, and a growing desertification of the interior and the islands (the Madeira and Azores). The results also show that the demand derived factors assume an enormous weight in the explanation of the differences between the districts, which must inspire eventual actions of the local entities.

New policies are needed to further entrepreneurial activity in the interior regions and the islands.

Lessons for political and economical decisions are drawn.

Prior work

The research for this thesis revealed a large literature that is important for the first part of this communication.

This research showed a lot about the variability of new firm creation across Portuguese NUT3 regions. This knowledge was very important to the current work.

Implications

The interior of the country and both sets of islands show a very low level of entrepreneurial activity, even lower than the already low levels registered in the seaside regions. This difference seems to be explained by the absence of exporting activities and of a strong internal market. This should guide the policies adopted by local authorities, if they are to develop entrepreneurship.

Value

This work shows good reason for Portuguese authorities to worry about the levels of entrepreneurial activity in the country, because entrepreneurship is so important and those levels are so low in Portugal.

It reveals that demand side factors could help develop entrepreneurial activity in the country.

It shows that the interior regions and the islands have increased reasons to worry about the lack of entrepreneurial activity and should pay special attention to these demand side factors.

The main text of the paper should be in Verdana 10 pt Regular, with paragraphs justified.

1. Introduction

Everyone talks about entrepreneurship these days. All governments announce their intention of betting on entrepreneurship, all business associations intend to promote entrepreneurship. All economical publications present sections on the subject.

What is, therefore, the reason for this interest and what is the situation of the phenomenon in Portugal? This is what will be approached in this work, based on Gartner's concept (2001): entrepreneurship is the creation of new enterprises.

2. The importance of entrepreneurship

The importance of the study of entrepreneurship is developed by several authors. For Low and MacMillan (1988) and Gartner (2001), entrepreneurship must be studied, fundamentally, to explain and to ease the role of the new company in the development of the economical progress. Another reason pointed to justify investigation in this area resides in the idea that, besides explaining how the markets work, it is also necessary to realize why they work and, for that, it is crucial to understand the role of a central agent in this process: the entrepreneur (Raposo and Silva, 2000).

Lambing and Kuehl (2003) defend that this subject must be studied mainly due to the dimension that it took, and they give us an idea of this dimension through the growth of the number of new companies created in the United States of America (U.S.A.), in the last forty to fifty years. Thus, in 1955, in that country, there were 4,5 million small enterprises, in other words, 1 for each 38 inhabitants. In 1965 this ratio passed for 1/29, in 1975 for 1/26, in 1985 for 1/20 and in 1998 for 1/16, less than half of the value registered in 1955. The pure dimension of the phenomenon of the creation of new enterprises is, according to these authors, a justification to the attention that is dedicated in the published investigation.

The importance of the entrepreneur and of the creation of new firms, mainly the small businesses, for the economical and social development of a country is pointed by the European Commission (2003) like another motive that justifies an effort of investigation on the phenomenon. The Green Paper of the European Commission (2003) points out as reasons to consider entrepreneurship important, its contribution for:

1. The creation of jobs;
2. The economical growth;
3. To improve competitiveness;
4. To use the potential of the individuals;
5. To explore the interests of the society (protection of the environment, production of health and education services, and social security).

Reynolds (1991) offers a more global vision on the phenomenon of entrepreneurship, telling that the enterprising subsystem, while a part of the social and economical system of a society, fulfils two functions, that of arbitration between subsystems (namely between the financing, the innovation and the suppliers of productive factors), and of integrator of the economical subsystem. For fulfilling such an important role in the society, it is not surprising that the entrepreneur is a target of so much attention in the published literature.

On the other side the significant increase that has been happening in the publication of investigation on entrepreneurship is a recognition of the importance what the phenomenon assumes in the development of the economies, a fact already underlined by Schumpeter (1949) more than fifty years ago.

This importance is recognized not only by the investigators but also by the political power: from the socialist French government, to the conservative governments of the E.U.A., going through the English government, they have all been underlining the strategic importance of entrepreneurship for the economical and social development of their countries (Raposo and Silva, 2000).

Henrekson (2002) and Coulter (2003) point three main reasons for the explanation given to this phenomenon: the creation of job, the innovation and the creation of wealth.

Reynolds, Storey and Westhead (1994) add a fourth: the constitution of the own enterprise sets itself as an important choice of career that affects the life of millions of persons in the whole world nowadays.

So, by analysing the published works, it is possible to summarize four principal reasons to justify the importance of the study of entrepreneurship:

1. The creation of jobs, including the self-employment;
2. The importance of young enterprises for the innovation in the economy;
3. The contribution of the creation of enterprises for the creation of wealth and for the development of the economy and of the society;
4. The career option for a significant part of the workforce.

Regarding the first pointed reason, the creation of jobs, Reynolds, Storey and Westhead (1994) estimate that, both in Sweden and in the USA, around half of the jobs created along a period of six years were due to the small and medium enterprises (SMEs) created in the same period. Also in the U.S.A. the small enterprises recently created are responsible for the creation of 3/4 of the new jobs (Henderson 2002). Palich and Bagby (1995) affirm that the governments see the entrepreneurs like the principal creators of new jobs, while Allen and Weinberg (1988) analyse several studies on the creation of jobs by SMEs to conclude (pp. 197) that its weight in this macroeconomical variable is high in the U.S.A.:

" ... during the period of 1969-1976 firms with fewer than 20 employees created about two-thirds of all new jobs and firms with under 100 employees created 80 percent of all net new jobs (Birch, 1985) ... "

This conclusion is confirmed by the works of Arzeni (1998) and Birley (1986), and that last one affirms the new enterprises are responsible for 2,9 % of the total of posts of work.

Also Timmons and Bygrave (1986) confirm this situation by concluding that the small enterprises of technological base are responsible for a quota of the creation of job superior to their weight in the economy. On the other hand, Arend (1999) uses statistics from the United States, according to which in the 80's the small enterprises created 20 million jobs, while the great companies contributed to the unemployment with strong "downsizings". It is of pointing out the green book on entrepreneurship of the European Commission (2003) where it is put in evidence the role that the business spirit assumes in the creation of job.

It is noticed, however, that the creation of job for the new enterprises passes in parallel with the possible close of ancient enterprises, outdated and won by the new ones. In other words, if on one side jobs are created, the process of creative destruction (Schumpeter, 1942) also leads to the loss of other jobs.

Baptista and Thurik (2004) studied the relation between the creation of new enterprises and the unemployment in Portugal and concluded that this relation is less significant or elapses with a more extended time gap than the average of the countries of the OECD, but even so it is positive.

Still on this subject, Baptista, Escária and Madruga (2004) found empirical confirming evidence of which the creation of new enterprises has straight effects in the creation of job, but has also indirect effects, through the increase of competition, on efficiency and on innovation. However, these indirect effects act with a time gap of around eight years, that is to say, the creation of new enterprises has also an influence of long term in the creation of job.

Regarding the second reason, the innovation, Reynolds (1994) and the white book of the U.S. Small Business Administration (1998) accent the importance of the new enterprises for the innovation in the economy, not only for the quantity of patents registered on behalf of these, proportionally much larger than the registered one on behalf of the most ancient enterprises, but also for the challenges that they set to the already installed enterprises.

Arend (1999) corroborates this position by indicating that, in the eighties', the small enterprises spent globally more in research and development (R&D) than the great enterprises and they produced 24 times more innovations for each dollar invested in R&D than the companies of Fortune 500, still they advanced that, to the incumbent firms, it is of no interest to explore the technological innovations, because the change has, sometimes, very high costs and risks.

Timmons and Bygrave (1986) confirm this situation while concluding that the small companies of technological base are the fountain of most of the technological "radical" innovations.

Hamel and Prahalad (1991) go further and affirm that to the large enterprises it is, in general, practically impossible to be truly innovative. In fact, the concern with the short term and the bureaucracy suffocate the innovation in the large companies (Drucker 1985).

Barrett and Weinstein (1998), however, say that it makes part of the nature of any great organization to be hostile to change (as a reflex of a certain form of homeostasis), in spite of the biggest enterprises having a potential advantage in the innovation since they have more resources to investigate, better established systems of distribution and can more easily finance and support the risk of the projects.

Therefore, for the young enterprises the innovation is its motto of development and the systematic search of innovation makes central part of the concept of entrepreneurship (Drucker, 1985a, 1985b, 1998).

Finally, it is important to mention Schein's (1974) study of "5 career anchors", because it concludes that the entrepreneurs were all in the group of creativity, that is, they were distinguished from the remain for this characteristic, necessary condition for the innovation.

As for the third reason, the creation of wealth and development, Reynolds, Storey and Westhead (1994) and Reynolds (1994) showed that, in the U.S.A., high taxes of creation of companies were, in the analysed period, a necessary condition for the economical growth. Reynolds, Storey and Westhead (1994) and Reynolds and Maki (1990, 1991) concluded that the creation of enterprises almost always accompanies the economical growth, while Sump, Gartner and Shaver (2003) confirmed that the creation of new independent business explains between a fourth and a third of the variation in the economical growth in a great deal of the industrialized countries. Also Arzeni and Pellegrin (1997), Tang and Koveos (2004) and the white book of the US National Commission on Entrepreneurship (2001) concluded for the existence of a statistically significant relation between the creation of new companies and the growth of the GNP.

Still on this issue, Baumol (1995) ended that the most important thing for the development of a society is not the existent quantity of entrepreneurs in the economy, but their distribution among different activities, namely between the informal economy and the formal one.

In the same sense, Henderson (2002) considers that the value of the entrepreneur is obvious both on a national level and on a regional or local level. At the level of the nations, he verified that those which have more enterprising activity have also a higher growth of the GNP, affirming even that entrepreneurship explains a third of the difference of growth between countries, though it should think that the relation between entrepreneurship and growth is stronger in countries that depend more on international commerce. According to the same author, it is still the segment of small enterprising companies that grows the most in the exports of the U.S.A., being that between 1987 and 1997 the number and the value of the exports of American Small and Medium Enterprises tripled.

On his turn, Coulter (2003) confirmed the existence in the countries of the G7 of a strong relation between the level of enterprising activity and the annual economical growth. Based on the report of the Global Entrepreneurship Monitor (GEM), this author supplies conclusive evidence that promoting entrepreneurship and the dynamic entrepreneur of a country had to be a component of the action of any government that intends to stimulate the economical growth and the social development. These conclusions confirm the work of Schumpeter (1942), which recovered the figure of the entrepreneur for over fifty years now and set him as the principal "activator" of the economical development, thanks to his innovator function.

The European Commission (2003) shares the same idea by concluding, in his green book on entrepreneurship in Europe, that the countries with a higher increase of the taxes of business initiative have a tendency to have a bigger subsequent decrease of unemployment, and still concluded that the "business spirit" contributes to the economical growth and can still contribute to reinforce the economical and social cohesion of the least developed regions and to stimulate the economical activity, the creation of jobs and the integration of the unemployed people in the working environment.

In the same sense, Audretsch (2004) ends up saying that entrepreneurship is the fountain of economical growth in the modern economies, since it allows the use of advancements in the knowledge.

Let's also highlight the work of Audretsch and Fritsch (2003), because it stresses that there is not a straight and unmistakable relation between entrepreneurship and economical growth. This relation can be different in different economical systems and in different times. In fact, while the studies carried out in Germany in the eighties of the XX century did not identify a relation between the level of entrepreneurship and the economical growth (Audretsch and Fritsch, 1996, Fritsch, 1996 and 1997), the study of Reynolds (1999) about the U.S.A. came to a completely different conclusion, identifying a clear and positive relation between two variables.

Meantime, using the same model, again in Germany, but with data of the nineties of the XX century, the results were then completely different, indicating that the regions with higher rates of creation of new firms showed a clearly higher economical growth. According to the authors, these results show that an alteration was registered in the structure of the German economy, having the motor of the growth of this country moved from the large established companies, as it was in the eighties, to enterprising activity, in the nineties.

Also van Stel, Carree and Thurik (2004) support that the relation between entrepreneurship and economical growth is not identical in all countries, but it depends on the level of profit per capita of the country. These authors conclude that

"... entrepreneurship fulfils different roles in countries located in different stages of economical development" (van Stel, Carree and Thurik, 2004: 1)

Wennekers et al (2005) defends, in the same sense, that this relation between entrepreneurship and economical growth has a form of U, in other words, for the most developed countries the form of stimulating the growth will lay in stimulating entrepreneurship, while in the countries less developed it becomes more viable to obtain this growth through a bigger exploration of economies of scale, for example, or the attraction of great foreign investments.

The way enterprising activity affects economical growth comprises three main vectors (Wennekers and Thurik, 1999 and Karlsson, Friis and Paulsson, 2004):

1. Innovation;
2. Addition of competition;
3. Creation of enterprises and of job.

However, Karlsson, Friis and Paulsson, (2004) admit that the effect of the increase of competition in the growth still need to be better studied.

Another vision on this subject is that of Sturzenegger and Tommasi (1994) that conclude the weak economical growth of some countries resulted from the allocation of entrepreneurs' resources for less productive activities.

An important contribution for the understanding of the relation between entrepreneurship and economical growth is offered by one of Michael Porter's conclusions:

"Invention and entrepreneurship are at the heart of national advantage." (Porter, 1990: 125)

Consequently, besides being important for economical growth, entrepreneurship also assumes particular importance for the development of economies, especially when these cross moments of transformation (Spilling, 1996 and Jackson, Klich and Poznanska, 1999). This importance is due, in great part, to the role assumed by the creative destruction in the processes of change of the economies, i.e. the creation of new enterprises is going to lead to the exclusion from the market and to the shutting down of companies previously existent (Jackson, Klich and Poznanska, 1999).

Finally, Bygrave and Minniti (2000) and Acs and Armington (2002) point out the importance of the positive "externality" resultant from the activity of successful entrepreneurs, through the encouraging effect for others to create their own firms and through the search for products and services for the new companies, which will lead to the creation of other enterprises generators of wealth in that region.

As for the fourth and last reason that justifies the importance of entrepreneurship, the matter of career option, the white book of the U.S. Small Business Administration (1998) underlines the relevance of the option and the work of Henderson (2002) tells that North Americans who work for themselves gain a third more than the wage-earners and that entrepreneurs who created an enterprise earn even more. For this economical reason and for a matter of affectation of the human capital of each individual, entrepreneurship is a subject that requires study, since it affects the lives of millions of persons who every year pledge in the creation of their own company

In accordance with the executive report of the Global Entrepreneurship Monitor of 2003 (Reynolds et al, 2004), of the 2,4 thousand million inhabitants in active age (18-64) in the 40 countries then analysed, almost 300 million persons were engaged in the process of creating a new enterprise, in other words, 190 million new enterprises were to be created in that year. This represents an estimate of 300 million new entrepreneurs in those 40 countries in 2003. These numbers are reinforced by the work of Reynolds (2003) that concludes that, between 1993 and 2002, the percentage of adults between 18 and 74 years old involved in the creation of new enterprises in the U.S.A. grew from 4 to over 13%.

Douglas and Shepherd (1999) analyse the issue of career choice for the entrepreneur as being dependent of the usefulness he expects to withdraw from each of the options (to create his enterprise or to remain an employee). This usefulness results from the compensations (financial and others) which he expects to receive, from the risks that he is going to assume, from the demanded effort, from the autonomy to take decisions and from the conditions of work. Carter, Gartner and Shaver (2003) add that those who opted for a career as entrepreneurs reveal to attribute less importance to the roles and to social recognition than others.

The present work claims to be inserted in this preoccupation and in this line of acting, once it is proposed to study an important factor of economical and social development. It is to this purpose that the Nobel prize winner Hayek (1974) presents the entrepreneur as the key to the development of the nations.

Finally, Shane and Venkataraman (2000) face this situation of the relevance of the study of entrepreneurship in a different way, when they affirm that it is necessary to study this phenomenon for three reasons:

1. This is the process for which the society converts technical information in goods and services available in the markets;
2. It is also the mechanism that discovers and moderates secular and space inefficiencies in the functioning of the markets;
3. Innovative entrepreneurship is the crucial process for the change and evolution of the economy.

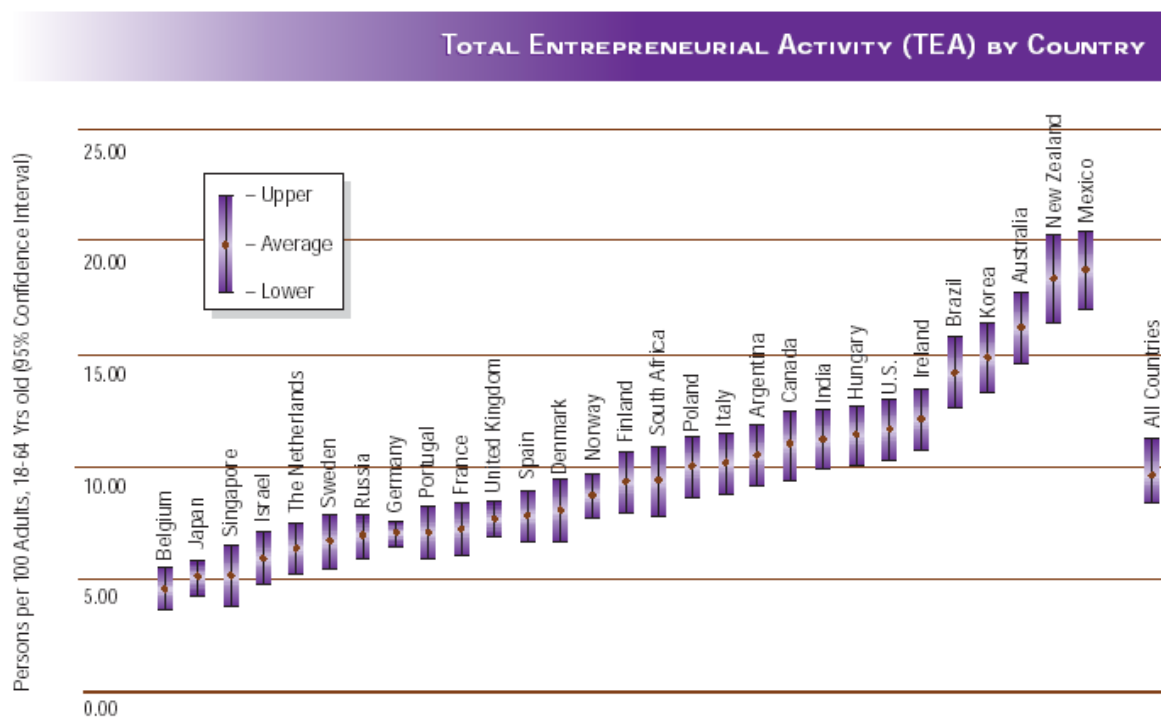
All these reasons put in evidence the considerable importance of entrepreneurship for the development of a region or country, thus justifying the realization of this work.

The results of the present work study may be particularly important for the understanding of a part of the reasons that explain the low levels which Carvalho (2003) presented for entrepreneurship in Portugal.

3. The Situation in Portugal

To analyse if the enterprising activity in Portugal is high or low, it is useful to do the comparison with what goes on in other countries. For this comparison it is relevant the use of the Global Entrepreneurship Monitor report of 2001, first year in which Portugal was included in this annual world-wide study (Reynolds et al, 2001). The comparison (Chart 1) is not much favourable to our country given the fact that, between 29 participant countries, Portugal registers the 9th lowest level of enterprising activity, and only 7,1 % of the adult population was engaged in this activity (the lowest tax of the 29). Portugal was also one of the countries where the percentage of women involved in an enterprising activity was lower. In 2004, the situation got worse, being Portugal the 4th worst of 16 countries analysed in this year, with only 4 % of the adult population engaged in the creation of enterprises (Nova Forum and Sociedade Portuguesa da Inovação, 2005).

Chart 1 – Enterprising activity per country



Source: Reynolds et al, 2001

In 2003, another study (Carvalho, 2003) attempted to do a characterization of entrepreneurship activity in Portugal, looking for reasons to explain a very low level of business initiative. By using the Global Entrepreneurship Monitor report of 2001 (Reynolds et al, 2001) to make comparisons with other countries, it found geographical, historical, educational, cultural and economical reasons to explain the weak expression that the phenomenon registers in Portugal. Also this study concludes for the necessity of betting on the formation in entrepreneurship to give dynamism to the economy, pointing out, however, the need to alter the dominant culture in the society regarding the entrepreneur.

Sardinha and Carvalho published in 2003 a comparison between Portugal, Spain and the Countries of the so called Group of Viségrad (Poland, Czech Republic, Hungary and Slovakia) as for the structural conditions for entrepreneurship and they concluded that it is in the education and in the formation that those countries, which entered the European Union in 2004, have advantage.

In the same year another study was published (Braga and Natário, 2003) where, based on UNO's "Human Development Report 2001", the Portuguese situation is analysed for its human development and access to knowledge, and concludes that, in the rate of access to knowledge, Portugal is the last of the EU (15 members then), while, in the rate of creation of new knowledge, Portugal little or nothing contributes to the inventive activity of the community, while in global terms, Portugal is one of the economies with less capacity of innovation in the EU.

In view of the shortage of studies carried out in Portugal on this subject, the present work tries to find the reasons that explain the differences in the creation (and the close) of enterprises across the country. Why is it that some regions reveal a large entrepreneurial activity than others?

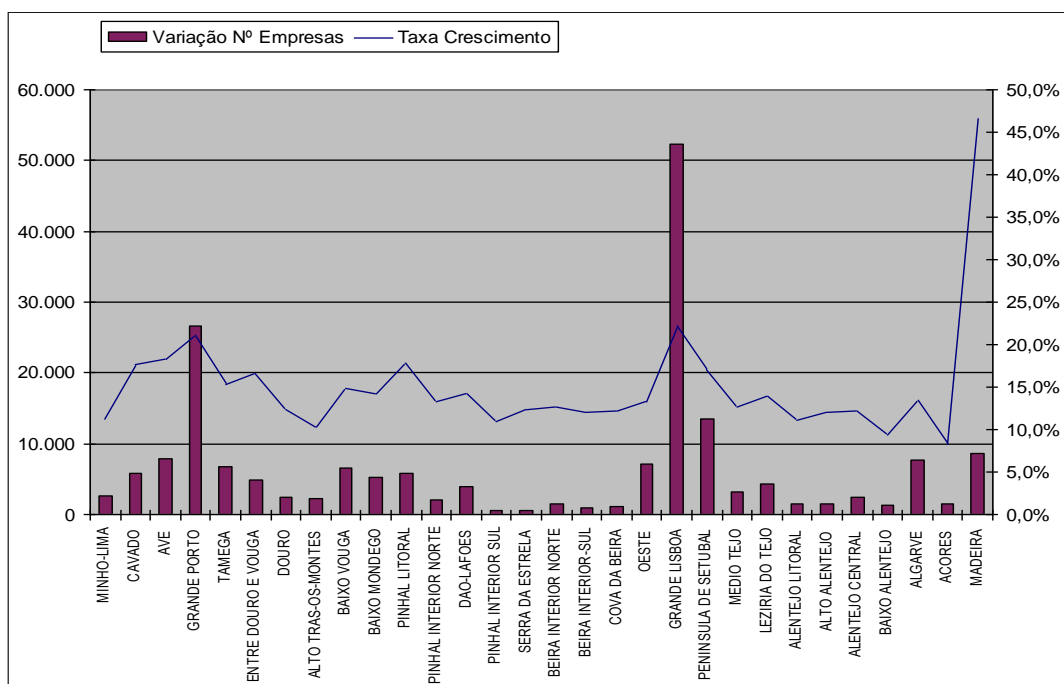
To answer this question, information was gathered from the National Institute of Statistic (INE) on the creation and close of enterprises in public notary and on a series of macroeconomical variables that could help explain (and understand) these differences.

The data gathered on the creation of enterprises is summarized in the Chart 2.

Table 1 presents the same data, in more detail, analysing the liquid variation in the stock of existent enterprises.

It shows that the country is concentrated in Lisbon and Oporto was this concentration has a tendency to grow, given that the growth rates are higher precisely where there are more enterprises, exception done to the Madeira, where the data is obviously influenced by the creation and activity of the local offshore, where many enterprises were created that do not represent "real" activity in the zone.

To analyse these data, we are going to follow the bibliography published on similar studies (Reynolds, Storey and Westhead 1994 and Keeble and Walker 1994) and create two data sets with the creation of new enterprises divided by 100 existent enterprises and by 1000 inhabitants. We are also going to do the same thing for the close of enterprises.

Chart 2 – Net Variation in the Number of Existing Companies

Table 1 – Changes in the Number of Existing Companies 1991-2000

	For 1000 Inhabitants			For 100 Existing Companies		
	Start-ups	Closes	Change in Stock	Start-ups	Closes	Change in Stock
MINHO-LIMA	12,4	2,3	10,2	13,7	2,5	11,2
CAVADO	16,7	1,8	14,9	19,7	2,1	17,7
AVE	16,9	1,3	15,5	19,8	1,6	18,2
GRANDE PORTO	24,1	2,9	21,2	24,0	2,9	21,1
TAMEGA	13,6	1,3	12,4	16,9	1,6	15,4
ENTRE DOURO E VOUGA	19,9	2,4	17,5	18,8	2,3	16,5
DOURO	12,2	1,3	10,9	13,9	1,5	12,4
ALTO TRAS-OS-MONTES	11,5	1,3	10,2	11,5	1,3	10,2
BAIXO VOUGA	19,9	2,6	17,2	17,2	2,3	14,9
BAIXO MONDEGO	18,1	2,5	15,7	16,4	2,2	14,2
PINHAL LITORAL	26,2	2,7	23,5	19,8	2,0	17,8
PINHAL INTERIOR NORTE	16,0	1,7	14,3	14,9	1,6	13,3
DAO-LAFOES	15,6	1,6	14,1	15,9	1,6	14,3
PINHAL INTERIOR SUL	12,9	1,5	11,4	12,3	1,5	10,9
SERRA DA ESTRELA	11,9	0,9	11,0	13,4	1,0	12,4
BEIRA INTERIOR NORTE	13,9	1,3	12,6	13,9	1,3	12,6
BEIRA INTERIOR-SUL	13,7	1,7	12,1	13,8	1,7	12,1
COVA DA BEIRA	13,1	1,6	11,6	13,8	1,7	12,1
OESTE	20,3	2,2	18,1	14,9	1,6	13,2
GRANDE LISBOA	31,8	4,2	27,7	25,6	3,4	22,2
PENINSULA DE SETUBAL	21,1	2,3	18,8	19,0	2,0	17,0
MEDIO TEJO	16,4	2,1	14,3	14,6	1,9	12,7
LEZIRIA DO TEJO	20,3	2,0	18,2	15,5	1,6	13,9

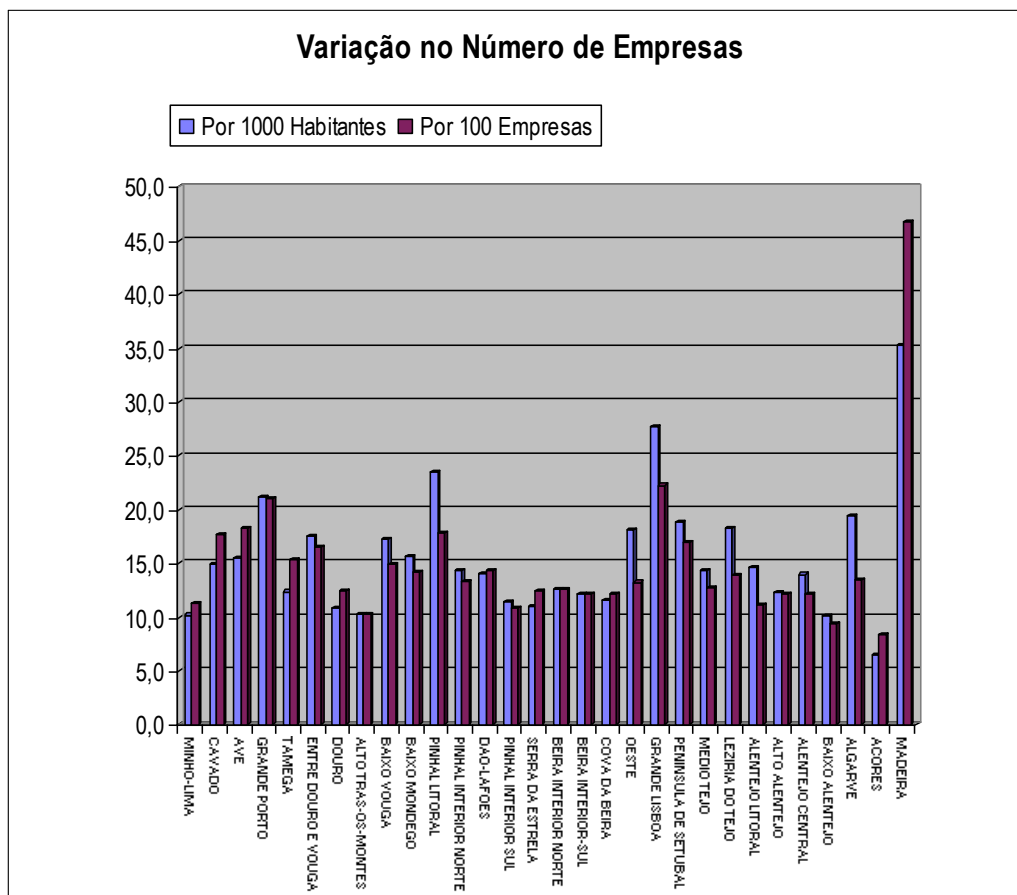
	For 1000 Inhabitants			For 100 Existing Companies		
	Start-ups	Closes	Change in Stock	Start-ups	Closes	Change in Stock
ALENTEJO LITORAL	16,8	2,2	14,6	12,8	1,7	11,1
ALTO ALENTEJO	14,6	2,3	12,3	14,4	2,3	12,1
ALENTEJO CENTRAL	15,9	2,0	14,0	13,9	1,7	12,2
BAIXO ALENTEJO	11,1	1,0	10,1	10,4	1,0	9,4
ALGARVE	23,6	4,2	19,4	16,4	2,9	13,5
ACORES	7,4	0,9	6,5	9,5	1,2	8,3
MADEIRA	39,9	4,7	35,2	53,0	6,3	46,7
Portugal	528	63	465	510	60	450
Média	18	2	16	17	2	15
Mínimo	7	1	7	10	1	8
Máximo	40	5	35	53	6	47
Máximo/Mínimo	5,4	5,4	5,4	5,6	6,4	5,6

Chart 3 shows table 1's data, analysing the liquid creation of companies across the country's regions.

This was the data gathered on the creation of enterprises in nineties and it will be used to represent the evolution of entrepreneurship in the same period, in spite of not including information about the self-employed I neither of the two fiscal formats that were popular in Portugal in those days, "profissionais liberais" and "empresários em nome individual". It was not possible to gather data on these two categories.

To analyse the regional differences in the creation of enterprises, this data was used in a regressive analysis that will be next described.

Chart 3 – Net Change in the Stock of Companies



To look for an explanation for the differences between regions, we are going to carry out a regressive analysis, using the variables described in the table 2.

Table 2 – Variables use to explain variation in company creation

EC	Start-ups 1991-2000
EE	Closes 1991-2000
S	Stock of Companies in 1991
PT	Total Population 1991
EES	Jobs in Service Companies 1991
NEES	Number of Universities or Polytechnic Schools1991
E	Jobs 1991
CH	Mortgages (in million euros) 1991
VPT	Average yearly percentual change in total population 1991-2001
PIB5	Average GNP per capita in the period 1991-2000
VPIB	Change in GNP in the period 1991-2001
DP	Populational Density 1991
TD	Average yearly unemployment rate 1991-2001
VTDpp	Change in unemployment rate in the period 1991-2001
VD	Total unemployment in 1991
PP	% of "bosses" in the active Population in 1991
PCP	% of self-employed workers in 1991
PST	Percentage of jobs in the third sector in 1991
EUE	% Expeditions to the EU in 1991
VEUE	Change in the percentage of Expeditions to the EU in the period 1991-2001
EX	% Expeditions outside the EU in 1991
VE	Change in the percentage of Expeditions outside the EU in the period 1991-2001
PC	Average Buying capacity in 1991

The results of this regressive analysis, are presented in the next tables and charts, first for the creation of enterprises and then for the close. In both cases the analysis is made on models calculated on the basis of the creation / close of enterprises by 100 existent enterprises and on the basis of the creation / close of enterprises for 1000 inhabitants.

There will only be considered as significant the variables whose t coefficients (for levels of signification of 0,05) will be superior to 1,7 or inferior to -1,7 (Parasuraman, 1991). It is noticed that, in all the regressions, the tests F show values superior to 2,46, critical value to accept as statistically significant the values of the R² (Parasuraman, 1991), given the degrees of freedom of the regression in question.

Reading these results on table 3, one concludes that the high value of R² in the first model (the one that connects the creation of enterprises with the population of each region), indicating that this regression manages to explain 95 % of the registered variance, in spite that only two variables turned out to be statistically significant: PCP and EX. It is important to notice that, nevertheless, four more variables became close to the levels of statistical signification: VD, PST, EUE and S.

Table 3 - Regression with the company creation data set

Dependent Variables \ Independent Variables	EC/PT		EC/NE	
	Coefficient	t	Coefficient	t
PCP	0,411	1,771		
PST			-0,654	1,764
EX	-1,136	-1,816		
	R²: 0,95	F: 6,104	R²: 0,047	F: 3,731

$$EC/PT = 0,411 PCP - 1,136 EX$$

$$EC/NE = - 0,654 \text{ PST}$$

The second conclusion, quite curious, is almost opposite to the first one, because for the second model the R^2 is quite low, indicating that it hardly manages to explain fewer 9 % of the registered variance, having only a variable with acceptable levels of statistical significance: PST.

These conclusions are curious at several levels, for example, because they do not confirm the results of other studies (Reynolds, Storey and Westhead 1994 and Keeble and Walker 1994), in which both models presented similar levels of capacity of explanation of the variance in the dependent variables.

Discussing only the model with larger adherence, it's interesting to conclude that there does not exist a constant (enterprises were not created independently of what goes on in the economy) and it seems that the creation of new enterprises depends essentially on percentage of well-employed and (negatively) on the exports outside of the EU, in spite of the level of unemployment, the already existent number of societies, the exports to the EU and the workers' percentage in the third sector might have also some paper in the explanation of the dependent variable.

In case of the close of enterprises (table 4), both models appear with high levels of variance explained (almost 93 % in the model that uses the relation between close of enterprises and the existent population and almost 90 % in the other). Also the number of statistically significant variables is higher than in case of the creation of enterprises, since in the first model we have four significant variables (PST, EUE, S and CH) and in the second we have two (PST and EUE).

In other words, for inhabitants' thousand it seems that the close of enterprises to be explained by the exports to the EU, by the workers' percentage in the tertiary sector, by the number of already existent societies and (negative relation) by the level of mortgage credit granted in each region.

On the other side, for hundred of existent enterprises it seems that the close of enterprises is explained only by the first two variables.

Table 4 – Regression with the closes data set

Dependent Variables \ Independent Variables	EE/PT		EE/NE	
	Coefficient	t	Coefficient	t
PST	1,566	2,981	1,615	2,563
EUE	2,596	2,498	2,85	2,285
S	17,628	2,081		
CH	-11,115	-2,205		
	R²: 0,929	F: 4,142	R²: 0,897	F: 2,782

$$EE/PT = 1,566 \text{ PST} + 2,596 \text{ EUE} + 17,628 \text{ S} - 11,115 \text{ CH}$$

$$EE/NE = 1,615 \text{ PST} + 2,85 \text{ EUE}$$

The analysis of this data shows different results from the study of the Ministry of Social Security and of Work (2003), possibly because of the use of different sources. That study pointed to 6 groups of explicative variables for the differences between the creation of companies in the different regions.

By using the creation of firms for 100 existent ones, only three groups of variables turned out to be explicative of these differences: the qualification of the regional work force (graduates' percentage), the degree of wealth of the region (GNP per capita) and the former existent business structure.

It is not really possible to compare the two, since one study used the creation of enterprises divided by the total population and the other used the creation of enterprises divided by the active population.

Contradicting a little the results of these two studies, Couto, Tiago and Natário (2004) conclude for the non-existence of significant differences between the different regions of the country, a situation that may be due to the diversity of statistical sources which were used.

4. Conclusions

From the analysis it seems legitimate to conclude that the model that uses like dependent variable the number of created enterprises divided by the population of each region presented high levels of explanation of the variance of this variable, in the attempt to explain the differences in the phenomenon of creation of enterprises across Portuguese regions.

The model used in the literature, which uses the creation of enterprises for hundred of existent enterprises, seems to have no adherence to the Portuguese reality.

On the other hand, in the case of the close of enterprises, both models present good levels of adherence.

Of the analysis of the regressions it seems legitimate to conclude that in Portugal in the decade of ninety it is possible to explain the creation of enterprises essentially from what usually is designated as pull factors or supply side factors.

Curious conclusion is to see that the variance in the creation and in the close of enterprises does not seem to be connected with the GNP.

Another conclusion that these results support is the confirmation that the large degree of opening of the Portuguese economy has an enormous influence in the economical activity.

From everything that described it is necessary to conclude that the phenomenon of entrepreneurship in Portugal registers levels very low, probably in great part due to the historical evolution of the economy and of the Portuguese society and also due to the low levels of innovation and of access to knowledge creation.

It is concluded also that the creation of new enterprises is particularly concentrated in the regions of the Great Lisbon and of Great Oporto, whereas in other regions of the Country (especially in the interior and islands) a great lack of entrepreneurial dynamic is registered.

This is a worrying conclusion, due to the importance that entrepreneurship assumes in the economies of the century XXI, as we explain in this work, since the importance of entrepreneurship in the development and in the well-being of our society is unmistakable and the necessity of maintaining and increasing the rhythm of creation of new enterprises is the essential motor for economic growth in a supported development.

In this sense, the formation, the support, the promotion and the incitement of the initiative and of an enterprising culture and of the creation of enterprises will have to be one of the strategic priority objectives for any central or local government or of any institution (business associations, universities, etc.) interested in the economical and social development of his region and of his country, particularly for the most discriminated regions.

In this development the figure of the entrepreneur surfaces like basic element of this progress and like principal artist of this new art of creation of enterprises, as well as the necessity of support to the local entrepreneurs.

To promote and to support entrepreneurship of the century XXI is to develop politics of formation orientated for the heart of the process of entrepreneurship and for the factors that characterize the entrepreneur of this century:

- The capacity to detect market opportunities and to produce ideas of new business, that has very much to do with his capacity of innovation and of observation of the social and technological changes, centred in the endogenous and exogenous potentialities of each region;
- The capacity to explore the business opportunities, for what it needs to disposing of the necessary resources, so much human as financiers;
- In most of the cases, the entrepreneur does not dispose of these resources, because his third characteristic will be his skill to mobilize these extern resources, property of others, and put them to the service of the business in creation.
- For last, the necessity that the entrepreneur has of resorting to external resources makes him behave in some ways. The entrepreneur will have to be a master in inspiring confidence, in negotiating and in politics. The entrepreneur will have verticality and sufficient confidence in his project to attract collaborators, suppliers and the necessary capitalists.

These conclusions reflect the conviction that "*Lighting the flame of entrepreneurial spirit empowers nations and peoples with the knowledge and ability to fish, rather than just giving them a fish*" (Timmons, 1994)

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