SESSÃO 10-A

DESAFIOS EMERGENTES DO DESENVOLVIMENTO REGIONAL

PRODUCTIVE CHANGE IN SPANISH BORDER REGIONS: 1977-2006

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ABSTRACT

The border between Spain and Portugal covers the territory of four Spanish autonomous communities, Andalusia, Extremadura, Castilla-Leon and Galicia. These four regions have been traditionally characterised by their relative economic backwardness compared to the national whole. The aim of this paper is to analyse the productivity of these four regional economies between 1977 and 2006, by taking the evolution of the Spanish economy as a reference. The most important methodological aspects of this work focus on the calculation of the aggregate production function of the Spanish economy by estimating a panel data model and on the calculation of productivity change through data envelopment analysis (DEA) and Malmquist indices. The variables used are Gross Value Added at current prices (GVA), number of employees, stock of production capital, and per capita value of human capital. The descriptive analysis of these four variables does not project a particularly optimistic outlook for the regional economies and their evolution over time. Despite the fact that the border regions showed a production change superior to the national average during the period 1977-2006, they did not achieve convergence with the most economically advanced regions at the national level. Therefore, we can conclude that the border regions follow a differentiated pattern of development, although it is not quite the same for the four regions.

Keywords: Total Factor Productivity, Regional Growth, Border Regions.

1 INTRODUCTION

The border between Spain and Portugal covers the territory of four Spanish autonomous communities, Andalusia, Extremadura, Castilla-Leon and Galicia. These four regions have been traditionally characterised by their relative economic backwardness compared to the national whole. In this paper we will analyse the production change of the four Spanish border regions over the past thirty years.

Economic growth in an economy depends not only on the quantities of physical capital and labour inputs employed, but also on how efficiently they are combined. Solow (1956) laid the theoretical basis for reaching this important conclusion, noting that the accumulation of labour and capital (classic inputs) only explains a portion of a country's economic growth. The remaining part (called "Solow residual") has to be associated with the technical or technological progress. Starting from the Solow analysis framework, endogenous growth models (Romer 1990, Grossman and Helpman, 1991) focus on trying to understand the determinants of this residual, emphasizing the importance of human capital as a driver of technological change.

These theories, currently prevalent in macroeconomic analysis, regard the major effects of technical progress as two, which also relate to other factors, creating a kind of virtuous circle. On the one hand, technical progress improves the efficiency of a country, because of expansion of its aggregate production function, thus producing more output per unit of labour and capital. On the other hand, technical progress reinforces incentives to invest in traditional labour and capital factors or improve their quality (from education to the modernisation of capital), which, in turn, is reflected in increased technical progress (Mankiw et al., 1992).

In quantitative terms, this phenomenon should be manifested mainly in increases in factor productivity over time (Barro and Sala-i-Martin, 1995). In a context of global markets, where the possibilities of exchange and profits increase, productivity appears to be the main determinant of the competitiveness of a country in the medium and long term and, therefore, a major factor of international positioning. This explains the privileged position that productivity occupies in the major political agenda. In particular, the European Commission in 2000 formulated the Lisbon Strategy to achieve these objectives (European Commission, 2004, Aho et al., 2006) and thereby sustain the economic and social model in Europe.

The aim of this paper is to analyse the productivity of the four border regional economies between 1977 and 2006, by taking the evolution of the Spanish economy as a reference. We analyse the compared evolution of the total factor productivity in these regions and Spain. Following the theories of endogenous growth, we include, besides the classic capital and labour factors, a new representative variable for human capital in the productivity calculation.

The next section describes the methodology used to estimate the aggregate production function and the evolution of total factor productivity. The third section offers a descriptive analysis of the main variables used along with the results obtained in calculating the aggregate production function and productivity in Andalusia and Spain. Finally we conclude by pointing out the main distinguishing features in the evolution of Spanish border regions.

2 METHODOLOGY

The most important methodological aspects of this work focus on the calculation of the aggregate production function of the Spanish economy by estimating a panel data model and on the calculation of productive change through data envelopment analysis and Malmquist indices.

2.1 Variables and Sources

The variables used are gross value added at current prices (GVA), number of employees, productive capital, and per capita value of human capital.

The data relating to the GVA and the number of employees has been obtained in the 1955-2007 linked series published by FEDEA (de la Fuente, A., 2009).

Data on productive capital and per capita value of human capital were taken from the freely accessible database of the Valencian Institute of Economic Research (IVIE).

The productive capital stock takes into account the ability of different types of assets to generate capital services. Productive capital stock is therefore a more relevant indicator than wealth capital for studying the processes of income generation and sources of growth.

The Human Capital Series includes national information for the period 1964-2007, as well as provincial and regional information (1977-2007). It also includes various synthetic indicators of human capital (JM Pastor and L. Serrano, 2002). The synthetic indicator that we will use contains numerical series reflecting human capital value in terms of equivalent numbers of workers without human capital.

The approach of this indicator is inspired by the procedure suggested by Mulligan and Sala-i-Martin. The basic idea is that firms pay a wage that compensates each worker's productivity and this latter depends on the human capital. That is, by employing a worker, companies buy the services of human capital, and, when they pay the worker, they are paying for the services provided by his/her human capital.

In general, the human capital of a worker depends on his/her education and experience. The rationale behind this choice is that human capital is acquired not only through formal education, but also through experience, which may be even more important.

The unit of measurement of the series of human capital value was determined by individuals without human capital. We measured the human capital of employees based on the number of equivalent workers without human capital that would be necessary to achieve their productive capacity. Similarly, the aggregate human capital of a region is the number of equivalent workers without human capital that would be needed to achieve the production capacity of its population.

The representative individual without human capital is a male worker with the least education and experience in the survey: i.e. an individual under 20 year old, male, with no or incomplete primary education. This individual has hardly accumulated any human capital through the educational system or through experience in the workplace and is therefore considered equivalent to a zero-skill worker as defined by Mulligan and Sala-i-Martin.

2.2 Time Frame

Given the different time frame of the series utilised, we limited the temporal scope of this study to the period 1977-2006.

2.3 Panel Data Model

The production function commonly employed in economic literature is the Cobb-Douglas function. According to the formulation of Mankiw, Romer and Weil (1992), we included an additional production factor representative of the human capital stock, along with the labour and physical capital. Thus, we estimated a function of this type:

$$Y = A K^{\alpha} L^{\eta} H^{\beta}$$

Where A represents the technical efficiency, K is the stock of physical capital, L is employment, and H symbolises human capital stock.

The function is easily transformed into a linear one by taking logarithms:

$$\ln Y = \ln A + \alpha \ln K + \eta \ln L + \beta \ln H$$

In order to simultaneously include geographical and time effects, we utilised an econometric panel data model in which all regions and periods were combined. Because panel data has both cross-sectional and time series dimensions, the application of regression models is more complex than it would be for simple cross-sectional data sets. The unit of observation in a panel data set is not necessarily individuals. It may be households, enterprises, geographical areas, indeed any set of entities that retains their identities over time. In our work these units are Spanish regions. Hsiao (2003), Baltagi (2001), Gujarati (2003), and Wooldridge (2002) offer comprehensive treatments of these models.

There are several types of panel data analytical models, i.e. constant coefficient models, fixed effects models, and random effects models.

One precondition for using the random effects model is that the observations can be described as being drawn randomly from a given population. This would not be a reasonable assumption if the units of observation in the panel data set were regions and the sample consisted of all Spanish regions.

In our application, after checking several possibilities, we chose the constant coefficients model as the best. This type of panel model has constant coefficients, referring to both intercepts and slopes. Because of there being neither regional nor significant temporal effects, we were able to pool all of the data and run an ordinary least squares regression model, sometimes called the pooled regression model.

Heteroskedasticity and autocorrelation problems were carefully considered in our model. As in other regression models, homoskedasticity appears when all random variables have the same finite variance. In this case, we used the Bartlett test in order to verify the null hypothesis that samples have equal variances, which we then confirmed.

The correlation between values of the process at different points in time indicates that an autocorrelation problem exists. The Durbin-Watson statistic with values lower than two confirms this situation. Thus, it is necessary to apply an autoregressive model (of the first order in this case).

2.4 Data Envelopment Analysis

In 1957 Farrell opened a research line into the efficiency analysis that is based on measuring the distance between the different observations and the efficient production frontier. From Farrell's approach, two ways to measure efficiency have been developed:

1. Defining a specific pre-production function (parametric measures of efficiency).

2. Without an a priori definition of a production function (nonparametric efficiency measures)

We will focus on the second option, i.e. a frontier assessment model, deterministic and non-parametric. These models are known as Data Envelopment Analysis (DEA) and derive from the field of operational research, since they are ultimately mathematical programming problems, usually linear.

Data envelopment analysis (DEA) is a mathematical programming method that generalises the measure of Farrell technical efficiency for one input and one output in the case of multiple inputs and outputs through the construction of an efficiency indicator relative to the ratio between virtual output and input. The original model was developed by Charnes, Cooper and Rhodes in 1978 with constant returns to scale (CRS) and was extended by Banker, Charnes and Cooper (1984) to include variable returns to scale (VRS). Thus the two basic models of DEA are known as CCR and BCC, which combine the initials of their respective creators into acronyms.

The key of the analysis lies in finding the "best" virtual producer for each real producer. If the virtual producer is better than the original one, due to obtaining more output with

the same input or the same output with less input, then the original producer should be considered inefficient.

The procedure of finding the best virtual producer can be formulated as a linear program. Analysing the efficiency of n producers requires solving a set of n linear programming problems.

The model evaluated in this study consists of one output variable (GVA) and three input variables (number of employed persons, value of productive capital, and per capita value of human capital). The number of units evaluated corresponds to the number of regions in Spain, seventeen, and the number of periods evaluated is equal to thirty (1977-2006).

The calculation of the levels of efficiency and the Malmquist indexes has been performed by means of Win4Deap software.

2.5 Malmquist indexes

Using the methodology proposed by Berg, Forsund and Jansen (1992) and subsequently used by Grifell et al. (1993), it is possible to estimate productive change utilising the Malmquist index. This index allows us to break down the productive changes, experienced by the evaluated units, into approaches of these units to the frontier (catching-up) and into shifts of the frontier itself (technical change).

Movements of the frontier or technical change must be understood as technological progress, i.e. changes in the production frontier due to improved available technology. At the same time, the approaches of firms to the efficient frontier or "catching-up" represent the portion of the variation in overall productivity that is not directly attributable to technological progress, and these approaches may be due to the effect of learning, knowledge sharing in the application of technology, organisational improvement, etc. This component ultimately reflects the efficiency with which each unit applies technological knowledge to production.

3 RESULTS

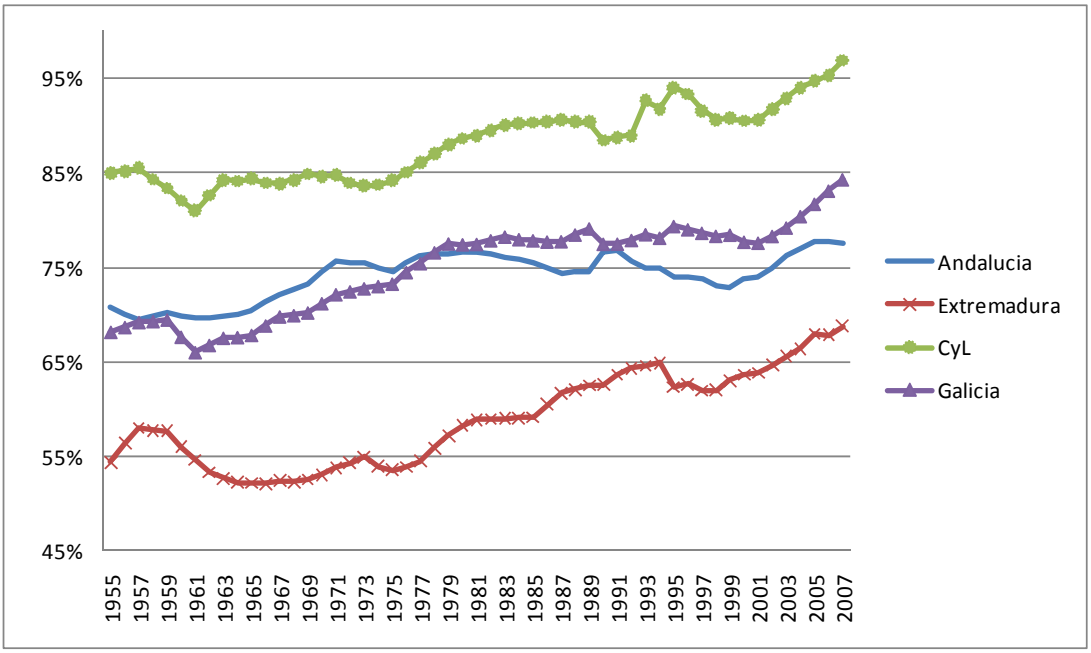
3.1 Descriptive analysis

3.1.1 GVA per capita and its evolution

Starting values, evolution over time and the final values of GVA per capita in the four regions show a clear difference from the national average. The analysis of GVA per capita must take into account the different GVA and population evolution in each territorial aggregate compared. For example, between 1955 and 2007 the Andalusian GVA was multiplied by 374 while that same factor in the national aggregate amounts to 377. From the perspective of population, the cumulative increase in Andalusia is 39.20% while in Spain it is 53.68%. Therefore, the improved evolution of GVA per capita in Andalusia in comparison with the national figure must be attributed to population factors rather than its productive capacity. Thus, in Spain the GVA per capita has increased by 155% and 169% in Andalusia.

Despite the recovery, in terms of GVA per capita, the situation in Andalusia and Extremadura continues to be quite distant from the national average. The Andalusian per capita GVA in 1955 was equivalent to 70.75% of the national per capita GVA, and in 2007, this proportion stood at 77.54%. These figures show a slow process of convergence with the aggregate levels of national welfare (Figure 1). The position of the analysed regions is almost the same as fifty years earlier, only Extremadura gained one position in the ranking. This demonstrates the seemingly permanent character of the relative backwardness of these regions.

Figure 1: Regional Gross Value Added per capita/Spain

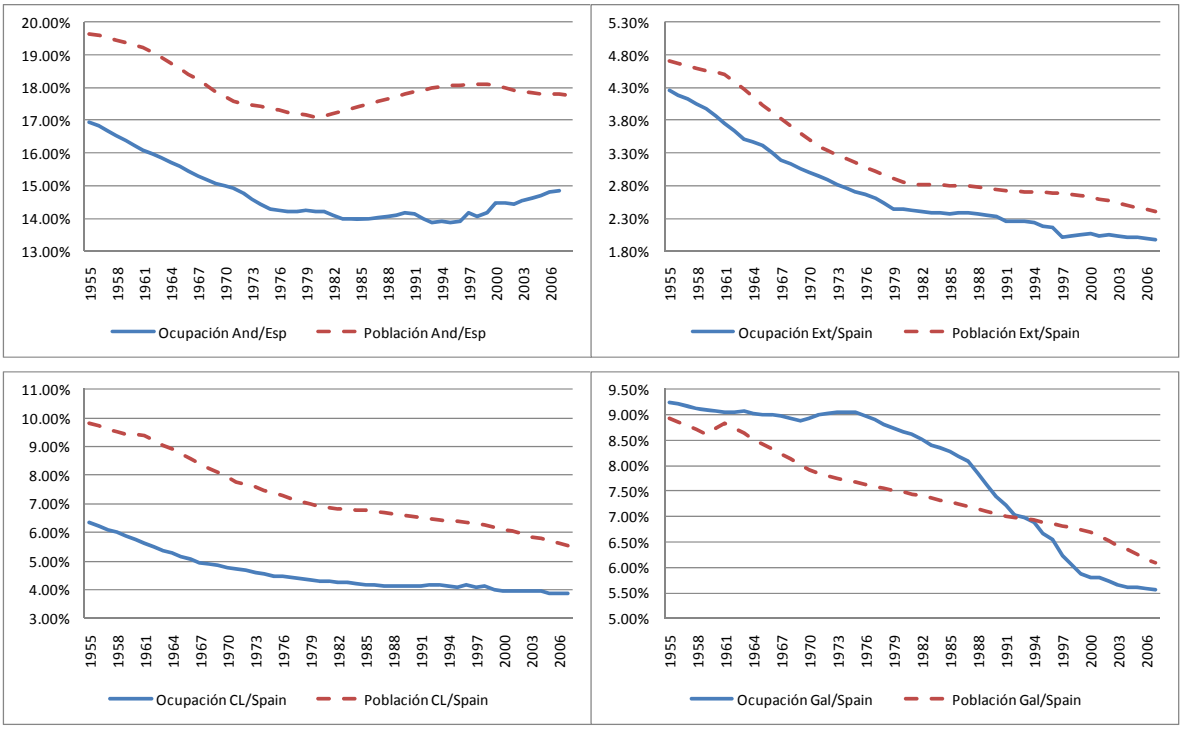


Nevertheless, in 2007 Castilla-León reached a rather advanced position in the group with a GVA per capita close to the national average.

3.1.2 Employed persons

The evolution of employment is one of the structural problems of these regional economies. Unemployment rates in all segments of the population are historically much higher than the national average. Moreover, the labour force participation is lower than in the rest of the country. The low degree of the workforce utilisation, which is such an important productive factor, is one of the reasons for the reduced production capacity of the border regional economies. In 2007 the number of employed persons amounted to 3,203,000 in Andalusia, i.e. 15% of all jobs available in Spain. If we compare the Andalusian share of employment in the whole country with its share of population in the country, we observe a large gap that limits the expansion of aggregate value added (Figure 2).

Figure 2: Share of regional employment in the whole nation



The case of Andalusia is representative of other border regions as well, especially Extremadura and Castilla-León. However, Galicia exhibits a different behaviour. Its share of employment in the country surpasses its relative population weight from the

beginning of the period to 1994. During the last thirteen years it presents the same picture as the rest of the border regions. Only in Castilla-León can we talk about a real convergence with the Spanish average in terms of employment.

In more than fifty years, the gap between the series represented in Figure 2 has not decreased in Andalusia and Extremadura. In fact this gap grew during the 1980s and 1990s. The temporal extent of the phenomenon reveals the structural nature of the low generation of employment for these two regions. The border regions that currently have the smallest gap between employment and population share are Galicia and Extremadura.

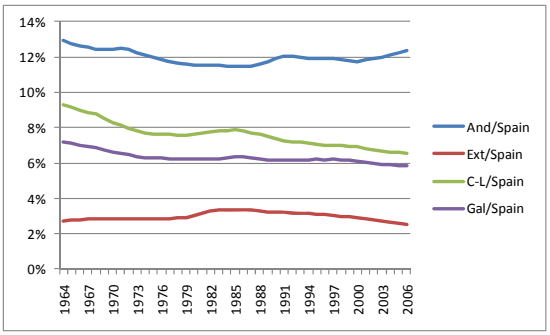
3.1.3 Capital Resource

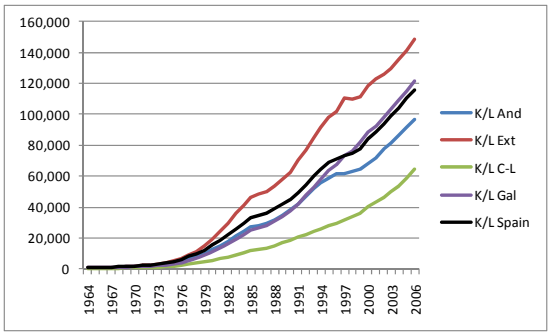
From the neoclassical growth model of Solow to the more recent theoretical developments, capital resource has played a crucial role in economic growth theories. From the standpoint of economic policy, in the short term, physical capital is the most flexible factor for promoting the sustained growth of an economy. Besides the provision of higher capitalisation rates in the economy, physical capital makes it possible to generate a virtuous circle that reinforces the role of human capital as endogenous promoter of technological progress.

Despite the importance of this production factor, we again find significant deficits in all border regions. The share of Andalusian productive capital in the whole nation has stayed at around 12% since the mid-sixties. Castilla-León has experienced an evident reduction of its share, although in 2006 it maintains a share in capital higher than in population.

In 2006 the productive capital used by each employed person in Andalusia amounted to 96,974 Euros. In Spain, the capitalisation ratio was 20% higher, amounting to 115,985 Euros per employee (Figure 3).

Figure 3: Share of regional capital in the whole nation and K/L ratio



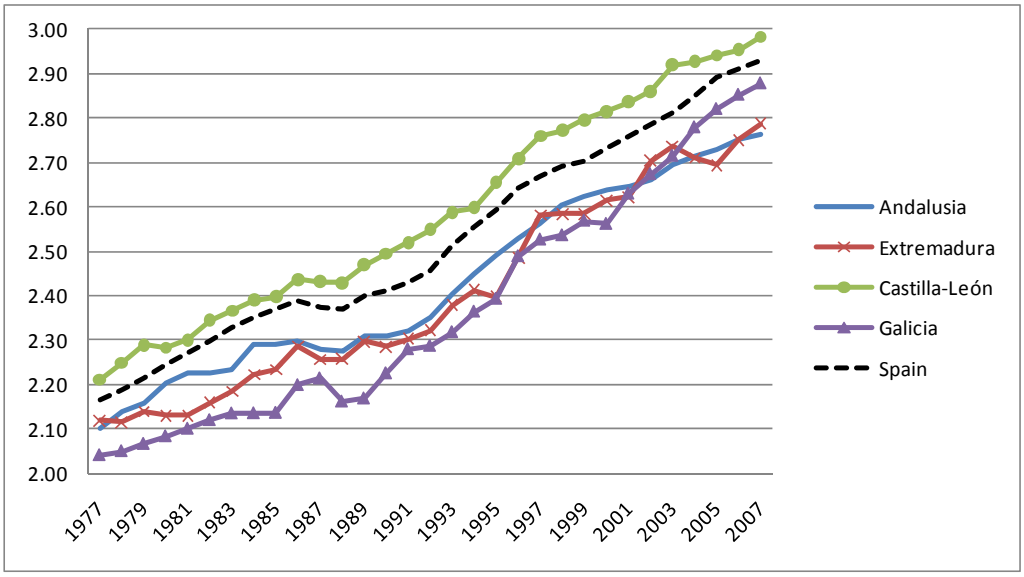


The capitalisation process in Spain and in the border regions began in the middle of seventies and initiated a real take-off in the middle of the eighties once the energy crisis period had ended. At this time Spain became a member of the European Economic Community. Nevertheless, the capitalisation process has not been homogeneous and it is possible to observe relevant differences among border regions. The capital per employee ratio in Extremadura is more than double that of Castilla-León.

3.1.4 Per capita value of human capital

The per capita value of human capital in Andalusia, Extremadura and Galicia does not reach the national average in any year of the time series analysed (Figure 4). Most worrisome is that the gap in Andalusia and Extremadura is becoming greater in recent years. This implies that despite the efforts made to improve human capital, worse results than those achieved by other regions have been obtained.

Figure 4: Per capita value of human capital



In 2007, the per capita value of human capital in Andalusia was 2.76, equivalent to 94% of the national average (2.93). This relative position of Andalusia and Extremadura is the worst in the last thirty years. In this variable, both regions, far from converging with the national set, followed a course resulting in a dangerous separation, which could deprive them of the benefits attributed to human capital in modern economic growth theories. Castilla-León is the only border region that exceeds the per capita value of the human capital national average.

In short, the situation in border regions for the four variables discussed and their evolution over time does not present a very optimistic outlook regarding the achievements of the economic policies implemented. At present, the relative position of these regions in relation to the country as a whole clearly shows an unfavourable scenario for the future growth model. The weak convergence process in terms of GVA can be explained by the persistent reduction of population in all border regions. In spite of this reduction, the capital per employee ratio is below the national average in Andalusia and Castilla-León. For instance, in Andalusia the population equivalent to 18% of the nation generates 14% of GVA and 15% of employment, with a stock of productive capital of 12%, and per capita human capital is 6 percentage points below the national average. All of this results in clear limitations in terms of the welfare of the population, whose level of per capita GVA is 77% of the national average.

3.2 Panel data model

Having analysed various configurations of our panel data model (fixed effects term, fixed effects of sections, etc.), we considered that the panel data model with constant coefficients offers the best fit. Once we had linearised the Cobb-Douglas production function, the model was solved in a logarithmic scale and the results confirmed the theoretical basis for this case study, i.e. all independent variables were statistically significant and their coefficients were positive. The model also provided a good fit, the probability of the F statistic was near zero and the value of R^2 was 0.97.

To examine equality of the residual variances (homoskedasticity) we applied the Bartlett Test. The results of this test caused us to reject the hypothesis of equality of variances, which indicates the existence of heteroskedasticity in the cross sections.

The Durbin-Watson statistic also indicates the existence of autocorrelation. This problem was corrected with an autoregressive scheme (AR 1) (Table 1):

Table 1: AR Scheme

Dependent Variable: LOG(VAB)
Method: Panel EGLS (Cross-section SUR)
Date: 12/30/09 Time: 12:08
Sample (adjusted): 1978 2006
Periods included: 29
Cross-sections included: 17
Total panel (balanced) observations: 493
Iterate coefficients after one-step weighting matrix
White cross-section standard errors & covariance (d.f. corrected)

Convergence achieved after 14 total coef iterations

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	7.861546	0.187102	42.01754	0.0000
LOG(OCUP)	0.75578	0.01365	55.36757	0.0000
LOG(CP)	0.2489	0.014155	17.5845	0.0000
LOG(H)	0.032691	0.017057	1.916568	0.0559
AR(1)	0.925648	0.003528	262.401	0.0000

Weighted Statistics

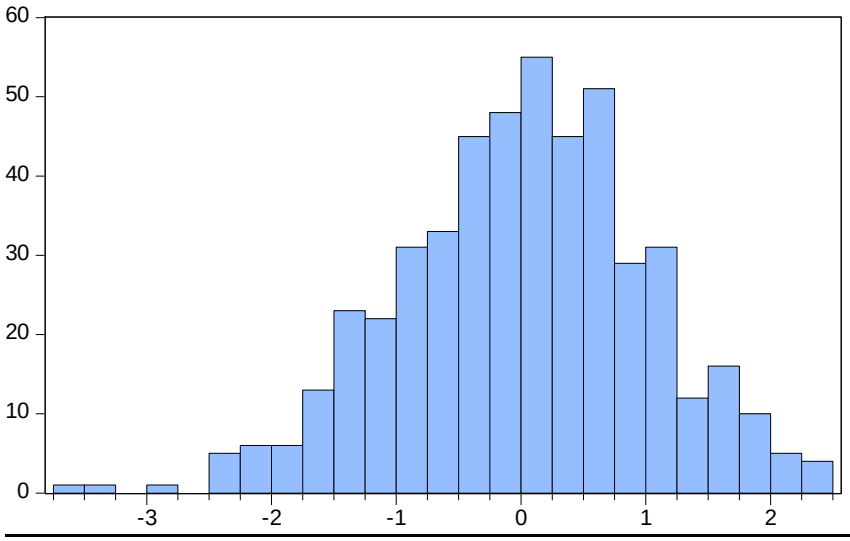
R-squared	0.999981	Mean dependent var	407.2985
Adjusted R-squared	0.999981	S.D. dependent var	657.5334
S.E. of regression	0.994859	Sum squared resid	482.9954
F-statistic	6458210	Durbin-Watson stat	1.6272
Prob (F-statistic)	0		

Unweighted Statistics

R-squared	0.99981	Mean dependent var	16.2799
Sum squared resid	0.124682	Durbin-Watson stat	1.1293
Inverted AR Roots	.93		

After the implementation of the autoregressive scheme, the performance of the coefficients remained true to expectations, that is, all coefficients were positive. The statistical significance of the human capital variable was lower (P value: 0.0559) but retained its positive sign. Moreover, the new DW ratio was nearly 2, together with R^2 being close to 1, indicating that it is a good model. Despite the failure of the normality test, we can see that the Jarque Bera statistic p is around 5% and the curve representing the distribution is quite close to the theoretical normal distribution (Figure 5). Therefore, from an econometric viewpoint, we can consider the configuration of the model with constant coefficients to be an acceptable model.

Figure 5: Normality test



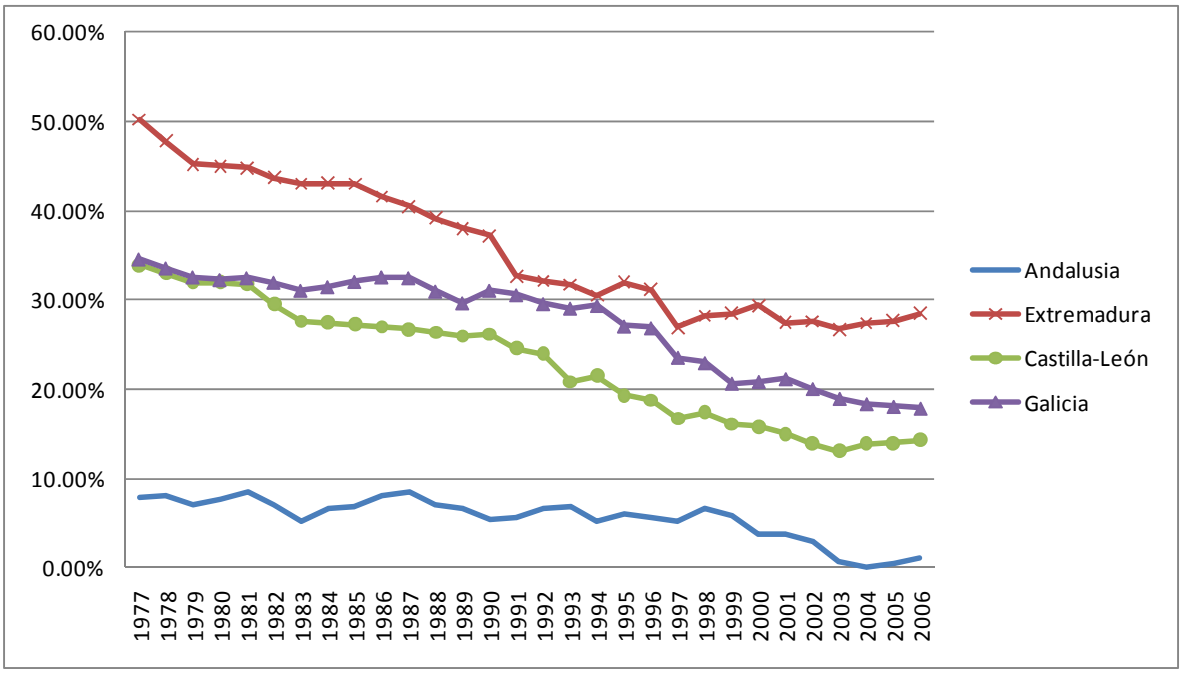
Series: Standardized Residuals	
Sample 1978 2006	
Observations 493	
Mean	0.007312
Median	0.059193
Maximum	2.407370
Minimum	-3.732475
Std. Dev.	0.990780
Skewness	-0.265447
Kurtosis	3.194695
Jarque-Bera	6.568284
Probability	0.037473

3.3 Data Envelopment Analysis

The results of data envelopment analysis performed showed a clear improvement in recent years in the production efficiency for all border regions, and especially demonstrated the excellent position of Andalusia in comparison with other Spanish regions. These results located Andalusia very close to the efficient frontier in 2006. DEA results confirm the underlying idea in previous sections that the degree of utilisation of productive factors in the Andalusian economy is close to the relative optimum. The problem lies in the structural underfunding of inputs (human and productive capital) and the limited capacity of the region to generate employment.

The evolution of technical efficiency of the border regions' productive systems in the last thirty years reflects a positive trend, with a progressive decrease in the degree of inefficiency (Figure 6). Apart from Andalusia, the other three border regions have reduced notably their level of inefficiency, but they still have a great margin for improvement. In some cases such as Extremadura, the technical inefficiency is close to 30%.

Figure 6: Regional Inefficiency

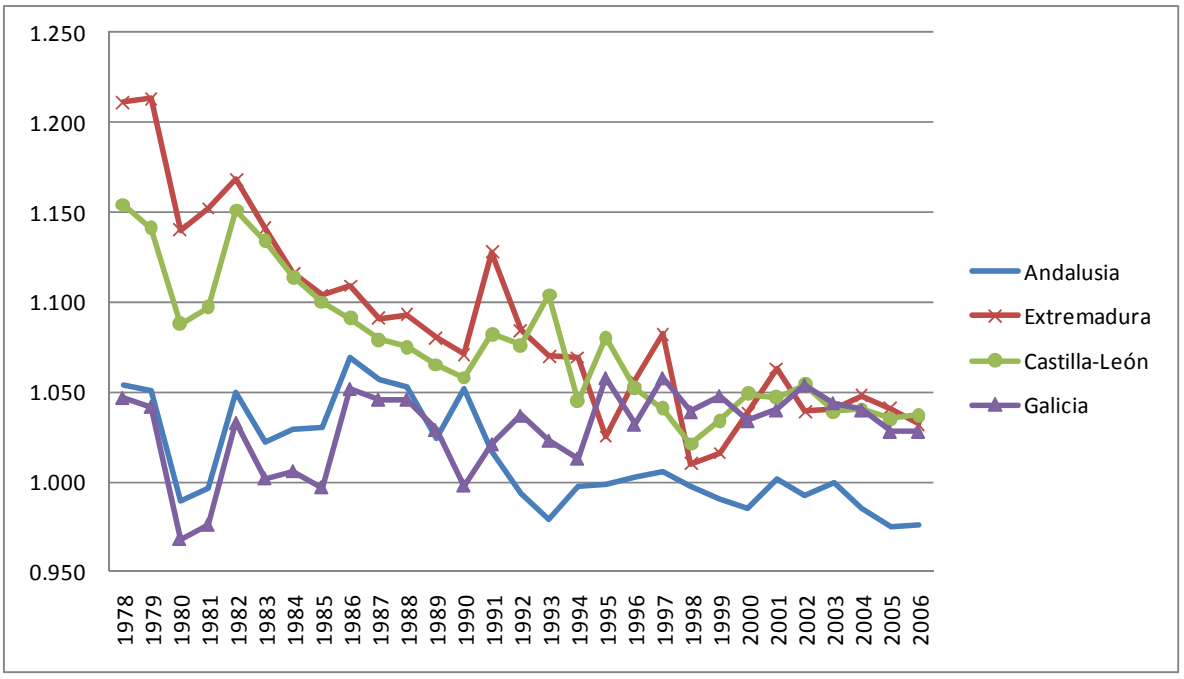


3.4 Total Factor Productivity

The total factor productivity index calculated by means of the Malmquist index allows us to measure productive change over time. The productivity improvement achieved by all Spanish regions each year explains the different position of the efficient frontier in each of the years analysed. Therefore, the DEA tells us what the annual relative position of each region is in terms of efficiency, but prevents us from knowing the evolution of total factor productivity over time. The calculation of Malmquist indexes every year indicates the productivity change in each region with respect to the previous year. Index values greater than 1 indicate a positive change in total factor productivity, while values below 1 reflect a drop in productivity compared to the previous period. In the group of border regions, different trajectories during the period 1977-2006 can be observed. Extremadura and Castilla-León experienced a continuous improvement in their productivity although with decreasing shift rates. Andalusia and Galicia alternated positive and negatives rates. Their productivity increased similarly in the first half of the period but from the beginning of the nineties a clear divergence was maintained up to the present. Total factor productivity of Galicia grew annually at a rate around 5% while the Malmquist index was below 1 in Andalusia in many of the years studied, so productivity fell.

Andalusia shows a sharp drop in production improvements between 1990 and 1992. From 1992 on, Andalusia experienced a relative stagnation in productivity that even fell below 1 in some years of the last decade. For the Spanish economy as a whole, the productive change has shown a downward trend from the late seventies to 2006. However, in no year, has it shown negative rates of change (Malmquist index less than unit). The second half of the eighties was a period of convergence for Andalusia in terms of productivity, with average change rates of 5% annually. However, in the last decade, the gap that separates it from other Spanish regions has reopened (Figure 7).

Figure 7: Total Factor Productivity Change



The change in total factor productivity has its origin in two key factors, firstly the degree of each region to optimise the use of its production factors so as to position itself as close as possible to the efficient frontier for each period (catching-up), and secondly, the capacity of each region to promote the shift of its frontier and production capacity increase (technical change). The combination of these two elements gives us the time evolution of the total productive change.

In the case of Andalusia, the technical efficiency throughout the period studied has been quite regular with moderate fluctuations which did not affect the productivity change.

This component of productivity change has maintained a rather homogeneous behaviour in all Spanish regions between 1964 and 2006.

Technical change, however, in this case, is the determinant of the evolution of regional productive change (Table 2).

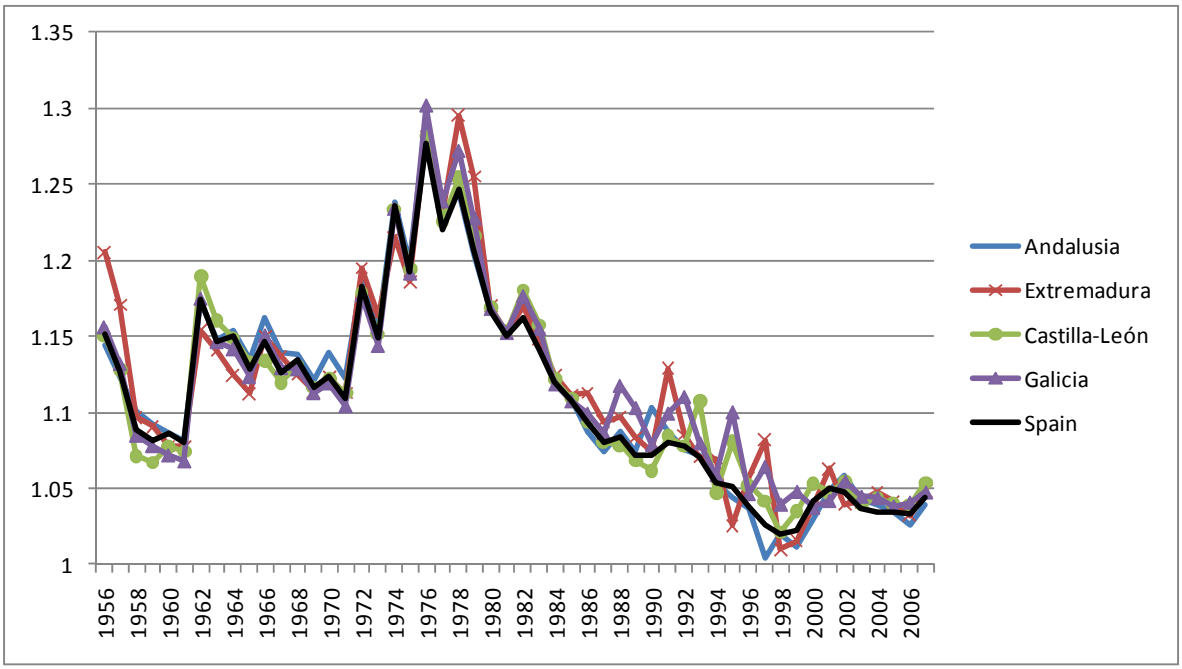
Table 2: Regional Technical Change

	Average Rate of Change				
REGION	Efficiency	Technical Change	Pure Efficiency	Scale Efficiency	Total Factor Productivity
Andalusia	1.002	1.010	1.000	1.002	1.012
Extremadura	1.013	1.073	1.001	1.012	1.086
Castilla-León	1.009	1.065	1.001	1.008	1.075
Galicia	1.008	1.021	0.999	1.009	1.029
Partial Mean	1.008	1.042	1.000	1.008	1.050
Spain	1.003	1.050	1.000	1.003	1.054

During the period analysed, the annual national average rate of technical change was 5%. Still, much of this average was affected by variations in the first half of the time period, whereas in the last fifteen years averages hovered around 2%. Border regions have an average technical change rate one point lower than the national average. Moreover, Andalusia shows one of the worst developments over the past thirty years, with annual average rates of change of 1%.

It is interesting to compare the evolution of total factor productivity calculated using DEA to traditional measures of labour productivity (a partial productivity measure, i.e. the ratio of output to labour input). The evolution of labour productivity, both in Spain and in border regions, shows a profile completely consistent with that observed in the case of total factor productivity (Figure 8).

Figure 8: Change in labour productivity



After 1975, we see a clear downward trend and a final stabilisation in the early twenty-first century. The main difference observed in the labour productivity series in comparison with total factor productivity is the distance between the national and border regions series during the nineties in favour of the latter.

4 CONCLUSIONS

The improvement of living conditions depends largely on the ability of countries to increase productivity in the long term, thus achieving higher levels of economic growth and consequently the nation's welfare as well.

Currently, the relative position of this group of regions in relation to the country as a whole offers unfavourable conditions for future growth. With a population equivalent to 32% of the Spanish total, these regions generate 26% of GVA and 26% of employment. In addition, the stock of productive capital is 27% of the national figure and its per capita human capital is 3 percentage points below the national average. These data reflect a clear limitation in terms of growth and welfare of the population whose level of GVA per persons is 82% of the national average.

The economic evolution of the border regions during the past thirty years allows us to conclude:

• The per capita GVA is the only variable that showed a moderate convergence with the Spanish economy. The reason for this gradual approach is rooted in demographic reasons and not in the productive sphere.

• The positive evolution of GVA, employment, productive capital, and human capital cannot be seen as relative improvements with respect to the national aggregate. In thirty years, the comparative positions remain the same; therefore, gaps in relative terms have not been eliminated.

• The evolution of labour productivity and total factor productivity in border regions followed a downward trend in recent decades in line with what happened in the Spanish economy.

• The technical efficiency trend is the most remarkable aspect of these regional economies. During the period analysed the regions succeeded in reducing levels of technical inefficiency. However, the observed weakness in technical change has resulted in a very limited productive change. The results of data envelopment analysis show a clear improvement in recent years in the technical efficiency of all regions except Extremadura. In 2006 Andalusia was located very close to the efficient frontier but Galicia, Castilla-León, and Extremadura occupied the last three places in the national ranking. Although during the period 1977-2006 the group of border regions had a productive change superior to the national average, they did not achieve economic convergence with the most advanced regions at the national level. Andalusian economy can be seen as an exception within the group of border regions, since its technical efficiency is close to the maximum level. Nevertheless, the trend of total factor productivity in this region is the only one that reflects negative rates in the last fifteen years.

Therefore, we can conclude that the group of border regions maintain different patterns of development that are not homogeneous. Although all regions have had unsolved structural problems for the last thirty years, in Andalusia the main problems seem to be the structural deficit of inputs (human and productive capital) and the limited capacity of the region to generate employment. In the other three regions the difficulty lies in the

low degree of utilisation of productive factors in comparison with other Spanish regions.

The results of the panel data model confirmed the explanatory power of the independent variables (employment, productive capital, and human capital) re the dependent one (GVA). The panel data model also reveals a low contribution of human capital to generate value added and the predominant role of employment as an economic driver of GVA. Furthermore, in the case of Andalusia, the relative deficit of productive and human capital puts the region in a disadvantaged position in terms of achieving productive change rates similar to those of the more advanced regions.

We cannot talk about a poverty trap in border regions, due to the fact that the growth experienced by the population is less than that of the Spanish economy as a whole. We are not facing a case of stagnant economies either. These regional economies are growing, roughly at the same pace as the Spanish economy. The problem is that they cannot reduce their relative disadvantage.

From the standpoint of economic policy there have obviously been great investment efforts made over recent decades with the advent of structural funds from the European Union. These efforts have been reflected both in the improvement of productive capital and in human capital as well. Nevertheless, the degree of capitalisation both productive capital and human capital still remains far below the national average in most border regions.

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EVOLUTION AND ECONOMIC IMPACT OF TARIFF DISMANTLING BY MOROCCO ON CEUTA: A PROPOSED METHODOLOGY OF ANALYSIS

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INTRODUCTION

For some time ago there has been talk of an economic crisis in Ceuta, stagnation of trade, high unemployment, school failure, and an exhausted economic model. However, the governments and social agents involved have so far not found an adequate approach for these problems.

We can observe strategic moves being undertaken in Morocco to equip its northern area with adequate infrastructure and protection, so as to compete in the area of influence of the Strait of Gibraltar where Ceuta inhabitants live. Moreover, in 2010 a significant tariff dismantling will take place, similar to the one that occurred in Spain years ago, which will liberalise Moroccan trade and most certainly lead to lower prices of certain products currently purchased in Ceuta.

Furthermore, the idea that abandoning the special tax status in Ceuta would be good for integrating the Customs Union between the countries is gaining more and more strength. The reasons are many, but perhaps the one most often repeated is that this policy would help Ceuta to be recognised internationally.

One objective is to analyse the economic impact of the Moroccan tariff dismantling anticipated in 2010 on the economy of Ceuta. We believe this is essential for deciding other aspects, such as whether or not to integrate Ceuta into the Customs Union.

Towards this end, we have designed a quantitative method of estimation, based on classical models of general equilibrium and research studies analysing similar problems in other parts of world. The theoretical framework and initial results, plus a brief description of the economic context in which the work takes place, will be presented below.

CEUTA ECONOMY

Description and evolution of the economic model.

Basic data on the position and location of Ceuta, found in the statistical yearbook of the City of Ceuta, are as follows:

- Official Population (to 01/01/2003) .....……74,931
  - Men……..38,395
  - Women…….36,536
- Surface……18.5 Km^2
- Perimeter……....28 km.
- Maritime Boundaries ……20 km.
- Land Boundaries……8 km.
- Altitude……45 m.
- Location:
  - Latitude North……..35º 55´ - 35º 32´.
  - Longitude……5º 17´W – 5º 23´W.

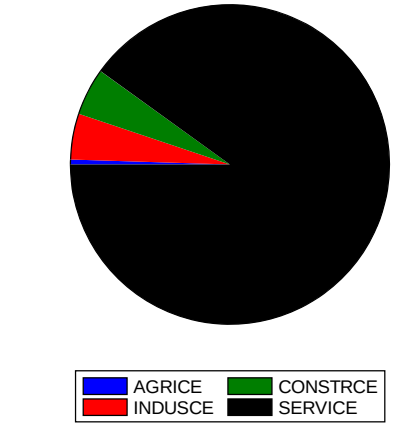
Legislators have always tried to provide the financial resources necessary for the economic growth of Ceuta and Melilla, taking into account the special geographical and historical characteristics of these cities.

As will be seen later, this special compensation is proving to be the key for maintaining local economic developments within acceptable indicators.

The main figures resulting from the evolution of the economic model for Ceuta from 1955, as published in the statistical yearbook (called “PROCESA” in Spanish), were the following:

obs	POPULATION CE	EMPLOYMENTCE	VAB CE	TOTAL PRODUCTION
1955		12848	3.1	5
1956		12848	3.1	5
1957		13090	4	6.5
1958		13090	4	6.5
1959		13303	4.8	7.6
1960	73182	13303	4.8	7.6
1961		13569	5.9	9.4
1962		13569	5.9	9.4
1963		13862	7.8	12.4
1964		13862	7.8	12.4
1965		13982	10.3	16.2
1966		13982	10.3	16.2
1967		14300	13.6	21.1
1968		14300	13.6	21.1
1969		14497	17.1	26.2
1970	67187	14497	17.1	26.2
1971		14841	21.9	32.9
1972		14841	21.9	32.9
1973		15280	31.2	47.1
1974		15280	31.2	47.1
1975		15640	46.3	70.1
1976		15640	46.3	70.1
1977		15800	69.8	105.5
1978		15800	69.8	105.5
1979		15957	103.8	158
1980		15957	103.8	158
1981	70864	16486	139.4	210
1982		16486	139.4	210
1983		17469	189.5	282.1
1984		17469	189.5	282.1
1985		17680	232.1	342.9
1986	65151	17680	265.3	391.6
1987	65141	18428	297.3	436.5
1988	67188	18428	333.8	490.2
1989	68014	18729	366.1	538.3
1990	68970	18729	413.3	600.9
1991	67615	20213	475.1	681.8
1992	68343	20213	523.5	751.7
1993	70777	20553	553.5	795.7
1994	71926	20553	580.6	838.3
1995	73142	20819	644.1	1063.7
1996	68796	21322	683	1121.4
1997	68796	21788	748.6	1221
1998	72117	22417	812	1304.7
1999	73704	23262	877.7	1405
2000	75241	23736	983.3	1559.1
2001	75694	24126	1037.8	1632.4
2002	76152	24446	1125.7	1681
2003	74931	25268	1189.9	1716.3
2004	74654	26516	1396.8	1927.7
2005	75276	27170	1495.9	2107.6
Source: BBVA and FUNCAS (from 1995)				

If we graph the four sectors for the past year, we have the following:



Where the service sector accounts for 90.1% of the total, followed by Construction 4.8%, industry 4.6% and agriculture 0.5%.

Some comparisons with the economic evolution of Spain from 2000 to 2005.

Between 2000 and 2005 the **resident population** in Spain increased at a cumulative average annual growth rate of 1.81% to 44,630,491 inhabitants. In Ceuta, the growth was almost zero, about 0.10%.

The growth of the potential workforce in Ceuta was much less than the general rate. In Spain it rose 1.85%, while in Ceuta only 0.07%.

The **working age population** of Ceuta grew at a rate of 1.48%, which was lower than the national average (2.70%). Similarly the **employed population** increased in Ceuta at around 2% (Spain, 3.14%), reducing the unemployment by 1.26% (Spain, 0.86%). However, the **unemployment rate** of Ceuta in 2005 (15.2%) was well above the national average (9.8%) and the relative distance between the percentages increased in those years. In 2000, the rate for Ceuta stood at 17.4%, 47% higher than the national rate 11.8%. In 2005 the differential was above 55%.

Gross domestic product at basic prices in 2000 grew by 3.57% in Ceuta, 2.61% higher than the national average. The gross regional product showed a similar behaviour. The growth rate in the period, the highest of all of the Autonomous Communities, enabled Ceuta to converge in its per capita GDP from 90% of the national average in 2000 to 98% in 2005.

In Ceuta the purchase of goods from abroad has increased significantly (9.10%), while sales of goods abroad has risen (5.66%), at a rate slightly below the national average. Trade relations developed negatively abroad and with the rest of Spain. Not only did sales (exports) increase below the national average, but purchases (imports) also grew by only 37%. However, this must be put in relation to cross border trade with Morocco, which has no commercial customs from Ceuta.

With regard to real convergence with the European Union versus the rate of convergence of income per capita adjusted for purchasing power, three components are involved: GDP at market prices, prices according to purchasing power, and population. Increases in Andalusian population due to immigration were situated at the bottom of the European convergence index.

The value reached by Ceuta in this index is very similar to the national aggregate, around 95.30. However, in the 5 years we studied, the rate of change in this index in Ceuta (2.59%) was much higher than that experienced in the whole of Spain (0.68%).

In summary, the weakness of the current production structure is reflected in the increasing deterioration in Ceuta's external trade. Trade relations have developed in a doubly negative manner abroad and in the rest of Spain. Sales (exports) increased below the national average, but purchases (imports) have grown by 37%. Nevertheless, this result should be treated with caution, since exports to Morocco are not registered officially. Due to there being no commercial border between Ceuta and Morocco, the continuous passage of goods across the border is only reflected as domestic consumption of Ceuta.

However, in the last five years per capita income in Ceuta has experienced a very positive development, showing high rates of real convergence with the national aggregate much as with the European Union. The growth rate in the period, the highest of all the Communities, has enabled Ceuta to converge in GDP per capita rising from a value equivalent to 90% of the national average in 2000 to 98% in 2005. Regarding the European Union, the rate of convergence of per capita income adjusted for purchasing power has reached 95.30%, an value identical to the national average, while the growth rate in Ceuta for 2000-2005 was remarkable.

The EU regional policy in Ceuta: Present and Future

The actions implemented in the city as part of the endowment policy and modernisation of infrastructure and employment promotion received much EU support as an important source of revenue. Obviously, such measures have contributed to the convergence of Ceuta in a national and community level.

During the earlier stage of community political programming, the city of Ceuta participated in the structural aid as region objective number one, a condition now replaced by the convergence objective. This has presently been phased-out because of the well-known statistical effect, i.e. the situation of the regions whose GDP per capita exceeds 75% of average EU-25 but less than 75 % of the EU15 average. However this has not prevented Ceuta from obtaining a good position in the Structural Funds allocation for 2007-2013.

In 2007 the European Commission approved the Operational Program of Ceuta for the convergence purpose of European Regional Development Fund (ERDF) for the same period. The total budget amounts to some 65.4 million Euros and includes EU investment from the ERDF, which amounts to 45.3 million Euros. This means that about 0.24% was provided to Spain for the entire period.

Some of the objectives of this financial effort were to achieve the integration of isolated areas and the suburbs, the port expansion and promotion of IT services both in government and in businesses. Key impacts include a rise in the employment rate from 48.79% to 56.46%, the decrease in the rate of water loss during distribution from 5.4% to 4.05% and the creation of an area of 170,000 square meters of urban development and modernisation of the port area.

The ultimate goal, in line with the Lisbon strategy, is to strengthen regional competitiveness, and create and secure permanent jobs through economic growth.

To achieve these general and specific objectives, priority action 6 was implemented. The specification and budget are reflected in the following table:

Table 1. P.O. Ceuta. ERDF. Breakdown of finances by priority axis (Euros)

Priority	Participation EC	National Public Contribution	Total Public Contribution

Development and Innovation	8,014,580	3,434,823	11,449,403
Environment, natural environment, water resources and risk prevention	8,136,756	3,487,182	11,623,940
Transport and Energy	11,048,200	5,904,433	16, 952, 633
Local and Urban Sustainable Development	15,669,358	6,715,444	22,384,802
Social infrastructure	2,210,311	552,578	2,762,889
Technical and institutional capacity building	193,403	48,354	241,757
Total	**45,272,608**	**20,142,814**	**65,415,424**

The Operational Program for the European Social Fund (ESF) for 2007-2013 is designed to achieve, as the main purpose, increases of quality, stability and employment levels. Some strategic objectives are to create job opportunities, actively combat social exclusion, comment on labour market access and business opportunities for unemployed women and promote stable and quality employment.

Table 2 shows the distribution of ESF assistance in Ceuta by priority. Total expenditure includes that provided by the multi-regional programs in the region, accounting for 43% of the ESF for allocation of aid to the territory.

Table 2. P.O. Ceuta. ESF. Financial allocation priorities (Euros)

Axes	**ESF Help**
1. Encouraging entrepreneurship and improving the adaptability of workers, enterprises and entrepreneurs	5,308,798
2. Promoting employability, social inclusion and equality between men and women	11,888,057
3. Increasing and improving human capital	420,890
4. Promoting transnational and interregional cooperation	31,991
5. Technical Assistance	317,871
TOTAL ESF CEUTA	**17,967,607**

The 2007-2013 financial perspective for the city also covered an allocation of 25 million Euros from the Cohesion Fund, which meant that Ceuta lost just under 30% of its funds from the previous period. This is no longer viewed as a detriment, according to the box configuration which constitutes the current regional map of the Structural Funds intervention. So the resulting allocation has not been as unfavourable to local interests as was predicted in its time.

However, the context cannot be considered successful in the future regarding Community structural action in Ceuta. From 2013, greater funding cuts are expected than those of today, thus exhausting temporary financial situation. This would cause Ceuta to remain outside the Convergence objective, and consequently have to give up the Fund. This scenario will be the case if adequate rates of growth and convergence

with the EU are maintained, thus enabling the region to be treated differently in the context of regional policy and cohesion.

However, this diagnosis is valid while the socioeconomic context of Ceuta continues in reality following the tendency already described– a reality based on major export trade with Morocco, which takes advantage of geographical proximity and, as has been said, can not officially register the absence of cross-border trade customs, as occurs in an environment of underground economy.

But the situation may take a significant turn due to the dismantling of Moroccan tariffs under the terms already described, so that the configuration of the policy of EU structural support in Ceuta would have to evolve in line with new developments. In this sense, if commercial advantage disappears and the socioeconomic scene has suffered the effects of such loss, we must inevitably bring back other solutions by means of regional politics that would help to work against the situation.

Until now, planning for structural support system has been very cautious because of the possibility of this hypothetic situation. Indeed, the OP ERDF only refers to this issue in the diagnosis SWOT, where it considers the threat of "the disappearance of the comparative advantages of local commerce to the expected EU agreements with Morocco and the consequent tariff dismantling".

At the time of publication of this program, agreements between EU and Morocco were not "foreseeable", as claimed, but were considered to be a clear reality. In our view, until now, EU and national governments have not addressed the fact in detail of what would be desirable. On the contrary, the situation was studied timidly without considering in depth the consequences it could bring to Ceuta. However, the concern is greatest in the case of local administration, and evidence of this is the great uncertainty that has resulted in social and political aspects of the city.

To consider properly the future of EU regional policy in Ceuta, it is necessary to look at the true impact the process of tariff liberalisation between Morocco and the EU will have on the local economy. And this must be seen as an essential step towards more realistic planning of regional policy. Otherwise, any attempt to plan future goals, strategies, priorities for action and financial plans will be meaningless work, because the

role of the structural support system will also be empty of content and not based on reality.

The fate of the EU regional policy in this autonomous city has a major challenge to confront for the effectiveness of measures implemented under its authority.

PROPOSED METHODOLOGY OF ESTIMATING THE ECONOMIC IMPACT OF TARIFF DISMANTLING

Theoretical basis

Studies on international trade have a long tradition in economics since Adam Smith and David Ricardo. In 1950 the work of Maurice Bye, Herbert Giersch and Jacob Viner developed the issue of customs unions. Viner's work, The Customs Unions Issue (1950), provided the theoretical point of departure for subsequent research.

Analysis of the economic impact must be based on appropriate economic models. Once these models have been found, we must define the variables that might influence them. Then there will be an econometric specification for the model.

In order to examine to what extent the reduction of tariff barriers can affect different business sectors, models of partial or general equilibrium will be useful. What is at issue is to model the behaviour of imports, according to the classical approach, which assumes that a country imports in keeping with the needs of products, or also to increase its economic activity and level of development.

To estimate the effect of reducing tariffs on trade volume, a simple equation which relates the imports (dependent variable) can be used, with the relative prices of imported goods between countries and with the GDP of the importing country, or some other indicator of domestic economic activity

This can be specified in a simple linear equation like:

$$Log(M_{ijk}) = \beta_{1ij} + \beta_{2ij} Log(PR_{jk}) + \beta_{3ij} Log(PIB_j) + \cdots + \varepsilon_{ij}$$

Where i refers to products imported to countries jk

M=Imports

PR=relative prices (tariffs and other import taxes)

GDP = gross domestic product in the importing country

The linear econometric equation, in a logarithmic scale, allows us to calculate the price elasticity of import demand, disaggregated by industrial sectors. This would allow us to make as many estimates as sectors. Or a panel data model could be built, since the available time series is not very wide, in which the types of products would be the cross sections. Thus the estimate would be conducted to obtain more consistent results. In our case, which depends on the reaction of Morocco to the tariff dismantling, another variable with the GDP of that country can also be included.

Once the demand elasticity of import price is known, one can predict what will happen to a decrease in this figure. With the results, the impact of these amounts (positive or negative) on various aspects of the economy (government spending, trade, employment ....) could be calculated. To achieve this, different simulation strategies would be employed depending on the case.

However, the problem one would face in this analysis is that Ceuta is not a country. The consulted models study the impact of tariff dismantling between countries. They look at the impacts on the domestic production sector of each product. In Ceuta, the majority sector is trade. There is no domestic production sector. In these circumstances, how could one build an analysis model adapted to the case?

Model specification for Ceuta

In this way, the fact that part of the imports from the EU become exports to Morocco has been taken into account. Therefore, the reduction of tariffs on these products in Morocco would entail a reduction of prices, which could influence a rise in exports from the European Union to that country. This could lead to a decrease in exports from Ceuta. But it could also lead to an increase in domestic GDP in Morocco and therefore an increased consumption of these products or an increased domestic production of the same, thereby offsetting the negative impact on the economy of Ceuta and continued purchasing through both channels.

Therefore, the first variable to use is the total imports to Ceuta from the European Union or less developed countries other than Morocco. From this figure we could estimate the quantity exported to Morocco.

Utilising the import figures supplied by customs and tax in Ceuta and comparing them with the average figures of Spanish national consumption of these products, we deduce, in a first approximation, the quantity of products dedicated to irregular trade with Morocco.

We also examined the series of tariffs on selected products from the neighbouring country. After a comparison of these tariffs, for products and years, with the local tax of Ceuta (IPSI) a variable that we called PR was obtained, which represents the relative prices between Morocco and Ceuta.

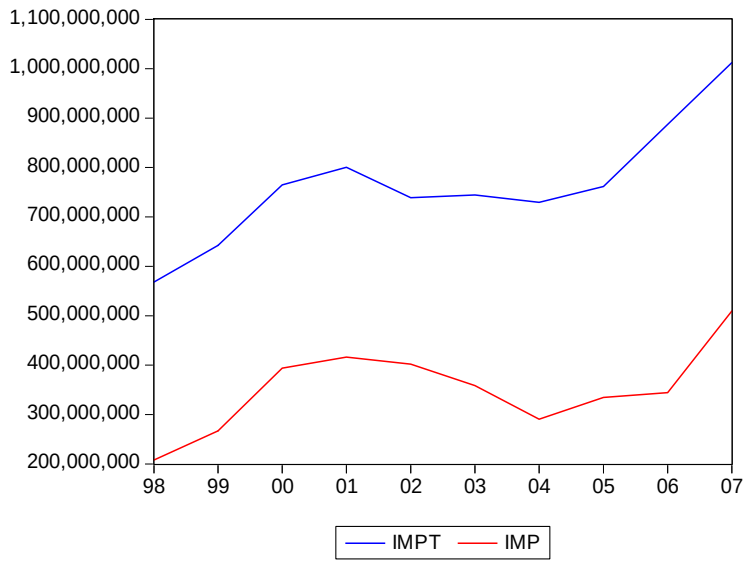
Finally, we have included variables representing the value added of Ceuta and Morocco's Gross Domestic Product.

With all these variables a panel data was formed with various estimates which have been shown in the following paragraph.

Descriptive analysis of data

Preliminary results for Ceuta global imports (IMPT) were as follows, and, in comparison, the estimated net exports to Morocco (IMP):

YEAR	*IMPT (en €)*	*IMP (en €)*	*%IMP/IMPT*
1998	***568,459,256.92***	**207,634,749.43**	**36.52**
1999	***642,078,003.01***	**266,611,070.75**	**41.52**
2000	***764,953,139.15***	**393,486,795.43**	**51.44**
2001	***800,547,221.73***	**416,103,192.83**	**51.97**
2002	***738,637,864.41***	**401,920,075.40**	**54.41**
2003	***744,672,669.73***	**358,401,273.52**	**48.13**
2004	***729,358,381.12***	**290,786,782.72**	**39.87**
2005	***761,647,502.64***	**334,611,175.99**	**43.93**
2006	**887,330,645.21**	**344,222,572.56**	**38.79**
2007	***1,012,426,467.07***	**509,475,030.18**	**50.32**

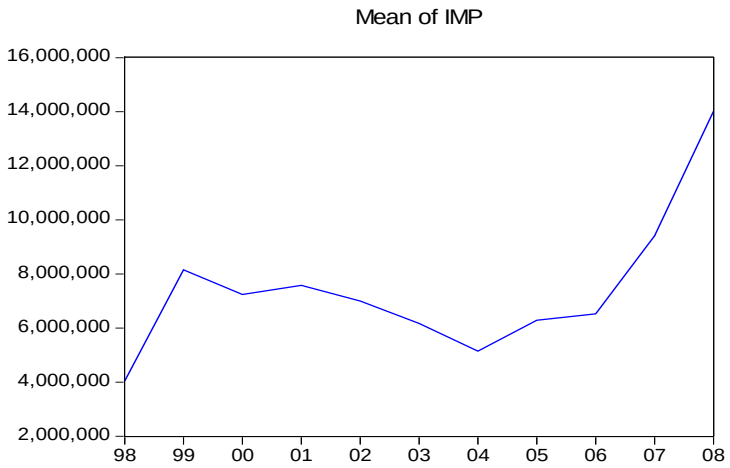


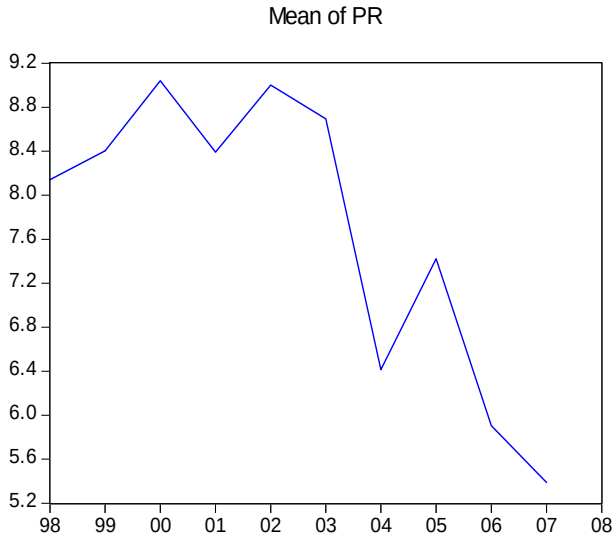
The annual graph of both series indicates that evolution is similar over time, which would be an indication that the estimate by differences is basically adjusted to reality, and that demand for products from Morocco is matched by imports made Ceuta, increasing or decreasing because of the demand.

If we analyse the structure of these imports, for example, in 2006, we see 887,330,645.21 € of import, representing a 68% relative to GDP at current prices, while national imports account for 26% of GDP in the same terms. These figures show the importance of imports for the economy Ceuta.

Regarding the differences, the calculations provide an amount of potential exports to Morocco equivalent to 405,285,933.04 €, which means 45.6% of the total. Rises in consumption below the national average are at -61,063,360.48 €, which represents approximately 6.9% of the total and those items of products purchased in both Morocco and the European Union, but not recorded as imports. Meanwhile, in 2007 percentages remain very similar.

Here we show the two graphs, the national average annual evolution, representative exports to Morocco from Ceuta (IMP) and the relative price (RP), in order to see if the evolution is similar.





As can be seen, evolution in relative prices of goods between Morocco and Ceuta, when comparing Morocco's tariffs with local taxes in Ceuta, has had a clearly downward tendency since 2003. However, since then, the graph of exports from Ceuta to Morocco shows a rising trend, i.e., tariff dismantling is not an apparent influence in the commercial activity from Ceuta, perhaps because the structure of commercial distribution of Morocco has not yet been adapted to the new situation, or because the products most in demand are coming from countries outside the European Union. This analysis will be done at a later stage.

Econometric estimates

As mentioned earlier, a panel data has been constructed with 56 groups of consumer products, amounts resulting from the comparison made between the national average consumption of these products and their imported equivalents, during a time series from 1998 to 2007. These amounts are linked to relative prices (tariffs / IPSI), Ceuta´s PV and Morocco's GDP. Subsequently, the VA on those imports from Ceuta and Morocco's GDP was related.

Two methods are used for calculation: one simultaneously estimating the two equations; another, identifying each equation and estimating by two stage least squares (2SLS) and fixed effects in cross sections (products). The results offered by the program for the first case are shown below:

System: SYS01
Estimation Method: Weighted Two-Stage Least Squares
Sample: 1999 2007
Included observations: 504
Total system (balanced) observations 1008
Linear estimation after one-step weighting matrix

	Coefficient	Std. Error	t-Statistic	Prob.
C(1)	698651.0	64669.99	10.80333	0.0000
C(2)	116.9341	200.2789	0.583856	0.5594
C(3)	-108.0063	214.4279	-0.503695	0.6146
C(4)	-22.56695	4.938006	-4.570054	0.0000
C(5)	-26487.40	1750.382	-15.13235	0.0000
C(6)	1.08E-05	3.08E-05	0.350149	0.7263
C(7)	1.070799	0.000907	1181.096	0.0000
C(8)	0.053570	0.003841	13.94680	0.0000

Equation: IMP=C(1)*PR+C(2)*VA+C(3)*VA(-1)+C(4)*PIBMADHPCR
Instruments: C PR PIBMADHPCR VA(-1)
Equation: VA=C(5)+C(6)*IMP+C(7)*VA(-1)+C(8)*PIBMADHPCR
Instruments: C PR PIBMADHPCR VA(-1)

As seen in estimating the first equation, the change in tariffs in Morocco, included in the relative price variable (RP), exerts a positive and significant influence on trade that from Ceuta. That is, the evolution of exports from Ceuta will decrease in accordance with the process of tariff dismantling, and this will occur in the opposite direction from economic growth in the neighbouring country.

However, the simultaneous estimation of the second equation emphasises that such exports to Morocco, listed in the import variable (IMP), did not significantly influence the economic activity of Ceuta. On the contrary, it influenced significantly, and positively, the added value last year (VA-1) and the GDP of Morocco (PIBMADHPCR).

If we now consider the equations by 2SLS individually, that is, *the first accurately identified and second over identifying,* we would obtain similar results for the first equation. In the case of the second equation, with corrections made by the Arellano and Bon method for dynamic panels, the following results, which generally give greater significance on individual coefficients, are obtained:

Dependent Variable: VA
Method: Panel Generalised Method of Moments
Transformation: Orthogonal Deviations
Sample (adjusted): 2000 2007
Periods included: 8
Cross-sections included: 56
Total panel (balanced) observations: 448
White period instrument weighting matrix
White period standard errors & covariance (d.f. corrected)
Instrument list: @DYN(VA,-2) PIBMADHPCR PR @LEV(@SYSPER)

	Coefficient	Std. Error	t-Statistic	Prob.
VA(-1)	1.115927	0.002994	372.7771	0.0000
IMP	0.000622	0.000226	2.751126	0.0062
PIBMADHPCR	2.232794	0.003235	690.3048	0.0000
@LEV(@ISPERIOD("2000"))	229764.4	1058.207	217.1261	0.0000
@LEV(@ISPERIOD("2001"))	252478.5	573.1597	440.5028	0.0000
@LEV(@ISPERIOD("2002"))	202084.1	511.4122	395.1491	0.0000
@LEV(@ISPERIOD("2003"))	192515.0	436.3086	441.2359	0.0000
@LEV(@ISPERIOD("2004"))	167628.6	510.2115	328.5473	0.0000
@LEV(@ISPERIOD("2005"))	123172.5	485.8419	253.5238	0.0000
@LEV(@ISPERIOD("2006"))	116867.6	481.9232	242.5026	0.0000
@LEV(@ISPERIOD("2007"))	57472.30	480.6846	119.5634	0.0000

Effects Specification

Cross-section fixed (orthogonal deviations)
Period fixed (dummy variables)

Mean dependent var	-136248.7	S.D. dependent var	74649.80
S.E. of regression	7722.557	Sum squared resid	2.61E+10
J-statistic	13.68944	Instrument rank	17.000000

As can be seen, the influence of exports to Morocco (IMP) on the local economy, becomes significant, although with a coefficient close to zero. This leads us to maintain the previous conclusion that it will not exert an important influence on the local economy.

This would indicate that while the decline in imports that the tariff dismantling might produce could involve a group of local businessmen, it would not, however, significantly affect the local economy. By contrast, economic growth in Morocco, if it continues to advance in its present rhythm with this dismantling being the largest increase, could still benefit the local activity.

The reasons could be that the only thing adding to the economic growth of those imports is the value of IPSI collected, which remains stable after the 2002 legislative amendment.

CONCLUSIONS

Preliminary estimates indicate that tariff dismantling of Morocco would have a significant influence on the evolution of the local economy through lower imports, although this may be offset by means of the country's economic growth.

However, the fact that commercial ties between Ceuta's neighbours and the European Union reach a peak with the full realisation in the area of free trade can leave Ceuta in a situation of isolation. This would be true in the case for intensifying EU-Morocco trade at the expense of reducing the intensity of trade between Ceuta and the Union, on the one hand, and with the neighbouring country on the other. Given this scenario, there is no doubt that the city would be marginalised from the commercial traffic within the triangle EU-Morocco-Ceuta, in which case it may be best to integrate Ceuta in the Community Customs Union, primarily for strategic reasons.

And in such a situation, it would also be necessary to grant the benefits of remote region, as the only way to stop the continuing deterioration of its economic model, and also to recognise Ceuta's uniqueness of appearing linked to economic development of an emerging country, despite its EU membership through belonging to Spain.

In short, the isolation of Ceuta from national economic centres and community, which has already been noted in terms of its marked geography, should not be exacerbated by the new pattern of trade relations involving the economies of the countries implicated. Local economic policy should take advantage of the synergy that the new trade integration process will unleash, and try to avoid any possibility of further economic isolation of the city, so as to place it in a favourable position towards real convergence in all EU regions.

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US, JAPAN AND EUROPE R&D BIG COMPANIES' PERFORMANCE: A CROSS COUNTRY COMPARISON

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ABSTRACT

In this paper we analyzed R&D entrepreneurial performance in big companies comparing North America, Japan and Europe. Using a database from Community Innovations Surveys (CIS) we regress firms' performance (market capitalization and profits) on R&D expenditure controlling for geographical area and other variables affecting firms' performance such as size and capital investment. The main results suggest that there are no significant differences in big companies' performance across sectors between US, Japan and Europe. These results sharply contrast with the increasing gap in R&D performance between US, Japan and Europe.

Moreover our results point out these divergences must mainly arise from the performance of small and medium companies.

Keywords: R&D+I, innovation gap, EEUU, Europe, Japan.

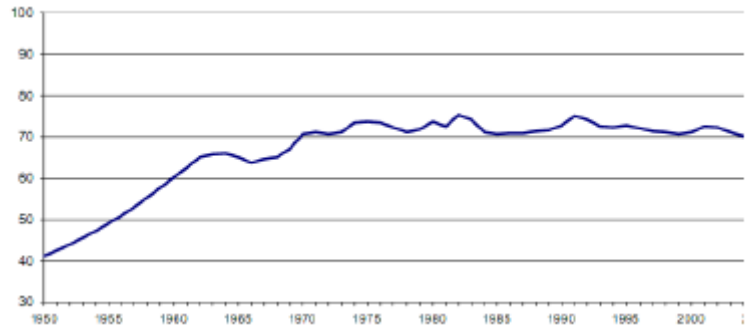
JEL codes: O30, O31, O32

1. European backwardness in RTD+I and the Lisbon Strategy

Since 2000 the EU and its Members States had not much contributed to the Lisbon goals. This disappointing delivery was due to poor coordination, conflicting priorities and still to the lack of determined political action. However the Lisbon strategy is still an urgent task to be done as the growth gap with North America and Asia had widened.

Figures 1 and 2 below shows the evolution of growth, employment and productivity in the old European Union with 15 members expressed as a percentage of US magnitudes.

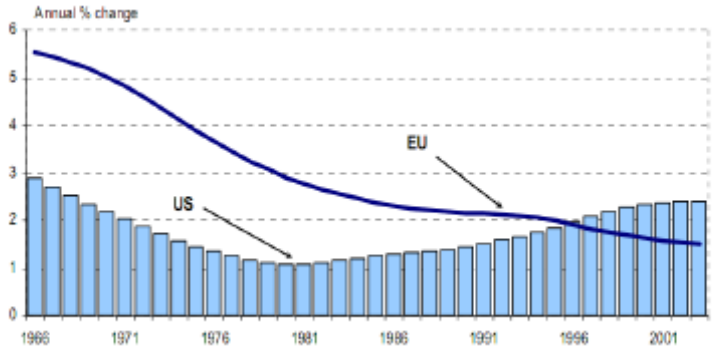
Figure 1: EU GDP per capita in PPS (at constant 1995 prices) (US = 100)



Source: Kok Report 2004.

The post-war catching-up process of the EU15 with the US in terms of output per head had come to an end in the mid-1970s when it became broadly stabilized. However, since 1996 Europe is losing ground and the average annual growth in EU output per head has been 0.4 percentage points below that of the US.

Figure 2: Productivity growth rates. Labour productivity per hour growth



Source : EU Commission, AMECO database. (Kok Report 2004)

This adverse trend in the growth rate of output per head has been accompanied by a reversal in Europe's productivity catch-up with the US. Over the period 1996–2003, the EU-15 productivity growth rate (averaged 1.4 %, as opposed to 2.2 % recorded for the US). Given the generally higher dynamics of the new Member States, the EU-25 average productivity growth was slightly higher over this period but still far behind that in the US (Kok Report 2004).

The Kok Report clearly stated the need to face the key challenges of increasing Europe's attractiveness for researchers and scientists, making R & D a top priority and promoting the use of information and communication technologies (ICTs).

The so-called linear model explained productivity growth and economic development as a causal sequence from science to technology and to their economic benefits. The interaction between science, technology and the economy is really complex and the relations between scientific knowledge, technological innovation, and their economic benefits are far from being linear, going from the former to the latter. Many scholars have in fact convincingly argued that the relationships go both ways (Freeman, 1982, 1994; Rosenberg, 1982; Kline and Rosenberg, 1986; Pavitt, 1999).

In the late 90s, inspired by the linear model critics, the European Commission supported the idea that the EU lags in some leading technological areas (essentially ICT and biotech) stem from its inability in converting its scientific strengths into economic profitable innovation (EC, 1995). These are of course important lines for policy action. However the Foray Report (2006) pointed out that the old myth of European Leadership in Science was not true anymore and highlighted the scope of improving the European, national and regional innovation systems by building technological capabilities and financing more knowledge acquisition and research in Technological Centres and higher education institutions (Dosi et al. 2005).

The simple economics of R&D location (involving issues of indivisibility and Marshallian externalities) taught us that national responses to R&D globalization are likely to be ill-suited to the main challenges. There is a need for a positive supply response (in terms of knowledge, human resources and academic collaborations) of the European knowledge infrastructure.

The recommended action is to build the European Research Area, thereby addressing Europe's issue of national fragmentation of the public research. Creating a true European research area is likely to generate more R&D funding possibilities, to intensify competition between scientists, and to enhance efficiency in R&D performance (Foray Report, 2006).

The major deficiency of the Lisbon strategy is the governance of the policy process. R&D are quasi-public goods and the so-called open method of coordination gives rise to a problem of resource allocation in R&D. The method of governance of the Lisbon Strategy is not suitable for the economic nature of the goods which are involved in R&D policy.

The formulation of national action programmes to meet the key priorities of growth and employment was an Improvement in the process for delivery, although it has fallen far short of expectations. Peer pressure has not been a strong enough incentive for the Member States to fulfill the Lisbon goals. However, benchmarking -one of the central elements of the open method of coordination—has fostered innovation surveys and statistical measures of comparative performance.

2. Innovation factors and indicators: 2008 European Innovation Scoreboard

Since 2000 European Innovation Scoreboards (EIS) yearly provide a comparative assessment of the innovation performance of EU Member States, under the EU Lisbon Strategy. Innovation factors and indicators are classified according to dimensions of Innovation Performance in the EIS. In order to give a balanced assessment of the innovation performance different related indicators are considered into 3 main groups covering:

1. Enablers: Human resources (availability of high-skilled and educated people) and Finance and support (government support and funding for innovation projects and activities)

2. Firm Activities: Investments in R&D and innovation, Linkages and entrepreneurship (collaboration and partnerships among innovating firms and other non-profit and public institutions) and throughputs (Intellectual Property Rights and Technology balance of payments flows).

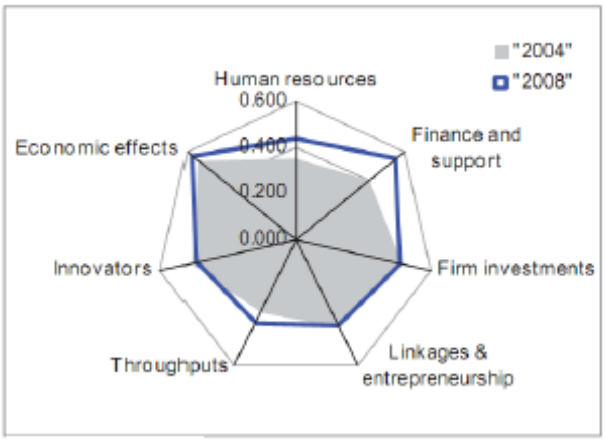
3. Outputs: innovators (number of innovating firms) and economic effects (succes of innovation in employment, exports and sales due to innovation activities).

For the current edition, EIS 2008, the methodology has been revised and the number of dimensions to be considered has been increased and presented in a more systematic

way. The 2008 EIS allows performance and absolute growth rates to be analysed for the EU27.

The analysis of the EU27 growth rate in innovation performance shows an average annual growth rate of 2.3% over a five year period. This improvement is particularly due to Human resources (4.0%), Finance and support (7.1%) and Throughputs (4.0%) where the EU27 has progressed most compared to 2004 (Figure 3). In Linkages & entrepreneurship (0.0%) and Economic effects (1.1%) improvement has been small and in Firm investments (-0.9%) and Innovators (-1.3%) performance has worsened slightly.

Figure 3: Innovation performance profile in EU27



Source: EIS, 2008.

The comparisons of EU with the US and Japan shows clearly a performance gap in innovation.

Figures 4 and 5 below present the main findings in the EIS 2008[1].

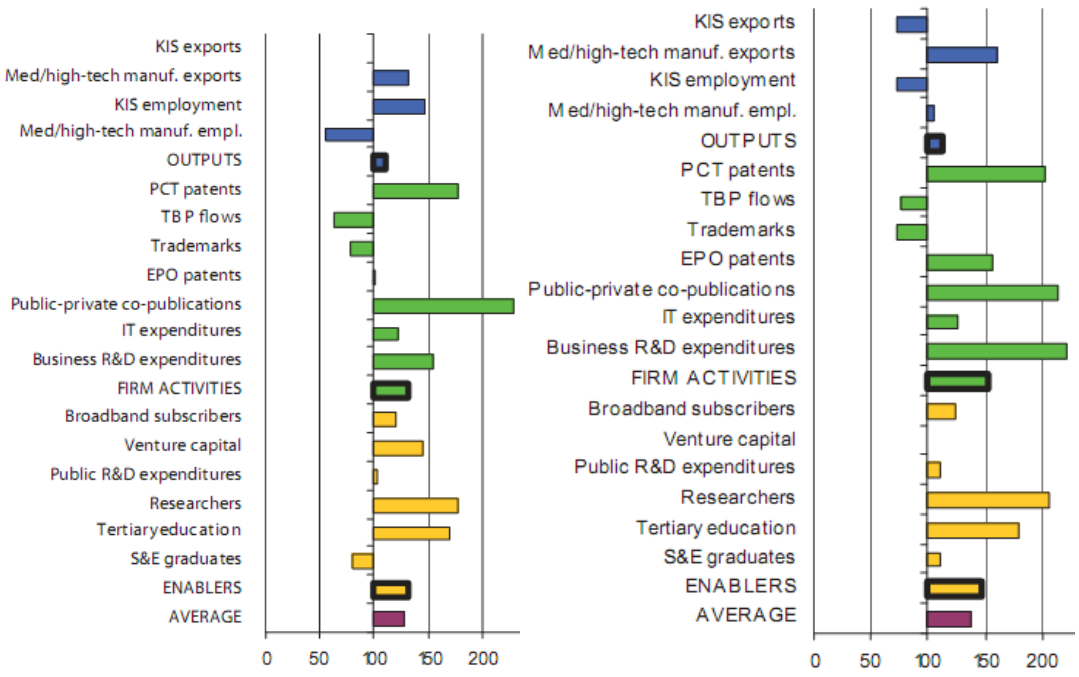
Overall there is a clear performance gap in favour of the US, with the US showing a better performance in Enablers, Firm activities and Outputs. In spite of certain catching up in last years, EU overall innovation performance is still 28% below that of the US. Only in S&E graduates, Trademarks, Technology Balance of Payments Flows and tech

[1] It is worth mentioning that the effects of the economic downturn in 2008 are not yet captured by these data.

manufacturing employment is the EU performing better. More over the US is slightly improving its lead in Business R&D, EPO patents and PCT patents.

Overall there is a clear performance gap in favor of Japan, with Japan showing a better performance in Enablers, Firm activities and Outputs. EU overall performance is 38% below that of Japan. Only in Trademarks, Technology Balance of Payments flows, Knowledge intensive services employment and exports is the EU performing better. Japan is improving its lead in Business R&D, EPO patents, PCT patents and tech manufacturing employment.

Figure 4: EU innovation gap towards US Figure 5: EU innovation gap towards JAPAN



Source: EIS, 2008

Most indicators point out business RTD as the critical factor among the EU drivers of growth. It is worth enough to have a look to the enterprises performance in this field by geographical areas.

3. The role of business in technological progress

The conceptual links between innovation and productivity are strong and clear, but the relationship between the two is complex. Scientist and technicians tend to speak eloquently of science , and university and technological centres contributions to basic

and applied science, as the key driver of recent economic growth in most developped countries.

However business practices may be as much or more important. And economics and finance research on those practices – on entrepreneurship and management – may be a vital research toward understanding growth (Hubbard 2008).

Total factor productivity increases are often attributed to the effect of technological progress, but It also requires the ability of enterprises to lead this process by means of entrepreneurship and high quality management.

To shed further light on the unprecedented growth performance of market economies the different, but complementary, rolls played by the innovative contributions of small and large companies must be considered. Drawing on the data collected by the National Sicience Foundation, William Baumol (2008) states that these two groups have tended to specialize in different components of society's innovation process. The major breakthroughs that are indispensable for growth have tended to come from small new enterprises, while the invaluable incremental contributions that multiply capacity and speed, and increase reliability and user-friendliness, have been the domain of the larger firms. Together, the two have contributed far more than either would have by itself.

Small and large entreprises have been competing on both main dimensions of Schumpeterian competition. For technological leaders, undertaking RTD is the only way to advance efficiency and maintain competitiveness. In today's economy many large oligopolistic firms use innovation as their main competitive weapon. These games are a kind of arms race and support the "deepening" patterns of technological change in sectors where cumulativeness and barriers to entry – and therefore large firm size - are important (Breschi et al.,2001, Bogliacino and Pianta, 2009). In contrast, the "widening" pattern of Schumpeterian competition expresses the technological trajectories where entry and creative destruction are dominant processes.

Most of the innovation that can be carried out by newly established small firms in a relatively small industrial economy will not have been contributed by the country's own R&D activities. A substantial proportion of that innovation will be obtained from foreign sources of knowledge and the so-called "imitative entrepreneurship" may be a

very important source of innovation (Baumol, 2008). Given the main contributory sources that play critical roles in expanding an economy's innovation and growth – entrepreneurs and small firms, large firms with internal R&D capacity, universities, technological centers and public bodies – technology exploration and diffusion is a crucial field of innovation policy.

4. Large firms' performance by geographical area

Great progress in measuring innovative output was achieved by a number of recent internationally harmonized innovation surveys (OECD published the Oslo-manual and Eurostat launched innovation surveys -CIS and EIS- in the European Economic Area and associated OECD countries.

In the most recent studies, relying on new data and using innovation output additional to RTD expenditure, Arundel et al. (2003) report that almost all studies find a positive and significant relationship between innovation and firms' performance.

More recently Janz, Lööf and Peters (2003) work relies on original firm data panels from different countries to estimate an econometric model in the spirit of Pakes and Griliches (1984) and Crépon et al. (1998); while Bogliacino and Pianta (2009) estimate a more complex model of innovation, with a basic distinction between the strategies of technological and cost competitiveness.

Market interdependency and oligopolistic strategies are relatively similar across geographical areas, so large firms' performance might not to be significantly different among them. In order to test this hypothesis, drawing from a panel data of large companies prepared for the EIS 2007, we have carried out a regression of firms' performance (market capitalization and profits) on R&D expenditure controlling for other variables affecting firms' performance such as size, capital investment, sector of activity and geographical area.

The panel gather economic and financial information of the 2000 world largest companies with a time span covering 2002-2005. After controlling the quality of data (eliminating extreme outliers and dropping companies with too many missing values), a homogeneous panel of 1,723 companies and 5,994 observations have been prepared.

Figure 6: Panel Data by Geographical Area

	Overall		Between		Within
area	Freq.	Percent	Freq.	Percent	Percent
eu	3073	51.27	906	52.58	100.00
jp	712	11.88	210	12.19	100.00
na	2082	34.73	563	32.68	100.00
row	127	2.12	44	2.55	100.00
Total	5994	100.00	1723	100.00	100.00
			(n = 1723)		

Source: Own elaboration from the panel data of large companies prepared for the EIS 2007

The first model we have employed is a between regression (based on the regression on group –enterprise- means. The model assumes that market capitalization depends on: 1) passed profits, p, and a series of variables xi capturing forecast effects in future benefits of size (number of employees), productivity, capital expenditures and RTD expenditures. These variables operate implicitly as multiplicative factors by means of a logarithmic transformation.

2) The model also includes a series of yj dummies for geographical and sectoral effects.

$$Mcap = p^{\rho} \cdot \Pi\, xi^{\gamma i} + \Sigma_{yj},$$

Table 1 below shows the outcome of the regression. It can be seen that RTD expenditure is a significant factor explaining large firms' market capitalization. This makes sense because RTD expenditure can be used as a proxy for future benefits. On the other hand, the coefficients for Europe and Japan are not significative and their confidence intervals overlap with the one of North America. No significant difference between Europe, Japan and North America has been found.

Table 1: Market capitalization and RTD expenditure in in the top 2000 largest enterprises

```
. * analysing market capitalization and profits and rrtd, double logarithmic model.
    Implies a constraint on positive benefits
. xtreg  lnmarket_cap lnprofits profits lnemployees lnproductivity lncap_exp lnrtd_exp
                      europe japan north_america sector*, be
Between regression (regression on group means)  Number of obs      =      2848
Group variable: id_comp                         Number of groups   =      1373
R-sq:  within  = 0.1450                         Obs per group: min =         1
       between = 0.8965                                        avg =       2.1
       overall = 0.8951                                        max =         3
                                                F(49,1323)         =    233.76
sd(u_i + avg(e_i.))=  .5680436                  Prob > F           =    0.0000
------------------------------------------------------------------------------
lnmarket_cap |      Coef.   Std. Err.      t    P>|t|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
   lnprofits |   .5270116   .0213561    24.68   0.000     .4851161    .5689071
     profits |  -3.31e-06   .0000134    -0.25   0.805    -.0000296     .000023
  lnemployees |   .0967193   .0347612     2.78   0.005     .0285263    .1649123
lnproducti~y |   .2061238   .0464076     4.44   0.000     .1150833    .2971642
   lncap_exp |   .1211254   .0250818     4.83   0.000     .0719209    .1703298
   lnrtd_exp |   .2199632   .0223333     9.85   0.000     .1761507    .2637758
      europe |   .0979715   .1019035     0.96   0.337    -.1019386    .2978816
       japan |   .1799643   .1073588     1.68   0.094    -.0306478    .3905764
north_amer~a |   .3218489   .1022395     3.15   0.002     .1212797    .5224181
```

Figures 7 and 8 below show the scatter boxes of the regression and illustrate the pattern of large firms' market capitalization with regard to passed profits and RTD expenditures and geographical areas.

Figure 7

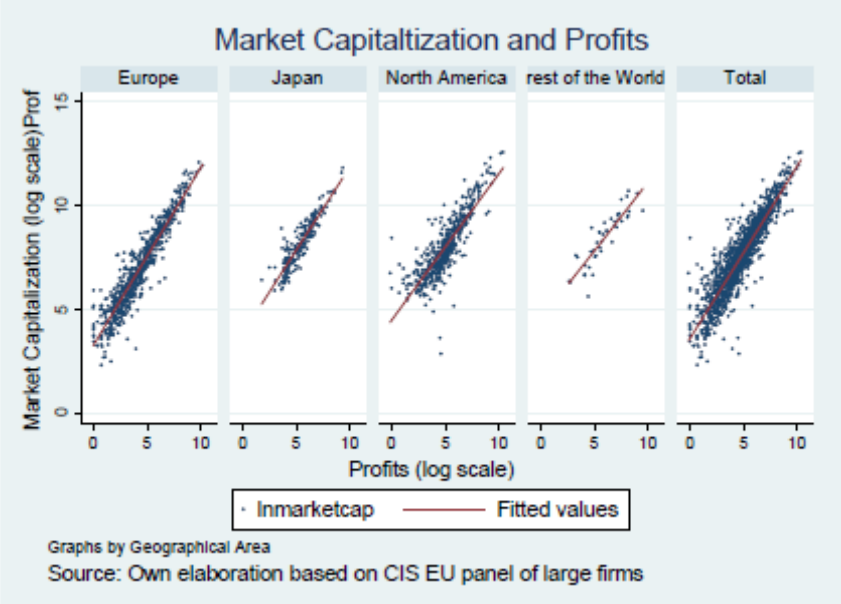
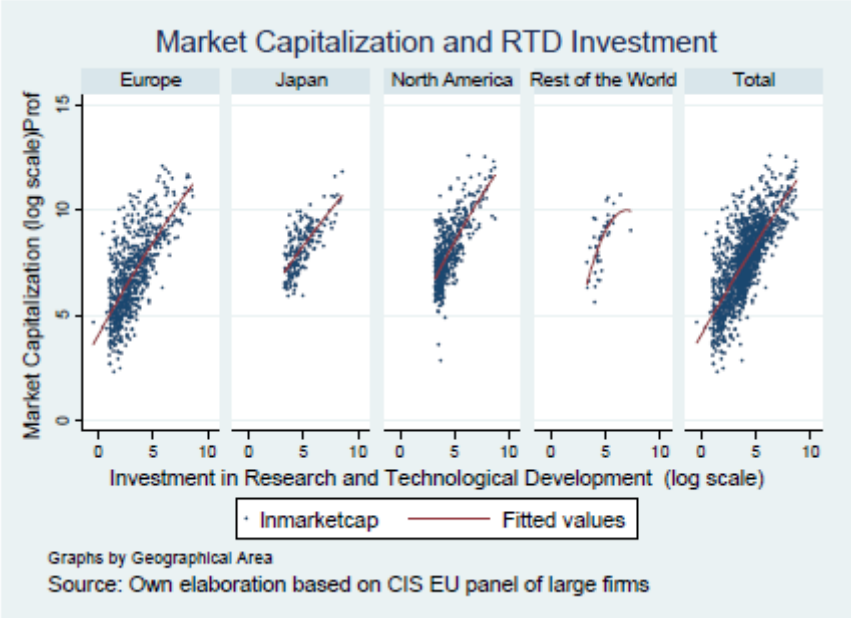


Figure 8



Next we explore the relationship between RTD expenditure and productivity in the set of 2000 largest world companies. A similar model is used. Productivity is assumed to be explained by:

1) a series of independent variables xi including size (number of employees), capital expenditures and RTD expenditures per employee (these variables are taken in a log transformation and they are implicitly assumed as multiplicative factors), on the other hand 2) a series of dummies yj is included to capture sectoral and geographical effects.

$$\text{Productivity} = \Pi\, xi^{\gamma i} + \Sigma_{yj}$$

We have ran again a between groups regression, that is a regression based on the variance of the enterprise means. The results of the regression are shown in Table 2 below. Once again -as it is expected- capital expenditure and RTD expenditure per employee significantly influence productivity. On the contrary, size has no influence at all in large firms' productivity. It must be realized that we are exploring a data set made of the 2000 largest companies in the world.

They are all very large companies and consequently size does not play a significant role in explaining productivity levels.

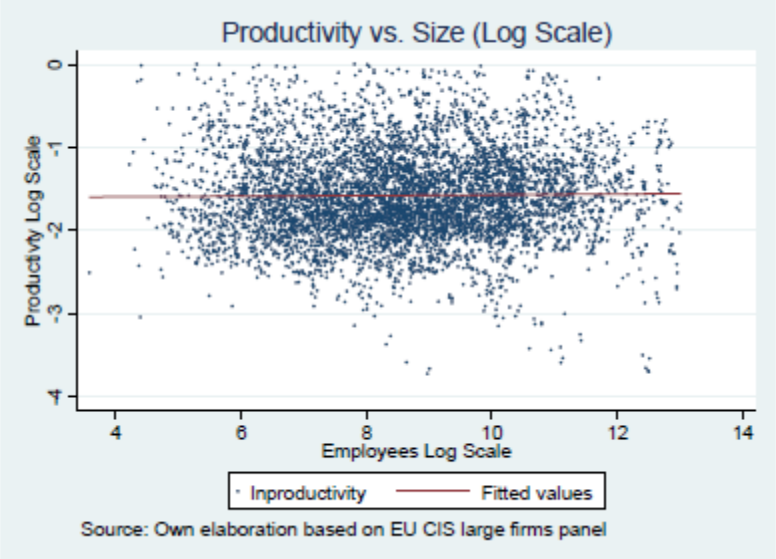
None of the coefficients for Europe, Japan and North America are significative and once again no significant difference between Europe, Japan and North America has been found.

Table 2: Productivity and RTD expenditure in the top 2000 largest enterprises

```
. xtreg   lnproductivity_th  lnemployees  lncap_exppe lnrtd_exppe europe japan
          north_america sector*, be
Between regression (regression on group means)  Number of obs      =      5994
Group variable: id_comp                         Number of groups   =      1723
R-sq:  within  = 0.1353                         Obs per group: min =         1
       between = 0.5325                                        avg =       3.5
       overall = 0.5072                                        max =         4
                                                F(46,1676)         =     41.50
sd(u_i + avg(e_i.))=  .3764861                  Prob > F           =    0.0000
------------------------------------------------------------------------------
lnproducti~h |      Coef.   Std. Err.      t    P>|t|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
 lnemployees |  -.0042201   .0069992    -0.60   0.547    -.0179482     .009508
 lncap_exppe |   .2372702   .0140879    16.84   0.000     .2096385    .2649018
 lnrtd_exppe |    .182829   .0109719    16.66   0.000      .161309    .2043489
      europe |   .0047044   .0608032     0.08   0.938    -.1145538    .1239626
       japan |   .1496368   .0645236     2.32   0.021     .0230815    .2761921
north_amer~a |   .1002284   .0611747     1.64   0.102    -.0197584    .2202151
```

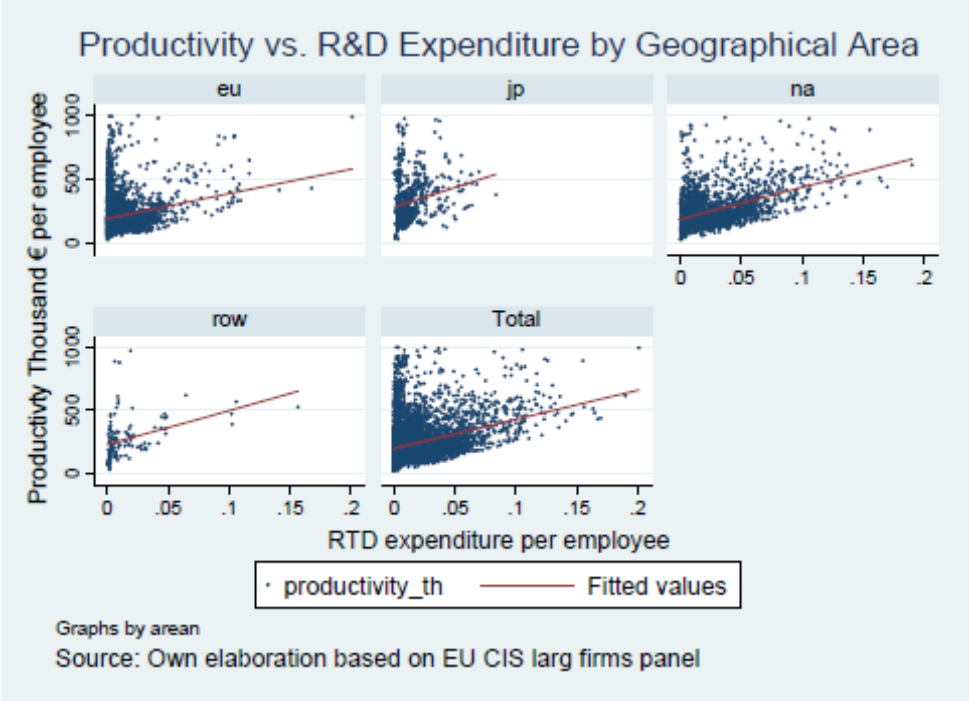
Next figures 9 and 10 offer the scatter boxes of the influence of size and RTD expenditures on large firms' productivity levels. The latter –Table 10- is broken down by geographical area to illustrate that they do not have a significant influence in the shape of the relationship between productivity and RTD expenditure in the world largest firms' sample.

Table 9



Source: Own elaboration based on EU CIS large firms panel

Table 10



5. Conclusions

In the previous section we have analyzed the sample of 2,000 world largest enterprises using a database from Community Innovations Surveys (CIS). Large firms' performance in terms of market capitalization and productivity have been regressed on RTD expenditures controlling for geographical area and other variables affecting firms' performance such as size and capital investment. RTD expenditures have proof to significantly influence largest firms' performance; however the main results suggest that there are no significant differences in big companies' performance across sectors between US, Japan and Europe.

These results sharply contrast with the increasing gap in business RTD performance between US, Japan and Europe. Therefore the evidence from the world largest firms' sample suggests that the European backwardness in business innovation must mainly arise from the performance of small and medium companies. This provides additional support to the new lines of research on national and regional innovation systems and the diffusion of open innovation practices among Small and Medium Size Enterprises (SME) and the relations among the players in the RTD and innovation fields,

Chesbrough (2003) coined the notion Open Innovation to signify a new model for organizing technological innovation in large RTD-intensive companies. However it does not signify an altogether new phenomenon. The concept of open Innovation fits very well in the theoretical and applied framework of industrial and innovation policy. It is a perfect complement to the concept of innovation system (national, regional or sectoral).

Recent studies have found that SMEs are becoming increasingly engaged in open innovation practices, especially in technology exploration. Some survey based studies have recently provide some evidence on the innovative practices in SME in Europe (Lichtenthaler, 2008, and Van de Vrande et al., 2009). What our paper suggests is that this line of research may shed much ligth on the true reasons of European backwardness in business RTD.

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LOCAL DEVELOPMENT INITIATIVES IN METROPOLITAN AREAS' SUBURBAN MUNICIPALITIES: A COMPARATIVE CASE-STUDY BETWEEN AMADORA (LISBON-PT) AND DIADEMA (SÃO PAULO-BR)

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Abstract

Amadora and Diadema are two small-sized but densely populated suburban municipalities, territorially contiguous to the metropolises of Lisbon (PT) and São Paulo (BR). In spite of their geographic and socio-economic specificities they both present common and important social exclusion (e.g. housing, unemployment) problems. This paper critically compares the local development initiatives put into practice in these two contexts, evaluating how multiple territorial actors (e.g. political institutions, financial and business associations, NGO's, civic movements) interact and establish partnerships directed to minimize some of the previously identified issues thus promoting these municipalities' populations socio-economic development.

Keywords: Local Development, Endogenous Development, Community-based Development, Social Exclusion, Amadora (Lisbon-PT), Diadema (São Paulo-BR).

1. Introduction

Some of the recent development theories and policies are placing their emphasis on local and endogenous factors. Indeed, since the 1970's, the territorial development paradigms changed from a functional perspective to a territorial perspective and even, since the 1990's, to an inter-territorial perspective, more suited for the current context of

Globalization characterized by increasing flows and networks, either they are of information, of knowledge, of financial capital, of labour, or of other types (Castells, 2003).

Following this point of view, the present paper will compare the local development initiatives put into practice in two different territorial contexts – Amadora and Diadema –, evaluating how multiple actors (e.g. political institutions, financial and business associations, Non-Governmental Organizations (NGO's), civic society and associative movements) interact and establish partnerships in order to minimize some of these municipalities' populations socio-economic problems.

In spite of their geographic and socio-economic specificities both these municipalities present relevant social exclusion (e.g. housing, unemployment) problems. Amadora (23.77 km^2 and, according to estimates from Statistics Portugal (INE), 172 110 residents in 2008) and Diadema (30.65 km^2 and, as showed by the Brazilian Institute for Geography and Statistics, 397.738 residents in 2009) are, are seen by these data, two small-sized but densely populated suburban municipalities, territorially contiguous to the metropolises of Lisbon (PT) and São Paulo (BR).

Structurally, the paper will be organized according to three main subjects, namely:

1. Theoretical questions about territorial entrepreneurship and "new" territorial management;
2. Territorial and socioeconomic comparative characterization of the municipalities of Amadora and Diadema;
3. Presentation of the local development initiatives held in these two municipalities.

2. Territorial Entrepreneurship and the "New" Territorial Management

As previously mentioned, some of the latest literature on development studies considers that local political authorities have greater advantages in relation to the central government regarding the creation of favorable conditions to improve enterprises' productivity and competitiveness. In fact, the local political governments tend to be

increasingly looked at as agencies that can intervene suitably to promote each municipality's sustainable development (Salvador, 2006).

Indeed, if we consider that City Halls[2] may have more institutional flexibility, when compared with central governments, and greater capacity of representation and political legitimacy, the municipalities may be more effective in attracting and supporting economic activities in its territory, so «*el gobierno local capaz de dar respuesta a los actuales desafios urbanos y de construtir un proyecto de ciudad y liderarlo debe ser un gobierno promotor*» (Borja and Castells, 1997: 151).

As a result of this situation, since the 1990's, regional and local political authorities worldwide have gained increasing importance in terms of economic growth promotion (in terms of infrastructure, ending bureaucracy, increasing participation of the private sector and business rationality of the public administration, search of consensus around "strategic" priorities, among many other aspects), leading some authors to defend that a new type of territorial management was to be developed, which Archer designated as "urban entrepreneurship", Harvey as "public urban management", LeGalès as "urban governing" or Fainstein as "local mercantilism" (Salvador, 2006).

The general perspective is that «*cities* [are] *competing for globally footloose investment and hence requiring particular priorities in urban policy*. (...) *It is suggested that a less deterministic approach to globalization could provide opportunities for greater local political choice and participation, leading to a wider discussion of priorities in urban planning*» (Thornley, 2002: 21)

Given this new perspective and since Borja and Castells (1997: 162-163) state that «*estamos convencidos de que un gobierno local promotor no puede funcionar según las formas de gestión y de contratación próprias de la administración tradicional*» it also seems important to consider the concept of "*Governance*", understood as the management of public affairs, in combination with citizens' associations and their

[2] In Portugal, the *Câmara Municipal* is the executive branch of the local government and the *Assembleia Municipal* is its legislative branch. On the contrary, in Brazil *Prefeitura* is seen as the executive branch and the *Câmara Municipal* appears as the legislative branch of the local government.

organizations, in a broad view of convergence between the interests of the public powers and its citizens, seen in this perspective as a company "shareholders". In this sense "*Governance*" can be understood as a broader concept of government (as a formal political structure and institutionalized territorial base), although it can be found a considerable diversity of definitions that give some instability in the theoretical and practical definition of this term. (Fermisson, 2005; Branco, 2006)

The entrepreneurial promotion is creating new political practices and social relations, as well as a local agenda determined by urban competitiveness and the development of a more efficient and dynamic local public administration.

On the other hand, the «*globalization of production* (…) *constitutes the new tension between globality and locality (Stöhr, 1990). Cities are the most differentiated and complex localities of all, hence the growth of competition between them*» (Jensen-Butler *et al.* 1997: 4). The previous statement means that Globalization – and "its" opening of markets, tendency for worldwide free trade, and technological and transports revolutions – has brought a new tension between local and global. Metropolization can now be seen as one of the primary results of such a tension (Salvador, 2006).

In the perspective of Manuel Castells (2003), the increased importance of cities is related to the new model of "network society", in which the main element of productivity is based on knowledge and information speed and processing. Indeed going even further ahead, there seems to be a growing perspective that this nation-states' and central governments' crisis will lead to the creation of an international network of interdependent and interrelated local governments (Borja and Castells, 1997). This assumption is based on the fact that nation-states are simultaneously too "big" to solve local problems and too "small" to solve the "new" economic and social problems resulting from the advent of Globalization. Like Borja and Castells (1997: 31) summarily state «*sus competências no son suficientes para controlar los flujos globales y su organización suele ser demasiado rígida para adptarse a los cambios constantes del sistema mundial*».

Nevertheless it is expected that the Nation-States will most likely continue to exist. Indeed the recent financial crisis showed that market regulation and public intervention

on financial markets is a need and that Adam Smith's "invisible hand" and "*laissez-faire*" policy is, in some extend, "unrealistic". Besides this, once we consider the importance of "economies of scale" and the need to ensure certain costly or technical complex public services (such as armed forces, justice, diplomacy, among others) we understand that it is still necessary a governmental political level "above" municipalities and even regions.

Nevertheless, it is important that Nation-States maintain with local governments a more decentralized, contract-based and less hierarchical relation. «*La reconstrucción de un estado flexible y dinámico, articulado entre sus diferentes niveles, parece la única posibilidad histórica de superar las tendencias disolventes de la sociedad de la información inscritas en la dicotomía entre los flujos de poder y el particularismo de la experiencia, al introducir una nueva perspectiva en la gestión de las ciudades*» (Borja and Castells, 1997: 31).

In a wider approach and considering the effects of metropolization, one should consider «*the concept of global city-regions* [which] *can be traced back to the "world cities" idea of Hall (1996) and Friedmann and Wolff (1982), and to the "global cities" idea of Sassen (1991)* (…) *in a way that tries to extend the meaning of the concept in economic, political, and territorial terms, and above all to show how city-regions increasingly function as essential spatial nodes of the global economy and as distinctive political actors on the world stage*» (Scott *et al*., 2002: 11).

One key question deals with the fact that this issue of Nation-State restructuring represents a deregulation or to free the central government of much of their social responsibilities and powers, transferring them to the municipalities. As Seixas (2002: 99-100) points out, «*continuing growing mercantile pressures* (…), *alongside with the concomitant demission of public responsibilities, a direction that, seemingly, drives even more the city before social, physical, even economic unsustainability.* (…) *This questioning of legitimacy puts a direct focusing in the state attitudes – with is actions, or better said, its re-actions of demission and casuistic regulation*».

As mentioned earlier, since the 1970's, the "local" perspective has been gaining an increasing importance in terms of economic development. Cities are the "wealth of

nations" and their competitiveness is to be promoted. Social conflicts are also increasingly being transferred from the "territory of the nations" to the "territory of the cities", no longer seen only as economic centers but also as the new leading political actors (Salvador, 2006).

One of the advantages of the "local" lies in the fact that the capacity for innovation depends not only on an appropriate education system, but also on the existence of certain equipments, research centers and urban services related to issues such as housing, culture, environment and health, which must able to attract the necessary qualified workforce.

Hence, since the late 1970's and early 1980's, new methodological tools such as "Territorial Strategic Planning", "Territorial Marketing", "Development Agencies" or "Public-Private Partnerships (PPP's)", among many others, have started to emerge, progressively enrolling cities in the sustainable development processes through a paradigmatic evolution that may be addressed to as the "New" Territorial Management.

A brief presentation of these new forms of territorial intervention is relevant, especially if considered that many of the projects and initiatives developed in Amadora and Diadema may fall under these types.

According to Fernandéz Guell (1997), "Strategic Planning" was born in the Military as the capacity to lead an army in the field and achieve the established goal. Indeed, Strategy results from the combination of the words *stratos* (army) and *ego* (leader) and goes back some 2300 years ago to Chinese general and philosopher Sun Tzu and his book "*The Art of War*". The Strategic Planning reemerged in the 1960's as a tool for the private sector to improve their businesses internal organization and operation, but it was only in the 1980's that several United States' Cities (San Francisco, Philadelphia, Memphis) and Federal States (California, Ohio, Wisconsin) began to draw up strategic plans aimed at attracting investment, promoting economic growth and urban regeneration and creating the "Territorial Strategic Planning" by reproducing the business strategic planning logics. «*Strategic planning is the most appropriate approach for all communities. This is a future-oriented approach that builds a local economy on the basis of local needs*. (…) *The strategic style of planning thus boils*

down to doing the everyday business of local government with one additional long-term objective firmly in mind: economic development» (Blakely and Bradshaw, 2002: 93-94).

Applying Strategic Planning to cities and regions represents an effort to produce fundamented decisions and actions that lead a certain territorial "organization" (either municipalities, regions or countries) to achieve its goals. In fact, faced with the renewed context of territorial planning one the most important challenges placed on territories and on the planning process itself is the need to integrate the territorial dimension in a strategic reference framework to be translated into adequate decision criteria. Formulating territorial trajectories of development requires multi-disciplinary cooperation and the building of a consensus around key-ideas constituent of a development project (Fernandes, 2006).

The emphasis put on "action" represents an effort to avoid inconsistencies between goals and actions, often found in "traditional" planning. The "interactive and participatory nature" seeks to incorporate a broad spectrum of actors in the decision-making process, in order to join forces and achieve consensus. The importance given to actors' participation comes from the supposition that the power is shared between different actors with their own strategies, that need to work together to create a single vision. Transposing these corporate-based strategies to urban management is indeed a viable option since, as stated by Ascher (1995) cities have great similarities with companies: i) they face international competition; ii) their development depends on economic factors; iii) the local politician is increasingly a "manager" of the city.

"Territorial Marketing" can be considered as a local/regional development tool based on a set of marketing and communication techniques designed to create a "trademark" and to establish the "market" position of a territory, as well as advertising and promoting the economic, social or environmental factors relevant for tourists, investors or new residents' attraction. "Selling" the city has become one of the basic functions of the local governments and an essential field for private-public negotiation. As defended by Salvador (2006) Territorial Marketing is to be approached as an integrated set of policies destined to boost economic growth and territorial competitiveness. It integrates research actions on the promoting of the territories, namely the desires, motivations and needs of its inhabitants and investors and can also include operations directed to boost

local economic actors' networks and businesses. However territorial marketing must not be measured in a strictly quantitative (or market-based) way. It is subject to qualitative aspects such as the satisfaction of the residents or the attractiveness of the territories. As Benko (2006) puts it, territorial marketing implicates the intervention of both public and private actors aiming at the coordination of their actions, which differs it from the marketing of the territorial companies, centred in one specific (and normally institutional) actor.

The growing need and importance of Territorial Marketing comes from the fact that all territories are competing among themselves for investment and/or skilled human capital attraction. In order to be successful, these territories need to develop actions to promote something unique and appealing that they have to "offer". In depth «*marketing a community is very much like marketing a product. Product and market research are employed to determine what type of assets a community has to offer, in what markets, and to what type(s) of clients*» (Blakely and Bradshaw, 2002: 292). In fact, «*as Harvey noted almost ten years ago, there has been a shift in the attitudes of urban government from a managerial approach to entrepreneurialism (Harvey, 1989). This entrepreneurial stance views the city as a product that needs to be marketed*» (Thornley, 2002: 22)

A "Regional or Local Development Agency" may be defined as an operational structure which seeks to identify the territorial development or sector problems existing in a given region. For that it is its mission to promote the implementation of projects adapted to the specific characteristics of each area. These institutions can be viewed as intermediation agencies between the State, the market and the civil society through which the local development strategies are made operational. They can play a large number of roles, namely: i) to provide technical and juridical support to local managers in the decision-making process; ii) to develop diagnosis of the project's situation, proposing measures to help achieve their objectives; iii) to promote and coordinate investments in transports and communications; or iv) to establish a set of mechanisms that allow for a selective productive restructuring, necessary to strengthen local competitiveness (Cabugueira, 2000).

Indeed, the development programmes organized by the central governments are not always suitable for application in the local contexts, since they are based on national policies and strategies and usually do not take into account the local community's interests. In this point of view it can be considered that the ideal development projects seek to integrate the local community in the processes of sustainable social and economic development, in order to adjust their productive capacity to market trends.

In some occasions, "Public-Private Partnerships (PPP's)" have been emerging as the most efficient method of promoting local development. In fact, «*une attention particulière doit être portée à la dimension "locale" des projets conduisant à des partenariats public-privé. D'abord, la plupart de projets partenariaux public-privé ont dans les faits une dimension territoriale très marquée. Ils mettent souvent en oeuvre des collectivités territoriales; leurs effets s'inscrivent dans des espaces géographiques circonscrits; c'est meme dans le nombre de cas cet effet géographiqement sélectif qui est recherché (projets dits de "développement local"*» (Gilbert, 2002: 191).

PPP's are characterized by allowing long-term associations between public and private entities with the goal of establishing the conception, financing and construction of public infrastructures or services. «*La notion de partenariat public-privé recèle en effect une idée nouvelle, par rapport aux institutions que l'on vient d'évoquer, celle d'une association et d'une solidarité entre les associés. En ce sens, elle s'oppose à la représentation traditionelle que donnent les doctrines liberals des rapports entre l'État et l'économie, et qui est fondée sur l'idée de leur séparation*.» (Marcou, 2002: 14)

Being a long-term relationship, the public partner is able to transfer to the private one the project's conception risks, since the private partner has the obligation to ensure the contract service throughout the partnership period. For that «*la première fonction du PPP est donc d'établir une interdependence et une solidarité entre l'engagement de la puissance publique et celui du secteur prive. Cette solidarité est le support d'une mutualisation des risques*» (Marcou, 2002: 37). However, since the risk is transferred to the private partner, it means that the public partner can not always define the requirements for the project development and its role is focused merely on the definition of the results to be achieved and the level of quality desired.

Another important aspect to be considered is that a PPP can only be justified if the efficiency levels achieved are sufficient enough to offset the financial costs. Therefore it is essential to develop a financial model that is able to allow the establishment of a comparable public cost. «*The hallmark of the U.S. experience in local economic development – whether in government or in the neighborhood – is the combination of the resources of the public and private sector in just the correct balance to attain objectives neither could attain alone*» (Blakely and Bradshaw, 2002: 97).

Projects that may fall under PPP classification are numerous and diverse and range from equipment management or provision of public services to strategic planning, territorial marketing, numerous types of contracts and programmes (cooperation with the central government), or even urban design projects (replacing the traditional legal framework and regulation on land use and occupation). This means that, in some cases, the PPP's have become the basic foundations or urban policies. Salvador (2006) notices that tax incentives directed to construction companies, public loans, or leasing financing have all increased exponentially in the last years as well as the practices of countermeasures in the use of urban lands or even infra-structures.

In summary, it is at this point understandable that local political authorities (i.e. Municipalities) can play (and have been increasingly playing) an important role in the establishment of connections between the different stakeholders present in their territory (whether they are companies, financial institutions, business associations, cooperatives, NGO's or civic movements) therefore providing the necessary institutional framework for an endogenous or community-based Development.

Endogenous Development corresponds, as the name clearly identifies, to the endogenization of the technical progress, understood here as the efficiency increase in using the traditional production factors (land, labour and capital). In the current global competition context, the capacity to innovate and generate new knowledge and competences susceptible to make the territorial system of production evolve is an essential asset. Endogenous Development is therefore the laying of attention to the innovation process and not only to the mere distribution of productive resources (Maillat, 2002).

In the 1980's, in close relation with the previously mentioned Endogenous Development theory, the emergence of the Social Capital theory took its place as well. One of the distinguishable characteristics of social capital is the fact that the trust in each other and the development of social relationship chains and norms is seen as a public good – similarly to what happens with knowledge within the Endogenous Development theory – contradicting the "conventional" capital definition which is usually based on private financial resources.

On the other hand, Community-based Development can be understood as a process that tries to create the conditions for a community economic and social progress, with the active participation of its population and based on their own initiatives. Ezequiel Ander-Egg (1980, *apud* Carmo, 2007) characterizes it as a social technique directed for the promotion of the "human-being" and for the mobilization of human and institutional resources through the active and democratic participation of the population in the study, planning and execution of community-based programs destined to improve these communes life-standard. Traditionally used as a development instrument in rural areas and developing countries, in the last decades, it has also been applied in problematic urban areas around the world (Carmo, 2007), especially in contexts facing important social exclusion issues (for example, areas of strong concentration of immigrant population) as it happens in the case-studies of Amadora and Diadema, that are to be described next.

3. Comparative characterization of the Municipalities of Amadora and Diadema

3.1. Amadora Municipality

The municipality of Amadora was created in 1979, through the separation of a portion of the Oeiras Municipality of whose Amadora was a *Freguesia*[3] (Civil Parish). Integrated in the Lisbon Metropolitan Area (LAM), this municipality has a privileged position in terms of accessibility, being located in the Portuguese capital city's (Lisbon)

[3] In Portugal there are over 4.200 "*freguesias*" (civil parishes) that resulted from the transformation, after the administrative reform of 1836, of formerly strict religious parishes into civil ones. Civil parishes have elected officials and among their functions one can find local roads, kindergartens, retirement houses, parks, cemeteries, and many others. *Freguesias* have both executive (named *Juntas de Freguesia*) and deliberative (called *Assembleias de Freguesia*) branches.

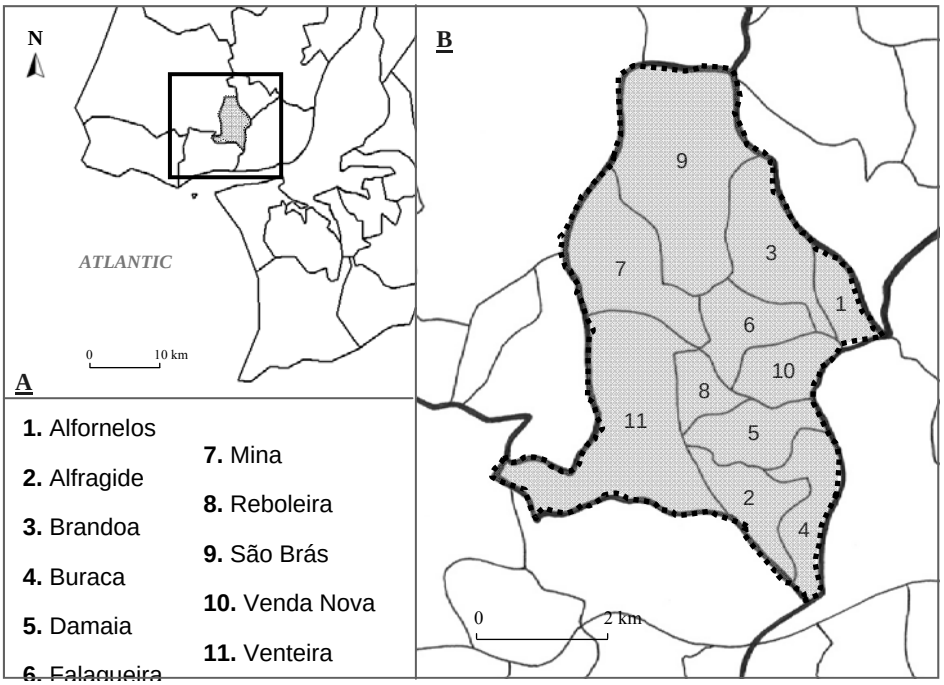
first peripheral ring (Figure 1). This relative position to the country's most important city soon conditioned Amadora's development pattern. With the opening of Sintra suburban railway in the late XIXth century, Amadora gained a strong accessibility to Lisbon, which was soon to be reflected in its exponential demographic growth[4], which became even more intensive in the second-half of the XXth century[5].

Indeed the suburban growth of this area was intensified during the 1950's and 1960's throughout an expansion following a radioconcentric structure coming from the metropolis. The industrial delocalization from Lisbon's centre to its periphery – where Amadora is included -, as a result of a tertiarization process in the second-half of the XXth century, originated an exponential demographic growth in the region where this municipality is currently located. This remarkably "spontaneous" growth was not guided (or even cared for) by the public authorities through urban plans, thus creating a dense and unqualified urban tissue, with severe housing deficiencies and lack of public equipments, and with a strong dependency of Lisbon in terms of access to services.

In terms of territorial dimension, Amadora has only 23.8 km^2 (0.03% of the total territorial surface of Portugal), but it is home of over 170 thousand inhabitants[6]. Its population density – which is strongly connected with urban and environmental pressures – is one of the highest in the country, around 7 200 residents/km^2. From a sub-local point of view, the municipality in divided in eleven Civil Parishes (Figure 1).

[4] Around 245% between 1890 and 1911 (Source: CMA, 2010).
[5] Around 250% between 1950 and 1960 and around 580% between 1950 and 1970 (Source: CMA, 2010).
[6] A total of 172 .110 in 2008 (INE estimates) representing around 1.6% of the total Portuguese population.

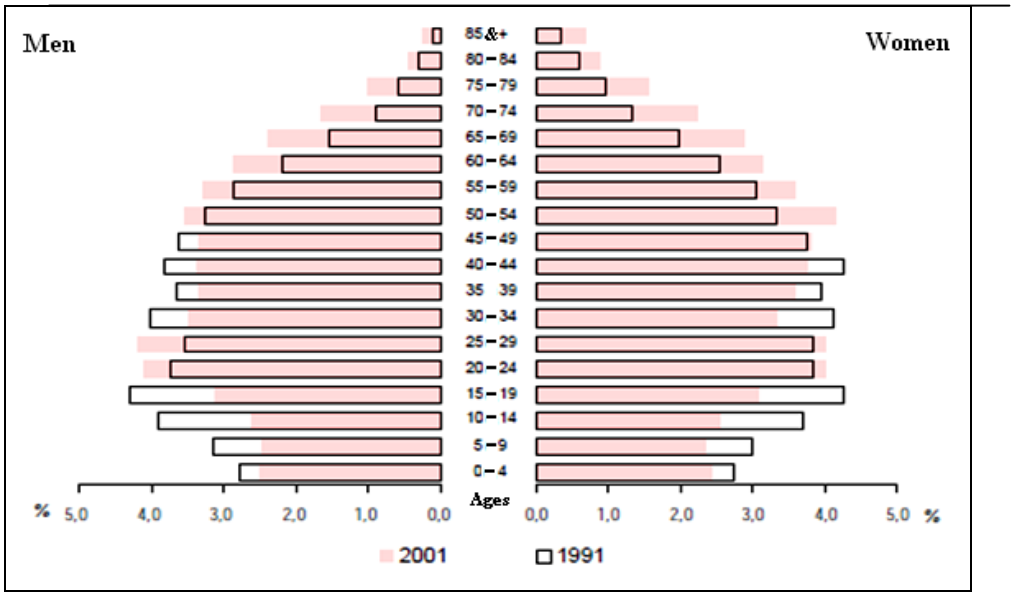
Figure 1 - Location of Amadora in Lisbon Metropolitan Area (A) and its eleven Civil Parishes (B)



A comparative analysis of the population pyramids of the municipality for the years of 1991 and 2001 allows to understand a clear population ageing, visible both on the bottom (less population with 15 years of age or less) and on top (more population with 65 years of age or more) of the pyramid (Figure 2). This is a characteristic situation somewhat all around Portugal, following the trends happening in the generality of the Developed Countries. Nevertheless, the proportion of elder people in the municipality's total population (14%) was according to the Census of 2001 still slightly below than that of the young population (15%). The old-age dependency ratio (20%) was, for that year, less than that of the LMA as an average (23%) (CMA, 2010).

Besides a progressive ageing process, another aspect shown by the two pyramids concerns to the increasing manifested in the 20-24 and 25-29 age groups, which may be a continuation of the tendencies shown in the last decades that place Amadora as a strong destination for international immigrants, coming especially from the former Portuguese African colonies and more recently from Brazil and Eastern Europe.

Figure 2 – Population Pyramids for Amadora in 1991 and 2001



Source: INE, Census 1991 and 2001

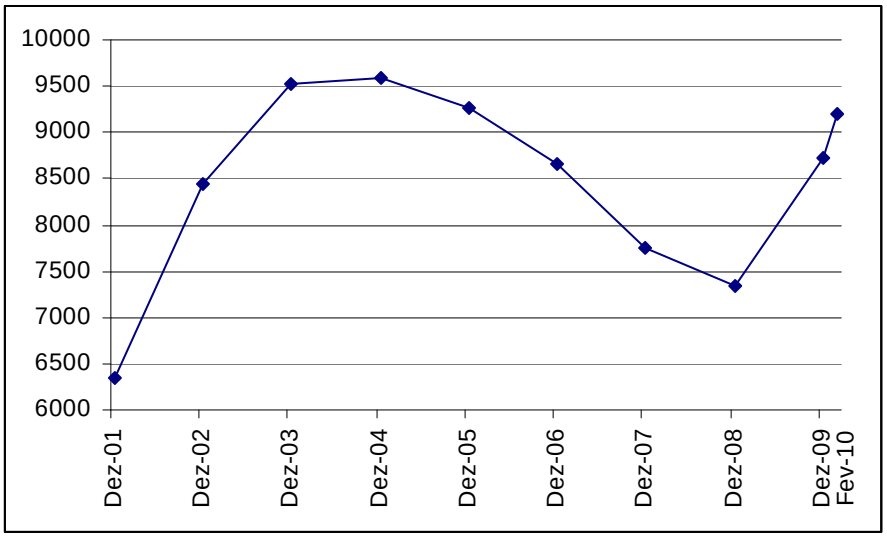
Despite the arrival of this immigrant population, the municipality's migration rate was, for the same intra-census period, negative (- ,4%). This means that, in spite of the strong immigration flows, the entrance of population in the municipality was not enough to compensate the massive exits (almost 15 thousand inhabitants) verified during the 1990's. Indeed recent demographic estimates undergone by INE show a continuity in this "negative" trend of the migratory indicators (-2,1% residents for the period 2001-2008). This situation may be connected with the degradation (of some) of Amadora's housing and social tissue, viewed (by the public opinion) as problematic areas in terms of criminality and insecurity.

The birth rate, although still above the national average, has been declining in the last decades, being 11.7‰ in 2001 (CMA, 2010). In terms of mortality rate, a growth can be identified (from 7.0‰ in 1991 to 8.2‰ in 2001) related with the increasing of the ageing process. Still this rate was, in 2001, around 2‰ lower than the national average. All these data show that not disregarding the fact that the natural growth of population in Amadora was still positive in 2001 a decrease has happened in the last decades, from 8.1% in 1991 to 4.4% in 2001 (CMA, 2010).

In terms of employment, Amadora had an economic activity rate of 53.4%, one of the highest in LMA, in the year of 2001. In terms of unemployment, the figures in

Amadora, as well as those of the country as a whole, have been rising in the last two years (Figure 3). This situation is motivated by both domestic and international economic problems, which led to the closure of important local industries such as the Bombardier train factory. In terms of economic activities, commerce (both in wholesale and retail), social and personal services (e.g. housekeeping), civil construction and manufacturing are the most important sectors in job numbers, with location quotients higher than 1.

Figure 3 - Number of registered unemployed people in Amadora (2001-2010)



Source: IEFP – Concelhos – Estatísticas Mensais

The previously mentioned unemployment levels and population job profiles are both indicators of potential problems in terms of professional and academic qualifications of the population. Indeed, the illiteracy rate faced a slight growth in Amadora between 1991 and 2001, from 5,1% to 5,5% (CMA, 2010), which is a divergent situation from the national and LMA tendencies. A possible explanation for this situation may be related with the African immigration flows (which "brought" many illiterate individuals), as well as the departure of some population with more economic capacity and education (as demonstrated by the general residents decrease during the period 1991-2001). Even in terms of population with higher educational levels, Amadora (8%) is quite below the LMA average (12%) (CMA, 2007).

In housing aspects, Amadora showed significant changes from 1991 to 2001. Being one of LMA's municipalities with stronger habitation growth during the second-half of the XXth century – around 50% of Amadora's buildings were built between 1960 and 1990 –, Amadora experienced, since 1991, a decrease in the growth rate for new lodging construction. Indeed during this period, its 12% growth in accommodation was lower that the 18% average verified in the LMA. Also in the number of construction permits issued since 1991, Amadora had some of the lowest values of the LMA for the same time-frame.

However, in spite of this recent reduction in urban growth, which may be related with the lack of expansion areas – it is important to recall that Amadora is one of LMA's smallest municipalities – Amadora's figures reveal that this municipality is still (and after the capital city of Lisbon) the second most dense area in terms of housing of the LMA (CMA, 2007).

More importantly that the single strong construction pressures is the fact that Amadora inherited a territory marked by precarious neighbourhoods in terms of housing, which had their origin during the 1960's and were progressively enlarged and made more dense in the following decades. Considering the lack of an integrative local housing policy capable of resolving the lodging offer deficit and its high prices, many of the immigrants arriving to this area in high fluxes (especially preceding from Portugal's rural areas in the 1960's and from the former African colonies, in the post-colonial period – 1970's and 1980's) started to resolve by themselves their housing problems by occupying and constructing illegally large "*bairros de barracas*" (slum neighbourhoods) in public and private un-urbanized lands. The result of this is the fact that, in 1993 Amadora registered almost 5 thousand slums (inhabited independent constructions made of old and re-used materials without a determined plan), the second highest value in LMA (just after Lisbon), which were located in 35 different critical neighbourhoods with over 20 thousand inhabitants, around 12% of the municipality's total population (CMA, 2007).

3.2. Diadema Municipality

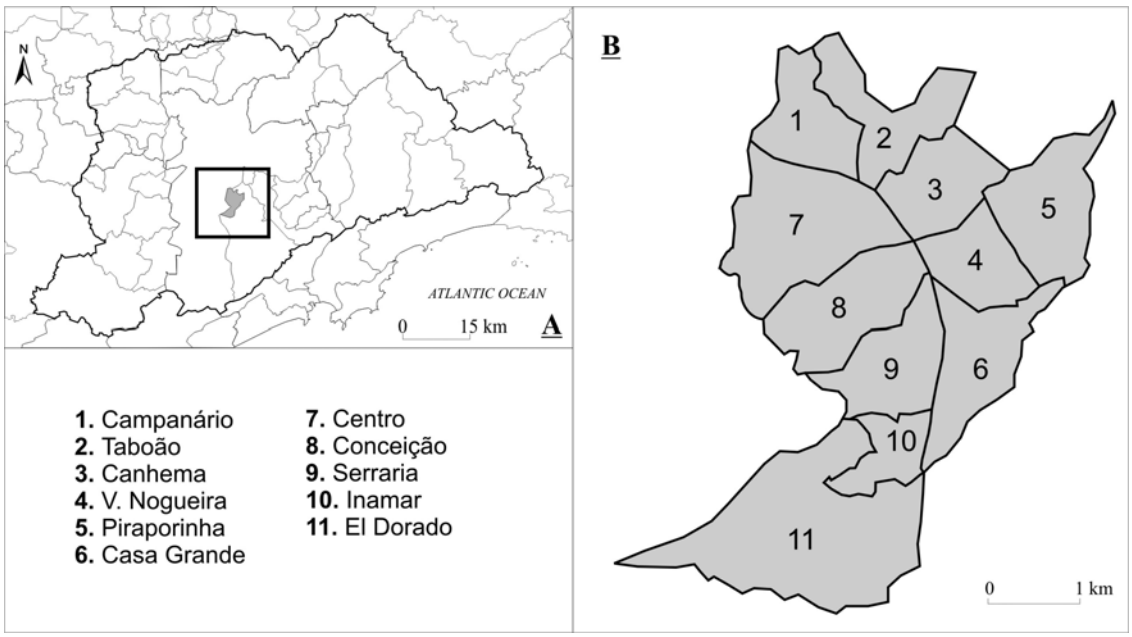
São Paulo is the most important metropolis of the South American sub-continent and a true "Global City" (following the definition of Saskia Sassen) equipped with modern infrastructures, able to provide world standard services and concentrating coordination and command functions associated with transnational corporations. The city and its metropolitan region (SPMR) work as the true economic capital of Brazil. Nevertheless, it is also known as the "*Metrópole das Desigualdades*" (Sachs, 1999) holding a chaotic process of urbanization, a largely dilapidated housing structure and high levels of poverty and social exclusion.

Diadema is one of SPMR first peripheral ring municipalities. With a relatively small size – only 30.7km^2 – this municipality was created in 1959, after being part of São Bernardo do Campo's Municipality, curiously a situation very close to the one verified in Amadora. This municipality is also part of the so-called ABC or ABCD region[7] located southeast of São Paulo, an industrial belt originated by the development of the manufacturing industry – mainly in the automobile sector – at the end of the 1940's and early 1950's, particularly through the policies of Getúlio Vargas, followed by Juscelino Kubitchek and his "*Plano de Metas*" that was concerned with the establishment of industrial and imports substitution macroeconomic development policies.

Its close location towards the city of São Paulo (Figure 5) soon contributed to the predominance of the industrial and residential land uses. Indeed, the territorial transformations that happened in Diadema since the 1960's, all followed the metropolis' own productive activity dynamics, leading to important economic activities and land use changes consistent with the growing industrialization and housing densification processes.

[7] ABC or ABCD stands for Santo **A**ndré (A), São **B**ernardo do Campo (B), São **C**aetano do Sul (C) and **D**iadema (D). More recently Mauá, Ribeirão Pires and Rio Grande da Serra municipalities have also been considered part of this region forming the so-called enlarged ABCD.

Figure 1 - Location of Diadema in São Paulo Metropolitan Area (A) and its eleven neighbourhoods (B)



During the 1960's and until the 1980's Diadema had a strong population growth, knowing average annual growth rates of around 20% during 1960-1970's period and 11% in the following decade. In the 1990's, the annual growth rhythm slowed strongly (around 3%). In spite of that, the absolute figures were still impressive during that decade with a resident's increase of around 50 thousand individuals, meaning an augment of about 17% during the first half of the last decade of the XXth century (IBGE *apud* Romeiro and Laviola, 1996). IBGE estimates also indicate an 11.4% population growth between 2000 and 2009.

The 2000 Census demonstrated that Diadema had a quite young population structure, with almost 40% of the residents having less then 20 years of age. The population with over 60 years was around 5% (IBGE *apud* Marques, 2008).

It is in the municipality's industrial expansion that one can find the basis for the previous demographic dynamics, as well as, indirectly for the aforementioned population structures. In the year 1960, the municipal industrial sector had only 632 workers; ten years later that figure increased up to 9 622. The manufacturing sector,

through the creation of new jobs, led to a migrants' attraction process. Immigrants started to arrive here coming from all across Brazil, especially from the "*Nordeste*"[8].

Romeiro and Laviola (1996) synthesize the most important economic and productive characteristics of Diadema in the mid-1990's, most of them still maintaining today:

- The industrial sector was the biggest employment sector of the municipality. Therefore, the productive restructuring that started in the 1970's still had visible consequences at that time, namely in terms of the local unemployment;
- Unemployment in Diadema is a cyclic and conjuncture phenomenon, dependent of the region's industrial dynamism. Nevertheless, since the 1980's, there has been a tendency of stabilisation of the unemployment rates around the numbers 15-17%, which represents a high value, even in the SPMR context;
- Diadema's manufacturing sector structure is characterized by local industry integration with the larger regional automobile industry, specially in the auto parts sub-sector;
- There is an important informal sector in the local economy, mostly related with non-specialized retail, automobile repair, personal and domestic objects selling and increasingly personal domestics services and civil construction;
- The services sector has been starting to display a known and positive dynamics, associated to the process of modernization of the local economy and to the real estate expansion verified in the municipality, as well as to the increases in transport, storage, communications and services to the companies.

In the social domain it is important to underline some interesting aspects. One of the first refers to the clandestine urbanization phenomenon extension in Brazil, in São Paulo and, more specifically, in Diadema. This raises several important questions concerning the local population development levels. In this field, the child mortality rate is an

[8] The Northeast Region ("*Nordeste*") of Brazil is composed of the following states: Maranhão, Piauí, Ceará, Rio Grande do Norte, Paraíba, Pernambuco, Alagoas, Sergipe and Bahia. With 1.558.196 km² and over 50 million inhabitants this is the poorest region of Brazil.

important indicator to be used. Although Diadema still presents high values on such a datum, the evolution is remarkable, from 108‰ in the year 1970, to 37‰ years 20 years later, a figure quite below the Brazilian average of around 50‰. In the following years this reduction tendency continued, reaching 21‰ in 1994 (Romeiro and Laviola, 1996).

Curiously, comparing these figures with those of Amadora (12‰ according to INE), show us the differences that in spite of the multiple similarities found between the two spatial contexts still exist between them. Also the average life expectation in that same period – around 63 years for Diadema – show us a difference of almost 10 years between these two territories, with a clear advantage for the Portuguese municipality.

In educational terms, Diadema has some serious problems. Its illiteracy rate in 2000 (12%) – one of the highest in SPMR, whose average is less then 9% – was more than the double of that of Amadora (5.5%). Around 34% of the population with more then 25 years in Diadema did not finished the first four years of education, and almost 75% did not completed more then eight years of formal tutoring. The population in Diadema holding a higher education diploma was less then 3%. On the other hand, Amadora – which has for itself a very low figure for the LMA context – had more than 8%.

In terms of housing, Diadema is also facing some serious problems. The population growth in the last decades had, obviously, extreme repercussions in terms of the municipality's lodging quality. The formal sector's inability to build sufficient new houses, associated with the migrant population's economic difficulties and the lack of "available" land in this reduced-size municipality, strongly conditioned the lodging quantitative and especially qualitative increase in Diadema's slums. The result of this is the existence of serious social problems in terms of poverty, social exclusion and marginalization, both in terms of housing and employment, as well as in Diadema's environmental sustainability.

Yet, important progresses have been made in the last decades, especially since the late 1980's and early 1990's. Indeed, houses and neighbourhoods' infra-structuring has improved importantly in the last 30-40 years. Only 71.4% of Diadema's houses were made of durable materials in 1970; currently, according to IBGE, the same value is above 98%. Only 35.9% of the houses had proper water supply in 1970; this has risen to

an actual total of circa 97%. In 1970, just about 29% of the houses were equipped with proper sewer facilities. IBGE notices that the current value is above the 75% figure (Romeiro and Laviola, 1996).

Finally, in what concerns to the numbers of "favelas" (or slums) and their corresponding population it is also possible to find some important improvements. Presently there is a total of 75 "*favelas*" in Diadema (almost 15% of SPMR's total number of slums), which represent a total of 40% of the municipality's population, around 130 thousand inhabitants. These figures, although still very significant, represent a massive reduction from the 97 "favelas" found in Diadema in the year 1980, which comprised more than half of the residents in this territory. This evolution is even more significant when contextualized in the general tendencies of the country's territory, since it represents a "counter-movement" to the one verified both in the Brazilian and the SPMR context, which still are currently facing a high growth in the number of slums and its inhabitants (Hereda and Alonso, 1996; Romeiro and Laviola, 1996; Sachs, 1999).

Despite all of their peculiarities, some important similarities have been found between the general characteristics of Diadema (Brazil) and Amadora (Portugal). They both faced heavy industrial growth in the second half of the XXth century, result of their territorial proximity to their respective country's economic centres. They both are small-sized but densely populated territories – individualized form larger municipalities in the second half of the XXth century – with severe social exclusion problems (mainly housing issues) related to the massive arrival of immigrants in result of the aforementioned industrialization processes. Their current educational, social, economic, habitational and demographic profiles are similar (obviously adapted to each country's context) and show clear reflections of these social and economic evolving profiles. All the previous factors determine the interest of their comparison in terms of their local development initiatives, which are going to be synthetically presented in the following section.

4. Local Development Initiatives in Amadora and Diadema

4.1. Methodology

Following the territorial characterization of the two municipalities target of the present paper some of the development initiatives directly and indirectly relevant for the enhancement of the local economies developed in the last years in the two case-study areas will now be synthetically demonstrated. Before that presentation, a brief note containing some necessary explanations about the empirical methodology applied will be undergone.

The research about the local development initiatives was made possible by the intensive use of the Internet. The websites of local relevant political, administrative and economic actors were thoroughly analysed. Far from being an exhaustive process, the selection of the projects and initiatives to be included was based on their real or potential contribution for the local economic development.

Based on previous research developed by Amaral Filho (1996, *apud* Marques, 2008), five great thematic areas were to be privileged in this process, namely:

1. Education, health and food security, which stand out as the basic foundations of the human capital. Investing in these areas is to invest in one of the most important production factors, the labour force;

2. Science and technology, or research and development, simultaneously extensions and products of the human capital that constitute the qualitative foundations of the economic development (either public or private);

3. Information and knowledge. Fast flow and inter-change of information about the markets and the processes of production is of fundamental relevance once it has the ability to boost the productive system's productivity;

4. Institutions, either public or private, visible and invisible, at several scales (with privilege to the local and regional levels of interaction), since they play an instrumental role in market boosting and regulation and in the preparation of the civil society for the ever-evolving challenges of the global economies;

5. Environment, meaning the sustainable use of resources and the reduction of the ecological impact (or the externalities) of a given production process.

The adaptation of the previous directives to the peculiarities inherent to the two case-studies and to the objectives of the current paper determined that subjects like the stimulus to the local entrepreneurialism, formal and informal education, environmental sustainability, land use legislation, or tourism were granted a greater relevance, answering to their potential towards the promotion of Local Endogenous Development. So, the initiatives identified were grouped into one of the following four categories: i) Incentives granted to the entrepreneurs and the enterprises and/or to the production processes themselves; ii) Education and professional qualification of the population; iii) Transport networks and accessibilities; iv) Tourism and environmental preservation.

In spite of an exhaustive presentation of all the initiatives identified in the municipalities – which would succumb faced with the paper's analytical objectives and dimensional constraints – it was to decided to present a synthesized comparative brief of the projects identified in the two spatial contexts, trying to identify (and compare) some common points and specificities inherent to each one of them.

4.2. Results: A Comparative Synthesis between Amadora and Diadema

A synthetic demonstration of the most relevant local initiatives identified in the two municipalities is presented in Table 1, organized according to the four themes considered methodologically. The organization of the initiatives considered in the two municipalities in a single table aims to promote a better comparison of these two territorial contexts.

A first aspect to be underlined is the fact that there is a similar relative importance conceded to the four axis of analysis in the two municipalities. Axis 1 and 2 – respectively the incentives to local entrepreneurialism and education and professional qualification of the municipality's population – gather a higher number of programmes. This is a trend already verified in a similar study developed for the SPMR (Marques, 2008). An interesting fact is to be seen in Axis 4 (Tourism and Environment) where the municipality of Amadora displays higher and more intensive concerns. Areas of intervention like the promotion of a strategic local sustainable development, or the recycling and individual and corporate waist disposal – perceptible in the Amadora case – are not as prominent in the municipality of Diadema.

In what concerns to transports and accessibilities two aspects are to be noticed. The first one respects to the fact that both the municipalities do not have an integrated local (territorial or strategic) transport programme. The second allows noting that there are no consistent initiatives concerning these matters neither in Amadora, nor in Diadema. A possible explanation for such aspect might be the fact that the transport and accessibility sectors are commonly (and as it may be seen in several countries) developed at a regional level. So is the case of Diadema, where transport management is being placed as a competence of a regional institution – the Intermunicipal Consortium of the ABCD region. Intra-municipal transport and accessibility management are normally cared for not by specific programmes but in the context of larger and more general urban rehabilitation operations hence the fact that the projects identified in the axis related to the transports tend to be scarcer that the rest.

	Amadora	Diadema
Incentives to Local Entrepreneurialism	- "Amadora Empreende": Municipal Program of Social Entrepreneurialism (public economic development agency); - Project "Quem não Arrisca, não Petisca" destined to grant support to local and unemployed small entrepreneurs; - Project "Quick Amadora" directed to support local young entrepreneurs to settle their businesses in Amadora; - MODCOM initiative: system of financial incentives to projects directed to modernize the traditional commerce; - "Housing Pockets" (directed to overcome the constraints verified at this level and stimulate the local housing market); - Programmes to promote immigrants' entrepreneurialism ("Contamos Consigo", "Geração" and "MILE"); - Sector programmes: "Mulher +" (entrepreneurialism among women), "Vantagem" (directed at disabled peoples); and "Conseguir" (specifically destined to ex-convicts);	- Marketing and promotion of the municipal enterprises (alongside with the infra-structuring of industrial parks); - Creation of the "Peoples Bank", institution that grants micro-credit to local and small entrepreneurs; - Implementation of strategic Thematic Industrial Centres (on the Cosmetics and Automobile sectors); - Project: "Self-Managed Enterprises Incubators" (free advisory and financial incentives to small companies); - Fiscal incentives granting to promote the establishment of local enterprises and the constitution of Cooperatives; - Incentives to market distribution and purchase of local agricultural products (delivered to social institutions); - Project: "Popular Entrepreneur" (destined to boost small-sized informal local enterprises and entrepreneurs); - Program Exporta-Cidade (destined to promote industrial companies' insertion in the International trading systems).
Education and Professional Qualification	- Social Development Local Contract (several axis of action including support in adult's education and digital inclusion); - Intercultural School of Sports and Professions (educational offers adapted to local and regional labour markets needs); - Centre "Novas Oportunidades" of Amadora (national-based initiative destined to promote adult's education); - Several initiatives under the European-based programmes URBAN II and EQUAL;	- Project: "Mov@di" (destined to promote the digital inclusion of the population through multiple initiatives); - Professional qualification courses (adapted to the local productive system's specificities and local social needs); - Stimulus for implantation of the campus of Diadema of the Federal University of São Paulo (PPP developed with local and regional enterprises associations); - Project MOVA Diadema (adult's alphabetization program).
Transports and Accessibilities	- Interventions in the ambit of the program PROQUAL (axis directed to improve inner-municipality accessibility);	- Local and regional programs to improve public transports and accessibilities in the municipality (and to its exterior).
Tourism and Environment	- Action Plan of the Local Agenda 21 (to be developed in Coordination with state, academic and private institutions); - National Comics Festival (following the creation of the National Centre of Comics and Image in Amadora); - PROCICLA, City Hall's program destined to promote selective waist disposal by individuals and companies;	- "Festival dos Sabores" (gastronomic festival organized by the City Hall and private investors of the lodging sector).

Table 1 – Comparative synthesis of the local development initiatives identified for the municipalities of Amadora (Portugal) and Diadema (Brazil)

Education and professional qualification is an important area of intervention in both the municipalities. It is possible to find clear similarities between the types of initiatives developed in Amadora and Diadema. Even though they have particularities driven by the need to be adapted to each context, in both the case-study areas one can find programmes directed at: i) the alphabetization and professional qualification of adults; ii) the development of "alternative" (formal and non-formal, at multiple levels of qualification) educational offers, more suited to face the challenges of the local and regional labour markets; iii) the digital inclusion of the municipal population.

Nevertheless, it seems to be possible to identify two distinctive aspects in this matter, being one the fact that the municipality of Amadora is directly beneficiary of a greater amount of public investments in education coming not only from the national government but also from funding granted by the European Union. So is the case of the projects developed under the local implementation of two European Initiatives, namely URBAN II and EQUAL, both of them financed through European Structural Funding. The isolated projects funded by these two programmes must be developed through the establishment of PPP's between the local city hall and other local and national institutions.

The other relevant and differential aspect to be elevated is the fact that Amadora's City Hall, understanding the importance of the educational sector, gathered the initiatives developed in this axis and decided to make them official through the establishment of a local municipal public enterprise named Intercultural School of Sports and Professions. Created in 1999 with the support of the Enterprise Association of the Region of Lisbon (AERLIS) and Cooptécnica – Professional School Gustave Eiffel, its objective is to present alternative educational courses specifically directed to the professional and labour integration of individuals with low qualifications or in the merge of school abandonment.

A rather different situation can be found in what respects to the projects developed under the scope of the promotion of the municipal entrepreneurialism and the granting of incentives (financial or not) to the local productive system. Apart from some very similar initiatives – small-businesses "incubators" or the constitution of local advisory teams – the projects and programmes identified in the two municipalities were distinct,

displaying interesting adaptations to each territorial context, from the local to the macro-regional levels.

The initiatives developed in Diadema are more directed at the industrial sector than the ones identified in Amadora, reflecting the more advanced state of economic tertiarization presented by this last municipality where the retail and traditional commerce, and the housing sectors (either one is talking about the construction, the selling/purchase or the renting markets) are directly addressed through specific programmes.

Although being a reality in both the cases, the informal sector is also treated differently in Diadema and Amadora. In Diadema – where the informal sector is, as it has been seen before, extremely important – one can find specific measures directed at the promotion of these practices (in a first phase) aiming at their future legal regularization (in a second phase). In Amadora the situation is different. Although there were found no specific initiatives concerned with the informal economies, the creation of an official municipal "housing pocket" – destined to boost the formal local housing markets – may be seen as an attempt to overcome informality in one of its most important sectors.

Another interesting aspect relates to the strategic, integrative and coordinated character of Amadora's initiatives in this ambit, since most of them are developed under the tutelage of a single local institutional programme (implemented through the establishment of multiple public-public and public-private partnerships) called "Amadora Empreende", which is now a public municipal agency. The remaining are generally promoted and financed at a national or European level. On the other hand, in Diadema, the programmes identified are more detached from each other not constituting an integrated and well-organized consistent set of initiatives.

The creation of cooperatives and sector associations is a concern in the Diadema case, while in Amadora the individual entrepreneurs are normally the focus of the initiatives. Entrepreneurialism incentives are more demographically and socially fragmented in Amadora than in Diadema, where generally all the municipality's inhabitants are eligible to apply to the projects developed. In fact, that is one of the most relevant characteristics of the incentives presented in Amadora. Several specific programmes could be identified, directed to women, international immigrants (particularly intensive

and relevant and adapted to the local socio-ethnic scenario), unemployed individuals, youngsters, disabled people or ex-convicts.

The previous distinctiveness is also visible by the fact that monetary incentives (like access to micro-credit) are more common in Diadema. On the contrary, in Amadora, the incentives tend to come under the form of indirect financing, like advisory and tutoring on how to build a business, integration in business networks, tax and infra-structural incentives, among other practices.

Conclusively, and accounting for the aforementioned, it is possible to notice that, even though the concept of entrepreneurialism implies both social and economic dimensions, one can say that in Amadora the incentives to entrepreneurial activity are more "socially-driven", while in Diadema they tend to be more "economically-motivated".

5. Final Remarks

Aiming at the accomplishment of a comparative study (between two suburban municipalities, Amadora and Diadema, respectively in São Paulo and Lisbon's metropolitan areas) respecting to the theme of local development strategies, a set of initiatives implemented in the two case-study areas was analysed.

The projects identified were grouped into four main areas, namely entrepreneurship, education, transports and accessibilities, and tourism and environment. Multiple programmes were analysed enabling the understanding of the existence of some focal points in what concerns the implementation of local strategies of development.

Amadora and Diadema present interesting local territorial resemblances. They both are small-sized and densely-populated municipalities, placed in the first ring of the two economic capitals of their respective countries. Their recent socioeconomic background was driven by industrial expansion, which led to chaotic and un-planned demographic growth (due to intense immigration flows) with multiple social problems attached to this phenomenon.

Nevertheless, and even though one is not disregarding the existence of some similarities between the initiatives developed in the contexts, it is possible to conclude that differences imposed by the recent socioeconomic evolutions of the two municipalities – many of which are due not only to the local levels but also to the changes happened at

the national and even macro-regional contexts (for example, the entrance of Portugal to the European Union) –determined the existence of different profiles on the initiatives developed.

One of the most important outputs of the present work is the reaffirming of the current importance of local contexts in the establishment of sustainable development strategies. The stimulus to local entrepreneurialism (especially in the form of small and medium enterprises) is a reality in the (two) suburban areas, and so it is the notion that factors such as technology, accessibility, environmental protection and especially education (knowledge) play a truly instrumental role in the promotion of Endogenous Development initiatives. And – even though presenting several adaptations to their territorial contexts – this seems to be an unequivocal belief of both the suburban municipalities analysed, as shown by the concerns displayed through their local development initiatives.

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"ENTREPRENEURSHIP IN THE OUTERMOST REGIONS OF EUROPE"

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ABSTRACT

External economic conditions are extremely important for the development and promotion of entrepreneurial activity. Entrepreneurship in the Outermost Regions of Europe (ORE) is potentially constrained by several economic, social and geographic restrictions. To analyse these restrictions, we study this phenomenon in three of the seven ORE: Madeira, the Azores, and the Canary Islands. A total of 21 semi-structured interviews were conducted among relevant public institutions, chambers of commerce and local entrepreneurs, which help us to characterize the entrepreneurial environment and to identify the specific entrepreneurial problems posed in these regions. Throughout the interviews it was possible to identify similarities between these regions: the economies are mostly composed of micro-firms; in all the regions the political and legal environment and the infrastructural environment is considered to be favourable to entrepreneurial activity; but also these regions have to overcome a common problem to the development of the entrepreneurial activity, namely the difficulties and cost of the transportation of goods and people.

Key-words: Entrepreneurship, New firms and Outermost Regions of Europe.

1 – INTRODUCTION

This paper analyses the nature and characteristics of the entrepreneurship phenomenon in the Outermost Regions of Europe (ORE). The external environmental conditions in any region are a fundamental factor for the promotion of entrepreneurial activity. The ORE are recognized as being entrepreneurial challenging because they have to overcome several socio and economic constraints. As a result, these regions may present an environment unfavourable to the entrepreneurial activity. Entrepreneurship is recognized as being extremely important for the economic development and technological progress of a region, because it stimulates economic growth, employment

and competitiveness (Ivancevich et al. 1997). In the entrepreneurial process the environment represents all the different conditions that are imposed on the enterprise from outside (Gartner 1985). Several researchers have studied the entrepreneurial environment and identified factors which are considered important to the entrepreneurial activity particularly in terms of new firm creation. The ORE are a group of seven regions within the European Union (EU) that due to their distinct characteristics are easily distinguished from the other regions of Europe. These regions are considered as being different because they have several economic, social and geographic restrictions, which will have impact on the available resources and the social and economic structures. These restrictions include: remoteness (ultraperipheral location), insularity, small size, difficult topography and climate, as well as economic dependence on a small number of products (European Commission 2008) and a limited internal market. The particular and interesting characteristics of the ORE combined with the lack of scientific published information on entrepreneurship in ultraperipheral and remote economies indicates the need for new research. Therefore, the focus of our paper is to characterize the entrepreneurial activity and assess the entrepreneurial environment in these regions through the analyses of a series of interviews. The interviews were based on a theoretical framework of the external environmental factors that affect new firm creation identified trough an in-depth literature review. The interviews allow the authors to answer the following two research questions: how is the entrepreneurial activity in the ORE characterized and how do local entities and local entrepreneurs assess the entrepreneurial environment in the ORE?

2 - ENTREPRENEURSHIP: THEORICAL BACKGROUND

Entrepreneurship is not a new phenomenon. It has accompanied humankind since the beginning of history; however, as an academic field of study it is considered to be very young (Cooper 2003). However, the complex character of the entrepreneurial field of research makes it unique within the social sciences, representing a significant challenge for researchers (Bruyat & Julien 2001). As a result, the study of entrepreneurship has attracted the attention of many academics and researchers. However, Shane (2003) emphasizes that despite the increasing interest in the field, academia has not been able to produce a consistent theoretical framework of entrepreneurship. The term entrepreneurship has become a broad label that covers a diversity of studies and

perspectives, contributing to the absence of a strong explanation for the phenomenon (Shane & Venkataraman 2000). According to Shane (2003) the absence of a coherent conceptual framework for entrepreneurship is caused by the fragmentation of the research field into two distinct approaches: the first, focused on individuals; and the second, the focus on external forces. Another explanation for this alack of coherence is that entrepreneurship is a diverse and complex phenomenon (Wickham 2006), which embraces a diversity of scientific fields: including economics, history, business and management and psychology.

2.1 – DEFINING ENTREPRENEURSHIP

Cantillon (c. 1680-1734) is considered one of the first people to introduce the formal concept of the entrepreneur into economics and business literature (cited in Casson 2003; Murphy, Liao & Welsch 2006). He perceived the entrepreneur as an individual who makes judgments in an uncertain environment; with the main propose of obtaining profit throughout a business exchange (cited in Herbert & Link 1989). However, the complex contextualization of entrepreneurship has originated a variety of different definitions within the entrepreneurial field of research. Table 1 presents the contributions of the different scholars who are recognized as being extremely influential in the field.

Table 1 – Major contributions to the conceptual development of entrepreneurship.

Author	**Key idea**
Cantillon (1755)	The entrepreneur is an individual with the main propose of obtaining profit throughout a business exchange.
Knight (1921)	The entrepreneur is risk taking individual.
Schumpeter (1934)	Entrepreneurship is a "creative destructive" event.
Kirzner (1973)	The role of the entrepreneur is to be alert to identifying opportunity in deficient market exchanges.
Casson (1982)	The entrepreneur is a person that takes critical and strategic decisions about the utilization of scarce resources.
Drucker (1985)	The main task of the entrepreneur is to search for change and exploit this opportunity through the introduction of innovation.
Gartner (1988)	Entrepreneurship is simply the process of creating a new organization.

As it is perceived, the entrepreneurship field of study incorporates different definitions of the same (or similar) phenomenon. This arises from different perspectives of analysis that incorporates a variety of disciplines, culminating in a vast and unstructured field of research. Furthermore, Grilo and Thurik (2004) underline that entrepreneurship is a concept that involves different dimensions; therefore, the definition adopted by a

researcher will depend on the topic and focus of his or her research. However, the absence of a solid and consistent definition of entrepreneurship is considered to be the largest obstacle to obtain a conceptual framework of the field (Shane & Venkataraman, 2000). In Low and MacMillan's (1988) revision of the relevant entrepreneurship literature they suggest a unifying definition of the field of entrepreneurship, by defining entrepreneurship as the "creation of new enterprise". They propose that 'entrepreneurship research seeks to explain and facilitate the role of new enterprise in furthering economic progress' (Low & MacMillan ,1988, p. 141). This definition of entrepreneurship is adopted in this research; therefore, the analysis of the entrepreneurial activity is being confined to the new firm creation.

Analysing the entrepreneurial field Shane (2003) emphasizes that there are two major approaches to the study of entrepreneurship: one involves focusing exclusively on individuals, where they explain the entrepreneurship phenomenon by identifying the members of a society that could be recognized as "entrepreneurial individuals"; and the other focuses exclusively on external forces, where they explain entrepreneurship by looking to the environment in which the entrepreneur originates, identifying situations where new firm formation is more likely to occur. Similarly, Davidsson, Low and Wright (2001) also divide the focus of analysis of entrepreneurial into two parts: the approach that focuses on individuals; and the other that focuses on environmental factors. The individual approach assumes that the entrepreneur is the fundamental actor in the entrepreneurial process, and is the central subject of research. The environmental approach considers that external forces have a fundamental impact on the emergence, development and outcome of an entrepreneurial activity. This research will focus on the environmental approach at a regional le and it will analyse how the regional environment can affect entrepreneurship (Davidsson & Wiklund 2001).

2.2 – Environmental Approach

The environmental approach considers that external forces have a fundamental impact on the emergence, development and outcome of entrepreneurial activity. This approach focuses exclusively on external forces, explaining entrepreneurship by looking at the environment in which the entrepreneur originates, identifying situations where new firm formation is more likely to occur (Shane 2003). Aldrich and Martinez (2001) emphasize

that the new firm will be directly influenced by the surroundings and its survival will depend on the degree of adaptation between the entrepreneurial efforts and the environmental context. Furthermore, to understand the entrepreneurial opportunity discovery and exploitation (Davidsson, Low & Wright 2001), and the final outcome (Romanelli 1989), it is necessary to understand the environmental factors that affected this process. For that reason, Van de Ven (1993) emphasizes that if entrepreneurship research is centred only on individual characteristics - and treats the environment as externalities - the study of entrepreneurship will be deficient. Therefore, it is extremely important to analyse and comprehend the influence that environmental conditions can impose on entrepreneurial activity.

The environmental surroundings within which a firm operates will pose several opportunities, threats and challenges to entrepreneurs. It will also be the primary supplier of the resources that are needed to develop entrepreneurial activity, and this is a crucial factor for success or failure. Therefore, the environment represents all the different conditions that are imposed on the new venture from the exterior (Gartner 1985) and the amount of environmental resources available will have a significant impact on the future of the start-up (Romanelli 1989). 'The term "entrepreneurial environment" refers to a combination of factors that play a role in the development of entrepreneurship' (Fogel 2001, p.103). According to Gnyawali and Fogel (1994) the entrepreneurial environment is an arrangement of different factors (economic, sociocultural, and political), and of all the available assistance and support services, that will have a significant impact on the development of the entrepreneurial activity. Specht (1993) recommends a combination of resource dependence and population ecology research to better comprehend the relationship between the environment and organization formation. This recommendation is followed in this study; therefore, research and contributions of both perspectives will be incorporated in the research to better understand the entrepreneurial environment and also identify the factors considered important to new firm creation.

2.3 – ENTREPRENEURIAL ENVIRONMENT

Several studies have attempted to identify the environment that is more favourable to entrepreneurial activity. These studies try to identify factors, characteristics and conditions that could be considered as fundamental for the development of the entrepreneurial activity. Additionally, it can be argued that these studies identify the environmental factors without which the entrepreneurial activity, namely the new firm creation, would be less likely to occur. The factors identified throughout these empirical studies can be assembled into six distinctive groups that will represent different dimensions of the entrepreneurial environment: socio-demographic environment; political and legal environment; economic environment; technological environment; financial environment; and infrastructural environment.

Socio-demographic Environment:

The socio-demographic environment represents the socio, cultural and demographic characteristics of a society in a specific region. It is an important element of the entrepreneurial activity within a region because society can help to promote entrepreneurship throughout the creation of a supportive climate to entrepreneurship. Table 2 presents the factors associated to the socio-demographic environment.

Table 2 – Factors associated to the socio-demographic environment.

Factors	Impact in the entrepreneurial activity	Studies
Social attitude	Positive impact	Bull & Winter 1991; Garofoli 1994; Davidsson Lindmark & Olofsson 1994; Lee, Florida & Acs 2004; Tamásy 2006.
Social Networks	Positive impact	Brüderl & Preisendörfer, 1998; Greve & Salaff, 2003.
Level education	Positive impact	Bull & Winter 1991; Van de Ven 1993; Guesnier 1994; Audretsch & Fritsch 1994; Armington & Acs 2002; Tamásy 2006.
	No impact	Gripaios et al. 1989.
Business background experience	Positive impact	Westhead 1990; Davidsson 1991.
Population (Demand) Growth	Positive impact	MacMillan, Siegel, & Narasimha 1985; Guesnier 1994; Audretsch & Fritsch 1994; Keeble & Walker 1994; Reynolds 1994; Hart & Gudgin 1994; Davidsson, Lindmark & Olofsson 1994;Reynolds, Storey & Westhead 1994; Armington & Acs 2002.
Unemployment	Positive impact	Storey 1991; Davidsson, Lindmark & Olofsson 1994; Reynolds 1994.
	No impact	Pennings 1982.
	Negative impact	Garofoli 1994; Ritsilä & Tervo 2002; Armington & Acs 2002.

Political and Legal Environment:

The political and legal environment represents the political and governmental characteristics, as well the legal situation within a region. Governmental policies will have a very important role to play in promoting the entrepreneurial activity within a region. According to Gnyawalli and Fogel (1994, p. 45) 'governments both directly and indirectly affect the development of an environment that could support entrepreneurship'. Table 3 presents the factors associated to the political and legal environment.

Table 3 – Factors associated to the political and legal environment.

Factors	Impact in the Entrepreneurial activity	Studies
Supportive government policies	Positive impact	Dana 1990; Young & Welsch 1993; Hart & Gudgin 1994; Choi & Phan 2006.
	No impact	Mason 1989; Del Monte & De Luzenberger 1989.
Low legal Requirements	Positive impact	Dana, 1990; Fogel 2001; Klappera, Laevena, Rajanc 2006.
Legal context	Positive impact	Johnson, McMillan & Woodruff 2002; Claessens & Laeven 2003.

Economic Environment:

The economic environment reflects the economic reality of a region, which will have impact on entrepreneurship. The type of existing industries, the number of firms and the structure of the economy will have influence on the type of entrepreneurial activity. Table 4 presents the factors associated to the economic environment.

Table 4 – Factors associated to the economic environment.

Factors	Impact in the Entrepreneurial activity	Studies
Income (Demand) Growth	Positive impact	Keeble & Walker 1994; Reynolds 1994; Reynolds, Storey & Westhead 1994; Armington & Acs 2002.
Small Firms	Positive impact	Hart & Gudgin 1994; Garofoli 1994; Reynolds, Storey & Westhead 1994.
Industry density	Positive impact	Krugman 1991; Porter 1998; Armington & Acs 2002.

Technological Environment

The technological environment represents the capacity for change and technological innovation within a region, which will contribute to the promoting of entrepreneurial activity. Innovation is referenced throughout the literature (see Table 5) as an important factor that contributes to entrepreneurship. Therefore, a region that can promote high

levels of innovation will have a more dynamic entrepreneurial activity. Table 5 presents the factors associated to the technological environment.

Table 5 – Factors associated to the technological environment.

Factors	Impact in the Entrepreneurial activity	Studies
Universities	Positive impact	Segal 1986; Chrisman, Hynes & Fraser 1995; O'Shea et al 2004; Kirchhoff et al. 2007.
Research and Development	Positive impact	Tushman & Anderson 1986; Venkataraman 2004; Fritsch & Mueller 2005; Choi & Phan 2006.

Financial Environment

The financial environment represents the financial and fiscal conditions, and the degree of accessibility to capital that exist in a specific region. This probably is one of the most important factors that will directly impact the entrepreneurial activity within a region. Table 6 presents the factors associated to the financial environment.

Table 6 – Factors associated to the financial environment.

Factors	Impact in the Entrepreneurial activity	Studies
Availability of capital	Positive impact	Pennings 1982; Florida & Kenney 1988; Davidsson, Lindmark & Olofsson 1994; Sutaria & Hicks 2004.
Fiscal incentives	Positive impact	Dana 1990; Chen, Lee & Mintz 2002; Klappera, Laevena & Rajanc 2006.

Infrastructural Environment

The infrastructural environment corresponds to the logistical conditions that must exist within a region to promote entrepreneurial activity. All the other factors presented earlier are important, however, some basic conditions need to exist to attract new entrepreneurs into a region. Table 7 presents the factors associated to the infrastructural environment.

Table 7 – Factors associated to the infrastructural environment.

Factors	Impact in the Entrepreneurial Activity	Studies
Communication and transport infrastructure	Positive impact	Dubini 1989; Aldrich 1990.
Supportive services	Positive impact	Dubini 1989; Fogel 2001.

Hence, the perception that one has in analysing the entrepreneurship literature is that 'the environment undoubtedly influences entrepreneurship' (Bull & Willard 1993, p. 183). Nevertheless, more research is required to better understand the link between

external environmental conditions and entrepreneurship. (Ucbasaran, Westhead & Wright 2001). Throughout the literature review it was possible to identify 18 important factors to the new firm creation. This research will consider that all this factors have a positive impact on the entrepreneurial activity.

3 - METHODOLOGY

Ucbasaran, Westhead and Wright (2001) emphasize that to study the effect of external environments on entrepreneurs and the reaction of firms to it; the "why" and the "how" questions can be investigated using a combination of multivariate statistical techniques and qualitative methodologies. This research followed a qualitative methodology to study the entrepreneurial environment in the ORE. The qualitative methodology was chosen because it will offer 'an apparently 'deeper' picture than the variable-based correlations of quantitative studies' (Silverman 1993, p. 15); allowing us to obtain in-depth information on the entrepreneurial activity and entrepreneurial environment in these regions. Therefore, a series of semi-structured interviews were conducted to collect the data and the interviewee's beliefs about the entrepreneurship phenomenon in the ORE. These interviews helped to overcome the lack of published scientific information on this topic. These interviews were conducted with the following objectives: 1) characterize the entrepreneurial environment in the ORE; 2) analyse the entrepreneurial environment in the outermost regions context, through the analysis of the several factors identified throughout the literature as important for the new firm creation; and 3) identify the specific entrepreneurial problems posed to these regions due to there extreme peripheral and remote location. To conduct these interviews a non-random sample (convenience sample) was chosen from public agencies, chambers of commerce, and local entrepreneurs that have the necessary experience to provide useful specific information about the entrepreneurship phenomenon in three of the ORE: Autonomous Region of Madeira (ARM), the Autonomous Regions of the Azores (ARA), and the Autonomous Community of the Canary Islands (ACCI). These three regions were chosen because they are geographically closer to the European continent, have a similar economic structure, and share specific European funds. The semi-structured interview used pre-determined standardized questions, based on the general findings from the literature review; however, they were all open questions to allow the interviewees to explain their answers and give their personal comprehension of the

phenomenon. This structure was chosen because it ensured that the interviews focussed on the topic of our research, but at the same time gave freedom and flexibility to the interviewee to respond to the questions and add new ones if necessary. In the interviews a total of eight standardized open-ended questions were posed: questions about the entrepreneurial activity in the ORE, their opinions about the factors identified in the literature review and their impact on the entrepreneurial activity, and also about the entrepreneurial environment in the other ORE. The definition of the key terms and the factors included in each one of the sub-environments were described to all interviewees. A total of twenty one interviews were undertaken: nine interviews from the ARM; eight interviews from the ARA; and four interviews from the ACCI. The interviews in the ARM and the ARA were collected with a face-to-face interviews lasting between 30 minutes to 1 hour, being all recorded and then transcribed into Portuguese. The interviews in the ACCI were conducted throughout email contacts. All interviews were coded to identify common codes features and when necessary citations were translated into English.

4 - FINDINGS

The interviews allowed a comprehensive characterization of the entrepreneurial activity and the entrepreneurial environment in the ORE. The main factors, opinion and characterizations provided by the interviewees are presented in below.

4.1 - ENTREPRENEURIAL ACTIVITY

The semi-structured interviews started with the characterization of entrepreneurial activity (new firm creation) in each region. The responses allow us to obtain a detailed and complete understanding of the entrepreneurial environment in the ARM, the ARA, and the ACCI.

ARM

The interviewees in the ARM characterized the entrepreneurial structure in their region as: being mainly composed of small and micro-enterprises; mainly family businesses; having a reduced and limited market which is concentrated in three large sectors (tourism, civil and public construction, and local commerce); and most investment is directed at the regional market. The entrepreneurial activity is evaluated as having a low level of dynamism and is not very innovative. One of the interviewees added that

one of the reasons is that in Madeira there is still the idea of the sole entrepreneur, not multi-skilled teams.

ARA

The interviewees in the ARA characterized the entrepreneurial structure in their regions as: being mostly composed by micro and small firms; family firms that pass from one generation to another; and with a restricted and insular economy, composed by 9 islands each one representing different markets. They also considered the entrepreneurial activity as being an emergent activity, with a very small number of very innovative firms. When analysing the entrepreneurial capability of the region one of the interviewees mentioned that people from the Azores have a closed attitude, and that young people are still more inclined to work for others and not to create their one company. Another interviewee stated that "there is a big aversion to risk, which was to do with our history by the fact that we have spent many centuries isolated".

ACCI

The interviewees in the ACCI characterized the entrepreneurial activity in their region as: within the national average of new firm creations; mainly focused in the trade and services sector; and with a small number of technology-based firms. One of the interviewees stated that the "Canarias production base is mainly composed of micro firms, meaning that almost 90% of our companies have fewer than 5 employees", also that the "Canarias has a strong structure which is outsourced and oriented towards tourism-related services". The majority of the interviewees considered that the entrepreneurial activity in the ACCI is local market-oriented because of the distance to the mainland and the insularity of the region.

4.2 – ENTREPRENEURIAL ENVIRONMENT

The interviewees were also asked to analyse each one of the environments and related factors, as identified throughout the literature review; and to give their opinion whether they considered the environment favourable or not to the entrepreneurial activity in the region.

Table 8 – Resume of the entrepreneurial environment analysis by the interviewees in the ARM, the ARA and the ACCI.

Environment	ARM	ARA	ACCI
Socio-demographic	Somewhat favourable	Mostly unfavourable	Unanimously favourable
Political and legal	Unanimously favourable	Unanimously favourable	Unanimously favourable
Economic	Mostly unfavourable	Mostly unfavourable	Somewhat favourable
Technological	Mostly unfavourable	Mostly unfavourable	Somewhat favourable
Financial	Somewhat favourable	Somewhat favourable	Mostly favourable
Infrastructural	Unanimously favourable	Unanimously favourable	Unanimously favourable

Table 8 presents a resume of the feedback obtained from the interviews. An overall comparison between the three regions, in terms of the entrepreneurial environment, suggests that the ACCI is considered to have the most favourable entrepreneurial environment to the new firm creation, followed by the ARM and then the ARA. However, between the three regions there are two environments that are considered unanimously favourable by all interviewees, the political and legal environment and the infrastructural environment.

Socio-demographic Environment

There was a mixed opinion about the socio-demographic environment in the ARM. The interviewees identified as favourable factors the social attitudes and the level of education because of the continuous progress in these areas in recent years. However, they also identified less favourable factors: the lack of cultural tradition towards entrepreneurship; the resistance of the society to change which heavily penalizes failure; the level of network and business background experience is considered very low; and most of the interviewees considered that unemployment has not contributed to entrepreneurship because it is mostly affected persons with very low qualifications. The majority of the interviewees in the ARA considered that their socio-demographic environment to be unfavourable. In their opinion the Azores society is still very conservative and traditional, and people do not like to take risks because failure is heavily penalized. Additionally, most interviewees considered that the level of education and social network are very low and that there is a lack of qualified

workforce. All the interviewees in the ACCI considered the socio-demographic environment favourable to the entrepreneurial activity because: the social attitude is favourable to entrepreneurship; the population is considered to have a high level of education and the entrepreneurs are considered as having a high technical knowledge; and that high unemployment in the ACCI has stimulated entrepreneurship. Despite all of this, some interviewees considered that the Canary society is traditional and conservative, but is slowly changing.

Political and Legal Environment

This environment is evaluated as favourable to the entrepreneurial activity by all interviewees in the three regions. The main reason for this is the recognition that there are extremely supportive governmental programmes and policies towards promoting entrepreneurship in all three regions; and that the legal requirement, the bureaucracy to create a new firm, is relatively low.

Economic Environment

The majority of the interviewees considered the economic environment in the ARM to be unfavourable to the entrepreneurial activity. The main reasons mentioned were: the low level of income; the cost of living is expensive in the region; the small internal market; and the lack of industrial capacity in Madeira, which does not allow obtaining economies of scale, clusters or synergies. The majority of the interviewees also considered the economic environment in the ARA to be unfavourable to entrepreneurial activity. This is because of the low level of income in the region; the conviction that there are still an insufficient number of firms in the economy; and the fact that industry density is very low (with the exception of agriculture industry); combined with the small market dimension and geographic constraints makes it impossible to obtain economies of scale and clusters. Analysing the interviews in the ACCI, there is no clear agreement about the economic environment; some interviewees considered it as being slightly favourable and others do not. In general, they considered that the individual's income is somewhat lower in the ACCI than the national average; that the competition is naturally promoted in the regional level, but is very little in national and international level; that at present there is a shortage of industrial zones and the industrial concentration is not very relevant.

Technological Environment

Through the analysis of the interviews it can be concluded that the technological environment in the ACCI is more favourable to the entrepreneurial activity than in the ARM and the ARA. However, there were some similar constraints indicated in the interviews in all three regions: that the relationship between the universities and the local firms needs to be improved to increase the transfer of knowledge and the creation of new technologies; and that the economic structure in these regions is mostly composed by micro-firms that lack the capital and resources to invest in research and development.

Financial Environment:

The majority of the interviewees in the ARM considered the financial environment to have some favourable factors that benefit entrepreneurial activity. They recognise that there are some fiscal and taxation policies that are more favourable in the ARM than in mainland Portugal. The interviewees also considered that there are several instruments to provide financial support to investors but that access to this support is not very easy: it is more difficult to obtain credit; the venture capital and business angels are limited/residual in the ARM; and the financial aid from government programs implies fulfilling several bureaucratic requirements. The majority of the interviewees in the ARA considered the financial environment to have some favourable factors to entrepreneurial activity. They recognize that the ARA presents the most favourable situation in terms of fiscal policies and taxation when compared to the rest of the country. However, they are some restriction to the access of capital: young entrepreneurs have significant difficulties in obtaining initial capital; bank credit is more difficult; and business angels and venture capital are not present in the region. The interviewees form the ACCI mentioned the existence of more favourable factor on the financial environment than in the other two regions. Most of the interviewees considered that fiscal policy is very favourable, composed by several specific fiscal incentives, unique with Spain (eg.: Zona Especial Canaria). However, the interviewees also mentioned that entrepreneurs have more difficulty in obtaining loans/credit, mostly due to the recent financial and economic crisis.

Infrastructural Environment

This environment is evaluated as favourable to the entrepreneurial activity by all interviewees. The main reason for this is that all interviewees mentioned that these regions have good infrastructural conditions and the necessary supportive services promote the entrepreneurial activity. One of the interviewees mentioned that "nowadays, the hardware infrastructures are sufficient to promote the appearance of new firms."

4.3 – PROBLEMS TO THE ENTREPRENEURIAL ACTIVITY DUE TO THE REMOTE LOCATIONS OF THE ORE

In the last part of the interview the interviewees were asked to give their opinion on which problems firms had to address due to the remote location of their region.

ARM

The main problem indicated by all the interviewees in the ARM is the transportation of goods and people, because this is expensive, limited and time consuming. It is expensive because it represents extra costs to firms if they need to export or import, and to local people when they travel; limited because there is only two options of transportation, by sea or by air; and time consuming because it takes about one week for goods to arrive from mainland Portugal to the ARM. During the interviews other problems were presented as being related to the remote location of the region: the problem of attracting highly qualified workforce to the region; and the high distance from potential customers in other geographic markets.

ARA

The main problem identified by the interviewees in the ARA was also the transportation of goods and people because there is only a few transportation options (by sea or air) and it is expensive, imposing problems to the provision of goods and adding costs to the business activity; and affecting also people's mobility. This situation affects the transport system to and from the mainland Portugal, but also between the nine islands that constitute the ARA. Other problems were presented: the lack of human resources in some areas; and the low diversity of the Azores economy.

ACCI

The interviewees from the ACCI also mentioned as the biggest problem the transportation of goods and people because of the costs and delays imposed on firms. Other problems that were mentioned are: the difficulty in obtaining quality and variety of products; difficulty in matching the needs of consumers to the existing supply; and difficulty to access to a wider market.

5 - CONCLUSION

The fundamental aim of this study is to offer a better understanding of entrepreneurship in the ORE. Analysing the interviews in the ARM, the ARA and the ACCI it is clear that there are differences regarding entrepreneurship activity and the entrepreneurial environment. The entrepreneurial environment in the ACCI is evaluated, by the interviewees, as being favourable to the entrepreneurship, followed by the ARM and the ARA. This reflects the different stages of entrepreneurial development in each region. However, it is important to consider that despite the fact that all three regions are considered outermost regions, they have different social, cultural and demographic contexts. An example of this is that, according to the last published data, the number of resident population in both ARM and the ARA is around 250,000 people, but the number in the ACCI is much higher with 2,000,000 people.

Nevertheless, the interviews allowed us to identify similarities across these regions: 1) the economies are mainly composed of micro-firms (according to the last published data around 94 to 95%), with a limited internal market; 2) in all regions the political and legal environment is assessed as being favourable to entrepreneurial activity mainly because of the several supportive governmental programmes; 3) the infrastructural environment is also considered as favourable in all regions, which can be the reflection of the effort made by the EU to improve the infrastructure in the regions; 4) and also that these regions have to overcome a common problem to the development of the entrepreneurial activity, which is the transportation of goods and people which is expensive and time consuming.

These interviews also provided data on the opinion of the different local agencies and entrepreneurs on what should be the strategy to promote the economic development of the regions. The majority of the interviewees argued that these economies offer good

conditions for the creation of new firms in the information technology (IT) sector and for the use of IT. One of the interviewees stated the following "the solutions to overcome this problem (remote location) will come from the new information technologies, because we will be able to put everything out in the world without the need of a very heavy logistic".

This study helped to clarify some key issues concerning entrepreneurial activity and the entrepreneurial environment in the ORE; helping to improve our knowledge on the entrepreneurship phenomenon in these regions which have a large number of economic, geographic and social constraints. The information obtained from this study can help policy-makers to identify effective instruments and policies to promote entrepreneurship within these regions; assist entrepreneurs in their decision to invest; and help researchers to better comprehend the complexity of the entrepreneurship phenomenon in the specific context of ultraperipherality and remoteness.

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