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JOANA AFONSO [1]
ISABEL MOTA [1 2]
SANDRA TAVARES SILVA [1 2]

[1] FACULDADE DE ECONOMIA, UNIVERSIDADE DO PORTO
[2] CEF.UP

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Micro credit and Territory - Portugal as a case study

Joana Afonso[1] (080431008@fep.up.pt), Isabel Mota[1,2]✉ (imota@fep.up.pt),

Sandra Silva[1,2] (sandras@fep.up.pt)

[1]Faculdade de Economia, Universidade do Porto, [2]CEFUP

Rua Dr. Roberto Frias

4200 – 464 Porto

Telef.: +351-225571100

Portugal

Abstract

This paper studies the relations between micro credit and territory, assuming that micro credit is an important instrument for fighting against poverty and social exclusion. Based on a micro-level database provided by ANDC (Associação Nacional de Direito ao Crédito), we developed a statistical and econometric work in order to identify the territorial idiosyncrasies associated with the employment of micro credit in Portugal. Focusing on the survival of the micro credit projects in the period of 2006-2009, our study sustains the significance of variables such as the population density, the value added growth in each activity and the promoters' qualifications, besides two regional dummies, for firms' survival.

Keywords: Micro credit, Territory, Poverty

JEL Codes: G21, R58

✉ corresponding author

1. Introduction

Micro credit has gained considerable attention among economists and institutions over the last two decades. The growth of the micro credit sector across the world and the recognition of its importance, especially in the developing countries, are well shown in two main events: the 2005 International Micro Credit Year and the attribution of the 2006 Nobel Peace Prize to Yunus and the Grameen Bank. The Nobel Committee considered micro credit as a tool to uphold the economic and social development, contributing in this way to fight against poverty and to promote the human rights (Mjos, 2006).

The evolution of the micro credit sector and its geographical dissemination hasn't been homogeneous. Additionally, there are different perspectives about the economic and social impact of this instrument on the beneficiaries and its ability to reduce poverty. However, the empirical evaluation of the micro credit sector and its effects is quite difficult, both because there are strict data limitations and the data collection is very expensive, and because the most adequate methodological procedure isn't clearly defined. Therefore, the research in this topic is far from being exhausted and there is still a lot to do in what concerns research in the micro credit sector (Rosenberg, 2010).

This paper intends to be a small contribution to this difficult task, using a territorial approach which, as far as we know, has not been explored at this level. The territory is expected to have an important role since poverty and social exclusion are geographically diverse and these differences must be taken into account when designing and implementing social policies. Our main goal is to identify territorial idiosyncrasies associated with the use of micro credit in Portugal and to propose explanations for the potential differences.

This study is organised as follows. After the Introduction, Section 2 reviews the concept of micro credit, its evolution and spread all over the world. Section 3 discusses the micro credit theme in Portugal and Section 4 elaborates on the relationship between micro credit and territory, proposing a study based on the Portuguese territorial idiosyncrasies. Finally, the main conclusions and the ongoing research are presented in Section 5.

2. The conceptualization and evolution of micro credit

Micro credit consists in providing small loans to poor and socially excluded people, allowing them to become entrepreneurs. Through self-employment, people are expected to be professionally integrated and to be able to earn sufficient income to support themselves and their families (Sengupta and Aubuchon, 2008; Microcredit Summit Campaign, 2010).

In this perspective, micro credit is an instrument for fighting against poverty and social exclusion and this was the main motive for the first experiences in the 1970's in some Asian and Latin American countries. The most famous and successful of these experiences was the one conducted by Muhammad Yunus in Bangladesh (Gutiérrez-Nieto, 2005). Starting from an academic experience in the village of Jobra, Yunus developed a loan mechanism specially designed for allowing the extremely poor to have access to money in order to work in a self-employment basis. In 1983, and as a result of the work developed in the country, the Bangladesh government created a special charter to allow the foundation of the Grameen Bank, an independent and formal financial institution dedicated to micro credit (Sengupta and Aubuchon, 2008).

The Grameen Bank experience demonstrated that poor people benefit from the possibility to access capital and that institutions achieve high repayment rates in these credits. This success was the reason for a fast dissemination to other countries, some of them replicating the Grameen Bank programme. The sector's evolution made also clear that besides the act of providing credit, many of the institutions started offering a wider range of financial products and services, including savings and insurance. This enlargement is reflected in the use of the term microfinance (Sengupta and Aubuchon, 2008).

Nowadays, across the world, there is an attempt to scale up microfinance with a market-based approach. As a consequence there is a growing concern with the sustainability of the microfinance institutions and an increasing tendency towards the transformation of non-governmental organizations into financial institutions. This tendency is particularly strong in developing countries and one example of this is the transformation, in 1992, of PRODEM – Fundación para Promoción y el Desarrollo de la Microempresa, into BancoSol – Banco Solidario, a commercial bank in Bolivia. With this change, the institution revised its priorities, with profitability becoming the main concern to its leaders (Sengupta and Aubuchon, 2008).

The evolution of the microfinance sector in the last years has raised some concerns about who is micro credit really helping, while questioning if the micro credit programmes are managing to help the extremely poor or the more geographically isolated. Marcus *et al.* (1999) pointed that most micro credit schemes do not address the poorest for several reasons.

One of these reasons is the way the schemes are designed in terms of loans and savings conditions, namely the interest rates and grace periods applied, and the liquidity conditions of the savings. Another is the group lending mechanism, which has many advantages but also some disadvantages as it discourages the most poor that have difficulties in joining or forming a group.

In spite of these considerations, the demand for financial services by the financially excluded people is enormous and this fact has been translated into the numbers of the microfinance sector. The 2009 Annual Report of the Microcredit Summit Campaign presents, for the 2007 year, a number of clients near 155 million and more than 3 550 microfinance institutions worldwide (Daley-Harris, 2009). This report also illustrates the difference between developing and developed countries, with North America and Western Europe representing an almost insignificant weight in the total numbers.[1]

The growth of the microfinance sector in developing countries brought attention to this type of programme and encouraged people in developed countries to try to adapt micro credit to their own realities. The first experiences in Europe started in the 1980s but the sector is still young as most institutions started their lending operations after the second half of the 1990s, including ANDC (Associação Nacional de Direito ao Crédito) in Portugal (Jayo *et al.*, 2008; ANDC, 2010a).

The adaptation of micro credit to developed countries, namely Western European countries, is founded in the belief that micro credit is based on universal principles, that is, being unemployed or receiving welfare contributions does not mean that people lack capabilities or the will to change their lives by creating their own jobs (Nowak, 2008). Frequently, these individuals are not able to acquire the financial capital needed to implement their projects as the banking system do not consider them credit worthy – these potential market segments are generally considered too small and less lucrative. Micro credit in Europe aims to close this market gap (Evers *et al*., 2007).

By comparing the micro credit sector with the micro enterprise banking, it is easy to recognise that the first represents a niche market but is still a considerable large niche. Additionally, even though it is not expected that microfinance programmes become profitable

[1] For these regions the number of clients is only of 200 000 and there are only 127 institutions, contrasting for example with Asia and Pacific, the more active region with 129 million clients and 1 727 institutions (Daley-Harris, 2009).

in a short term, they still make economic sense as they are a better alternative to welfare contributions (Evers *et al.*, 2007).

This is one of the main reasons for the growing interest in micro credit, also at the European Union level. The current economic crisis and the evolution of European labour markets cannot be dissociated from the structural reforms needed to address the long term challenges of globalisation and demographic and climate change. The massive unemployment growth in the last few years and the clear perception of the need to retain and bring more people into the labour market, specially women, older workers and groups facing discrimination, have contributed to the rising interest in the solution of self-employment (Nowak, 2008; European Commission, 2009).

Unterberg (2009) considers the European Initiative for the development of micro credit in 2007 the entrance moment of the issue in the institutional agenda of the European Union, but there were several previous initiatives, starting from the end of the 1990's. Among these initiatives are: the working group Micro credit for small business and business creation: bridging a market gap (2003), the 1st Microfinance Conference in Brussels (2004) and the launching of JEREMIE – Joint European Resources for Micro to Medium Enterprises (2005).

More recently, in 2008 and 2009, the European Commission approved the JASMINE programme (Joint Action for the Support of Microfinance Institutions) and the Progress Initiative, which establishes a European Microfinance Facility for Employment and Social Exclusion. JASMINE's primary goal is to provide to the microfinance non financial institutions the necessary resources to scale up their operations, allowing an increasingly number of unemployed, people at risk of losing their jobs and deprived people, including the young, to develop their own micro-enterprises, as well as supporting micro-enterprises in the social economy which employ persons in the above conditions (European Commission, 2009).

The European Commission defines micro credit as loans up to 25 000 Euros for the creation or development of small businesses (Evers *et al.*, 2007). This is a broad concept that doesn't take into consideration the profile of the entrepreneurs and the main motive of micro credit in its original concept. This is also an expression of what are the two different approaches to microfinance: a *poverty lending approach* closer to the first experiences in developing countries and assuming as a primary goal to reach the lowest segments of society, and a *financial system approach* more concerned with the scale and sustainability of the operations in a perspective that a larger number of clients will allow a wider portfolio of financial products offered, even if this means the exclusion of the poorest (Bonomo and Vitali, 2004).

These two perspectives co-exist across most countries and micro credit is nowadays an expression used indistinctively. This fact made some authors, including Yunus, to support the need for a clarification at this level. Yunus (2010) suggests a trial classification of several types of micro credit that includes ten categories, being one of them the “Grameen type”.

The experience of micro credit in Europe isn’t a homogeneous reality. There are differences resulting from different approaches that are also linked to distinct realities when comparing with developing countries.

Nowak (2008) presents the main differences: in the developing countries, self-employment has been the dominant way of employment, which means that micro credit has a huge number of potential clients; the strong demand for financial services and the importance of proximity relations between people made possible the implementation of mechanisms like the group lending that minimize risks and operational costs, which is one of the central problems in the developed countries; nowadays, the banking system is still less developed in developing countries, which allowed an easier entrance for the microfinance institutions, especially in rural areas; finally, the framework for developing businesses is more favourable to small initiatives while in developed countries, firms have to compete in highly regulated markets, subject to taxes and social charges.

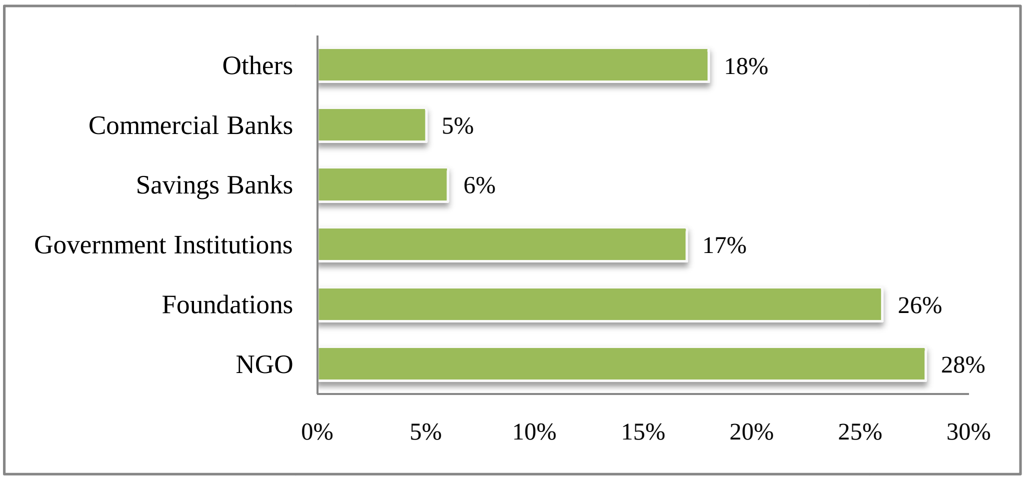
This last aspect raises another important question related to micro credit in Europe, concerned with the capabilities and knowledge needed to successfully manage a business. For a considerable part of the poor and socially excluded people this isn’t a simple task and many of the microfinance institutions, namely the non-governmental institutions that assume the struggle against poverty and social exclusion in their mission statement, complement their portfolio activity with training and business development services (Nowak, 2008).

The overview of the sector in 2007, developed by the European Microfinance Network, demonstrates that even inside Europe the sector is not homogeneous. There are different types of institutions (Figure 1), with different missions and priorities, acting in different geographical scales.

The type of micro credit institutions is not identical across Europe and if there is an important role of savings banks and foundations in Spain, the main actors in France, England and

Portugal are the non-governmental organizations, whilst in Finland is a government agency, Finnvera (Underwood, 2006; Evers *et al.*, 2007).

Figure 1 – Types of Microfinance Institutions (2007)



Source: Adapted from Jayo *et al.* (2008).

Jayo *et al.* (2008) identify four categories of mission statements and the surveyed institutions fit almost equally in these categories: 29% of the institutions focus on job creation and entrepreneurship promotion, 26% elected social inclusion and fighting against poverty, the same percentage chooses economic development and small and medium firms' growth, being financial inclusion the category with a smaller relevance (20%). These mission statements illustrate various forms of combining social and financial objectives, which is reflected in the average loan value disbursed. For those institutions with social concerns, the average loan, in 2007, was of 6 260 Euros while for those selecting economic development as the main goal, this average reached 15 292 Euros.

One important characteristic of the micro credit sector in Europe is its infancy as 62% of the institutions started their lending programmes after 2000. For many of them micro credit represents one among other activities, not being the primary one: lending operations account for less than 25% of the activity portfolio for 46% of the surveyed institutions (Jayo *et al.*, 2008).

The analysis of the microfinance sector is not complete without considering the target-population. The importance of women as a target group for micro credit, which is one of the main features of the programmes in developing countries, has not been as important in

Europe. In 2007, only 44% of European micro credit clients were women, although in some countries women were the majority, namely in Spain, Bulgaria, Portugal, United Kingdom and Romania (Jayo *et al*., 2008).

Other segments identified as targets in the European context are the immigrants and young people and also for these groups the outreach is still below the expected. In what concerns the immigrants, Spain is the most relevant experience in 2007, as 47% of the clients were immigrants, followed by France (24%) and Italy (21%). Nevertheless, in countries such as Germany and Belgium, where a high proportion of foreign population exists, the number of immigrants who apply to microcredit is irrelevant. The outreach of the young is even less expressive, being Hungary the exception, as the only country with a percentage of clients under 25 years larger than 50% (Jayo *et al.*, 2008).

3. Micro credit in Portugal

Micro credit was introduced in Portugal at the end of the 1990s, by the initiative of a group of people who considered that it could be an important instrument for fighting against poverty and social exclusion in the country. In December 1998, the ANDC, a non-governmental organization with national coverage, whose mission focuses on social inclusion and fighting against poverty, was created. In the following year, a micro credit programme started operating, based in a partnership between ANDC, a public institution (Instituto Emprego e Formação Profissional, IEFP) and a commercial bank, Millennium BCP.

During the last ten years a few other programmes were implemented, especially in the second half of 2000s. In the period 2005-2009 two other national programmes and two local schemes, all of them supported by partnerships, can be identified. The two national programmes are the autonomous micro credit operation developed by Millennium BCP and a programme targeting young entrepreneurs managed by the National Association of Young Entrepreneurs (ANJE).[2] The local programmes are conducted one by Santa Casa da Misericórdia de Lisboa, with a very specific target public (residents in Lisbon) (Microcrédito SCML) and the other by a network of 13 local development associations that was the result of the EQUAL project and that covers about 60 municipalities in the North and Centre of the country (GLOCAL-SIM). All the programmes developed by non-governmental organizations

[2] The ANJE programme has recently been changed with an increase of the maximum credit amount to 50 000 Euros, so this programme cannot be considered as micro credit by the European Union definition.

integrate a commercial bank in the partnerships and all of them are concerned with financial exclusion. The programme conducted in Lisbon is the only one that assumes fighting against poverty as a central goal.

Although the sector has grown in Portugal in the last decade, with several actors coming into action, there are still few studies on this subject, particularly with a focus in a territorial approach. The main impact study up to date is the one conducted by Mendes (2007) that analysed all micro credits approved by ANDC, between July 1999 and August 2006. In spite of not specifically focusing on a territorial perspective, one of the recommendations included in the report is the need to adapt the instrument to the diversity of poverty and social exclusion situations that are presented at a local level. In this context, Mendes (2007) underlines the role of local institutions that should work in a straight collaboration with ANDC.

The importance of the territory in the development of small scale economic initiatives is also stressed in a study about micro-entrepreneurship in Portugal, promoted by Instituto António Sérgio do Sector Cooperativo (INSCOOP). The authors support the idea that entrepreneurship is influenced by the environment in which the businesses are created and developed. There are micro-climates, which are territorially diverse, that stimulate or restrain the entrepreneurship process, and this is particularly relevant for small initiatives (Portela *et al*., 2008).

4. Micro credit and Territory – Portugal as a case study

Micro credit first experiences were conducted in a particular territorial context, namely rural areas in some developing countries. The results obtained with these experiences motivated the export of micro credit to countries and regions with enormous differences in what concerns the level of development. In this process, the instrument was also employed in urban areas, principally in developed countries. In Portugal, for the period between 1999 and 2009, 47% of the projects approved by ANDC were originated in the districts of Lisboa and Porto, two mainly urban areas (ANDC, 2010b).

The relevance of the territory dimension in the micro credit programmes in Europe, especially when they have social objectives, is illustrated by a significant presence of local schemes. Moreover, some of the most important national microfinance institutions felt the need of being located at the regional level. This territorial relevance is illustrated, for example, in France, by the presence of the 120 and 236 permanent offices of the Association pour le droit à l'initiative économique (Adie) and the France Initiative Réseau (FIR), respectively, in 2006 (Jayo *et al.*, 2008; Planet Finance, 2007).

In Portugal, the most significant and documented experience at the micro credit level is associated with ANDC. Therefore, we developed our analysis based on a micro-level database provided by that institution for the period between 1st January 2006 and 31st December 2009.

Table 1 shows the evolution of both new projects and projects subject either to an increase of capital, possible since 2007, or to a restructuring process (meaning an extension of the repayment period).

Table 1 – Total ANDC Micro credit Projects, 2006 - 2009

	2006	2007	2008	2009	Total
New Projects	123	144	219	192	678
Capital Increase	0	15	28	36	79
Capital Restructuring	4	7	8	12	31
Total	127	166	255	240	788

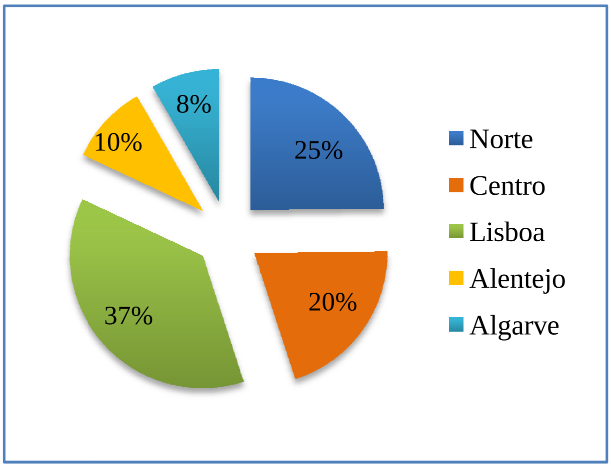
Source: Own calculations, ANDC database.

These numbers suggest an increasing importance of micro credit in the Portuguese economy in the last years, only interrupted in 2009. In this year there were less new projects and, simultaneously, more processes of increasing capital and extending repayment periods. This situation might be related to the recent economic crisis felt in Portugal and across Europe.

We then analyse the distribution of new micro credit projects across regions NUTS II and III in the period 2006-2009 (see Figure 2 and Table 2).

In Figure 2 it is clear the relative importance of Lisboa in the results, with a weight of 37% in the total of new projects developed during the period 2006-2009. Additionally, Table 2 shows that the 9 municipalities of Grande Lisboa are the most dynamic in what concerns micro credit. This table also demonstrates that the micro credit presence is not uniform across the Portuguese country. There are regions, like Lisboa and Algarve where new projects were developed in almost every municipality but there are also regions where this presence is more concentrated in some of the municipalities, being Minho-Lima and Pinhal Interior Norte the best examples. In these two areas there are 24 municipalities but in only 3 of them there were projects in the period under study (Viana do Castelo, Vila Nova de Poiares e Miranda do Corvo).

Figure 2 – New Micro credit Projects, by NUTS II, 2006-2009



Source: Own calculations, ANDC database.

At the national level (Portugal mainland), the number of municipalities with new micro credit projects was, in the period 2006-2009, slightly above 50%. Comparing with firm birth rates in each region for 2007 (INE, 2010), we detect different regional dynamics at this level, with the geographic distribution of micro credit projects and total new firms being dissimilar.

Table 2 – Geographic distribution of Micro Credit projects, 2006-2009

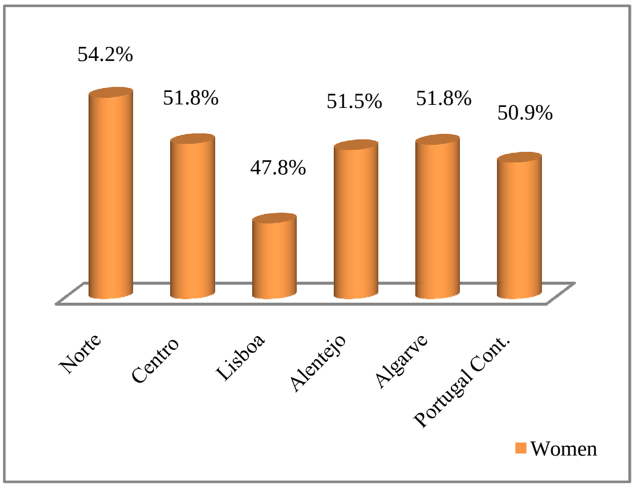
NUTS	Municipalities			New micro credit projects		Total new firms with 1 or more employees, 2007	
	Total	with new projects					
		N.º	%	N.º	%	N.º	%
182 – Alto Alentejo	15	3	20,0%	5	0.7%	1 311	0.9%
183 - Alentejo Central	14	7	50,0%	17	2.5%	2 067	1.4%
181 - Alentejo Litoral	5	4	80,0%	8	1.2%	1 215	0.8%
184 - Baixo Alentejo	13	8	61,5%	24	3.5%	1 379	0.9%
185 - Lezíria do Tejo	11	6	54,5%	12	1.8%	2 994	2.0%
18 - Alentejo	**58**	**28**	**48,3%**	**66**	**9.7%**	**8 966**	**5.9%**
150 - Algarve	16	15	93,8%	56	8.3%	9 693	6.4%
15 - Algarve	**16**	**15**	**93,8%**	**56**	**8.3%**	**9 693**	**6.4%**
171 - Grande Lisboa	9	9	100,0%	201	29.6%	40 700	26.9%
172 - Península Setúbal	9	8	88,9%	50	7.4%	12 914	8.5%
17 - Lisboa	**18**	**17**	**94,4%**	**251**	**37.0%**	**53 614**	**35.5%**
161 - Baixo Vouga	12	8	66,7%	21	3.1%	5 694	3.8%
162 - Baixo Mondego	8	3	37,5%	19	2.8%	4 821	3.2%

163 - Pinhal Litoral	5	4	80,0%	23	3.4%	3 855	2.6%
164 - Pinhal Interior Norte	14	2	14,3%	2	0.3%	1 309	0.9%
165 - Pinhal Interior Sul	5	2	40,0%	2	0.3%	296	0.2%
166 - Dão - Lafões	15	6	40,0%	13	1.9%	3 207	2.1%
167 - Serra da Estrela	3	1	33,3%	1	0.1%	436	0.3%
168 - Beira Interior Norte	9	3	33,3%	5	0.7%	1 004	0.7%
169 - Beira Interior Sul	4	1	25,0%	2	0.3%	780	0.5%
16A - Cova da Beira	3	2	66,7%	2	0.3%	998	0.7%
16B - Oeste	12	11	91,7%	36	5.3%	5 266	3.5%
16C - Médio Tejo	10	6	60,0%	11	1.6%	2 590	1.7%
16 - Centro	**100**	**49**	**49,0%**	**137**	**20.2%**	**30 256**	**20.0%**
111 - Minho - Lima	10	1	10,0%	7	1.0%	2 714	1.8%
112 - Cávado	6	4	66,7%	12	1.8%	5 220	3.5%
113 - Ave	8	6	75,0%	12	1.8%	6 179	4.1%
114 - Grande Porto	9	7	77,8%	70	10.3%	20 738	13.7%
115 - Tâmega	15	5	33,3%	13	1.9%	5 556	3.7%
116 - Entre Douro e Vouga	5	2	40,0%	9	1.3%	3 743	2.5%
117 - Douro	19	7	36,8%	26	3.8%	2 186	1.4%
118 - Alto Trás-os-Montes	14	5	35,7%	19	2.8%	2 300	1.5%
11- Norte	**86**	**37**	**43,0%**	**168**	**24.8%**	**48 636**	**32.2%**
1 – Portugal (mainland)	**278**	**146**	**52,5%**	**678**	**100.0%**	**151 165**	**100.0%**

Source: Own calculations, ANDC database.

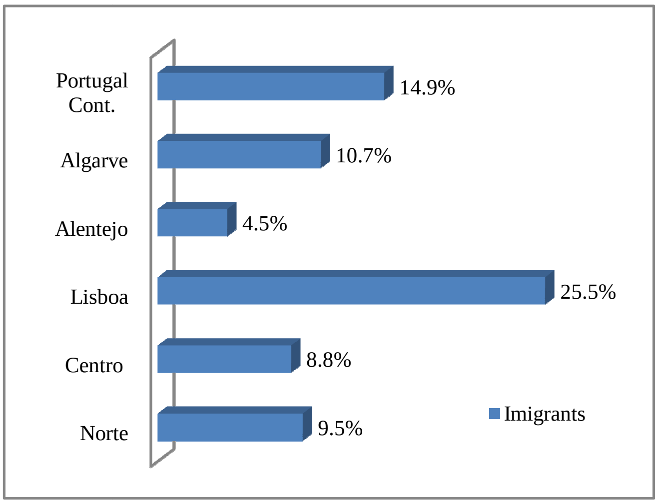
Focusing now on the characterisation of the micro credit public by nationality, gender, age and scholarship, once again for the period 2006-2009, it is possible to observe significant differences between regions, even when the analysis is made at a NUTS II level, as Figures 3 to 6 show.

Figure 3 – Women in New Micro Credit Projects, by NUTS II, 2006-2009



Source: Own calculations, ANDC database.

Figure 4 – Immigrants in New Micro Credit Projects, by NUTS II, 2006-2009

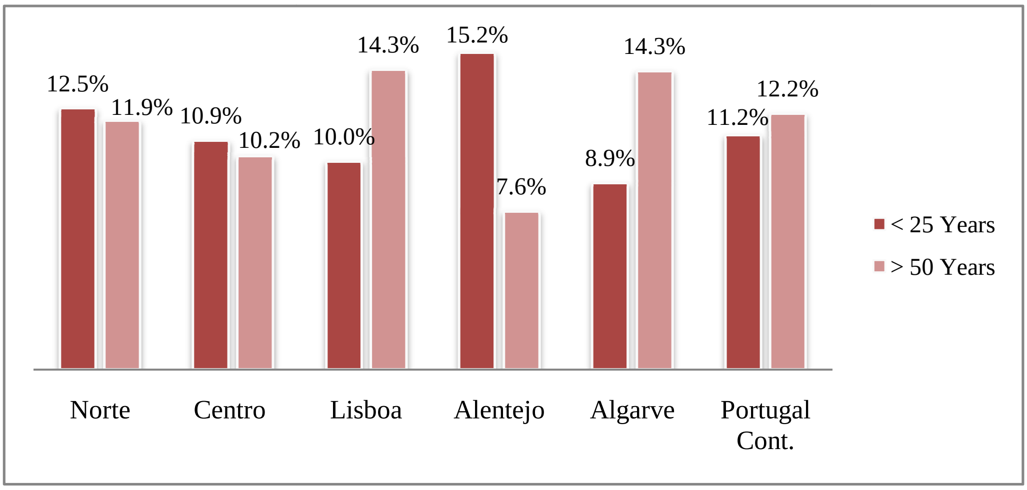


Source: Own calculations, ANDC database.

We observe substantial differences in the geographic distribution of micro credit projects developed by women and immigrants, usually identified as more vulnerable to social exclusion. In what concerns women (Figure 3), Lisboa has clearly the smallest percentage, which influences the national result. Norte is the region where the women's weight is more relevant, followed by Algarve, Centro and Alentejo with similar percentages. This situation can be associated with larger feminine unemployment rates, as in 2009 these rates reached 12.4%, 11.9% and 11.2% in Norte, Alentejo and Algarve, respectively, according to the Instituto Nacional Estatística (INE, 2009a).

Differently, the number of immigrants' projects is significantly higher in Lisboa where a quarter of the new projects are promoted by immigrants, and this is particularly true for the municipalities of NUTS III Grande Lisboa (28%) (Figure 4). The presence of immigrants in other regions is concentrated in a reduced number of municipalities. For instance, in NUTS II Alentejo there were 3 projects in 3 municipalities and in NUTS III Grande Porto, there were immigrants' projects only in the municipalities of Porto and Vila Nova de Gaia. When comparing with the distribution of total immigrants in Portugal (SEF, 2010), we may observe that the most relevant region is also Lisboa, but in this case gathering 54% of total immigrants in Portugal.

Figure 5 – New Micro Credit projects, by age of the Promoters, by NUTS II, 2006 – 2009

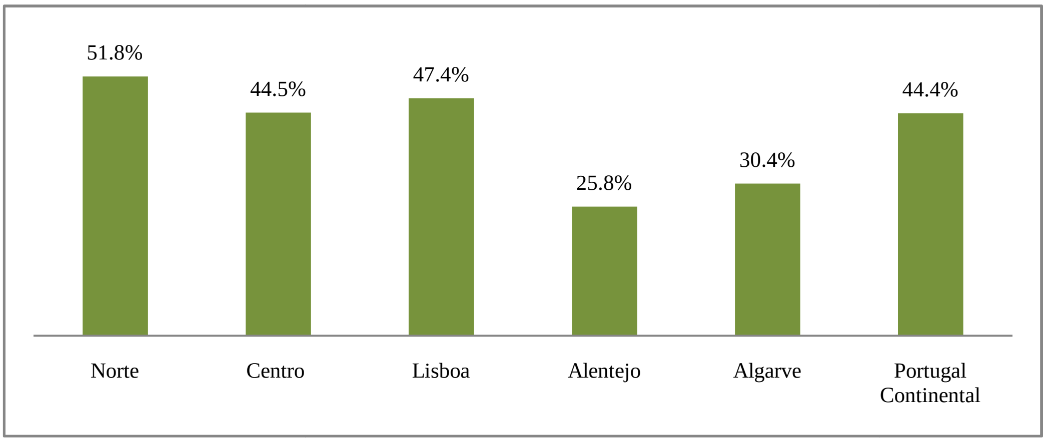


Source: Own calculations, ANDC database.

The average age of the groups is also a criterion with distinct results by territory (Figure 5). Considering the extreme groups – young people under 25 years and older people with more than 50 years – it is curious to see the relatively high weight of young people in Alentejo (15.2%), a region with the highest ageing index in the last decades (INE, 1991-2008). Also significant is the weight of promoters with more than 50 years in Lisboa and Algarve where they overtake the number of the young ones.

Figure 6 highlights an important characteristic associated with the ability of managing a business: the qualification level of entrepreneurs:

Figure 6 – Micro Credit Promoters with the Secondary School, by NUTS II, 2006 - 20009

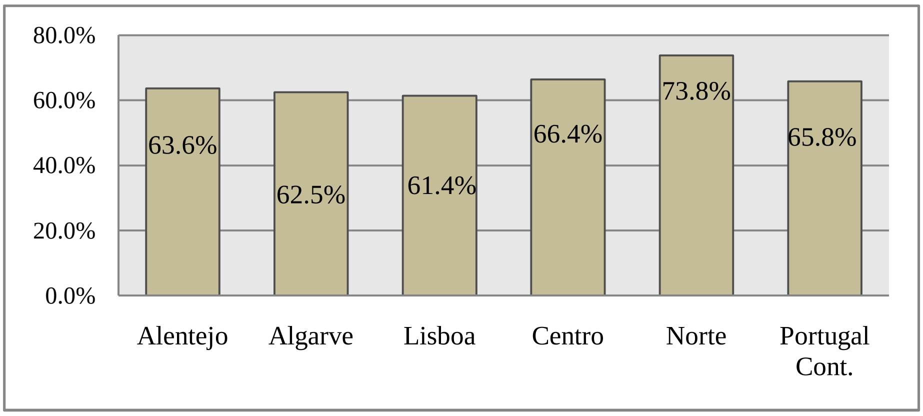


Source: Own calculations, ANDC database.

In the period under study, almost 52% of the new micro credit projects in Norte were conducted by promoters with, at least, the secondary school completed. This number contrasts with 26% and 30% in the two regions in the South of the country, respectively, Alentejo and Algarve. We must also note that the distribution of micro credit promoters and the distribution of total population by education level is dissimilar: according to INE (2009a), and for the year 2009, the highest secondary school enrolment rates take place in Lisboa (43.8%) and Algarve (35.8%), while for Norte and Centro, the corresponding rates are much lower (27.1% and 28.4%, respectively).

The relatively higher qualifications experienced by the micro-credit promoters in Norte may be one of the explanations for the better results obtained in terms of the survival rate of the projects in this region. Figure 7, confirms that Norte was by far the region with the best performance in what relates the relative importance of the businesses open at 31st December 2009 on the total of the new projects that begun in the period 2006-2009.

Figure 7 – Micro credit Business Survival Rates at 31/12/2009, by NUTS II



Source: Own calculations, ANDC database.

At this stage we may state that there are important territorial nuances concerning the implementation of micro credit in Portugal. The statistical analysis developed so far offers the fundamental support for developing a discrete choice model to explore the influence of the territory on the success of microcredit loans. To the best of our knowledge, this topic has not been studied and deserves a particular attention.

In order to explore the influence of territorial idiosyncrasies in the survival of micro credit projects for the period 2006-2009, we developed a survival analysis. This methodology has been employed in the study of firms' survival since the 80s, typically by using a hazard model. In this type of study, the traditional OLS model is not adequate because the dependent variable is incomplete as at the end of the period under study there are several business projects that are not closed. The most important studies focus on the influence of the characteristics of firms and sectors on the duration of firms (e.g. Mata and Portugal, 1994; Mata and Portugal, 2002).

Our main hypothesis assumes that the impact of micro credit on the beneficiaries depends on the sustainability of the businesses promoted through micro credit, assuming that this as a condition to ensure sufficient income and allow the beneficiaries to support themselves and their families.

We developed a Cox Proportional Hazard model, with the businesses life time (in years) as a dependent variable. In order to explain the business closure, we include several explanatory variables that are mainly drawn from the literature on firms' survival (systematized in Table 3).

The population density (inhabitants per square km) (INE, 2009b) might reflect the land cost, as firms and population compete for the same location, and, therefore, we expect to observe a negative influence on the survival of micro credit projects. Also, and similarly to Mata and Portugal (1994, 2002), we expect that the sector dynamics, evaluated by the growth rate of the gross value added in each sector (INE, 2010), has a positive influence on firms survival. All the other variables are dummy variables. The influence of the promoter's nationality on firms' survival is a relevant topic to study, as local promoters are more informed about national legislation, and therefore, more able to get a higher survival rate for their businesses. We also expect that the entrepreneurs' capabilities, measured by their school enrolment rate and age, have a positive influence on firms' survival. In what concerns the effect of the sector of activity on firms' survival, we categorized the manufacturing firms according to their technological intensity. Most micro credit projects are in services, and therefore, we adopted a larger categorization for this sector: delivering, production, social and personal services. Finally, our main focus is on the territorial dimension and therefore, we included a dummy variable for each region NUTS II.

Table 3: Explanatory variables

Variable		Designation
Population density		DP
Promoters' nationality		NAC
Annual growth rate of the gross added value in each sector		VAB
Promoter's schooling	Primary school	HAB – 1C
	2nd and 3rd cycle	HAB – 3C
	Secondary school	HAB – S
	Bachelor, under-graduation or graduation	HAB – U
Promoter's age	18-24	IDD – A
	25-34	IDD – B
	35-44	IDD – C
	45 or more	IDD – D
Sector of activity	Agriculture and Fishing (CAE - A)	NEG – A
	Construction (CAE -F)	NEG – C
	Manufacturing with high technology intensity (CAE - C: 20-21, 28-30, 33)	NEG – IFT
	Manufacturing with low technology intensity (CAE - C: 10-19, 22-25, 31-32)	NEG – IBT
	Delivering services (CAE - E, G, H, J)	NEG – SDB
	Production services (CAE - K, L, M, N)	NEG – SPD
	Social services (CAE - O, P, Q)	NEG – SS
	Personal services (CAE - I, R, S)	NEG - SP
Region (NUTS II)	Norte	REG – N
	Centro	REG – C
	Lisboa	REG – L
	Alentejo	REG – AT
	Algarve	REG - AG

Our database covers new micro credit projects developed in Portugal by ANDC from 2006 to 2009. We have 652 observations, 206 (31.6%) of which correspond to business closures.

The results of a Cox Proportional Hazard model are presented in Table 4. In the implementation of the model we tested the proportional hazard hypothesis to guarantee that there weren't time dependent variables included in the model.

Table 4: Cox Proportional Hazard model: Results

	Estimated β	Standard Error	Wald	Freedom degrees	Significance level	Exp (Estim.β)
DP	0,001	0,000	8,239	1	0,004*	1,001
VAB	0,019	0,011	2,836	1	0,092*	1,020
HAB - U			7,779	3	0,051*	
HAB – 1C	0,613	0,341	3,224	1	0,073*	1,845
HAB – 3C	0,765	0,290	6,976	1	0,008*	2,149
HAB - S	0,513	0,298	2,953	1	0,086*	1,670
IDD- D			1,774	3	0,621	
IDD - A	0,181	0,260	0,487	1	0,485	1,199
IDD - B	-0,027	0,198	0,018	1	0,893	0,974
IDD - C	0,173	0,202	0,732	1	0,392	1,188
NAC	0,296	0,184	2,597	1	0,107	1,345
NEG - SS			7,231	7	0,405	
NEG - A	0,061	0,669	0,008	1	0,927	1,063
NEG - C	0,365	0,532	0,471	1	0,493	1,441
NEG - IBT	0,292	0,492	0,353	1	0,552	1,340
NEG - IFT	0,681	0,719	0,897	1	0,344	1,975
NEG - SDB	0,471	0,434	1,179	1	0,278	1,602
NEG - SP	0,465	0,443	1,101	1	0,294	1,592
NEG - SPD	-0,337	0,533	0,400	1	0,527	0,714
REG - N			5,119	4	0,275	
REG - AG	0,566	0,346	2,682	1	0,102	1,761
REG - AT	0,618	0,329	3,529	1	0,060*	1,855
REG - C	0,500	0,267	3,496	1	0,062*	1,648
REG - L	-0,027	0,202	0,018	1	0,894	0,974

Source: Own calculations, ANDC database. * Significant at 0.1 level of significance

The results show that the population density is significant and has a negative influence on the survival of micro credit projects. In fact, we expect that an increase of 1 inhabitant per square km increases the business closure likelihood of 0.1, ceteris paribus. Additionally, we observe that the sector dynamics has a negative influence on firms' survival, which contradicts our expectations.

In what concerns the promoter's schooling, the results were as expected: we observe that the probability of business closure for a promoter with a bachelor or higher degree is the lowest one. Actually, a micro credit promoter with the 1st cycle has a risk of closure of 84.5% higher than if the project was developed by a promoter with a bachelor or higher degree, ceteris paribus. If the promoter has the 2nd or 3rd cycle, the risk of shutdown increases to 114.9%, while for a promoter with the secondary degree, this risk is 67% higher than if he has the bachelor or higher degree. Our results do not support the influence of sector's specificities or of the promoter's nationality or age on firms' survival.

Finally, for the regional dummies, the results reveal that the probability of observing a business closure is 85.5% and 64.0% higher in Alentejo and Centro, respectively, when comparing with Norte, ceteris paribus. Therefore, we may conclude for the existence of differences between the territories in what concerns the target-public characterization and the success of the economic initiatives created during the period under study.

5. Conclusions

It is recognized that micro credit is growing and gaining visibility as an instrument of social policy in Europe and, particularly in Portugal, even if it is still an infant sector, with a small dimension, when compared with the experiences in developing countries, namely in South Asia and Latin America.

In Portugal, the micro credit was introduced at the end of the 1990s through a partnership between a non-governmental organization, a commercial bank and a public institution, and our study was based on this experience. Starting from a database collected from the ANDC database for the period 2006-2009, we identified some of the main territorial characteristics of the programme developed by this institution.

Our results allowed us to conclude for the existence of differences between the territories in what concerns the public characterization and the success of the economic initiatives created during the period under study. We also focused on the survival of the micro credit projects in the same period and concluded that both the population density and the sector dynamics have a negative influence, while the promoters' qualifications seem to influence positively the micro credit projects' survival. Finally, we observed that the region with the lowest business closure rate is Norte, with Alentejo and Centro gathering a higher risk of closure.

This analysis is crucial for economic and development policy, both when considering the introduction of new micro credit schemes or any potential changes in the schemes that have been implemented so far. Therefore, we expect to improve this research in further directions, namely by exploring the causes of the failure or closure of micro credit projects.

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