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The Banking Systems of Germany, the UK and Spain from a Spatial Perspective: The Spanish Case

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Abstract

When looking at the Spanish banking market through a German lens, the differences between the banking markets in these countries and between decentralised and centralised systems with regard to the SME-credit decision-making process become obvious. Despite our hypotheses that Spanish savings banks were similar to German savings banks until the crisis, or at least until liberalisation and before the break-up of the regional principle, we came to the conclusion that they were never as significant as savings banks in Germany, at least not for SME finance. Notwithstanding recent initiatives to create a common European market and to integrate diverse national banking systems, the European financial system remains spatially complex and uneven, particularly with respect to the degree of geographical concentration. Whereas decentralisation increased in Germany, especially during the financial crisis, the rather decentralised Spanish banking system has become more and more centralised. This development has tended to fuel the financial crisis even further in Spain. In Spain, however, whereas most savings banks, which already operated nationally, were finally privatised due to their heavy losses in the crisis, regional savings banks in Germany further increased their market share in firm financing.

Keywords: comparing banking systems, SME finance in Germany, SME finance in Spain, savings and cooperative banks, decentralised vs. centralised banking

JEL classification: D43, E21, G01, G21, G38, R12

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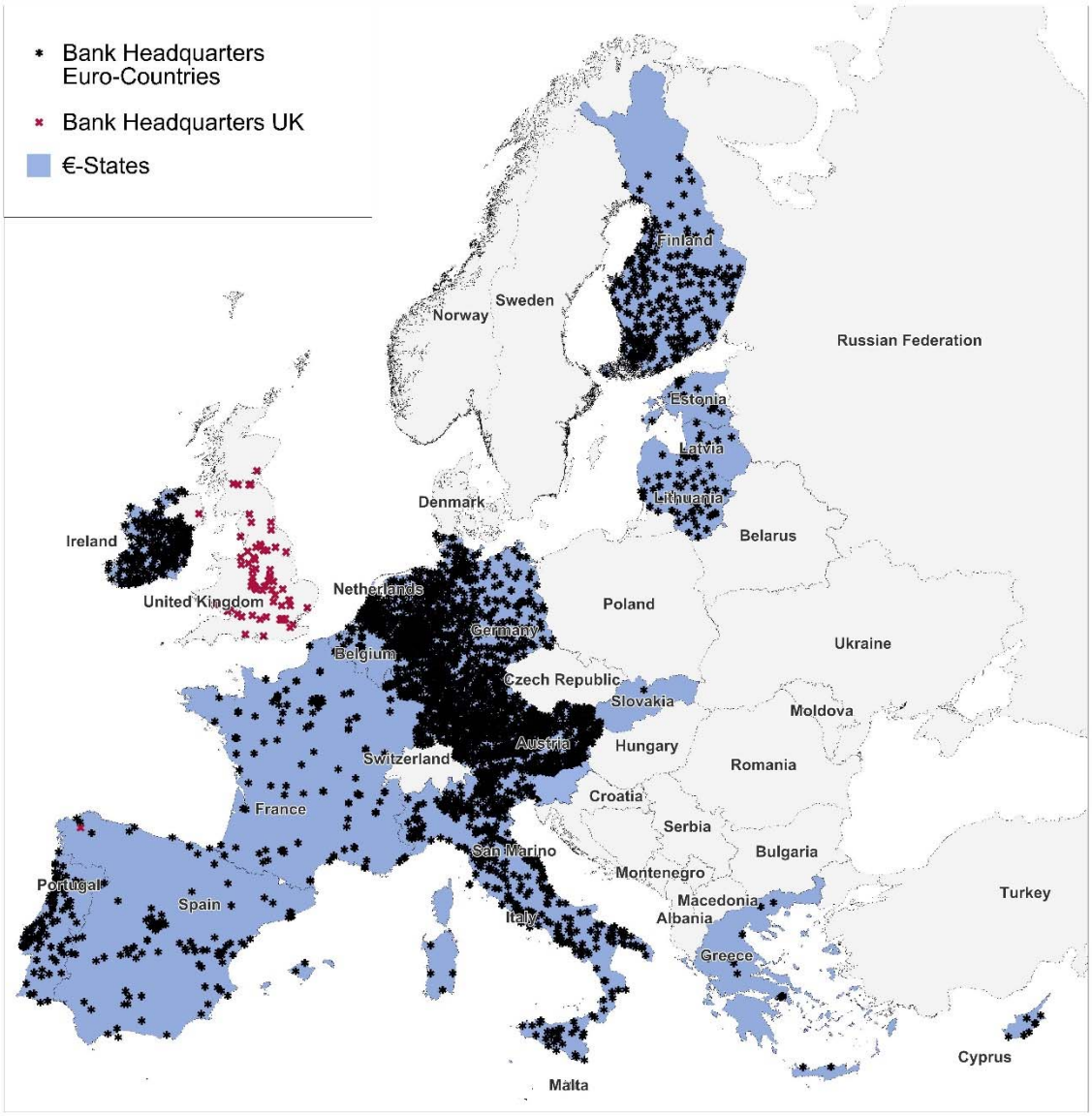
Contents

A Introduction

Despite initiatives to create a common European financial market, the banking systems of the European States variegate, especially with respect to the spatial concentration of banks and other financial institutions (Klagge and Martin, 2005; Gärtner and Flögel, 2014; Wójcik and MacDonald-Korth, 2015). Figure 1 shows substantial differences in the spatial allocation of banks' headquarters for the Euro states in 2014 and UK in 2017. Western Germany is especially full of banking headquarters, which are broadly distributed regionally. Furthermore, there is kind of a local bank bell that stretches from northern Italy, across Austria (and Switzerland; data is unfortunately missing) and western Germany and ends in the Netherlands. The high number of banking headquarters in Ireland is mainly caused by the 421 credit unions, which account for 14.1 billion USD in savings and 4.5 billion in loans (World Council of Credit Unions, 2015). In contrast, France, Spain, Belgium and the UK appear to be rather centralised in terms of bank headquarters. The existence or non-existence of regional banks tends to explain the visual difference between the European states apparent in Figure 1. This paper examines the diversity of the national banking systems of Europe from a spatial perspective, i.e. looking at decentralised and centralised banking (Gärtner and Flögel, 2014; 2017). This is the first of three papers resulting from a research project sponsored by the **Hans-Böckler Foundation** that compares Germany, the United Kingdom and Spain. It discusses the development of the Spanish banking system "through a German lens", focusing on regional banks and lending to enterprises. The rest of the introduction outlines the conceptual and methodical foundations of the research project.

Figure 1: Bank headquarters location in the Euro countries for 2014 and in the UK for 2017



Own map, source: ECB 2014, Bank of England 2017

The diversity of banking and financial systems becomes visible when looking under the surface. Traditionally, we have approached the structure of financial systems by distinguishing between bank- and market-based systems (Allen and Gale, 2001; Demirgüc-Kunt and Levine, 2001; Hall and Soskice, 2001). However, doubts about the appropriateness of this classification have emerged since the financial crisis of 2008 (Beyer, 2009; Hardie et al., 2013). There is a range of alternative taxonomies and concepts to distinguish between financial systems (for an overview, see Gärtner, 2013b). For example, Gowan (2009) has outlined differences between the public banking system on the one hand and the capitalist banking system on the other. Differences between Islamic and non-Islamic financial systems, which are linked to the question of whether or not it should be permissible to generate interest income, have also been discussed (Pollard and Samer, 2007). Banks' lending practices have been discussed in Hardie and Howarth's (2013) classification, where they look at banks' dependency on the capital market, meaning distinguishing traditional banking from market-based banking. Whilst we appreciate these approaches, we see one additional distinctive feature of financial and banking systems in their spatial arrangement relating to the importance of decentralised banking compared to centralised banking.

As early as 1995, Klagge was arguing to classify banking systems into decentralised and centralised systems (Klagge, 1995), so our approach picks up an ongoing debate (Klagge and Martin, 2005; Gärtner, 2011; Gärtner and Flögel, 2013). In our view, two important and related characteristics define decentralised versus centralised banking and banking systems (Gärtner and Flögel, 2014):

1. The *geographical market orientation* of banks' business activities. Do banks operate on a regional level, for example by collecting money from regional savers and handing it over to regional borrowers, or do they rely on business at the supraregional scale, whether by borrowing and investing in national/global capital markets or by operating supraregional branch systems (regional vs. supraregional banks)? The theoretical foundation for this characteristic lies in the polarisation and post-Keynesian theories on regional banking market and interregional flows of capital (Chick and Dow, 1988; Dow and Rodríguez-Fuentes, 1997; Klagge and Martin, 2005; Gärtner, 2008). The ability of regional banks in particular to slow capital drains from the periphery to the core regions is behind the assumption that regional banking makes a difference with regard to access to finance in peripheral regions and hence contributes to more balanced regional development (Gärtner, 2008).
2. The *place of decision-making*. Do banks decide in proximity to their clients (such as whether to grant a loan) or are decisions made at a distance, for example in remote headquarters (proximity vs. distance)? Decentralised banking capitalises on proximity between creditor and borrowers in order to conduct investment/lending decisions. From a theoretical point of view, lending to borrowers at proximity is associated with lower information asymmetries and reduces credit rationing, especially when lending to small- and medium-sized enterprises (SMEs) (Stein, 2002; Pollard, 2003; Berger et al., 2005; Gärtner, 2009; Alessandrini et al., 2009; Flögel, 2017). The importance of difficult-to-transmit so-called soft information in lending to informationally opaque SMEs restrains decision-making at a distance, such as in financial centres, for example, and promotes a decentralised banking system in which banks' head offices and decision-makers are located in proximity to their clients. In contrast, centralised systems capitalise on proximity between the financial institutions themselves in order to facilitate financial innovation and organise and control investment decisions indirectly. As a consequence, financial institutions need geographical proximity to other banks, rating agencies, lawyers, regulatory bodies, etc., which explains the rise of financial centres (Taylor et al.; 2003, Lo, 2003; Grote, 2004; König et al., 2007; Hall and Appleyard, 2009; Schamp, 2009; Gärtner, 2013a; Dörry, 2015; Friedmann and Wolff, 1982; Friedmann, 1986; Sassen, 2001; Therborn, 2011).

Against this conceptual background, the core element of this research project is to compare decentralised and centralised banking in three European countries (Germany, Spain and the United Kingdom). In line with the Varieties of Capitalism (VoC) research tradition (Hall and Soskice, 2001; Schmidt and Tyrell, 2004; Hackethal et al., 2006; Dixon et al., 2012), our research questions are twofold: on the one hand, we raise the question of how decentralised and centralised banking systems influence access to finance, especially for SMEs, and how they influence regional development in doing so, meaning how financial intermediaries could contribute to balanced regional development. On the other hand, the influence of the broader economic, social and political context on the development of the banking systems is addressed. Here we have tried to identify causes for the development of decentralised or centralised banking systems. In doing so, we address the influence of banking regulations and other national and international policies, advances in innovation and in information and communication technologies (ICTs), the degree of centralisation in the political system and the role of banking associations. Our intention is not only to identify reasons why regional banks exist, but also to ask whether or not regional banks are actually able to conduct decentralised banking considering the unification of (international) banking regulations and the ubiquitous use of ICTs in banking, especially the application of rating systems in small-firm lending (Gärtner and Flögel, 2013; Flögel, 2017).

The three country cases of Germany, Spain and the UK were selected because they putatively show a substantial variety in banking centralisation. Germany represents a decentralised banking system that has more than 1,500 regional and economically autonomous banks, the vast majority of which are savings and cooperative banks (Gärtner, 2008). When comparing, it is important to note that Germany's decentralised

and public banking system is a logical product of the specific regional structure of the Federal Republic of Germany. Savings banks have tended to be privatised in centralised countries (in France, for example) but have remained (mainly) public in countries with a federal structure such as Germany and Switzerland (cantonal banks). The decision in favour of privatisation in France and Italy was taken by the central government while in Germany and Switzerland it would have to be taken by the federal states or cantons (Hakenes and Schnabel, 2005: 22). The UK, on the other hand, exemplifies a centralised system, with London as one of the most important international financial centres in the world. The degree of centralisation of Spain's banking system could be viewed as falling between the German and UK case. Spain also presents an outstanding example for studies, as the former regional savings banks have been freed from their geographical burden since 1988, causing a decline in decentralised banking, as will be shown below.

The country comparison was conducted with different methods. We analysed data, studies and (internal) reports from the banking groups or single banks to the extent that they were available. However, the results are quite strongly based on qualitative work, such as qualitative interviews and participant observation. Due to the high regional orientation of the German banking sector, the German banking system shall function as the point of reference and will always be compared to the other countries within the whole analysis. In regard to this report (the Spanish case), we have conducted 32 interviews with bank employees, regulators, representatives from the banking associations, policy makes, researchers and SMEs. Further on we have done a short research stay at the University La Laguna in Tenerife (Carlos Javier Rodríguez Fuentes), to discuss our result and ideas.

All the country reports show differences in the historical paths of the countries and their banks and reveal that their economic systems are very heterogeneous overall. Furthermore, since appropriate data from one common database (such as ECB-Data) is missing, we had to use different national data to approximate the aspects we needed. This will lead to slightly different structures in the three country reports. In order to gain an overview of an overall structure that also enables comparison, each country report is structured in three parts flowing from this introduction (Part A). Part B addresses the structure of the banking system concerned. Part C explores the decision-making process and part D summarises the results. For the UK, we focus on the debate of how a regional banking system could be (re-)established, for Spain we discuss the requirements of decentralised banking in a broader sense and for Germany we address the recent challenges of decentralised banking.

B The Spanish banking structure

Looking at the Spanish banking markets through a German lens is at first difficult and then perhaps fruitful. It is difficult because we thought that Spanish savings banks were similar to the German savings banks until the crisis, or at least until liberalisation and before the break-up of the regional principle, which limits banking activity to the home-region by public law. We have come to the conclusion that they were never as significant as savings banks in Germany, at least not for SME finance.

After a brief glance, we can say that the idea of three pillars (public, cooperatives and commercial owned) is suitable for Germany and Spain. In a more detailed analysis, however, the situation is more difficult and many differences are visible.

Not only has the crisis itself led to the privatisation of most of the savings and public banks and therefore to structural change, but permission granted in the late 1980s to open up branches within other regions also changed the situation. The situation changed further with the privatisation of public banks prior to the crisis and mergers and acquisitions between commercial banks. Spain's banking groups are much more homogenous and show more differences within the groups than in Germany. In most regions, savings banks (and cooperative banks) played only a limited role in SME financing. The number of savings and cooperative banks and their shares of loans to SME finance has never been similar to analogous banks in Germany and

commercial banks have always been comparatively important. Some commercial banks that operate nationwide, like Banco Sabadell (based in Sabadell, northwest of Barcelona), were—and still are—specialised in SME financing.

Until democratisation and liberalisation in 1977, savings banks in Spain were mainly in charge of collecting savings. Savings banks were monitored by the state and their savings were channelled via the big banks, which gave loans to companies. Since 1977, all financial institutions, including savings banks and cooperative banks, were almost treated like commercial banks and were allowed to make transactions with companies for the first time. Deregulation, which was not accompanied by development programmes to build skills, had already led to a minor banking crisis in the late 1970s and early 1980s. As a result, mergers, state capitalisation and privatisation were implemented (Laeven and Valencia, 2008: 46; Reinhart and Rogoff, 2010). In 1988, the regional principle was abolished and Spanish savings banks became active in open branches all over Spain (Illueca et al. 2005). To gain market shares, savings banks lent to customers who did not receive loans from the local banks. Other causes of the crisis included savings banks' late development towards becoming universal banks, the lack of funding bases on the local level, the partial lack of professional competence in management, governance problems in supervisory boards, principal-agent problems within the audit and, of course, the Spanish property boom.

Below, we explain the country context in regard to the regulatory framework and the political and regional system in order to describe how regional banks are able to refinance themselves (Section 1). The development and role of banking associations and financial centres is discussed in Section 2. Section 3 describes the banking structure from a spatial perspective and Section 4 focuses on market specialisation. Part B ends with a conclusion in Section 5.

1 Country context

The degree of freedom available to banks has changed quite often over the last few centuries and the issue of which banks are allowed to do which business differs from country to country. Not just banking regulations, but other mechanisms are also important for banks. The business culture of a country and for regional banks is quite important in determining the degree of interregional cohesion and the banks' development. In Section 1.1, we will discuss Spanish banking regulations before we analyse the degree of spatial inequalities in Section 1.2.

1.1 Banking regulations

After the Franco regime ended in Spain, Royal Decree 2290/1977 (the Fuentes Quintana Decree) was very important as it allowed savings banks to offer the same financial services as commercial banks. In 1985, LORCA and Royal Decree 798/1986 regulated the governing bodies of the savings banks and specified the participation of stakeholders (Maixe-Altes, 2011). By the mid-1980s, the representative structure had been reformed slightly as the influence of public representation had increased, before national Law 44/2002 reduced the weight of public presence on the governing bodies again to incorporate aspects of European legislation (Maixe-Altes, 2011: 19).

What was most important from a spatial point of view, however, was Royal Decree 1582/1988, which granted the savings banks territorial freedom. They achieved the right for to geographically expand their branch network away from their traditional territories and allowed them to develop the same financial services as commercial banks. The Spanish deregulation agenda was in line with international politics. Since the late 1970s, international institutions (such as the International Monetary Fund (IMF) and the World Trade Organisation (WTO)), nation states and even the European Union have advocated for deregulation, privatisation and open financial markets as a way, in their view, to increase efficiency and thereby general wealth (Gärtner, 2013a). Banking markets had previously been regulated and/or financial institutions had been created in under-served regions in order to bring capital to disadvantaged regions (Myrdal 1959: 42;

Chick, Dow 1988). The deregulation, liberalisation and deliberate promotion of financial centres turned this principle upside down.

The goals of financial integration, the creation of big transnational players and increased competition were especially supported both by the European Commission (Commission of the European Communities, 2009) and the European Central Bank (Cabral et al. 2002). Germany took a special path and did not follow this agenda completely. Germany's savings banks have long been criticised by the European Commission for operating solely within set regional boundaries, which represents area cartels from the Commission's point of view. Therefore, the European Commission launched competition proceedings in January 2001. An agreement reached with the EU Competition Commission in 2001 resulted in the abolition of municipal liability obligations in mid-2005 (Gärtner, 2009). However, the main characteristics and regional principle have been kept until today.

Spain's adaptation more closely followed the common idea of financial deregulation and financial integration. According to our hypotheses, the freedom of territorial expansion granted to the savings banks in 1988 is also a reason why Spanish savings banks have been in trouble. From 1988 onwards, the decentralised savings banks previously specialised in its region's demands expanded not only to neighbouring regions, but also to remote regions or cities. The expansion has increased the situation of competition on the ground, but has also led to strong branch growth (Handke, 2015), although Spain has been already well supplied by commercial banks with branches (Olit, 2012). To gain market shares in new markets, from a geographical perspective, "they lent to customers who did not get loans from the local bank" (interviews with actors of the Spanish financial sector on 24 May 2015). Since the savings banks were previously accustomed to commercial customer relationships, it was rational that they were highly engaged in the real estate sector and also predictable that they expanded their commitment to the rapidly growing construction sector.

Between 2009 and 2013 (see the following table), there was intense regulatory activity in the Spanish banking sector to deal with the crisis. Most of the regulations concerned the sector as a whole, but some only concerned the savings banks. The high point of this process was Royal Decree-Law 02/2011, which established new levels of core capital for the depository institutions. This new regulation forced most of the savings banks to raise their capital levels to 10%, and those that were not able to achieve this goal had to ask for state aid and had to turn into commercial banks (Article 11, Royal Decree-Law 2/2011). Also due to the new capital level, 28 of the remaining 30 savings banks in Spain have outsourced their banking business or bundled their commercial banking activities in major and rather privatised savings banks (DSGV, 2014). Caixa Ontinyent and Colonya Caixa Pollença are the only two "real" financial institutions in existence bound by the Savings Bank Act 2013, at least back to a certain part of their home region (reintroduction of the regional principle) and to a balance limit. Of course, this could be judged differently if the regulations, in reaction to the crisis, were only aimed at curbing it or if it was a stab in the back of decentralised banking. Nevertheless, if Spanish savings banks were still decentralised banks during this time, it must be asked if there were other opportunities. However, the fact that Spain reinvented the regional principle in 2013 for the two savings banks still in existence shows that the policy of deregulation has been rethought in this regard.

Table 1: Regulation from 2009 onward

Decree Law	Description
Royal Decree Law 9/2009	Banking restructuring to improve the strength and capital solvency of the Spanish financial system, providing three options: • Commercial solution: the banking institution designs its own restructuring framework • Solution with the support of the Banking Deposits Guarantee Fund (FGD) to increase the capital solvency of the institutions, or M & A within the sector

	• Banking Restructuring Fund (FROB) takes control of the institution
Royal Decree Law 11/2010	Improve the savings banks' abilities to increase their capital solvency with two new options: • Through a commercial bank that controls the savings banks with a minimum of a 50% of the shares • Transformation of the savings bank into a foundation and transfer of the banking activity to a commercial bank
Royal Decree Law 02/2011	• TIER 1 capital requirement of 8% • TIER 1 capital requirement of 10% for banking institutions with an interbank leverage ratio above 20% and without 20% of their capital shares listed in the stock exchange.
Royal Decree Law 2/2012	Reappraisal of the real state assets in the balance sheet of the banking institutions and establish new reserves for possible depreciations
Royal Decree Law 18/2012	Re-establish a new set of reserve funds to cover the depreciations of the real state assets in the balance sheet of the banking institutions
Royal Decree Law 24/2012	Creation of SAREB, the bad bank responsible for managing assets transferred by the four nationalised Spanish financial institutions
Law 26/2013	New regulations for the savings banks sector: • Reintroduce the regional principle • Maximum level of assets (€1.3 billion)

Own creation, source: Banco de España

"The traditional hypothesis on the relationship between financial integration and financial stability has been that financial integration and globalisation would dilute risks and reinforce financial stability" (Commission of the European Communities 2009: 58). For a brief time after the financial crisis began, there were growing signs of a rethink: the Commission questioned its market philosophy for the first time in the European Financial Integration Report released in January 2009. "The financial crisis has offered a live demonstration that financial globalisation may indeed amplify the original financial shock" (Commission of the European Communities 2009: 58).

However, the requirements and the renewed and complex regulatory environment have not only been led and could again be led to a consolidation and privatisation process in banking, and therefore to more financial integration and less decentralised banking in the future in Spain, but also internationally (implementation of Basel III). The uniformity and complexity of the advance regulation penalises local banks relatively more in comparison to large banks, as the implementation is fixed in its costs (Alessandrini et al. 2016). To protect local and community banks, the United States implemented Basel III differently. The dual-regulatory system differs between large banks and community banks. Unlike Europe, the US regulators decided that community banks have smaller capital requirements and less planning and reporting duties than large banks (Alesandrini et al. 2016; Yellen, 2014).

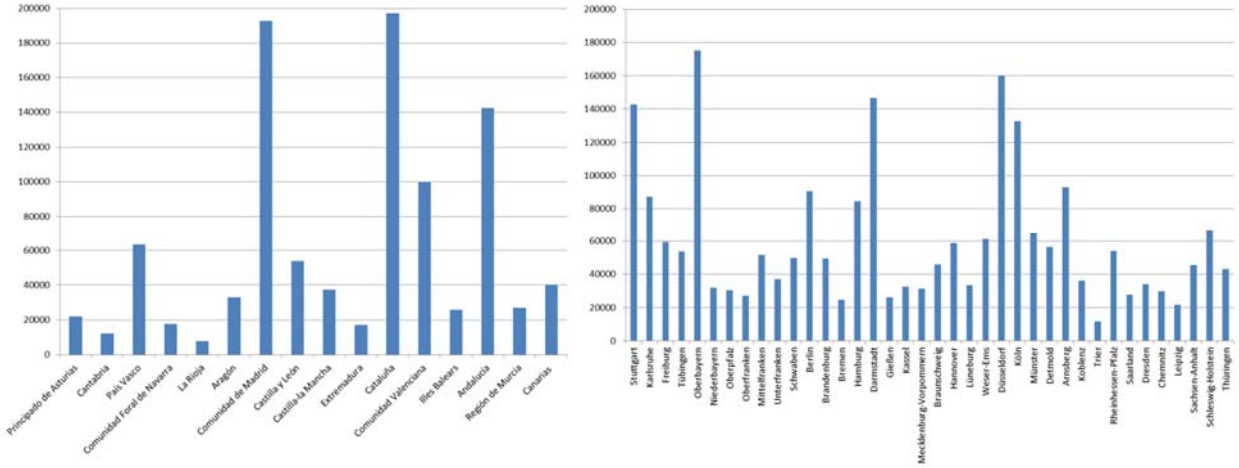
1.2 Regional savings and the refinancing of banks

Decentralised banks need savings from their region, otherwise they depend on the capital market for refinancing which in turn also reduces their regional independency with respect to lending decisions (Hardie and Howarth, 2013; Gärtner and Flögel, 2017). As we have argued elsewhere, the fact that regional banks in Germany can survive even in disadvantaged and peripheral areas is partly explained by the interaction of complex mechanisms of regional balance in conjunction with a specific spatial structure. Public transfers between regions and a decentralised structure allow for a basic volume of economic and social life

in all of Germany's regions and mitigate the development of substantial regional disparities (Gärtner and Flögel, 2017).

Different methods, regional bases, variables and indicators are used in analyses measuring interregional disparities within a country (e.g. Kessler and Lessamm, 2009; Checherita et al., 2009). Two main aspects are discussed in the following: the interregional degree of income inequalities and gross domestic product (GDP) inequality within a country and the degree of interregional redistribution of money. Concerning the GDP, Figure 2 shows that disparities between the Nuts-2 regions are slightly higher in Spain than in Germany. In Germany, Nuts-2 regions are the 38 Administrative Territories or in some cases small states, and in Spain they are represented by the 18 Autonomous Communities (AACC). The spatial dispersion of GDP is important for regional banks because banks need companies demanding services and loans in each region. Equally important is a specific minimum size of income in each region so that private persons can save income, as regional banks are dependent on regional savings. An OECD comparison that calculated the regional range in household primary income as a percentage of income in the country's median (for 2009) reveals some differences: in Spain, the range between the regions is around. 55.5% higher than in Germany (48.7%) (OECD, 2013). This indicates that the spatial dispersion of income is higher in Germany than in Spain. Against the background of the substandard development of the former GDR-regions in Germany, it is astonishing that GDP and primary income are more equally distributed between the regions in Germany than in Spain.

Figure 2: GDP (average 2005/2014) in Spanish (left side) and German Nuts-2 Regions



Own calculation, source: Eurostat

Most primary income consists of wages and property and entrepreneurial income. Disposable income adds all social benefits to the primary income, transfers and subtracts taxes on income and wealth and social contributions (and transfers). If we consider the Gini index (takes on values between 0 and 1), which measures inequality among the regions in each country, we see that disposable income in Spain (0.093) is also more unequally distributed between the regions than in Germany (0.0792) (OECD, 2013). Differences between primary income and disposable income reflect state redistribution mechanisms. Therefore, we also calculated the variation coefficient[2] (for the method, see Leßmann, 2005) for regional disposable income of private households as a percentage of primary income. The statistical relation is positive, which means that if the indicator is higher, then redistribution between the regions is higher. The variation coefficient for Spain is 0.043495, lower than for Germany (0.079739), indicating that redistribution in Germany is higher than in Spain.

To sum up, as described above, the gap between rich and poor regions in Spain is greater than the gap between rich and poor regions in Germany. This becomes especially apparent when taking disposable

[2] VC = $\frac{standard\ deviation}{mean}$

income into consideration, as a lack of disposable income could lead to a lack of savings for decentralised banks in poor regions. The need for exogenous capital in Spain led to a securitising process intended to gain liquidity (Caterineu and Pérez, 2008; Carbó-Valverde et al., 2011; Otero-Iglesias, 2013; Dymski, 2013). Otero-Iglesias (2013) thinks that securitisation activity in Spain fostered riskier lending behaviour. Although the main reason for securitisation in the Spanish banking sector concerned funding purposes, the banking institutions tended to relax their lending standards in the new operations they financed based on the liquidity obtained with securitisation. However, the reason behind this was simply the need to procure liquidity and not to reduce or diversify risks (Dymski, 2013). This led to the banks still being responsible for parts of the securitised risks. The Spanish construction boom which led to the high capital demand was also made possible by the generous designation of land for development by local authorities, resulting in high revenues (Garcia, 2010). Although Spanish savings banks greatly exacerbated the lending business by being too engaged in the real estate sector and real estate companies, they were also affected by spillover effects from the crisis of the US real estate market onto the Spanish real estate sector. Sources of funding in the markets were therefore extinguished over the course of the crisis.

2 Financial centres, proximity and banking associations

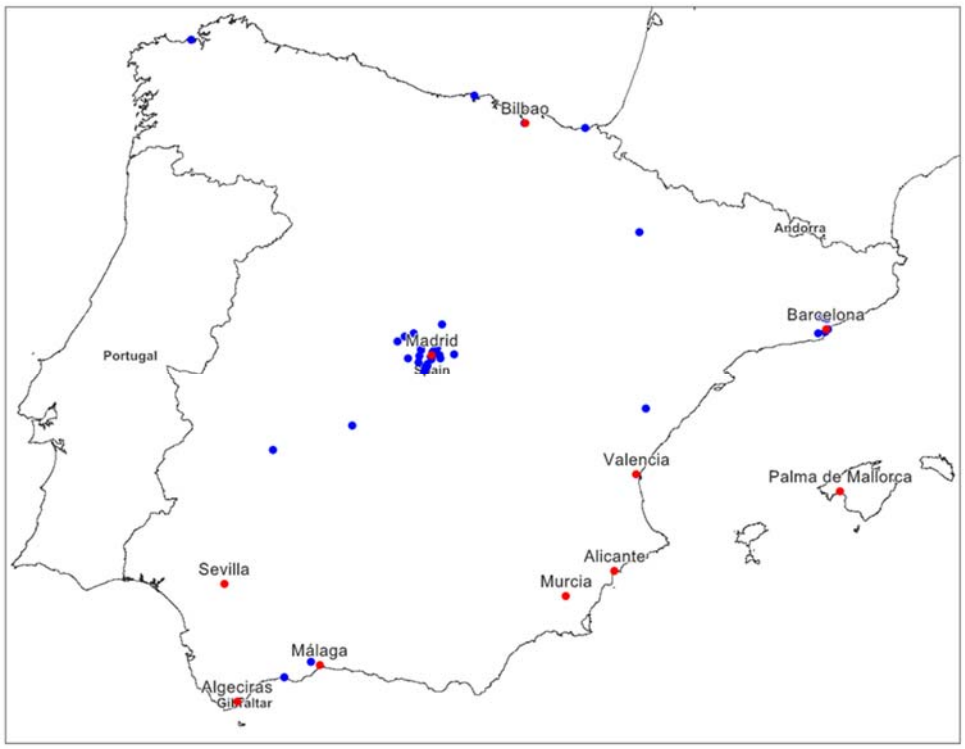
As described in the introduction, we distinguish between decentralised banks that benefit from close relationships to their customers and centralised banks that benefit from close relationships with companies within the financial value chain. The role of space and proximity is important for both, but at different points on the value chain.

The creation of important financial centres, which should cause above-average growth through spillover effects, is significant for centralised financial intermediaries. Transnational companies are represented at these locations for reputation-related reasons, which again can lead to cumulative effects in the sense of a self-fulfilling prophecy. The increasing meaning of world finance centres and the spatial concentration of finance goes hand in hand with a decline in traditional local banking systems (Dow et al., 1999; Gärtner, 2013).

Larger, well-established companies are primarily financed by international capital markets in the form of shares and bonds. Securing finance and bonds in international capital markets generally offers improved cost-effectiveness and is associated with less dependency on the financing institutions. The geographical proximity of debtors to lenders or investors (such as shareholders) does not matter much, since the objective is to make comprehensive information available to the public. Considerable knowledge is required to provide, evaluate and distribute this information.

Spain's financial economy is built differently. There are several centres of gravity. Spain is a centralised state, but is also the home to Catalonia, the Basque Country and Navarre as strong and independent regions. Even if Madrid plays a role as a major national financial centre due to a process of increasingly concentrated banking activities, it does not hold a leading position from an international perspective. In comparison to other financial places, the financial centre of Madrid is less developed as a social place regarding the importance of the inherent possibility of having face-to-face meetings. Some of the leading Spanish commercial banks built up their headquarters outside Madrid, as can be seen in the map below. According to the Global Financial Centres Index (2016), Madrid only ranks 64 after Vienna, Istanbul, Warsaw and Rome.

Figure 3: Location of commercial banks in Spain (former savings banks, savings banks and cooperative banks are excluded)



Own figure, source: ECB

As outlined in the introduction, decentralised banks capitalise on proximity between creditor and borrowers. However, decentralised locations, remote from financial centres, have the disadvantage of missing proximity to other banks, rating agencies, specialised lawyers etc. This poses the risk of a lack of specific (financial) knowledge, skills and access to services. However, proximity is by no means bound to geographical proximity, but can be substituted with other dimensions of proximity (Boschma, 2005; Torre and Rallet, 2005; Ibert, 2007; Bathelt and Henn, 2014; Grabher and Ibert, 2014). Cognitive proximity, for example, can be maintained via organisational and professional proximity. Well-organised banking networks/associations can create proximity for their member banks and facilitate knowledge spillovers and learning, meaning access to the financial centres' knowledge bases, for geographically remote regional banks as well. In this regard, it is well established that banking associations or networks enable small banks to achieve economies of scale "in a wide variety of activities" (Bülbül et al., 2013; Gärtner and Flögel, 2013; 2017; Greeham and Prieg, 2015).

For German savings banks, the Sparkassen-Finanzgruppe [savings banks group] plays a key role in efficiently processing downstream activities. It consists of around 420 savings banks, 12 Regionalverbände [regional associations], the Bundesverbände [federal associations], Landesbanken [regional federal state banks], public insurance companies, specialised service providers and many other bodies. The savings bank finance group offers individual savings banks the advantages of a major company but ensures that they retain the benefits of a flexible business unit. The group has developed over time and grown following the creation or merger of organisations with altogether more than 330,000 employees (DSGV 2015). The *Deutsche Sparkassen- und Giroverband* (DSGV) is the umbrella organisation. Together with the 12 regional associations, it coordinates decision-making within the savings banks financial group, offers knowledge and services and determines strategic direction. The DekaBank is a kind of a central bank for the savings banks in Germany and ensures access to a wide range of investment products and services for retail and institutional investors. The bank is 100% owned by the regional savings banks associations and the DSGV and has about 4,000 employees.

Similar to the DSGV in Germany is the Confederación Española de Cajas de Ahorros (CECA) in Spain. This association lobbies in the interest of the Spanish savings banks before Spanish and European regulators. It also cooperates with the Bank of Spain and the Ministry of the Economy in developing new banking regulations. Before the bank reorganisation in Spain, the association offered its members several financial services, such as securities services, treasury management and wholesale banking services, and coordinated joint ventures between the members. Most of the time CECA also acted as partner in these ventures such, as during the creation of the Ahorro Corporation, a company focused on financial market investments, and other highly specialised companies like leasing or insurance enterprises. The association was crucial for the economic viability of the smaller savings banks. Without that support, these institutions could not offer the same financial services as their competitors.

As a result of the privatisation of the Spanish savings banks, CECA was forced by law to become a banking foundation and to transfer its financial activity to a commercial bank (Cecabank) whose shareholders include CECA, with 89%, and the members of CECA (CaixaBank, Bankia, Kutxabank, Grupo Unicaja, Liberbank, Abanca, BMN, CatalunyaCaixa (a member of BBVA Group), Banco Sabadell, Ibercaja, Caixa Ontinyent and Colonya Caixa Pollença), with 11%. The new banking institution offers the same wholesale financial services to the banking sector and not only to its members. The current members of CECA are the remaining savings banks, the credit institutions that emerged from the defunct savings banks and the foundations that own a share of the privatised savings banks. These foundations are divided into banking foundations when they control above 10% of the shares, and ordinary foundations when they keep less than the 10% of the banking institution.

Comparing the savings banks association and its affiliated companies and organisations between Spain and Germany is perhaps difficult, as it must always raise the question what bodies belong to the compared group, as the structures are complex. For example, the Landesbanken in Germany are still parts of the savings banks finance group. Of the more than 332,116 (2015) employees in the German savings banks finance group, a huge number, 233,742 employees work for savings banks, 40,491 belong to the Landesbanken and the Dekabank, 61,100 have their jobs at daughter companies (service companies, public insurance providers, etc.) and 3,217 are employed by federal and regional associations (DSGV 2015). If we compare the latter with CECA, the differences become apparent, as CECA had just four employees in 2015. In December 2015, the institution transferred all 512 of its employees 512 to Cecabank, except those four working for the banking foundation (CECA annual report, 2015). However, this shows that even before the crisis of the Spanish savings banks, the support structure was much less developed than it was in Germany.

Another category of banks in Spain is that of cooperative banks that show cooperation among their members. La Unión Nacional de Cooperativas de Crédito (UNACC) is the association representing the interest of almost all cooperative banks in Spain.

Cajamar Cooperative group, a set of 20 institutions, recently changed to commercial banking association, the Asociación Española de Banca (AEB), and skipped the UNACC in 2014. The group is represented in the AEB through its commercial bank, Banco de Crédito Cooperativo, an institution that operates as a central bank for the members. The group stabilised agreements with Generali Seguros, Trea Capital and the Cetelem bank to offer their members insurance, investment and consumer loans services, respectively.

Although the UNACC is the official association, two groups stand out due to their stronger cooperative framework: the Caja Rural Group and Cajamar (no longer a member of the UNACC). The Caja Rural Group follows the structure of the German Volksbanks and the independent cooperative banks have created several companies to offer several services, such as the Spanish Association of Cooperative Banks, which acts as wholesale banks for the partners and manages the extra liquidity of the members of the banking group, like Rural IT, which provides technological outsourcing services for the members, and RGA Insurance, which is the insurance company of the group. In all three of these companies, the German DZ Bank acts as shareholders.

For commercial banks, we found the AEB. The association only fulfils a small role focused on lobbying for the institutions before the government and the multinational banking associations. The association does not have any other tasks. The lack of cooperation among the commercial banks in Spain can be explained

by the individualistic character of the banks. Due to the size of the single banks, commercial banks do not need to cooperate with other banks to develop financial services like savings banks and cooperative banks.

3 Spatial development of the Spanish banking structure

As mentioned above with the liberalisation and deregulation process, savings banks gained decision power over their balance sheets and complete freedom to supply the same financial services as commercial banks without any geographic restriction. From a spatial perspective, this led to the following situation: the number of headquarters was reduced (see 3.1) while the number of branches expanded (3.2), which led again to a specific spatial distribution of loans and deposits (see 3.3).

3.1 Headquarters

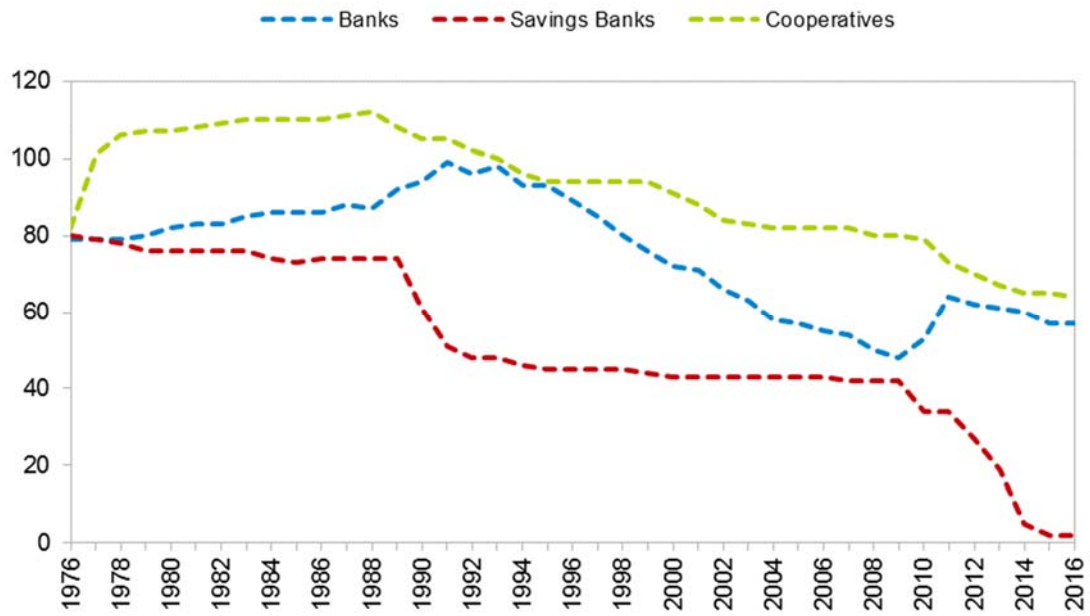
The structure of the Spanish banking sector has undergone several transformations since the beginning of democracy in Spain. An initial important transformation started after the liberalisation of the savings banks sector in 1988. Within four years, there was an active period of mergers between the savings banks. As Figure 4 shows, 74 savings banks were operating in 1988 whilst in 1992 that number fell to 48, meaning a decline of 35% within four years. Except for this period of concentration, the savings bank sector remained relatively stable until the start of the financial crisis in 2008.

After an initial period of expansion between 1976 and 1993 and mainly after the entry of foreign banks[3] into the Spanish banking sector, there was a sharp drop in the number of commercial banking institutions. The most common reason for the reduction was M&A among the different institutions. One example is the liquidation of foreign banks in Spain. The Spanish banking market was highly competitive and foreign players could not acquire a sufficient rise of market shares to make their investments profitable.

After 1988, cooperative banks began a process of concentration that lasted seven years. Whilst the number of cooperative banks in Spain rose to 112 at the beginning of the period, by 1995 that number had slumped to 96, with most of the difference acquired by savings banks. The main factor for this was viability problems of the cooperative banks (Romero, 1997).

3 From the definition of commercial banks that are established in Spain, we excluded the branches of foreign banks from within and outside the European Union.

Figure 4: Number of institutions in the Spanish banking sector



Own creation source: Banco de España

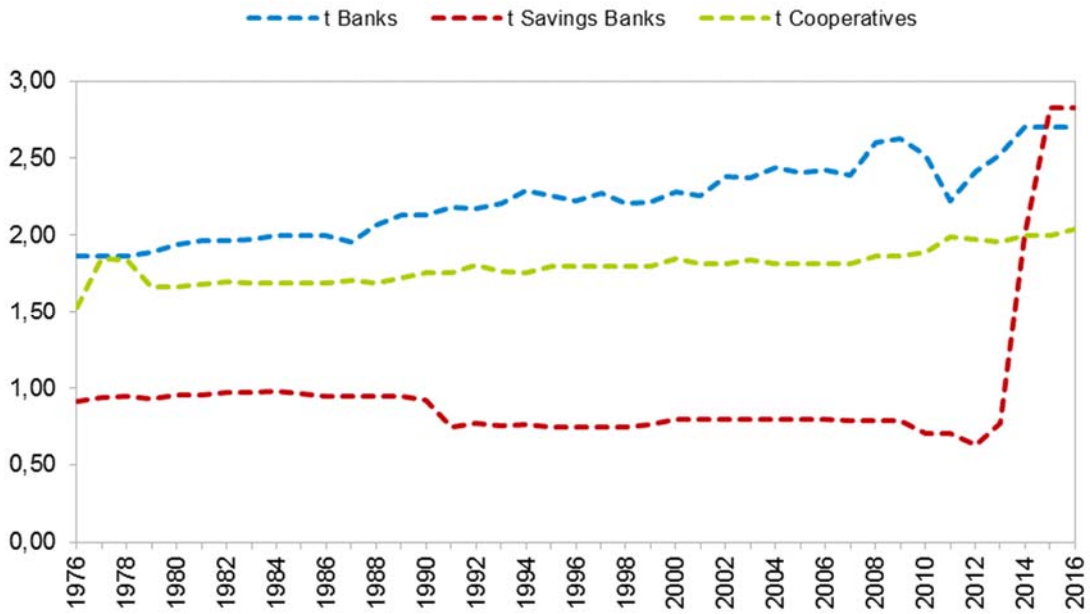
The Nuts-2 regional classification system (Autonomous Communities (AACC)) has been used to analyse the geographical distribution of banking institutions (see section 1.2.). To measure the differences between the regions, we have calculated a ratio (t-ratio) that divided the standard deviation among the regions by the mean of the indicator.[4]

$$t_t = STD_t/MEAN_t \qquad (1)$$

The higher the ratio, the greater the difference is found among the regions. The increase of the ratio means that the standard deviation grows faster than the average, so the distribution of the indicator is less homogeneous. Figure 5 shows the results for this for bank headquarters.

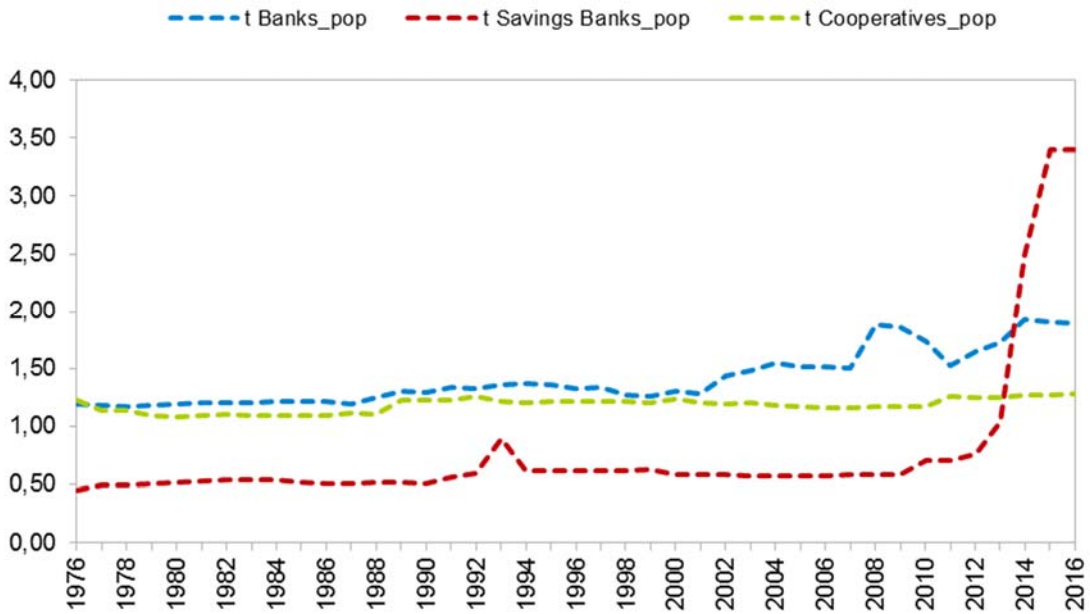
[4] t-ratio = $\frac{standard\ deviation\ of\ ech\ region}{mean}$

Figure 5: Regional distribution of headquarters among the 17 Autonomous Communities in Spain (t-ratio)



Own creation, source: Banco de España

Figure 6: Regional distribution of headquarters per one million inhabitants among the seventeen Autonomous Communities in Spain (t-ratio)



Own elaboration, source: Banco de España

To account for the different size of the Autonomous Communities, we calculated not only the ratio in absolute terms (Figure 5) but also weighted it by the number of inhabitants in the region (Figure 6). The savings banks had the most homogenous spatial distribution by far (lower t ratio) in the Spanish banking sector until the financial crisis. Commercial banks and cooperative banks presented a more uneven spatial distribution, but for very different reasons. In the case of the commercial banks, this uneven spatial distribution came from the concentration of banking headquarters in the most dynamic regions (Madrid and Catalonia). For the cooperative banks, the uneven spatial distribution derived from the success of the credit

union's business philosophy in a limited set of regions (Valencian Community, Andalusia and Castile la Mancha). The Valencian Community in particular concentrates significant numbers of cooperative banks compared to the other Spanish regions. Indeed, we counted 47 in 1988 and 37 in 2006, while in Andalusia there were 13 in 1988 and 10 in 2006 and Castile la Mancha we only counted 9 in 1988 and 8 in 2006.

When we computed the ratio by the number of inhabitants of every Autonomous Community, the ratios fell, but the difference between the types of institutions remained. Until the crisis, the savings banks remained the most equally distributed banks across the country by far.

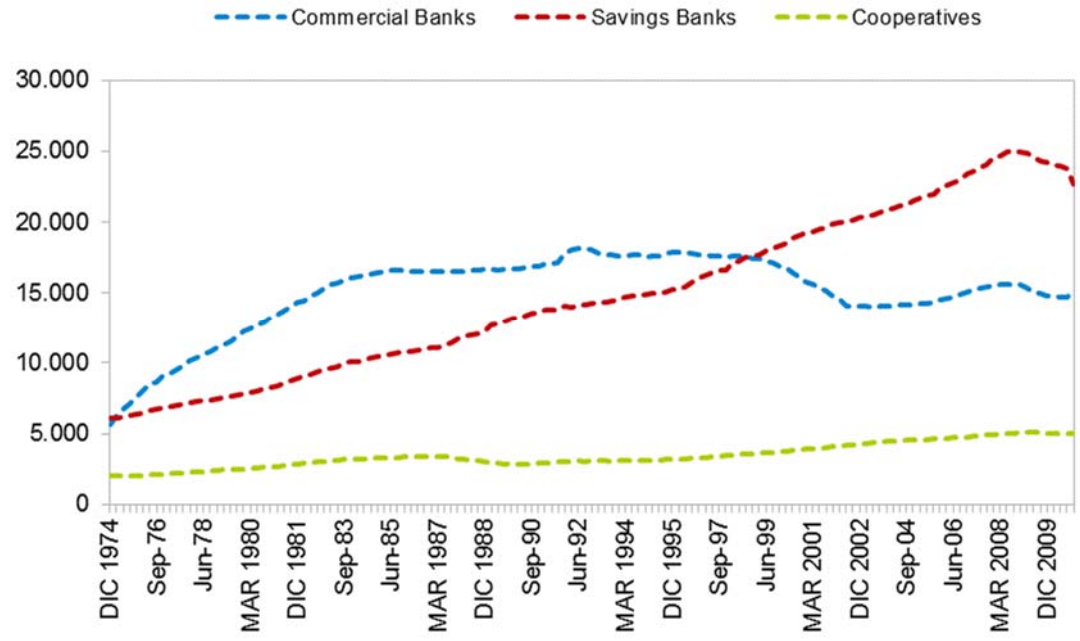
3.2 Branch network

As shown above, Royal Decree 2290/1977 (Fuentes Quintana Decree) and Royal Decree 1582/1988 had a significant impact on the spatial distribution of the banking sector. These two bills also played a key role in the expansion of the banking branch network. In 1974, the savings banks and commercial banks had a similar number of branches, but that year also marked the moment when commercial banks expanded their branch network (see Figure 7). In a period of 10 years, the commercial banks tripled their number of branches (from nearly 5,600 in 1974 to 16,410 in 1984, when the expansion slowed down). In the same period, savings banks almost doubled their number of branches from approximately 5,600 branches to 10,440 in 1998, and after the geographic liberalisation of the savings banks sector in 1989, commercial banks and savings banks reached a similar number of branches (17,541).

After 1998, these two trends diverged again, but this time the savings banks followed an increasing trend of expansion while the commercial banks' network shrank. By June 2002, commercial banks had around 14,000 branches and savings banks had almost 20,000, but savings banks kept expanding their network until September 2008 when the number of branches rose to 25,000. In these six years, the banks opened around 1,600 new branches in the country.

With regard to the expansion of cooperative banks for the same period (1974-2010), their branch network increased by 150%. They had a low market share in the Spanish banking industry with a slow path in the development of their branch network.

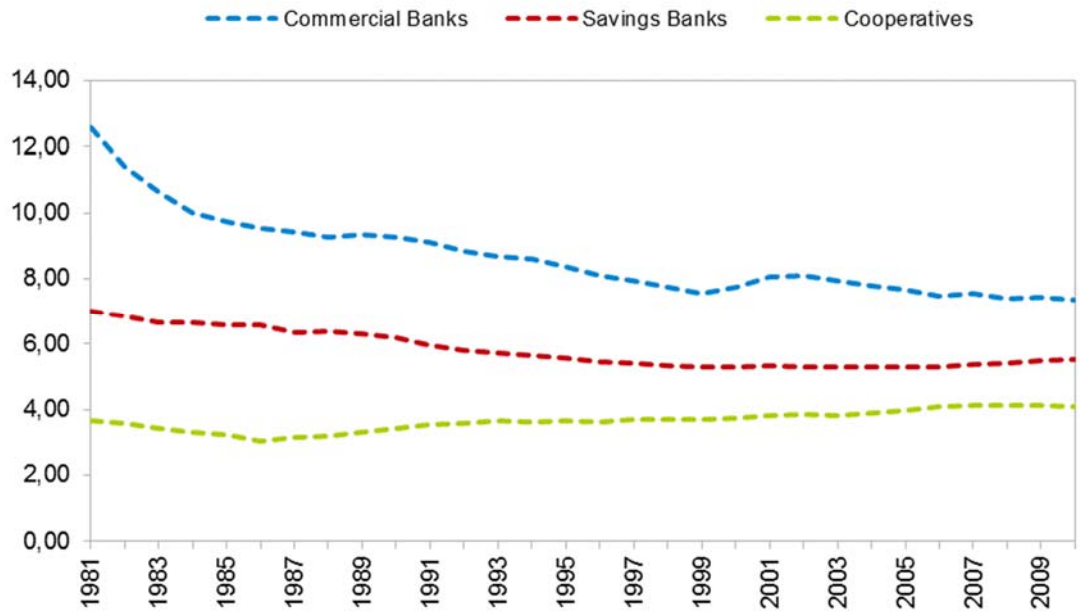
Figure 7: Total number of branches per year (1974-2010)



Own creation, source: Banco de España

Considering the number of employees per branch, commercial banks had around 13 employees per branch in 1981, which is almost twice the value of the ratio for the savings banks and three times the numbers of the cooperative banks (see Figure 8). Ten years later, in 1991, the average values were lower than 10 employees per branch (almost six employees per branch for savings banks and nearly four employees per branch for cooperative banks). At the start of the economic crisis in 2007, the numbers decreased even further to seven employees per branch for the commercial banks, five employees per branch for the savings banks and four employees per branch for the cooperative banks.

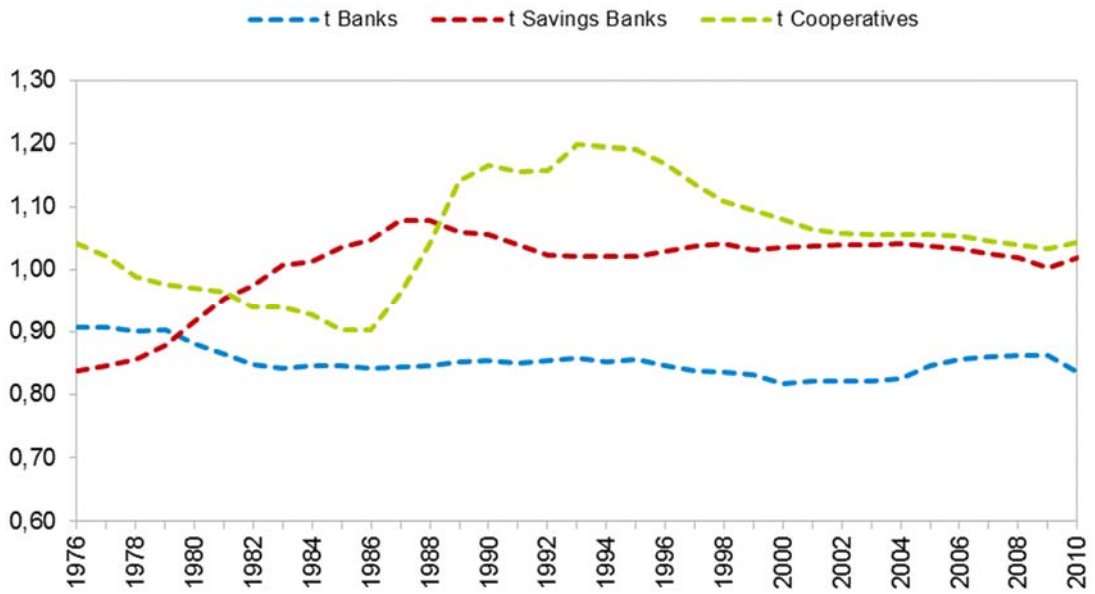
Figure 8: Number of employees per branch (1981 - 2010)



Own creation, source: Banco de España

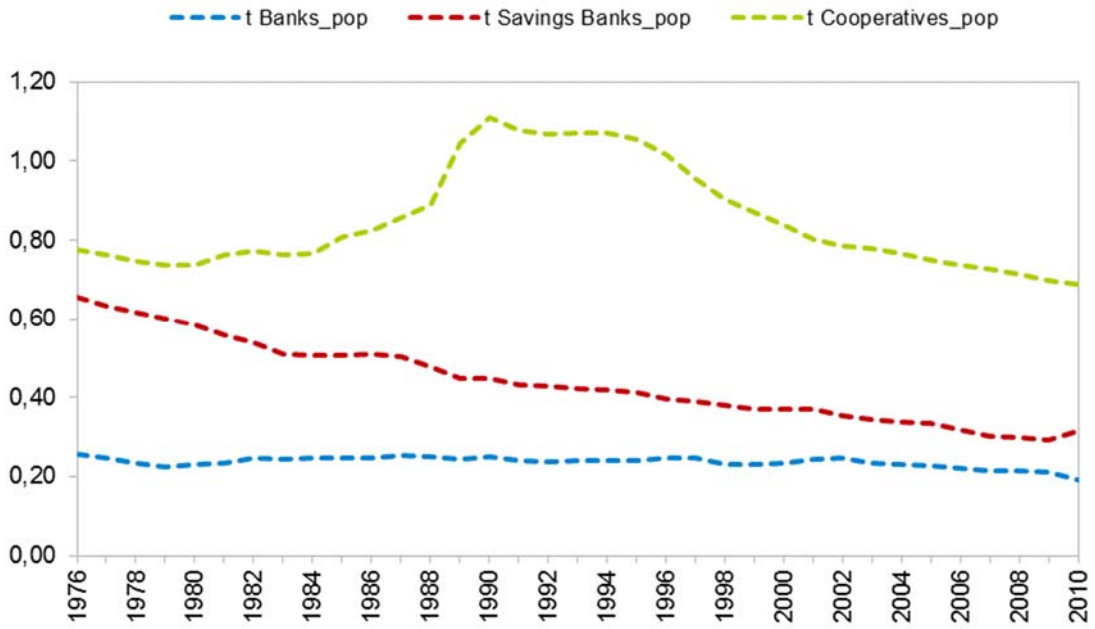
Turning to the spatial distribution of branches, at the beginning of our observations in 1977, savings banks had an average of 600 branches per Autonomous Community with a standard deviation of 545, which results in a t ratio of 0.9 (see Figure 9). This is the lowest among the three groups. In 2010, the ratios for the three categories of banks were 0.84 for commercial banks, 1.02 for savings banks and 1.04 for cooperative banks, which means that the savings banks especially concentrated their branches in specific regions. A possible explanation could be that when savings banks expanded their network, they focused their activities on the more prosperous regions (Alamá et al., 2015). For the cooperative banks, this explanation does not apply because not all areas are places where cooperative banks do business, whilst in other regions they are significantly represented. In conclusion, commercial banks seem to have a more balanced branch network today.

Figure 9: Regional distribution of branches among the seventeen Autonomous Communities in Spain (t-ratio)



Own creation, source: Banco de España

Figure 10: Regional distribution of branches per 1,000 inhabitants among the seventeen Autonomous Communities in Spain (t-ratio)



Own creation, source: Banco de España

By taking the population of the location into account (the number of branches per 1,000 inhabitants), the differences among the three groups and the trends become more evident (see Figure 10). Commercial banks reveal the lowest ratio for the entire time interval, presenting an even distribution in their branch network. The savings banks at this period present a ratio below 1 that shifts from 0.66 in 1976 to 0.29 in 2009, possibly due to their geographical expansion, which was implemented simultaneously with banking

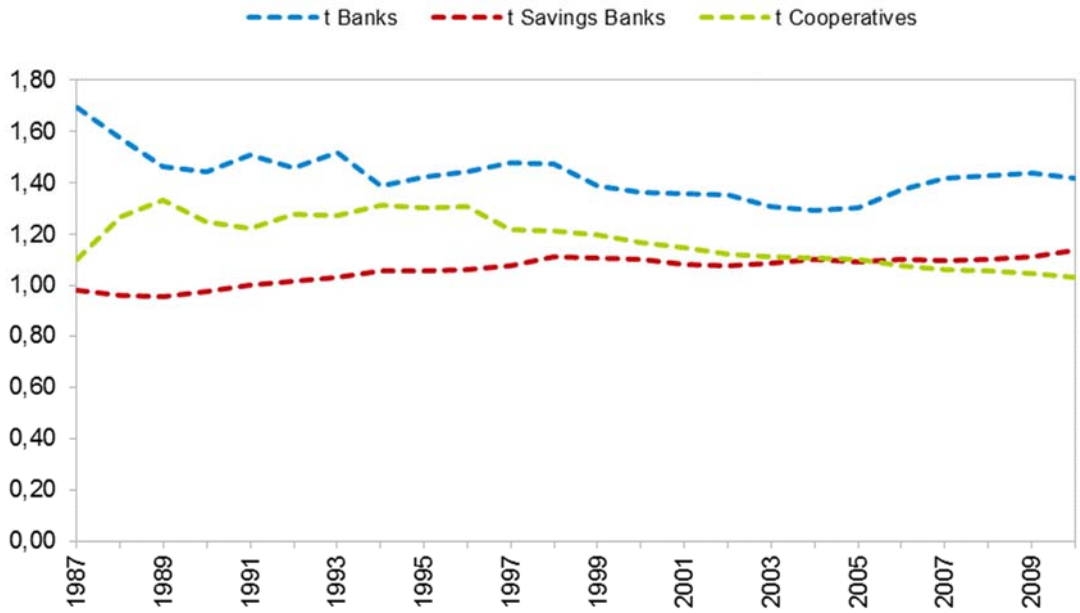
regulation. We can see that the savings banks expanded more robustly into urban areas than the countryside. The open question is to what extent they did this because these are their traditional business areas or because the urban areas, which had higher demand, especially in mortgages, seemed to be more attractive for expanding strategies. The downside was that in the more densely populated areas, the competition was already high. Cooperative banks still present the highest ratio, especially between 1983 and 1990. This phenomenon could be traced back to the process of concentration among cooperative banks during this period and the fact that cooperative banks focused on activity in less densely populated areas.

3.3 Spatial distribution of loans and deposits

To describe the spatial distribution and market specialisation of the banking activities, the t ratio has again been used. The distribution of loans (as t-ratio) among the Spanish regions in absolute (Figure 11) and relative terms (Figure 12) has also been compared. Without any doubt, the savings banks presented the lowest ratio among the three groups, especially if we consider the volume of credit per inhabitant (as a relative term) in particular. Most of the Autonomous Communities that had a savings bank located in their territory contributed to a more even distribution of credit. However, if we compare Figures 11 and 12 (the one that considered the population and the one that do not), we arrive at the conclusion that the savings banks gave slightly more loans in more densely populated areas. Commercial banks, on the other hand, obtained higher ratios both in total amounts and in relative terms. Compared to the savings banks, their credit activities were more concentrated in fewer regions. But this difference fell slightly over the years, especially in the late 1990s.

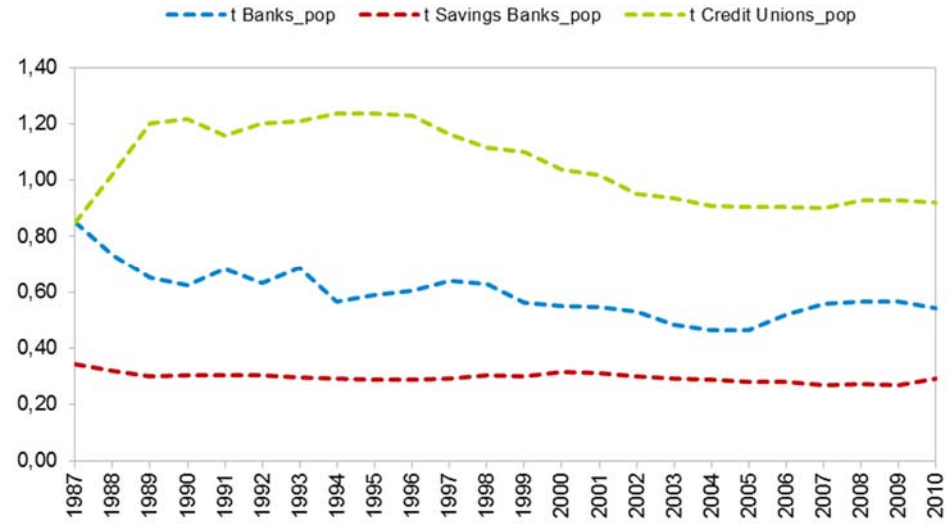
The cooperative banks presented a highly uneven distribution of credit activity, even higher than the distribution of commercial banks in terms of credit volume per inhabitant. An explanation can be found again in a fragmented distribution of cooperative banks in Spain and the small sizes of these institutions. They were also present in less densely populated regions and could have therefore played an important role in access to finance.

Figure 11: Regional distribution of loans among the seventeen Autonomous Communities in Spain (t-ratio)



Own creation, source: Banco de España

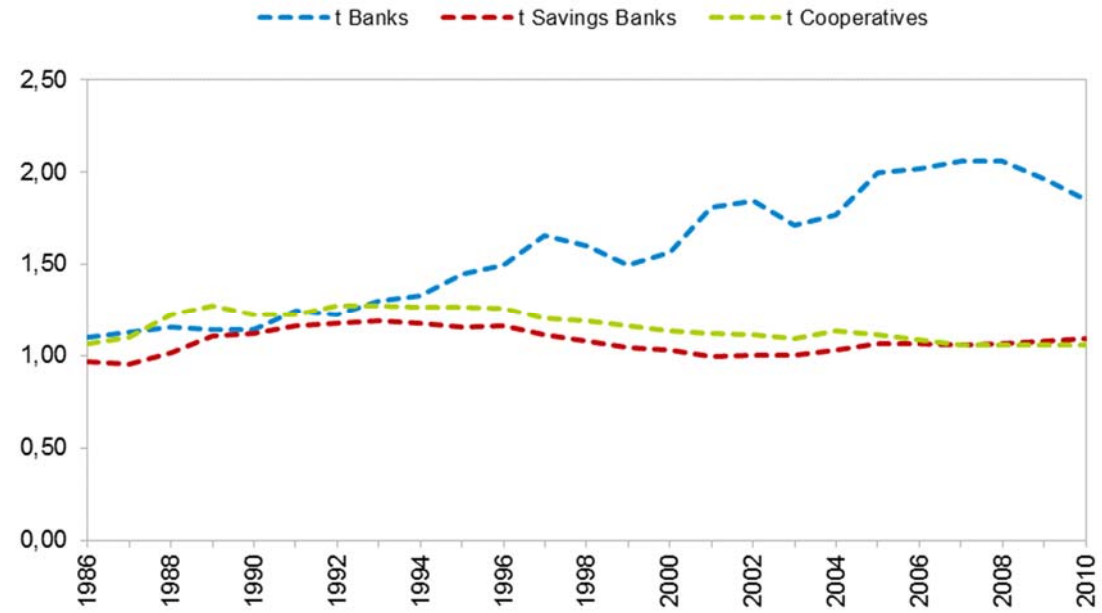
Figure 12: Regional distribution of loans per 1,000 inhabitants among the seventeen Autonomous Communities in Spain (t-ratio)



Own creation, source: Banco de España

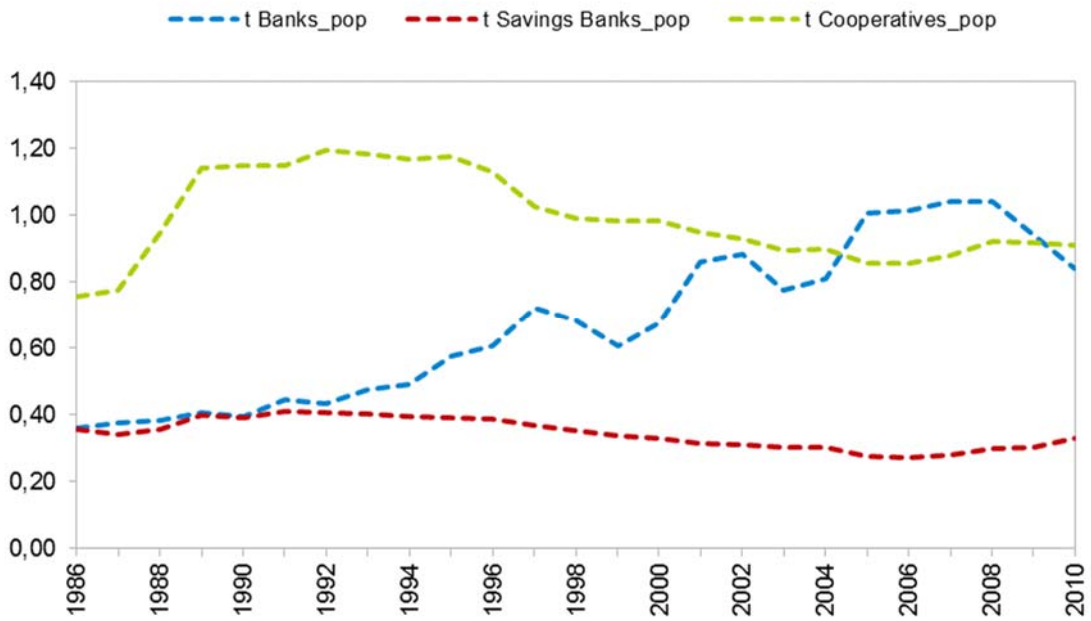
In regard to bank deposits, the savings banks pursued a more even spatial allocation both in absolute (Figure 13) and relative terms compared to the other categories of banks (Figure 14). Traditionally, the core business of savings banks consisted of attracting and raising deposits. They accounted for the biggest share of deposits from households and non-financial enterprises in Spain with €746 billion in 2008, compared to the almost €600 billion of the commercial banks' deposits (Berges et al. 2009). After 1992, commercial banks started a process of spatial concentration.

Figure 13: Regional allocation of deposits among the seventeen Autonomous Communities in Spain (t-ratio)



Own creation, source: Banco de España

Figure 14: Regional allocation of deposits per 1,000 inhabitant among the seventeen Autonomous Communities in Spain (t-ratio)



Own creation, source: Banco de España

In summary, we could not clearly distinguish between the banking categories in terms of the spatial concentration of their headquarters and branches, the distribution of loans and the source of deposits. Whilst the savings banks have had the biggest share of branches and the most even distribution of headquarters and branches, a concertation process took place through the reduction of branches (especially for the commercial banks) and headquarters, varying in intensity in different time periods and for different banking categories. Clearly viewable is the high concertation for the savings banks since the financial crisis. The comparably high concentration of the cooperative banks is caused by the fact that they are not present in all regions and are more present in the less populated areas. The latter (the statistical effect), however, says that they do not fully guarantee access to finance in peripheral, less populated areas. Therefore, the overall market share is too small.

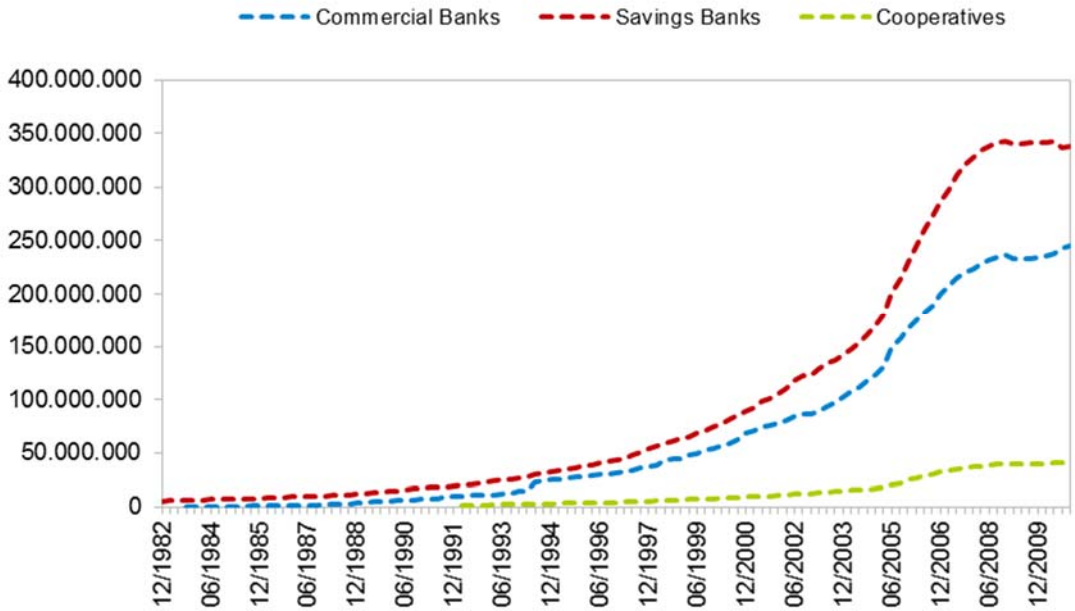
4 Market specialisation

One of the outputs we received from the data and our expert interviews is that some kind of specialisation exists within the Spanish banking sector. Commercial banks have traditionally been more active in the credit market with SMEs and corporations, whilst savings banks have focused more on the household sector, which includes deposit management and mortgages. The savings banks were highly competitive in the credit market with construction and real estate enterprises. Cooperative banks, on the other hand, directed their core business towards banking in rural areas and towards credit business with the primary sector. The development of loans to real estate and mortgages (Section 4.1), other industries (Section 4.2) and household deposits (Section 4.3) is discussed below. Section 4.4 examines the role of securitisation for the lending business, which became necessary because of insufficient savings in Spain.

4.1 Loans to real estate and mortgages

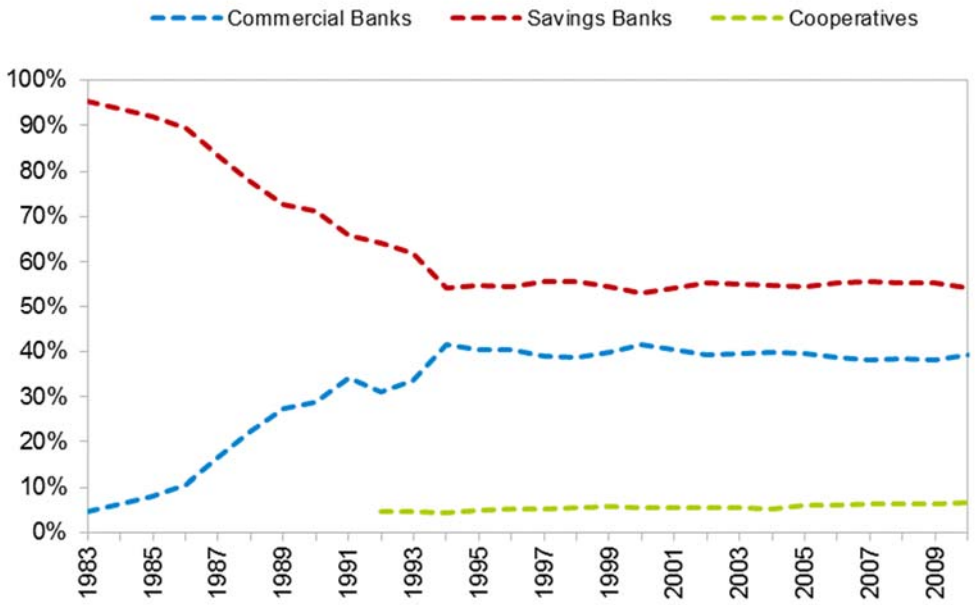
If we compare the three groups with regard to the construction and real estate sector (loans to construction and real estate enterprises and lending for house purchases), savings banks ranked first in granting loans for house purchases and loans to the construction and real estate sector. Savings banks in particular had been considered to hold the leading position in the market of loans for home purchases (see Figures 15 and 16) since the beginning of the 1980s, and were able to hold market advantages until the mid-1990s when commercial banks gained significant shares but still remained in a secondary position.

Figure 15: Total lending for home purchases to other sector residents (in thousands of Euros)



Own creation, source: Banco de España

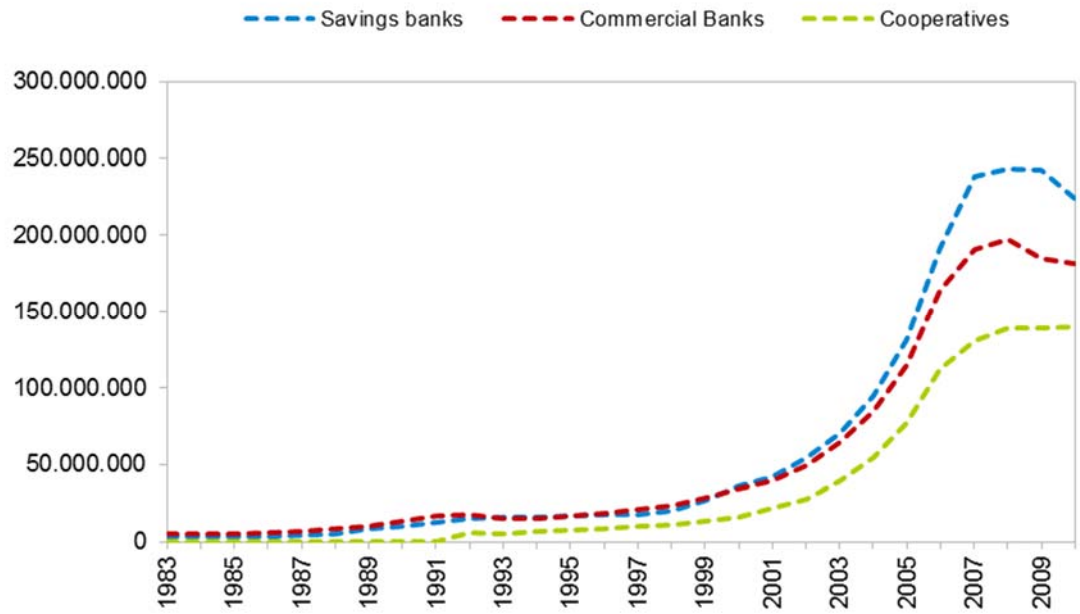
Figure 16: Market shares in lending for home purchases to other sector residents (%)



Own creation, source: Banco de España.

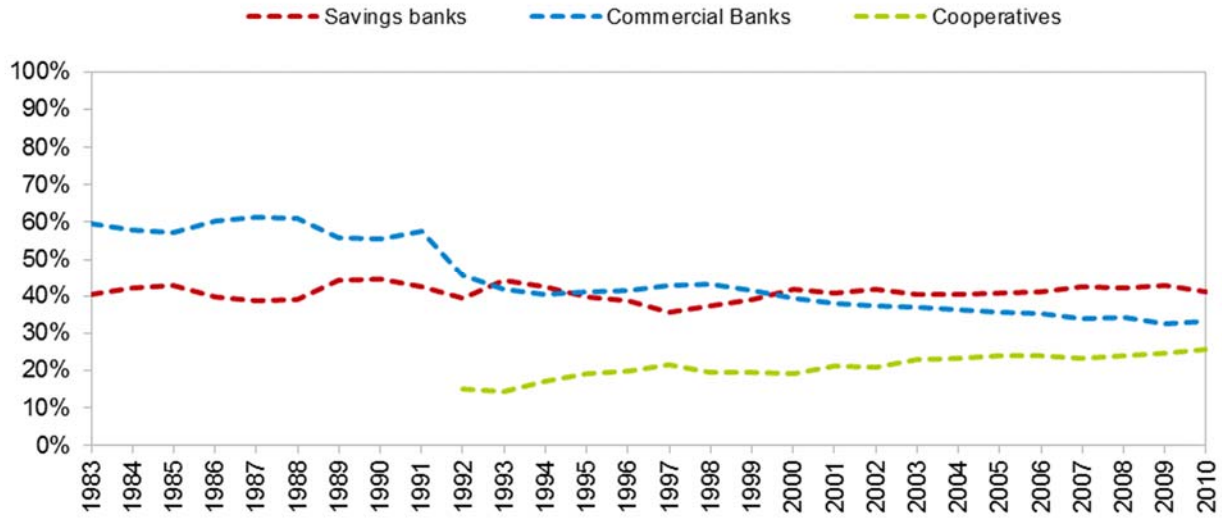
The situation in the credit market with construction and real estate companies evolved differently. As we can observe in Figures 17 and 18, savings banks were very active in the market, but in the early 1980s, commercial banks controlled major market shares. In fact, between 1993 and 2000, commercial banks and savings banks switched the top position in controlling the biggest shares in the market. After 2000, savings banks became the leaders in holding market shares above the 40% mark. Furthermore, a significant increase in credit activities can be ascribed to cooperative banks after 2001, when they achieved stable market shares above 20% at the expense of commercial banks.

Figure 17: Loans to the construction and real estate sector (in thousands of Euros)



Own creation, source: Banco de España

Figure 18: Market shares in credit to the construction and real estate sector



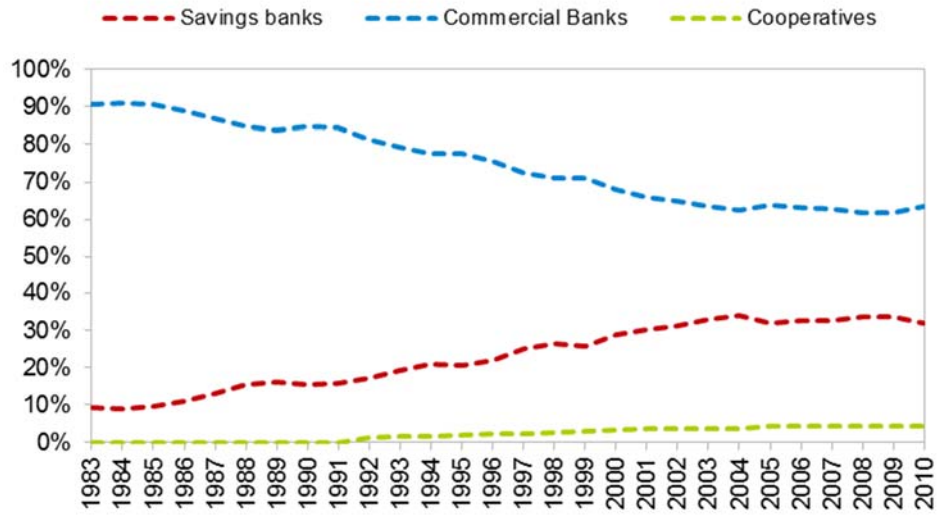
Own creation, source: Banco de España

4.2 Loans to industry, services and the primary sector

As we will learn from the following figures, commercial banks controlled loans to the industrial and service sector, but construction and real estate activities were excluded. Over the course of the last 25 years, however, savings banks have closed the gap with commercial banks, shifting from 10% of the market shares in 1983 to 34% in 2004, with their position remaining stable until the end of the period studied.

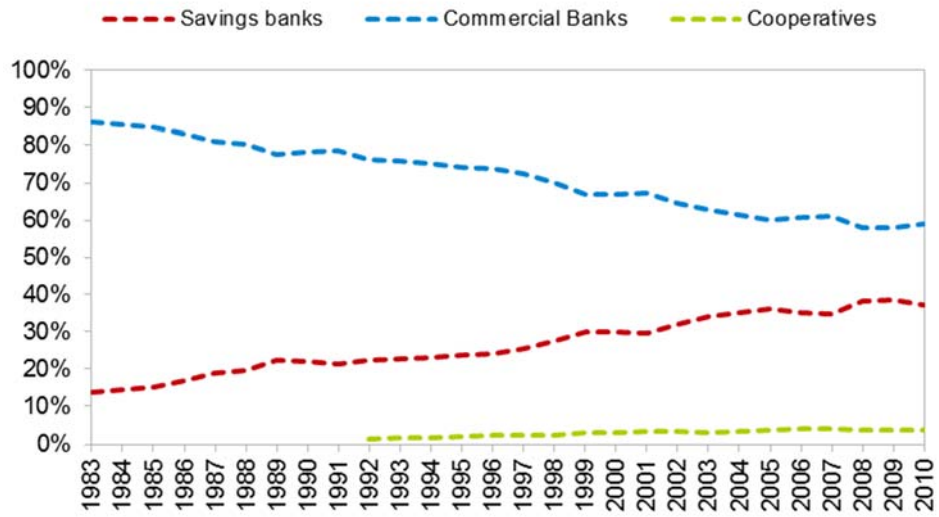
Furthermore, this closing of the gap between savings banks and commercial banks was connected with the former's geographical expansion. The findings from the interviews and from the data confirm our hypothesis: to attract customers from other credit institutions, banks had to engage in riskier and less profitable operations. Although some of the market share was not obtained by commercial banks alone, it probably was gained by the formation of new kinds of enterprises emerging during Spain's economic development.

Figure 19: Market shares in loans to industrial enterprises (construction not included)



Own creation, source: Banco de España

Figure 20: Market shares in loans to service enterprises (real estate not included)

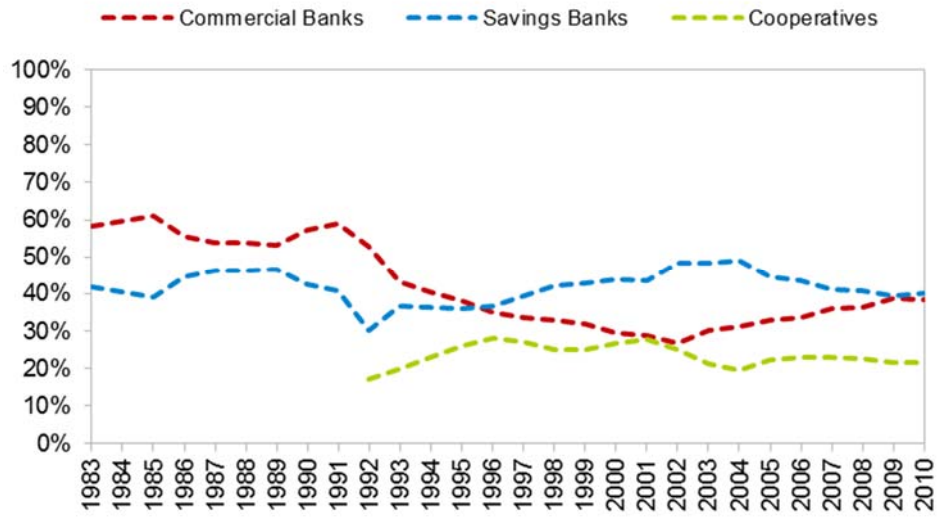


Source: Own creation, Banco de España.

The presence of cooperative banks in both markets was and still is the smallest of the three. In the credit market for industry, it only represented 5% at the end of period studied and 4% in granting credit to the service industry. Decentralised banks show much more market power in Germany. In 2015, savings banks and corporate banks together were responsible for more than 46% of the loans to the German economy (self-employed and companies). The four big commercial banks and state banks (Landesbanken), which we call centralised banks, dissociating them from decentralised or regional banks, claimed 35.4%. The situation was different in 1999, as centralised banks claimed a market share of 44.2% and regional banks accounted for 35.5%. Thus a sharp increase in the market share of decentralised banks can be observed in Germany (German Central Bank, own calculations).

When we take a deeper look at the primary sector (see Figure 21), competition among the three types of institutions was very high. In the early 1990s, commercial banks controlled the sector with a market share of 51%, which then declined in favour of the savings banks and cooperative banks. The savings banks took advantage of the decrease in market shares in the late 1990s, which they kept until 2008, when commercial banks and savings banks obtained similar market shares.

Figure 21: Market shares in loans to primary sector enterprises



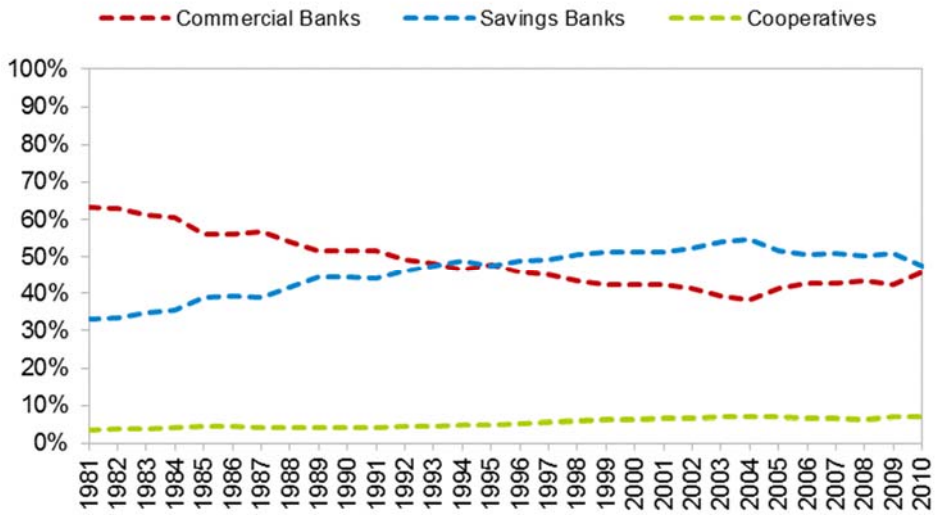
Own creation, source: Banco de España

4.3 Household deposits

Despite the fact that deposits are the traditional business of savings banks, the competition between savings banks and commercial banks during the period of study was intense. The reason for this is that institutions depend on their ability to collect deposits to boost their lending activity.

Figure shows that the savings banks increased their market shares continuously until 2000. Since 1993, they had outpaced the commercial banks. A continuous decline in the market shares of commercial banks from the beginning of the period apparently too place independently from different regulatory policies that were passed in those years. One possible explanation for this trend could lie in the commercial banks' higher level of interest in investment and pension fund management than the deposit business.

Figure 22: Market shares in resident deposits



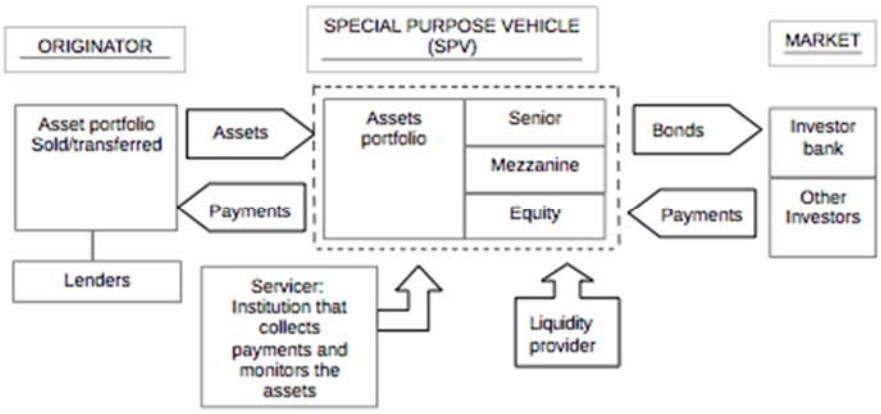
Own creation, source: Banco de España

4.4 The role of securitisation activity in the lending business (funding and business strategy)

An important issue that affected banking lending activity in Spain was securitisation. The literature (Carbó et al., 2011; Caterineu and Pérez, 2008; Otero et al. 2013; Dymski, 2013) and experts we interviewed explained that institutions employed this tool as a source of liquidity to expand their credit business.

The process of securitisation in Spain followed a traditional structure (Figure 23): banking institutions (originator) sold their assets (mainly mortgages and loans to SMEs) to a special purpose vehicle (SPV), in which the assets were transformed into several tranches of bonds (senior, mezzanine and equity), depending on their rating, and were sold on the market.

Figure 23: Traditional securitisation structure



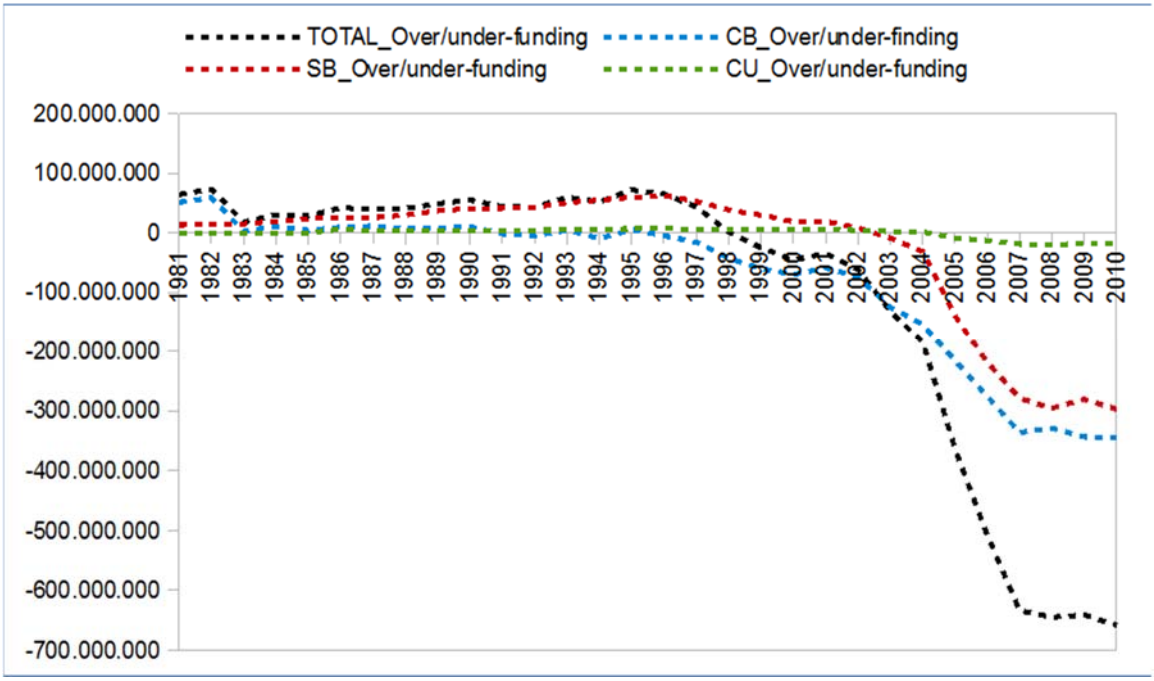
Source: Bank of Spain

In order to control possible deficits with securitisation, the Bank of Spain issued Circular 4/2004, which legally determined that securitised assets must remain on the banking institutions' balance sheets in case there was no major transfer of credit risk.

In the Spanish banking sector, the originator typically kept the total amount of the first tranche of losses of the bond issuance (see Figure 23). The reason for that strategy was to make the securitisation more attractive to investors (Caterineu and Pérez, 2008) and therefore achieve higher ratings from the rating agencies.

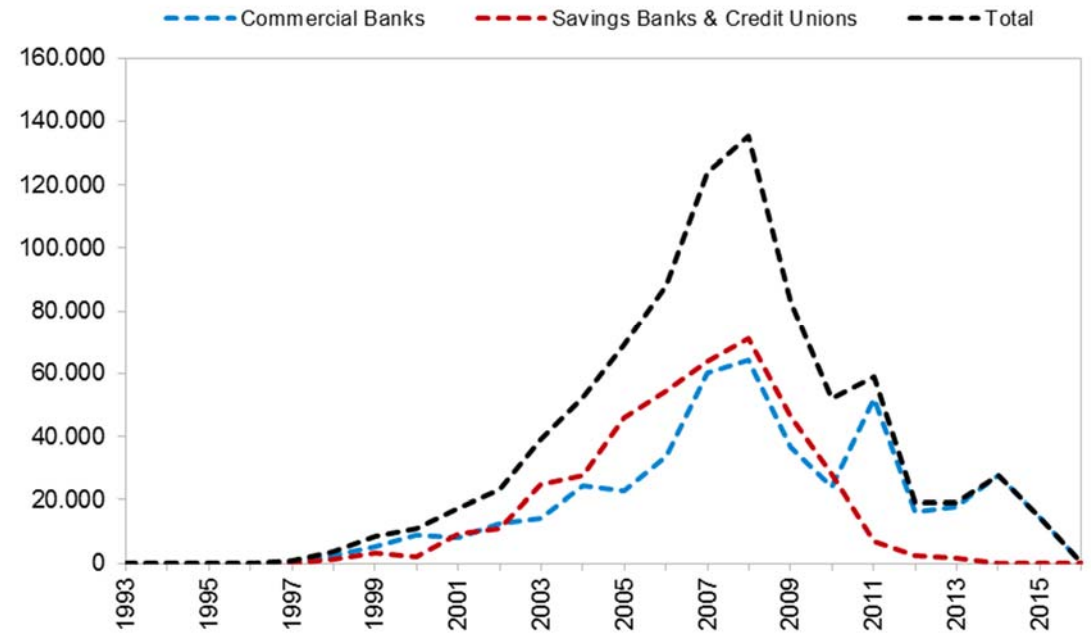
In the late 1990s, commercial banks started to lend higher volumes of money compared to their level of deposits (Figure 24) and simultaneously also started issuing securitised bonds (Figure 25). Savings banks began to face liquidity problems near the year 2004, seven years later than the commercial banks, but they entered securitisation more or less at the same time as the commercial banks, at the end of the 20th century. Between 1998 and 2008, the issuance of securitised bonds dramatically increased.

Figure 24: Total over- or underfunding (deposits from minus credit to public administrations and other sector residents) by type of banking institution (in thousands of Euros)



Own creation, source: Banco de España

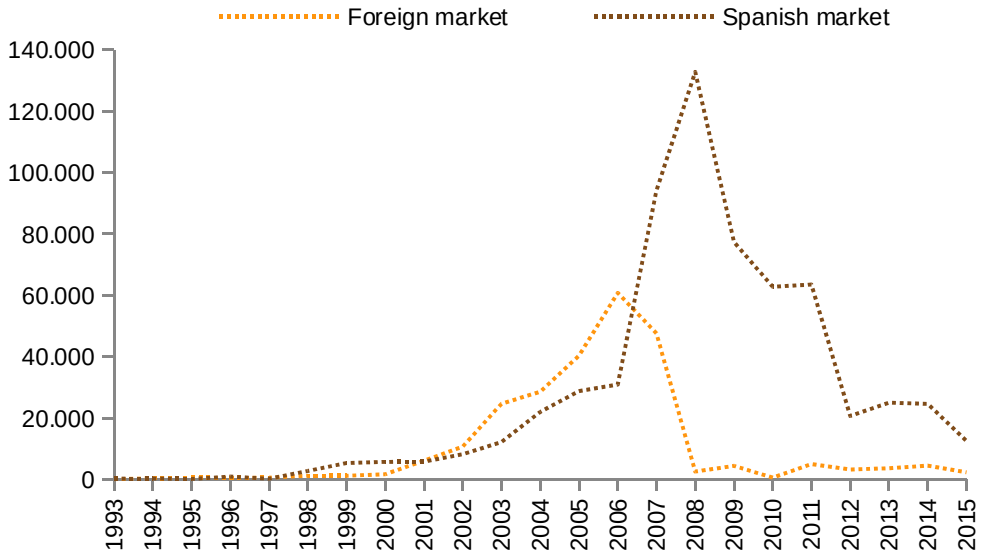
Figure 25: Securitised bonds and notes by type of banking institution (in millions of Euros)



Own creation, source: CNMV

Between 2001 and 2008, Spain experienced the most intense securitisation activity, moving from around €17 billion at the beginning of the period to more than €135 billion at the end of it (Figure 24). This expansion of securitised bonds went along with the expansion of the Spanish economy and of banking activity. During this interval, a large part of investment shares in the Spanish market for securitised bonds came from abroad (see Figure 26). Savings banks considered to be regionally oriented banking institutions combined the collection of deposits, interbank lending and money from abroad through securitisation to fund their activities.

Figure 26: Securitised bonds and notes purchased (from Spanish banks) by national and international markets (in millions of Euros)

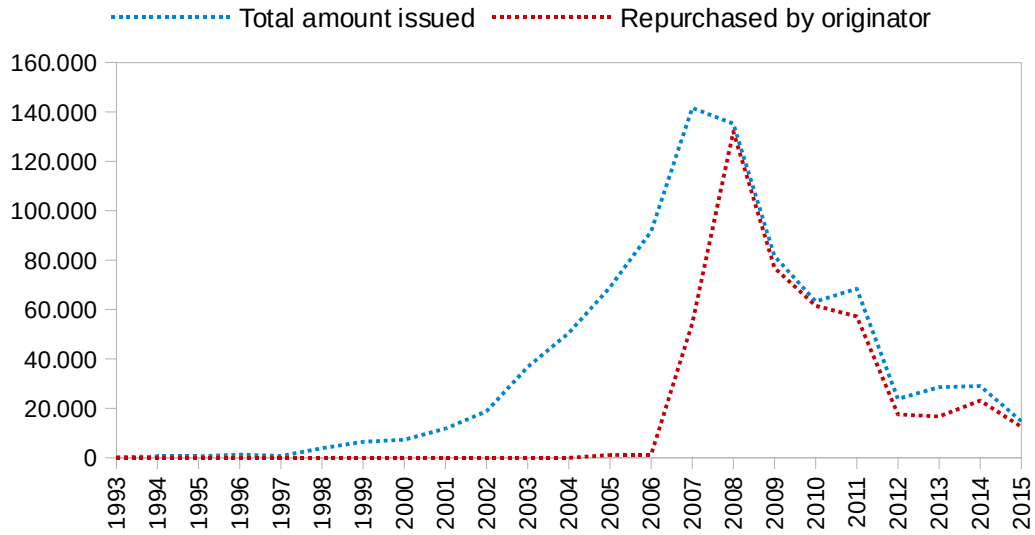


Own creation, source: CNMV

During the financial crisis, the securitisation market closed down because investors were no longer interested in this type of financial asset. However, banking institutions kept issuing securitised bonds that

were later repurchased by the originator (Figure 27). The reason for that was to employ the securitised bonds as collateral for the Bank of Spain and the European Central Bank's liquidity operations (Arce et al., 2012). Their main concern was to maintain access to liquidity in order to remain capable of operating.

Figure 27: Total securitised bonds and notes issued and the amount repurchased by the originator (in millions of Euros)



Own creation, source: CNMV

Carbó et al. 2012 and Otero et al. 2013 think that the securitisation activity fostered riskier lending behaviour. Although the main reason for securitisation in the Spanish banking sector was for funding purposes, the banking institutions tended to relax their lending standards in the new operations they financed based on the liquidity obtained with securitisation. However, the reason was just to get liquidity and not to get rid of or diversify the risks (Dymski, 2013). This led to the fact that the banks have remained in charge of parts of the securitised risks. Although Spanish savings banks have greatly exaggerated the lending business by being too engaged in the real estate sector and real estate companies, they were affected by spillover effects from the US real estate market crisis onto the Spanish real estate sector. The market's source of funding was therefore extinguished over the course of the crisis. Compared to the case of Northern Rock in the UK, the problem in Spain appeared to be a similar issue. (Shin 2009).

5 Discussion

The main focus of this report is to describe the geographical distribution of the banking sector, focusing on the question of whether or not there were significant differences among the different types of banking institutions from a spatial point of view. Our studies have observed an evolution in the banking sector, shifting from a decentralised one, mainly due to the orientation of savings banks and cooperative banks, to a rather spatially and institutionally concentrated sector. Stating this, it must be considered that savings banks in Spain have never been as important in SME finance as savings banks in Germany. We could identify a market specialisation within the sector: savings banks were focused on deposits, household lending and mortgages; whilst commercial banks controlled larger shares of the credit business with enterprises.

By not only analysing what the banks are doing, but also by comparing banking associations between Spain and Germany, it becomes obvious that banking groups and their associations are much more similar to each other in Spain than in Germany. In Germany, the financial groups are completely separated. This is no longer possible in Spain, as many former savings banks are still members of the Spanish savings bank

association (SECCA), but are no longer publicly owned savings banks. Furthermore, from a German perspective, it is very unusual that a cooperative banking group joined the banking association (AEB) of the commercial banks.

In Germany, associations are very important for small banks to generate economies of scale as well as economies of scope. The savings bank association in Spain was never similar to the associations in Germany. This leads to the fact that because of missing support, savings banks could not develop as quickly and development was more regionally divergent. Due to the lack of a strong and efficient association, the individual situation of the savings banks depended very much on the regional economic situation, savings banking management and regional politicians. Due to the lack of regional associations, external audits in Spain are not conducted by institutions within the group, but instead by commercial financial auditors. However, embeddedness in an association is not the only factor of success for Germany's savings banks, as regional embeddedness is important as well. The late lifting of this regional restriction in Spain meant that savings banks were latecomers in many locations and had to get market shares in other banks. Gaining customers from competitors implies that the new institution needed to offer loans to former customers of commercial banks in better conditions, meaning lower interest rates. However, the new savings bank has less information about the customer and probably less time to assess the credit proposal as well. As a result, savings banks had to accept risky or poorly analyzed operations if they wanted to reach out for new customers – giving rise to a narrower profit margin. Regional embeddedness also requires savings banks to exist even in poor regions so that the regional banks can be independent. The fact that local banks in Germany can even survive in peripheral and economically weak areas is also due to complex mechanisms of regional balance in conjunction with a specific spatial structure. Since Germany is a decentralised country, not only is the power of the states and regions comparably high, but different money flows also reduce interregional income disparities. This is less the case in Spain, so not only the increase in loans due to the real estate bubble, but also the higher disparities between the regions could be a barrier.

C Decision-making

Information is the key resource for making decisions. Information distribution between savers and borrowers is typically asymmetric, i.e. borrowers know more about their repayment abilities and willingness than savers (Levine, 1997; Klagge, 2009; Beck et al., 2009; Gärtner 2009, Hartmann-Wendels et al., 2010). The theory of credit rationing states that the asymmetrical distribution of information implies that not all demand for credit can be met. If complete information were available, the interest rate would alter accordingly so that each borrower received a loan at a rate appropriate to the risk involved. However, banks have an incentive to exclude riskier groups of borrowers from lending altogether, instead of selecting good quality borrowers from these groups, because in doing so they can reduce transaction costs at the price of credit rationing (Stiglitz und Weiss, 1981). This applies in particular to SME loans and start-up finance for which information collection is costly and the average loan volume—and hence, earning opportunity—is low. Distance matters in this context because banks face difficulties in transmitting soft information across distances (Pollard, 2003; Klagge and Martin, 2005; Agarwal and Hauswald, 2007; DeYoung et al., 2008; Alessandrini et al., 2009, 2010; Canales and Nanda, 2012). For Stein (2002, 1982), "soft information cannot be directly verified by anyone other than the agent who produces it", so its transmission within hierarchical structures or across distances (such as via ICTs) causes difficulties. In contrast, the transmission of hard information is not subject to any restrictions. Actors unambiguously verify hard information such as financial statements, payment histories and account information (Flögel, 2017).

According to Alessandrini et al., (2009b), distance between two actor-pairs matters for bank-based SME lending: firstly, between SME customers and their customer advisors (called the operational distance) and secondly, between customer advisors and supervisors, i.e. head offices (called the functional distance).

As Flögel (2017) argues, the incorporation of distance in the Stein (2002) model on decentralisation, hierarchy and soft information imply the following relations: whereas a short operational distance facilitates customer advisors' ability to access soft information, short functional distance is associated with enhanced bank-internal use of soft information, which encourages local staff to actually collect soft information (Flögel, 2017). In this context, a purely metric understanding of distance insufficiently explains information transmission, as short geographical distance is neither a necessary nor a sufficient condition to facilitate knowledge exchange between actors (Boschma, 2005; Torre and Rallet, 2005; Torre, 2008; Bathelt and Henn, 2014). Instead, other forms of closeness such as social and organisational embeddedness and cognitive affinity must be considered to fully understand the effect of distance in banking (Uzzi and Lancaster, 2003; Klagge and Martin, 2005; Alessandrini et al., 2009, 2010). And yet, low geographical distance eases the transmission of soft information because it facilitates face-to-face interaction and supports other forms of closeness like social embeddedness. That is because several authors argue that regional banks operating at low geographical distances carry out superior screening and monitoring of informationally opaque SMEs (Klagge, 1995; Gärtner, 2009; Alessandrini et al., 2010; Flögel, 2017).

Studying the decision-making processes in SME finance in the Spanish banking market was really eye-opening for us from a German perspective. With regard to operational and functional distances, the Spanish banking market is much more complex than the German market. In Germany, savings and cooperative banks could be regarded as showing shorter operational and functional distances to SMEs in recent years, especially compared with large banks (Flögel, 2017). In contrast, a range of commercial banks have traditionally shown to be more efficient in using soft information and have been linked more closely to their customers and regions than some savings banks in Spain. Today the situation is even more complex.

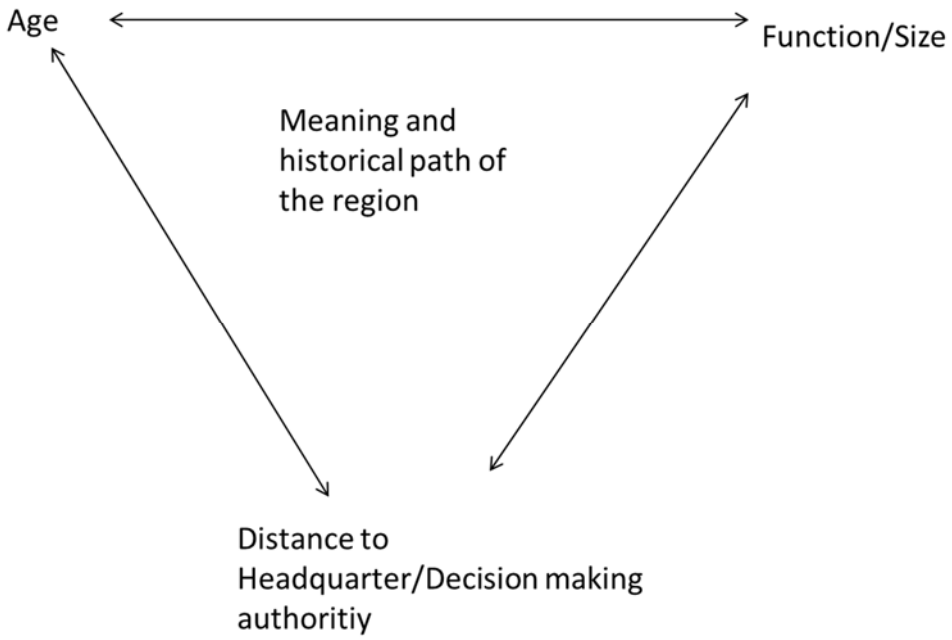
To understand whether banks in Spain are still embedded in decentralised decision-making structures and to find out if there are differences between the categories of banks, we focus on the decision-making processes (Section 6) before we try to group Spanish banks in regard to their functional and operational distance (Section 7). We will close by drawing conclusions about our findings in Section 8.

6 Decision-making processes in the Spanish banking sector

Unlike in Germany, some commercial and centralised banks in Spain are more involved in SME-finance than savings banks. This is why commercial bank branches are quite important, as they provide a banking infrastructure. This factor must be taken into account, given the fact that centralised banks do not have their headquarters near their most customers. If the branch has decision-making authority over the amount of financial resources and the customer's risk, the SME manager or the branch manager could approve loans based on the results of the bank's credit risk models. If the branch has insufficient decision-making authority, the proposal starts travelling to the different risk departments: from the risk departments at the regional level to the risk departments or the credit investments commissions at the headquarters. This process can be taken as functional distance. Since the branch network for most banking groups in Spain is spatially dense, the operational distance does not differ much between the banking groups.

Although the basic concepts are very homogenous among the banking institutions, the reality of credit decision-making processes is more complex. Based on expert interviews, we define three factors of the branch that affect credit decision-making processes in most Spanish banks (see the figure below).

Figure 28: Three related factors of the branch in regard to decision-making processes



Own figure

The first key element is the number of years that the branch has been operating in the area. It is easier to decide about a loan proposal when a branch has a long tradition in the area and has a customer portfolio large enough to gain access to local information networks. The second factor, which is often interrelated to age, is the size and the function of the branch. This could be approximated by looking at the number of employees (see Section 3). In cases where the branch has enough employees to tend to the SME portfolio, the SME manager has enough time to visit businesses and prepare the decision-making processes. Larger branches often have a more important function and are often allowed to execute more decision-making authority. The endogenous business strategy or culture is of course also influenced by the personal preferences of branch management. Company representatives pointed out in the interviews that some branch managers were mainly interested in incorporating business with households, including both assets and liabilities, but were not as interested in increasing the share of branch assets from SMEs. This means that the branch would not consider studying loan proposals from companies and would not defend a credit proposal against risk analysts.

These two elements affect the banking institution's access to soft information. For example, when an SME manager receives a credit proposal, he or she investigates the relatives of the owner of the company, whether or not the employees have an account in their branch and if the branch works with the SME's suppliers or customers. This allows the SME manager to get a more accurate overview of how the business is working. Is it paying its employees and suppliers on time? Does the family of the owner have a reputation as reliable businesspeople? This kind of information is especially important for informationally opaque customers in need of additional explanations.

The third variable that could influence the appraisal of credit is the infrastructure of the bank in the region. Depending on the bank's number of branches and employees and its historical path, the institution will have a bigger infrastructure to support credit activities. If the branch network in the specific region is not that pronounced, the main share of credit proposals is transferred to longer-distance risk departments, such as at the bank headquarters. Furthermore, a high number of branches in the region increases the chance that there are regional sub-headquarters which have high levels of decision-making authority.

The particular structure upheld in a region is highly dependent on the bank's strategic plan of expansion and their individual historical path. If banks are interested in a region, they could define a plan to open

new branches in the main cities first and then move to smaller places. In contrast, other institutions prefer to take over a bank that is established on the ground and build up its branch network from business that has already been confirmed. The latter happened frequently in Spain (and to some degree also in other European countries), because larger banks were regularly established by mergers of different former local and regional banks. This can be witnessed today in some bank names such as "Banco Santander" or "Banco Sabadell". Although many banks in Spain act on a national level, some of them have a different impact on financing in different regions. This is not only based on the infrastructure, but also on the market shares held by the former regional banks, and therefore tends to influence the degree of soft information to which regional banks have access. Normally, the activity of the headquarters of the acquired bank is transferred to the headquarters of the acquiring bank, but in some cases the support structure and the risk department remains within the region and sometimes it is improved with more employees keeping all the expertise and know-how about business activities and culture in the region. Sometimes, and this is especially true for public or semi-public banks, political reasons are also behind the remaining independence or decision-making power of former regional banks, with own regional risk department and so on. This is above all true if regional banks in regions with strong identities (such as Catalonia and the Basque Country) are integrated in a banking merger, it is important to show that regional independence will partially be kept and that the new large bank is very interested in the wellbeing of the region. This is important for responding to the customers' needs or feelings. Occasionally, this means that even if banks generally have a hierarchical structure and credit decisions are made centrally, in some more important regions the decision-making authority for SME loans is still regional and only large credit operations are decided at the headquarters.

In the past, savings banks did take over other banks and established new branches in new regions (see section 3). The main reason for this was that a takeover of one savings bank by another was impossible and mergers occurred mainly among savings banks from the same region. Therefore, when a savings bank planned a branch network expansion, it had to be applied from scratch in every new region it tried to enter, with all the difficulties that this implies. Since the crisis, however, acquisitions have taken place in the savings bank sector and many former savings banks have merged. This leads to Spain's previously described structure today, in which there are only two "real" regionally oriented savings banks and a few roughly nationwide savings banks or savings banks of a larger regional scale.

7 Banking group prototypes and distance

Whilst contrasting centralised banking against decentralised banking and examining if there are different effects on decision-making processes, let us focus on operational and functional distance. To approximate distance, we need adequate quantitative data to ensure comparability between different countries.

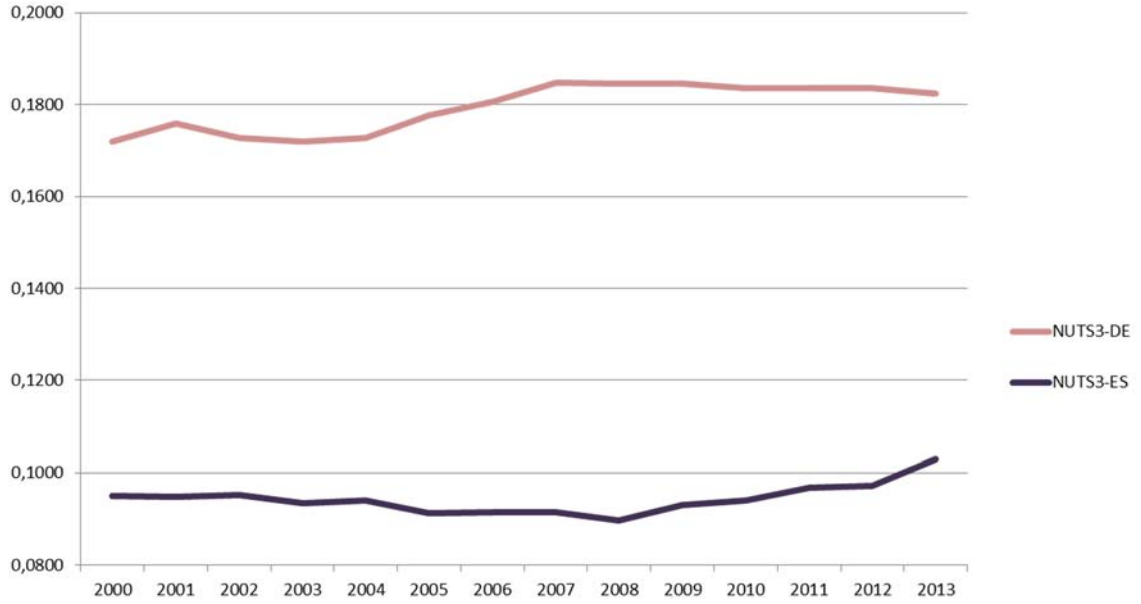
For operational distances, we looked at the geographical distribution of the banks' employees. The use of employment data for spatial comparisons of financial systems is still new (for the first applications, see Gärtner, 2011 and Wójcik and MacDonald-Korth, 2015). Unlike other indicators, employee data are often available at the micro level, such as at the level of districts and towns (NUTS 3), for example, which are the 402 "Kreise and kreisfreie Städte" in Germany and the 52 "provincias" of Spain (2013). This makes it possible to analyse the spatial concentration of the financial system of each city. We used the industrial classification of "financial service". The data for Spain comes from the Ministry of Labour and Social Security (Ministerio de Empleo y Seguridad Social) and the data for Germany comes from the Federal Employment Agency (Bundesagentur für Arbeit). All employees who pay social insurance are involved. Self-employed people are excluded. To analyse the spatial concentration of banks employees, we compared the proportion of employees working in finance vis-à-vis the rest of the economy in one region to the proportion of employees working in finance vis-à-vis the rest of the economy in the whole country. See the following formula.

$$RKI_j = \sum_j \left| \frac{b_{ij}}{B_{i.}} - \frac{b_{.j}}{B_{..}} \right| * 0{,}5$$

bij = Number of employees sector i, region j
Bi. = employees sector i
b.j = all employees region j
B.. = all employees

The range of the indicator goes from 0 < 1. An index value of one would indicate that all employees of a particular banking group are located in one region. As the geographical distribution of workers increases, the index value tends to draw towards zero (see the next figure).

Figure 29: Spatial concentration of employees working in finance for Spain and Germany (NUTS-3)

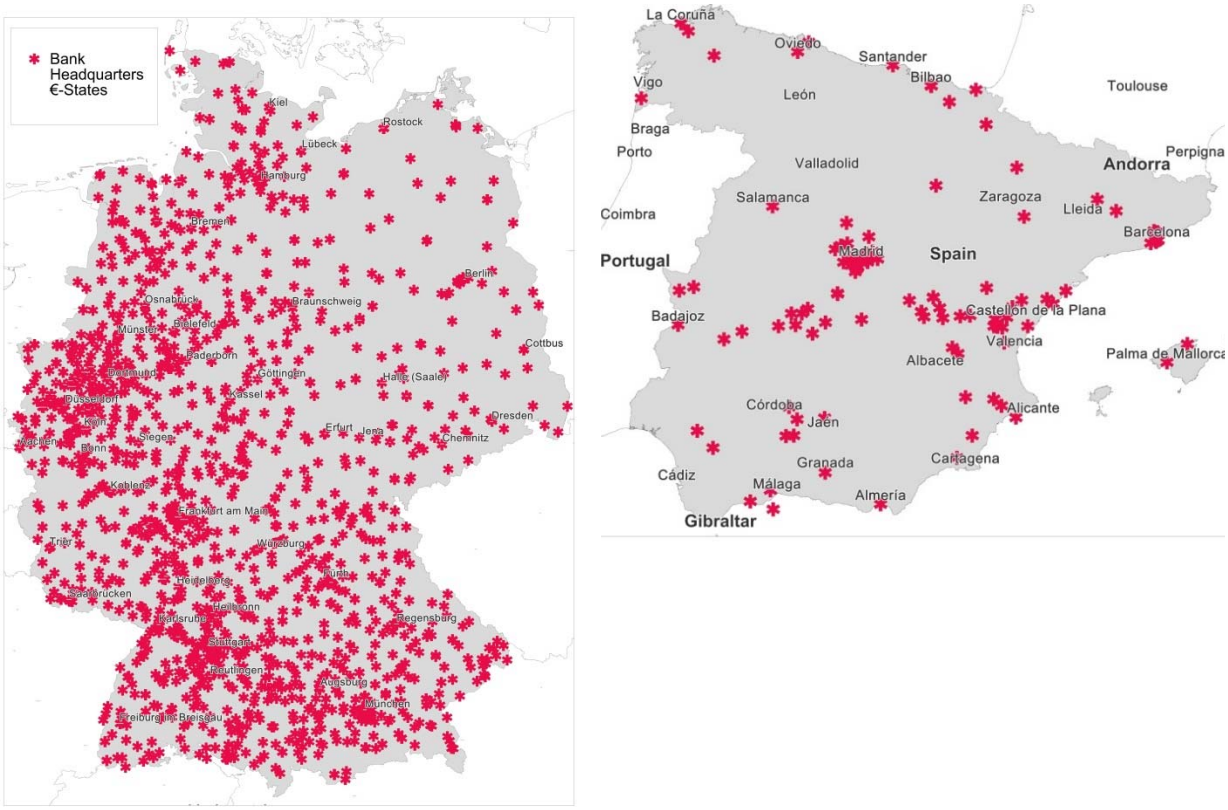


Own figure, source: Bundesagentur für Arbeit (Register data/social insurance), and Ministerio de Empleo y Seguridad Social (Register data/contracts)

The low index value for Spain demonstrates that Spanish employees in finance are less spatially concentrated than in Germany. The high degree of decentralisation of the employees in Spain is also caused by the expansion of the banking branch network since the 1970s (see Section 4.2). The increase in spatial concentration since the 2008 crisis in Spain can probably be traced back to the fact that the savings banks have since reduced the number of branches and concentrated more in specific regions. The fact that NUTS level 3 is different between Spain and Germany underscores the data (see Section 1.2). It could be mentioned that the difference in spatial concentration between Germany and Spain is therefore smaller in reality, but still exists.

However, credit decisions in SME finance are only occasionally made at the branch level, so not only functional distance, but also operational distance is relevant. To proxy operational distance in a cross-country comparison, we used the spatial distribution of the headquarters (see Figure 30), as presented in the introduction. The data comes from the ECB.

Figure 30: Bank headquarters locations in Spain and Germany, 2014

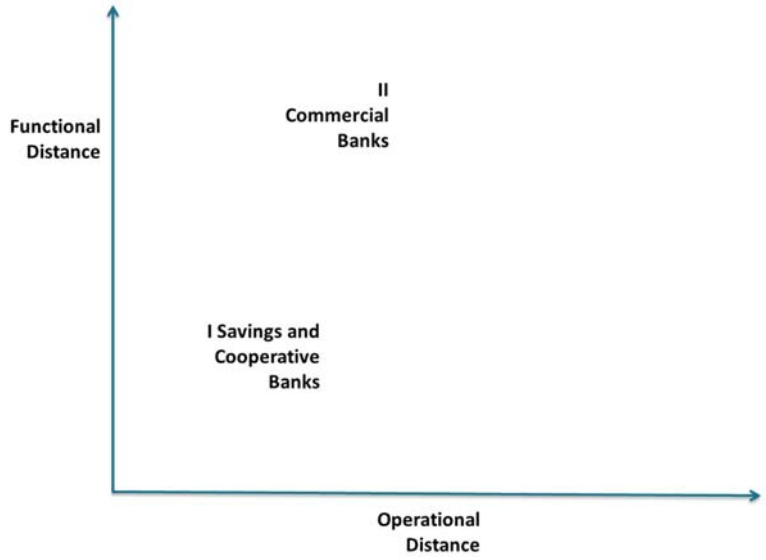


Own figure, source: ECB

The comparison between Spain and Germany is definite: western Germany in particular is full of banking headquarters, which are broadly distributed regionally. In 2014, a couple of years after the crisis, there were no longer many banks in Spain. So far, the quantitative data analyses indicate shorter operational distance in the Spanish banking market, which is particularly explained by the substantial branch expansion before the financial crisis and shorter functional distance for Germany, as there are less banks in Spain and bank headquarters there are apparently more spatially concentrated. Unfortunately, a separate data analysis that includes functional and operational distance for the different types of banking is not possible.

Taking the results of the data analyses and the empirical findings from the interviews together, we can develop a heuristic classification of categories of banks concerning operational and functional distance (see the two figures in the following). The position on the x- and y-axis is estimated and not calculated. Again for Germany, the situation is quite clear (see Figure 31). Here we can combine the local, and respectively regional, savings banks in one group (Type I) with the cooperative banks, which are low in both operational (many branches) and functional distance (each bank decides locally). The second group (Type II) could be built by the commercial banks (above all Deutsche Bank AG and Commerzbank AG). They also still have a broad branch network but are more focused on urban areas, so the operational distance is lower than it is for savings and cooperative banks. However, the main difference between these two groups for Germany lies in their functional distance.

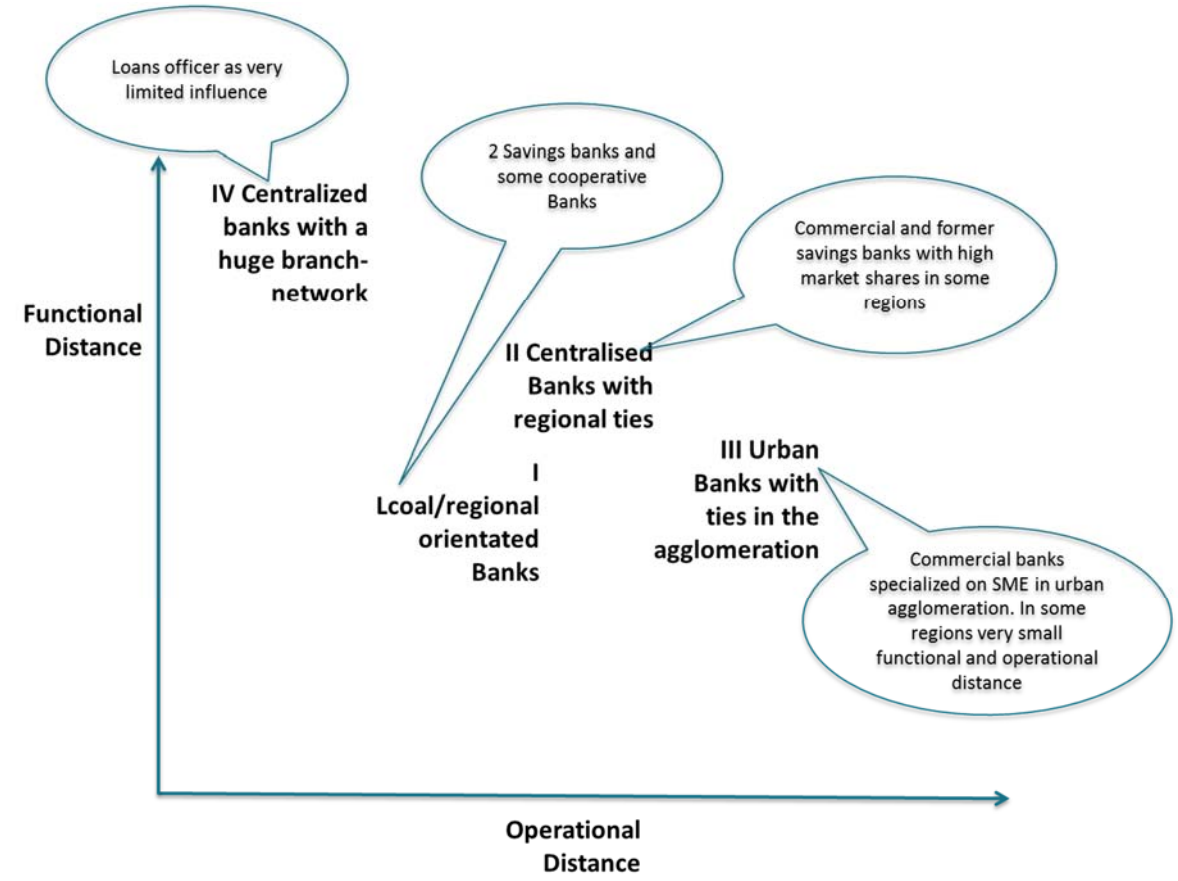
Figure 31: Operational and functional distance in Germany



Own figure

Spain again is different: here we do not have a clear distinction between different groups and could at least define four groups in regard to their operational and functional distance (see Figure 32).

Figure 32: Operational and functional distance in Spain



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Type I: Locally and regionally oriented banks:

The first group consists of locally and regionally oriented banks. Particularly it includes the two savings banks that still exist and some of the cooperative banks. The group of cooperative banks in Spain is also heterogeneous. Some of them act on a national level, others are just specialised in giving loans to farmers and yet others are locally oriented universal banks similar to the German cooperative banks. We would put these ones in the group of locally and regionally oriented banks. This group is similar to the German group consisting of savings and cooperative banks, but much smaller with regard to their market shares. See the case description of "CAIXA ONTINYENT" in the textbox below as an example of a regionally oriented savings bank in Spain. These institutions are characterised by a dense branch network in their home region and a local decision-making authority. The branches have an intermediate number of employees. This should be considered in light of the fact that most of the decisions are made in the headquarters and most of the branches have a long tradition in their locations. They represent the bank with the lowest functional distance among the different banking institutions due to the small size of the banks and their decision-making centre in the region. That allows companies to gain access to higher levels of the hierarchy in order to present their project in case the bank has doubts about its success. On the other hand, due to a relatively small credit investment portfolio, they can enjoy personalised monitoring of their credit investments and have closer relationships with their customers as a result.

CAIXA ONTINYENT

Caixa Ontinyent has a regional market orientation focusing on banking intermediation in its traditional territory. The savings bank operates in a well-defined region within the Autonomous Community of Valencia, which allows the institution to have physical proximity to the customer, but it also has functional proximity because of its size. The small size of the institution affords it narrow hierarchy of decision-making processes for credit proposals:

1. Every credit proposal enters through the branches. The employees of the branches decide on credit proposals with a volume of between €20,000 and €120,000, depending on the type of branch.
2. The next step for a proposal is the territorial level. The territorial level decides on credit proposals below €250,000. Furthermore, a credit analyst has to supervise these credit applications.
3. After the territorial level, the Assets and Liabilities Operations Commission is in charge of lending decisions if the credit volume ranges between €600,000 and €1 million.
4. If the credit volume above €1 million, the decision must be made by the Executive Commission of Caixa Ontinyent.

Through this process of authority allocation, the bank guarantees that every project enjoys technical supervision for a large credit investment that ensures consensus within the institution. That is, every project enters through the branch and must be approved by the different levels, travelling up the hierarchy, depending on the amount of money. This structure also hinders fraud because high-level decision-makers are supervised by lower-level ones. Both proximities offer the institution access to more and better information about its customers, because the person in charge of making the decision knows the territory and has access to the networks of information in the community. And when he or she needs to study a project, he or she already has informal information about specific business activities, plus the information gathered during appointments with the customer and quantitative data from accounting and tax reports.

However, the small size of the institution also leads to limits on growth in lending. Caixa Ontinyent has only €70 million in equity capital (2014). Thus, if they decide to lend more, they need to increase reserves from profits first. Although their size is a problem for carrying out their activities, it is also the main thing keeping them so close to their customers.

A big challenge for banking institutions without a national presence is to offer their customers financial services they can use around the country. One example is the guarantee of providing enough cash dispensers for their customers to be able to pay with cash wherever they go. Caixa de Ontinyent must cooperate with other Spanish bank alliances so their customers can get money in areas without a Caixa Ontinyent

ATM. This problem developed in the first place because cooperation existed between different savings banks within CECA, but now it could no longer be established . These kinds of problems can be a threat to the viability of these regional banking institutions, forcing customers to open accounts and ask for credit cards from banking institutions with a national presence.

Caixa Ontinyent has had to allocate fewer loans since the financial and economic crisis and finds it difficult to invest its savings regionally. There is a lack of new credit because businesses only apply for funds for short-term investments, mainly so they can finance their current assets or solve concrete problems of liquidity.

Bank type II: Centralised banks with regional ties

The second group (II: Centralised Banks with regional ties) shows a slightly higher distance, both on the operational and functional levels compared to group I. This group consists of centralised banks that are building strong regional ties in some regions. These ties were established via mergers. Big banks bought smaller regional banks or regional banks merged. These banks retained decision-making authority in the region with high market shares. Sometimes this can be explained by direct economic reasons and other times more by political reasons (see section 6). SME managers have the option to call the risk analyst to explain their point of view about the operation and the analyst can visit the company to gain a better impression of the business model. This group consists of former savings banks and commercial banks with high market shares in some regions.

Bank type III: Urban banks with ties in the agglomerations

These institutions have the smallest branch network and present a medium-high functional distance. The strategy of these institutions is to focus on medium-sized enterprises located in highly populated urban areas. For this reason, they have a high number of employees per branch and may have been operating in the territory for many years. Depending on the density of the branch network developed in the region, there will be a regional risk department or credit operations will be studied at the headquarters. SME managers have the option to talk to the risk analyst to discuss the operation, but the risk analyst must be able to visit the enterprise and talk to the manager, which the operation also merits. With these institutions, the functional distance is smaller than the operational distance.

Bank type IV: Centralised banks with a huge branch network but less decision power

This type of banking institution presents low operational distance but high functional distance. It has developed a dense branch network but shows substantial functional distance. This implies that the risk analysts are distant from that the credit applications and that there is no option for "ordinary" branches to talk to the analysts. The only opportunity for the SME manager to defend the proposal is at the beginning, when he or she loads the data into the software. The branch has some power in decision-making processes, depending on the strategy of the institution, but this situation can easily change. An example of this kind of institution would be Banco Santander.

8 Discussion

In a historical analysis, Verdier (2002) showed how regional banking is connected to other national structural factors. One of his core ideas is that not only are decentralised banks necessary to avoid the centrifugal forces of capital, but a decentralised state system also has to be in place. Verdier's framework is very fruitful for reflecting our results, but the study of many countries over a long period and the examination of overall systems of interlinkage means that this study might not be accurate in all its details. When comparing Spain with Germany, it is important to discuss one point: Verdier explains that regional independent banks cannot survive without state subsidies or without lobbying for regulations that "defend local banks against competition from the centre" (Verdier, 2002: 20). And indeed, the argument that it is difficult

to survive, especially for local banks in peripheral economic regions, is not new. It is generally assumed that regional banks' profits depend directly on the strength of the regional economy. A regionally distinct banking system "may not be an unmixed blessing to the periphery: while such a system may guard against a monetary outflow to the centre, periphery banks are exposed to extra risk where peripheral regions have, as they tend to do, quite specialized and strongly cyclical economies" (Chick and Dow, 1988: 240). Economic instinct would suggest that regionally delimited banks in a flourishing economic environment have greater profit potential and can therefore generate higher returns than those in weak regions (Alessandrini and Zazzaro, 1999). For Germany this relationship does not hold true. Here, the local banks are at least as successful in poor peripheral regions as in economically strong regions.[5] One of the reasons for this is that Germany's saving banks are forced by public law to concentrate on the region (the regional principle). This was also the case for Spain until 1988. The principle of regionalism ensures not only that centripetal backwash effects are reduced, but also that the banks are bound to the region and therefore develop strong relationships with their customers, which is especially possible in weak regions with less competition from commercial banks.

Less competition could therefore enhance the bank's informational advantages in the case of local banks and lead to regional embeddedness. So, finally, two factors could be responsible for the survival of local banks in weaker and peripheral regions in Germany without state subvention. First, market power results from oligopolistic local markets (Fischer and Pfeil, 2004). Second, regional banks gain their informational advantages by being regionally embedded and having substantial market shares there. If we take Germany as a prominent example for regional banks, it becomes obvious that governance is important, and here above all the governance of the regional principle, but in contrast to Verdier's (2002) historical analysis, not in terms of regulating and limiting the centralised banks but rather in terms of regulating the savings banks themselves. This is an important difference from the situation in Spain, where the regulation of local banks was liberalised.

D Summary

Our studies have observed an evolution in Spanish banking, shifting from a slightly decentralised banking sector mainly due to the orientation of savings banks and cooperative banks, to a spatially and institutionally concentrated sector. Spain is an interesting example for investigation as its regional savings banks were liberated from their geographical restrictions in 1988. Comparatively traditional regionally oriented savings banks have declined and transformed into national players. Yet the comparatively small importance of savings banks to SME finance must be considered. We could identify market specialisation within the sector: savings banks were focused on deposits, household lending and mortgages, whilst commercial banks controlled larger shares of credit business with enterprises.

By analysing the businesses in which banks are engaged the most and by comparing bank associations in Spain and Germany, it becomes obvious that banking groups and their associations are much more similar to each other in Spain than in Germany. In Germany, these associations are completely separate from one another. This is no longer possible in Spain, as many former savings banks are still members of the Spanish savings bank association.

Interestingly, Spanish savings banks have been in trouble not because they were too small and too focused on regional markets. Indeed, the opposite was the case: deregulation and the possibility of operating nationwide was an important reason for the crisis. Whereas Verdier (2002) says that regional banks can only survive if the big banks are regulated, we see by comparing the regional banks in Germany and Spain that regional bank regulation by the state or self-regulation is sufficient.

[5] Gärtner, 2008; Conrad, 2008; Christians, 2010; Christians and Gärtner, 2014

Since Germany is a decentralised country, not only is it the case that the power of the states and regions is comparatively high, but various money flows also reduce interregional income disparities. Here Verdier's (2002) framework is very valuable, as he draws on a correlation between a decentralised state and a decentralised banking system. In Spain this correlation cannot be observed in the same way. Thus, problems might have arisen not only from the late development of universal banks, the less developed associations (in comparison to Germany), the abolition of the regional principle and the increase in loans due to the real estate bubble, but also from the higher disparities between the regions.

However, this is not to say that the solution is just to adopt the German banking system and the system of regional cohesion and state structure. Different financial systems are set in different market, cultural, legal and regulatory contexts that exert a powerful influence on which systems in have advantages or disadvantages in which countries. Instead, it means that different countries require different solutions and that a system with regionally independent banks needs certain circumstances. The question is: to what extent would a regional banking system similar in significance to Germany's be possible in other countries?

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Interviews

We conducted 32 interviews. Due to data protection laws, below we only list interviews with researchers and association representatives.

- García Domínguez, Camino; Confederación Española de Cajas de Ahorros (CECA), Madrid, Institutional Relations, Madrid (8 May 2015)
- de la Herrán, Joaquín; The Spanish Banking Association (AEB), Madrid (24 April 2015)
- Illueca, Manuel; University of Valencia (22 April 2015)
- Martínez, Ana; Instituto de Crédito Oficial (ICO), Madrid (24 April 2015)
- Maudos, Joaquín; University of Valencia (21 April 2015)
- Ródriguez Fuentes; Carlos, University of La Laguna, Tenerife (29 April 2015 to 6 May 2015: research stay; several talks)
- Tulla-Pujol, A.; University of Barcelona (17 June 2016)

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