Cross-border banking in Europe: An empirical investigation.

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Abstract

This paper investigates bilateral trade in banking services within the European Union. The attention has been addressed to two main issues. First, to test the bank's motivations for setting up the different forms of overseas offices, and secondly, to assess the importance of barriers to entry across national European banking systems. Empirical results confirm the existence of different motivations for establishing representative offices, branches and subsidiaries in foreign locations. In addition, evidence has been achieved about the importance of non-regulatory barriers that could make difficult the existence of a single European market for banking services.

Key words: cross-border banking, barriers to entry and form of representation.

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1. Introduction

International trade in banking services has received important attention in the literature during the last decades. The provision of banking services to non-residents can be made on an arm's length basis from the bank's headquarters, or through banking offices located in the resident's country. While the first type of foreign banking activity will be determined by the existence of restrictions to international capital flows, the setting up of banking offices in foreign countries will mainly depend on the existence of restrictions to foreign direct investment in the banking sector. The gradual elimination in most countries of barriers to international capital flows, jointly with a general relaxation of barriers to entry have led to an important increase in foreign banking activity.

The experience of the European Community constitutes an unique case for the investigation of international trade in banking services. The Treaty of Rome in 1957 created the basis for the existence of an European common market. However, in 1983 a White Policy Paper recognized that at least for financial and banking services, a common market was far to exist. In fact, as a 1988 study of the Commission of the European Communities showed, important price differentials for similar banking services across the European countries still exist. They would suggest the existence of some barriers to entry that would isolate domestic banking sectors from competition.

The purpose of this paper is to investigate the determinants of bilateral trade in banking services within Europe. Our attention has been addressed to two relevant issues. First, to test the bank's motivations for setting up the different forms of overseas offices and secondly, to assess the existence of barriers to entry within Europe that could partially isolate national banking systems from competition.

Most papers investigating foreign banking activity have not taken into account the form of representation chosen by the bank for entering a foreign location. Nevertheless, as Heinkel and Levi (1992) showed, the form of overseas offices constitutes a relevant issue in the investigation of international trade in banking services. In fact, representative offices, branches and subsidiaries represent different levels of investment for the parent bank, offering a different range of banking services.

Regarding the second issue, the removal of regulatory barriers

-formally achieved through the II Banking Directive- constitutes a necessary but not sufficient condition for an integrated European market. In addition, non-regulatory barriers need to be taken into account.

This paper is organized as follows. Section 2 summarizes the recent evolution towards a single market for banking services in the European Community. The proposed model is discussed in section 3. Section 4 presents the methodology as well as a description of the data and variables used in the empirical analysis. Finally, the results obtained from estimating the model and the conclusions that arise from them are shown in sections 5 and 6 respectively.

2. Toward a single market for banking services

The creation of an European single market for banking services must be viewed as a part of the wider process of integration of financial services across the European Union, including insurance and security investment services. It requires the removal of barriers that isolate domestic firms from competition. Regarding banking services, we should differentiate between retail and wholesale activities. While wholesale banking services are often supplied in an international competitive market, retail-banking services have been traditionally provided on a national basis. Therefore, the major gains from the integration of European banking systems should arise from the increase of competition in the retail segment. Large price differentials in retail banking services across Europe should be due to the existence of barriers to entry. Several studies have attempted to measure the extend of these price differentials. The most popular is the study by Price-Watherhouse. It estimated the potential changes in financial product prices as a result of completing the internal market. Two interesting points emerge from the Price-Waterhouse study: First, benefits from the single market measured in terms of price reductions are important. Second, these benefits will vary dramatically from country to country. Accordingly, Spain (34%), Germany (33%) and France (25%) benefit from the highest reduction in prices. In the opposite extreme, the Netherlands (10%) obtains the lowest reduction in prices.

If differences in prices for banking services are due to the existence of barriers that would isolate domestic banking systems from competition, the elimination of these barriers should lead to a reduction in price differentials for financial services across Europe. This was the main aim of the Second Banking Directive approved in 1988. It established the principle of mutual recognition, and the existence of a single license for operating across the European Community. Therefore, a bank authorized to operate in a member country could operate in any other member country without the need of local authorization. It was expected that once regulatory barriers to foreign banks were removed, a substantial cross-border banking movement within Europe would occur. Nevertheless, ten years after the approval of the II Banking Directive the level of integration of the European banking system does not seem to have changed much. According to White (1998), in 1998 cross-border offices within Europe represent less than 0,3% of the total banking offices. This fact would indicate that cross-border banking movement had not occurred yet. Some factors have been suggested as responsible of this situation. First, as traditional barriers to entry have been removed, the attention must be addressed to other kind of barriers, such as technical standards and cultural differences between consumers across Europe. These barriers may have the effect of isolating domestic banking systems from competition, making difficult the existence of a single European market for banking services.

3. Model

The purpose of this section is to specify a model of cross-border banking movements across Europe. Unlike most previous researchers, in this paper international expansion through representative offices, branches and subsidiaries is investigated. The proposed model is based on the activities typically carried out by overseas banking offices. In addition, the existence of barriers between national banking systems has been considered. The bank's motivations for entering a foreign market have been traditionally classified in four main areas: 1) servicing exporters from the home country, 2) servicing foreign subsidiaries of home country clients, 3) participating in the host country's capital markets, and 4) participating in the host country's banking system. Heinkel and Levi (1992) did not consider the last as an activity carried out by overseas offices. The reason is that participating in the host country banking system is normally carried out by foreign subsidiaries, that enjoy the legal status of national banks[1]. Nevertheless, the fact is that subsidiaries, as representative offices and branches, belong to a parent bank, and constitute an organizational form for carrying out a foreign activity. In addition, as Ter Wengel (1995) notes, banks may consider branches subsidiaries and representative offices as substitute organizational forms in their foreign expansion.

Previous research has emphasized the importance of barriers to entry as a main determinant of cross border banking movements. Regulatory restrictions in the host country have been often mentioned as a barrier to entry in multinational banking. A pre-requisite for entering a foreign country is obviously, that the entry is allowed by the national authority. With few exceptions, researchers do not make any difference regarding the form of representation chosen by the bank for entering a foreign location. As it has been previously noted, regulatory barriers were formally removed within the European Union through the Second Banking Directive. Nevertheless, factors as the existence of hidden restrictions, as well as non-regulatory barriers could -at least partially- isolate national banking sectors from competition.

The discussion about the determinants of cross border banking movements within Europe is presented next.

3.1. Servicing home country clients

A main motive for establishing banking offices abroad has been to provide banking services to home country clients. The range of banking services typically offered would include the provision of information about the general and economic conditions for doing business in a particular foreign country and, above all, the collection of receivables for home country exporters. The rationale of this behavior would be the need to preserve existing banking relationships in the home country before they could be eventually substituted by a new banking relationship (Williams, 1997). Empirical evidence widely supports servicing home

[1] Therefore, from a legal viewpoint they are not overseas offices.

country exporters as a determinant of foreign banking expansion (see Heinkel and Levi, 1992, Ter Wengel 1995 and Brealey and Kaplanis, 1996).

3.2. Following-the-client-behavior

Banks following their clients' multinational expansion has been widely considered as a main motivation of cross-border banking movements (see e.g. Grubel, 1977 and Gray and Gray, 1981). Information asymmetries regarding local banks about the client's financial needs would constitute a main ownership advantage for the foreign bank. Empirical research supports, for the most part, a following-the-client behavior in the banking sector (Grosse and Goldberg, 1991 and Ter Wengel, 1995). However, a general agreement does not exist about the organizational form used by the bank for servicing clients in foreign locations.

3.3. Participating in the host country's capital market

Banks have traditionally played a major role in domestic and international capital markets. The growing expansion of commercial banks towards the securities business[2] should make this trend to continue and even increase in the future.

Accordingly, some authors have suggested that banks will establish facilities abroad with the aim of participating in the host country's capital market. Hence, through overseas offices banks would funnel internationally the savings originated in the home country. The greater possibilities of diversification available at an international level would justify this behavior. Previous research has revealed the existence of large and well-developed capital market in the home country, as a determinant of banking expansion abroad (see Heinkel and Levi, 1992).

3.4. Participating in the host country's banking system

Participating in the host country banking system should be a quite straightforward motivation for establishing overseas offices. Accordingly, banks would enter in foreign countries to carry out the typical commercial banking activity of lending and accepting deposits. Since the interest margin –the difference between interest earned and paid- constitutes the main component of banking benefits, high interest margins –adjusted for the

2 This behavior is usually justified due to information advantages and economies of scope (Diamond,1984 and 1991).

Nevertheless, monopoly rents that persist with time are only possible under the existence of

effects arise: the existence of monopoly rents will make a foreign location more attractive to

the entry less likely to occur. The net result, of course, will depend on which effect prevail.

3.5. Host country's attitude towards foreign entry

Goldberg and Johnson, 1990). In fact, a license from the national authority is needed in most countries to operate in the market. The Second Banking Directive established the single

operate in a member country could operate in any other member country without the need of local authorization. However, although national European governments can not formally

entry involves the acquisition of a national bank. The recent attempt by Nationale Netherlanden to acquire Bank Brussels Lambert constitutes a good example of this situation.

3.6. Cultural distance

Differences between consumers across Europe are expected to constitute an entry barrier in highly standardized products, the bank's ability to connect with its potential client needs will be lower when important cultural differences exist. This would explain what casual observation shows: the firsts movements abroad tend to occur towards nearby countries, that typically share cultural similarities with the home country. Empirical evidence for the US supports cultural distance as a barrier of entry in international banking (Grosse and Goldberg, 1991). Therefore, we expect that a higher cultural distance between two countries will make bilateral banking movements less likely to occur.

4. Data and variables

In this paper, the proposed model has been estimated using Poisson regression. Previous researchers investigating foreign banking activity have mainly used ordinary least squares (e.g. Heinkel and Levi, 1992 and Grosse and Goldberg, 1991) and logistic regression (Ter Wengel, 1995). An exam of our matrices of data shows some limitations associated to both approaches. First, ordinary least squares do not allow to capture the discrete nature of the dependent variable: the number of banks proceeding from country i with offices in country j. On the other hand, logistic regression only allows two values for the dependent variable: 0 for all cases where no bank from country i has entered country j and 1 otherwise. Therefore, since it does not take into account the number of banks from country i that have entered country j, it will not measure properly international trade in banking services. On the contrary, Poisson regression models allow to capture the discrete and nonnegative nature of the data, taking into account the number of banks from a home country with offices in a foreign location[3] Regarding the form of representation used for entering a foreign market -representative offices, branches and subsidiaries- three models have been estimated. The dependent variable -RO_{ij} in the model of representative offices, BR_{ij} in the model of branches and SUB_{ij} in the model of subsidiaries-, measures the number of banks proceeding from country i with representative offices, branches and subsidiaries respectively in country j.

According to the discussion in section 3, the independent variables are the following:

> EXP_{ij}: the level of exports in millions of US $ from country i to country j. Source: International Monetary Fund, (1994). *Direction of Trade Statistics Yearbook.*
>
> MNC_{ij}: The number of multinationals based on country i with full-owned subsidiaries in country j. Source: John M. Stopford, (1992). *Directory of Multinationals.*

3. See Greene, 1993, Ross, 1982 and Winkelmann and Zimmerman, 1995, for a detailed discussion about the properties of Poisson regression models.

CAP_i: The capitalization of country i in millions of US $. Source: Federation International des Bourses de Valeurs, (1994). *Memoire Annuel*

IM_j: Interest margins as a percentage of total assets in country j. Source: OECD, (1994). *Bank Profitability.*

R_j: An indicator of the attitude by authorities in country j about the entry of foreign banks[4]. Source: Thschoegl (1981). *The regulation of foreign banks: Policy formation in countries outside the United States.*

CD_{ij}: Cultural distance between countries i and j. Source Hoefstede (1983). *The cultural relativity of organizational practices and theories.*

The three models that will be estimated are:

$$RO_{ij} = f\left(\overset{+}{EXP}_{ij}, \overset{+}{MNC}_{ij}, \overset{+}{CAP}_i, \overset{+}{IM}_j, \overset{+}{R}_j, \overset{-}{CD}_{ij}\right) \quad (1)$$

$$BR_{ij} = f\left(\overset{+}{EXP}_{ij}, \overset{+}{MNC}_{ij}, \overset{+}{CAP}_i, \overset{+}{IM}_j, \overset{+}{R}_j, \overset{-}{CD}_{ij}\right) \quad (2)$$

$$SUB_{ij} = f\left(\overset{+}{EXP}_{ij}, \overset{+}{MNC}_{ij}, \overset{+}{CAP}_i, \overset{+}{IM}_j, \overset{+}{R}_j, \overset{-}{CD}_{ij}\right) \quad (3)$$

The sign above each independent variable in the former expressions indicates the expected effect according to the discussion in section 3.

The sample used for estimating the models is formed by the banks included in the top 300 by the Banker in 1994, belonging to any of the EUR-15 countries excluding Luxembourg. The exclusion of Luxembourg has been due to the non-availability of data corresponding to this

4 This indicator takes entire values from 1 to 5, according to the restrictiveness of host country's attitude towards foreign banking entry. The score 1 will represent the maximum restrictive attitude.

country for some variables. Therefore, we have investigated bilateral cross-border banking movements
between Austria, Belgium, Denmark, Finland, France, Germany, Greece, Ireland, Italy, Netherlands, Portugal, Spain, Sweden and United Kingdom.

Table 1 shows some descriptive statistics about the variables.

Table 1. Descriptive Statistics

Variable	Mean	Stand. Dev.	Minimum	Maximum
EXP	4894.90	7873.00	32.00	0.43E+05
MNC	11.57	18.38	0.00	82.00
CAP	0.20E+06	0.30E+06	605.00	0.11E+07
IM	2.65	1.09	1.34	4.97
R	3.93	1.39	1.00	5.00
CD	4.81	2.30	0.50	10.40

4. Results

Empirical results presented in table 2 show the significance of the proposed model for the three forms of overseas offices: representative offices, branches and subsidiaries. Nevertheless, as it will be discussed next, some interesting differences regarding the form of representation have emerged.
According to the motivation for entering a foreign market, the level of exports from the home country positively affects, as expected, the bank’s entry in a foreign location. Variable

EXP shows a positive associated coefficient, statistically significant at a 0.01 level in the three models, showing that banking services to home country clients are provided through representative offices, branches and subsidiaries. Evidence has been achieved supporting a following-the-client behavior in the banking sector. As expected, the presence in a foreign location of multinationals from the bank's country of origin positively affects the setting up of representative offices, branches and subsidiaries. As in the previous case, the associated coefficient to MNC has a positive sign being statistically significant at a 0.01 level in the three models.

Participating in the host country's capital market positively affects cross-border banking movements through representative offices and branches but not through subsidiaries. In the first two cases, variable CAP shows a positive associated coefficient, significant at a 0.01 level. On the contrary, in the model of subsidiaries it has a negative sign although it is not statistically significant. This result would suggest that banks tend to participate in the host country's capital market through representative offices and branches but not through subsidiaries.

High interest margins in the host country positively affect foreign banking entry through representative offices and branches, while surprisingly it does not affect the setting up of subsidiaries. The associated coefficient to IM is positive and statistically significant at a 0.01 level for representative offices and branches, meanwhile it is negative although non-significant in the model of subsidiaries. According to the definition of interest margins, a positive sign would indicate that high interest margins in a foreign location would make this location more interesting for the bank, favoring the entry. Due to its legal status, the subsidiary seems to be the suitable form of representation for participating in the host country's banking system. Hence, a positive coefficient was expected. However, as it has been previously noted, high interest margins are usually associated to barriers to entry, especially important in the retail banking segment. Therefore, the existence of entry barriers could neutralize the attractiveness of the foreign location due to high interest margins. Representatives and branches, on the other hand, focus their activity on the wholesale banking segment, where barriers to entry are lower.

Table 2. Results

Variable	Representative Offices	Branches	Subsidiaries
EXP	0.47E-04[a]	0.44E-04[a]	0.77E-04[a]
	(4.53)	(4.25)	(6.19)
MNC	0.15E-01[a]	0.15E-01[a]	0.32E-01[a]
	(3.96)	(4.75)	(5.76)
CAP	0.76E-06[a]	0.18E-05[a]	-0.49E-07
	(2.79)	(8.39)	(-0.09)
IM	0.36[a]	0.19[a]	-0.10
	(4.92)	(2.62)	(-0.81)
R	0.11	0.12	-0.16[c]
	(1.40)	(1.30)	(-1.70)
CD	-0.18[a]	-0.98E-01[a]	-0.11[b]
	(-4.67)	(-2.68)	(-1.99)
Constant	-1.19	-1.51	0.13
N	182	182	182
Log-likelihood	-255.28	-229.32	-143.11

T values in parentheses.
a-Significant at a 0.01 level.
b-Significant at a 0.05 level.
c-Significant at a 0.1 level.

The attitude of host country authorities towards foreign entrants does not affect cross-border banking movements through representative offices and branches. In both cases, variable R shows a positive coefficient which is not statistically significant. In the model of subsidiaries, the associated coefficient is negative and significant, but only at a 0.1 level. This result suggests that a restrictive attitude by host country authorities toward foreign entrants does not affect the setting up of representative offices and branches, but paradoxically favors the entry through subsidiaries. A quite straightforward explanation would be that while no barriers seem to exist for representative offices and branches -probably because they tend to operate in the wholesale segment-, banks tend to establish subsidiaries in locations with restrictive policies about foreign entrants, where higher monopoly rents should exist.

Finally, cultural differences between clients across Europe negatively affect cross-border banking movements through representative offices, branches and subsidiaries. The coefficient associated to CD is negative in the three models. Its significance level is 0.01 in the models of branches and subsidiaries, and 0.05 in the model of representative offices. Therefore, as it had been hypothesized, cultural distance constitutes an important non-regulatory barrier in cross-border banking within Europe.

5. Conclusions

This paper has investigated cross-border banking movements within Europe. The attention has been addressed to two set of issues. To test the bank's motivations for establishing different forms of overseas offices and, to assess the existence of barriers to entry in the European national banking systems.

Our results show that important differences exist between the setting up of representative offices and branches, regarding foreign subsidiaries. Therefore, while representative offices and branches may be considered, to a certain extent, substitute forms of representation for the parent bank, subsidiaries play a different role. Unlike the other forms of representation, subsidiaries do not seem to take an active role in the host country's capital market. In addition, banks tend to establish subsidiaries in locations with a more restrictive attitude towards foreign entrants, possibly due to the existence of monopoly rents in the retail segment. This result supports the assumption by Heinkel and Levi (1992), that subsidiaries compete less directly with other forms of representation, than other forms of representation compete between them.

The results also reveal the importance of non-regulatory barriers, such as cultural distance between consumers within Europe, in the integration of national banking systems. This result is especially important, showing that although regulatory barriers were completely removed, cultural differences could make difficult the existence of a single European market for banking services. In this point, we must mention the effect that the introduction of the Euro should have in the integration of the European banking systems. As some authors have noted, separate currencies divide the market in money even more than those in other goods and services. In this context, the Euro should contribute to the integration of national banking systems by reducing the importance of national differences.

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