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Abstract

Between 1995 and 2005, foreign bank participation in Mexico rose from 2 percent of bank assets to 83 percent, as the top five largest banks were acquired by foreigners. This paper examines the link between foreign bank acquisitions and banking outreach. Using quarterly country, bank, and bank-municipality-level data, the authors find some contrasting patterns. As foreign bank participation rose due to foreign acquisitions, the number of municipalities with bank presence increased but the number of loan and deposit accounts fell for the country as a whole and for banks after they became foreign. The drop in the number of loans, however, was partially off-set by an increase in domestic bank loans. Further, the decline in loan and deposit accounts was more pronounced in more rural and poorer areas. Finally, only very rich and urban areas experienced an increase in branches after foreign acquisition.

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1. Introduction

During the 1990s, many developing countries embraced financial globalization and, in particular, welcomed foreign bank entry into their banking sectors. Micco, Panizza, and Yañez (2006) report that the average level of foreign bank participation among developing countries (as measured by the share of assets held by foreign banks) rose from 18 to 33 percent between 1995 and 2002.[1] Arguably, nowhere has the increase in foreign bank participation been more dramatic than in the case of Mexico. Over this period, the share of assets held by foreign banks rose from 2 to almost 82 percent. Mostly, the increase in foreign bank participation in Mexico resulted from foreign acquisitions of domestic banks, as opposed to de novo entry. By 2005 foreign bank participation was close to 83 percent and the top five banks in the system had been acquired by foreigners.

This study examines how banking sector outreach or breadth – i.e., the extent to which the banking sector caters to a large percentage of the population – changed during a period of drastic increase in foreign bank presence driven by foreign acquisitions. Since we do not have information on the actual share of the population with banking services we use proxy measures of outreach. In particular, we track the behavior of the number or share of municipalities where banks are present and the number of branches, loans, and deposit accounts. First, using quarterly country-level data we investigate how the share of municipalities with branches, the number of branches, deposit accounts, and loan accounts per capita at the country level changed as foreign bank participation increased due to foreign acquisitions. In particular, we separately examine changes in outreach for domestic and foreign banks to determine whether domestic banks off-set foreign bank behavior. Second, using bank-level data, we examine how foreign bank outreach changed after the acquisitions. Again, we focus on the number of municipalities with bank

[1] Their sample covers 104 developing countries across all regions.

presence, the number of branches, loans and deposit accounts. Contrary to the country level regressions where identification is weak because omitted factors might be driving the link between outreach and foreign bank presence, in the bank-level regressions we can identify the effects of foreign acquisition by comparing results for banks that were acquired at different points in time and by including Banorte as a control group, a similarly large bank that remained domestic throughout the sample Finally, we conduct a more disaggregated examination using bank-municipality-level data.[2] In this context, we examine the extent to which changes in outreach of a given bank within a municipality varied after its acquisition by foreigners depending on the initial level of GDP per capita and the degree of urbanity of the municipality.

An extensive literature has examined many of the consequences of foreign bank participation in developing countries. In particular, the implications of foreign bank entry for bank efficiency, competition, stability and access to credit have been thoroughly investigated by cross-country and country-specific studies using an array of different data sources.[3] Studies on the impact of foreign bank participation on competition and efficiency suggest that foreign bank entry can bring potential gains in this area except in environments that limit competitive forces, such as when bank concentration is high, bank activities are restricted, and bank entry and exit is difficult (see Barajas, Steiner and Salazar, 2000; Denizer, 2000; Claessens, Demirguc-Kunt, Huizinga, 2001; Unite and Sullivan, 2002; Claessens and Laeven, 2003; Claessens and Lee, 2003; Martinez Peria and Mody, 2004; Levy-Yeyati and Micco, 2007). The research on foreign bank participation and stability concludes that for the most part foreign banks contribute to banking stability by continuing to lend when faced by financial crises and by lending more under these circumstances than their domestic counterparts (see Goldberg, Dages, and Kinney, 2000;

[2] What in Mexico are known as "municipios" are similar to what in the U.S. are referred to as counties.
[3] See Clarke, Cull, Martinez Peria, and Sanchez (2003) and Cull and Martinez Peria (2007) for a review of the literature.

Crystal, Dages, and Goldberg, 2001; Goldberg, 2002; Martinez Peria, Powell and Vladkova-Hollar, 2005; Detragiache and Gupta, 2006; De Haas and van Lelyveld, 2006)

The literature on the implications of foreign bank participation for access to finance has primarily focused on the impact on lending to small and informationally opaque firms. To date, the evidence on this issue is mixed. Studies using country or bank-level data such as Berger, Klapper, and Udell (2001), Detragiache, Gupta, and Tressel (2005), and Mian (2006) present results that suggest that foreign banks limit access and serve only the largest and most transparent firms. Using firm-level data for India, Gormley (2006) finds that on average firms located in districts with newly established foreign banks were less likely to get long-term financing, but this effect was stronger among the more opaque firms. On the other hand, cross-country research using firm-level data conducted by Giannetti and Ongena (2005) and Clarke, Cull and Martinez Peria (2006) indicates that though larger firms benefit more from foreign bank presence, even small companies enjoy greater access to credit when foreign bank participation increases.

In the specific case of Mexico, a number of papers have documented the impact of foreign bank entry into this country. Looking at the period immediately following the 1994 Peso crisis, Goldberg, Dages, and Kinney (2000) and Peek and Rosengren (2000) conclude that foreign banks in Mexico were not volatile lenders, did not retrench in the aftermath of the crisis and, in fact, exhibited higher and more stable loan growth rates than their domestic counterparts. On the other hand, analyzing the effects of foreign bank penetration in Mexico during 1997-2004, Haber and Musacchio (2005) and Schulz (2006) come to less optimistic conclusions. The first study finds that foreign banks grant less credit, screen loans more intensively (as evidenced by lower non-performing loan ratios), and charge lower interest rate spreads than domestic banks

to attract lower risk credits. However, foreign banks are more profitable than their domestic counterparts because their market power allows them to charge higher fees. The second study concludes that foreign bank participation had a positive but limited impact on banking sector development. More specifically, Schulz (2006) argues that the main contribution of foreign bank entry was to help recapitalize the banking sector and to improve its asset quality, but had limited effects on efficiency or lending.

Our study contributes to the literature on foreign bank entry – both in general and for the specific case of Mexico – by analyzing the link between foreign bank acquisitions and outreach.[4] This is an interesting question that is ex-ante unclear and has been unexplored by the empirical literature. Contrasting predictions can be derived from existing studies on foreign bank lending behavior. In particular, studies that predict that foreign banks tend to "cherry pick" and lend only to the largest most transparent firms (e.g., Detragiache, Gupta, and Tressel (2005), Gormley (2006), and Mian (2006)) would imply that foreign bank acquisitions would be negatively related to outreach, since greater outreach is likely to be associated with a larger number of loans and a wider branch network reaching smaller clients. On the other hand, studies that argue that large and foreign banks have superior transaction technologies that enable them to reach all types of clients including small ones (Berger and Udell, 2006) suggest a potential positive association between foreign acquisitions and outreach. Finally, there is the argument that even if foreign banks do not cater themselves to small clients, outreach could increase if domestic banks are forced to move down the market, expanding their outreach to serve smaller clients.

[4] Using cross-country data Beck, Demirguc-Kunt and Martinez Peria (2007a) find a negative association of loan and deposit accounts per capita and the foreign bank share, but no significant association with branch or ATM penetration. Using bank-level survey data, Beck, Demirguc-Kunt and Martinez Peria (2007b) find that foreign banks charge higher deposit account fees, although a larger foreign bank share is associated with lower barriers in deposit services overall.

Using country-level data for Mexico over the period 1997-2005, we find some contrasting patterns. In particular, while the share of municipalities with bank services (i.e., the share of municipalities with a bank branch present) increased as foreign bank participation rose due to acquisitions, the number of branches, loans and deposits per capital fell. The drop in the number of loans, however, was partially off-set by an increase in domestic bank loans. Using bank-level data, we find that foreign acquisitions resulted in an increase in the number of municipalities served, while the number of deposit and loan accounts dropped after acquisitions. Unlike in the aggregate regressions, however, we find an increase in branch penetration after foreign acquisitions. Our analysis at the bank-municipality-level largely confirms our aggregate and bank-level results for loan and deposit accounts. We find that both outreach indicators declined following acquisitions, and we find some evidence that this effect was stronger in poorer and, especially, in more rural areas. We also find that the probability of a bank being present in a given municipality increases after foreign acquisition, especially in urban areas, while the number of branches increases exclusively in urban and rich municipalities.

Though our results withstand a number of robustness tests, several notes of caution are warranted. First, in our country-level regressions, we cannot completely eliminate the possibility that the increase in foreign bank participation and the contemporaneous changes in outreach are driven by a third factor. Bank- and municipality-level regressions, however, allow for a cleaner identification of the effect of foreign acquisition. Second, our outreach indicators are admittedly crude and are not exact measures of the share of households that has access to or uses banking services. Cross-country comparisons, however, have shown a close link between outreach indicators such as branches, deposit and loan accounts per capita and the share of households that uses banking services (Beck, Demirguc-Kunt and Martinez Peria, 2007a; Honohan, 2007).

Finally, while our study provides new and robust evidence on how outreach changed during a period of rising foreign bank participation, with important implications for other countries, such inferences have to be undertaken with caution. While Mexico experienced foreign bank entry through the acquisition of domestic private entities by foreign banks, there are different patterns of foreign bank entry around the world, ranging from heavy de novo entry to entry of foreign banks through the privatization of government-owned banks and results might vary in those cases.

The rest of the paper is organized as follows. Section 2 provides an account of the changes in bank ownership experienced by the Mexican banking sector since the early 1990s. Section 3 describes the data used while section 4 lays out the methodology pursued to examine how outreach changed along with the increase in foreign bank participation. Section 5 presents our empirical results. Section 6 concludes.

2. The Mexican banking sector – from government to foreign ownership

In the span of two decades, the Mexican banking sector experienced an incredible transformation going from a government-run sector to a privately yet exclusively domestically owned one, only to end up today as a sector dominated by foreign banks. Below we provide an account of the significant changes in ownership the Mexican banking sector underwent in recent years. Table 1 illustrates the development of the Mexican banking system from 1990 to 2005, showing the number of banks, the number of government, private domestically-owned banks and foreign-owned banks and listing the names of the foreign-owned banks present in Mexico in specific years.

Following the 1982 debt crisis, Mexican banks were nationalized under the López Portillo presidency and remained in government hands until 1991. During this period, banks primarily used their deposits to fund the public sector. In 1986, for example, over 60 percent of bank credit went to the government (Gruben and McComb, 1997). After a decade of government ownership, a process of rapid bank privatization took place between June 1991 and July 1992 under the Salinas de Gortari administration.

According to Schulz (2006), the new owners had little banking experience and severely mismanaged the banks.[5] Haber (2005) argues that banks' behavior between 1991 and 1995 is also consistent with a tunneling view proposed by La Porta et al. (2003) by which shrewd bankers took advantage of the lax regulatory and supervisory environment in Mexico to engage in widespread insider lending. Others like Gruben and McComb (1997) argue that banks' aggressive lending practices during the post-privatization period were consistent with a struggle for market share. Regardless of the reasons behind events, bank credit and non-performing loans grew at alarming rates; total real bank lending doubled within three years and non-performing loans rose to 17.1 percent by December 2004 (considering loan rediscounts as non-performing loans). The on-going build up of non-performing loans was exacerbated by the macro imbalances that eventually led to the devaluation of the peso and the economic and financial crisis that ensued at the end of 1994.

Up until 1994, the only foreign bank in operation in Mexico was Citibank, which had been established in 1929, before legislation restricting foreign bank participation was passed in 1966. The North American Free Trade Agreement (NAFTA) was the first attempt by the

[5] Also, Haber (2005) argues that payment rules were very lax and bankers had little of their own capital at risk.

Mexican government to liberalize the banking sector, albeit at a very slow pace.[6] The treaty, which came into effect on January 1, 1994, allowed the establishment of chartered subsidiaries. Still, NAFTA restricted foreign bank participation severely, providing that U.S. and Canadian banks could not own more than 30 percent of a Mexican bank's capital (Haber, 2005). Furthermore, banks from the US and Canada could not acquire a controlling stake in any bank whose market share exceeded 1.5 percent and the total market share under foreign control could not initially exceed 8 percent and it could only rise to 15 percent by the year 2000. Even after this period of transition, NAFTA recognized the right of the Mexican government to freeze the purchases of Mexican banks if foreign banks as a group controlled more than one-quarter of the market.

The 1994 crisis confronted the Mexican government with the urgent need to recapitalize banks, hastening the decision to rapidly open up the banking sector to foreign interests. By the end of 1998, the government removed all remaining restrictions on foreign bank ownership. The liberalization of the foreign bank entry regime thus came as a result of the crisis rather than the free trade agreement with the U.S. and Canada.

Though there was an initial wave of foreign bank entry in 1995 (see Table 1), driven mostly by investment or corporate banks, the nature and extent of foreign bank ownership in Mexico started to change drastically in 1997-1998. Table 2 provides a list and timeline for the foreign acquisitions that occurred between 1997 and 2005. Large international banks such as BBVA (Spain), Banco Santander (Spain), Citibank (US), HSBC (UK), and Scotiabank (Canada)

[6] While a number of papers have looked at the implications of NAFTA on the Mexican economy, few have examined the effects on the financial sector. Furthermore, in most cases, the existing studies have been speculative and forward looking rather than based on solid empirical evidence (Garber and Weisbrod, 1993, Welch and Gunther, 1994, White, 1994, Glaessner and Oks, 1998).

acquired most of the largest Mexican banks. As a result of these acquisitions, the share of assets held by foreign banks increased from 15 percent in 1997 to 83 percent in 2005.

Foreign bank entry into Mexico allowed the recapitalization of the banking sector and the clean-up of banks' balance sheets. Between 1997 and 2003 capital ratios increased from 9 to 12 percent and non-performing loans declined from 10 to 3 percent (Haber, 2005). In what follows, we study how outreach changed in Mexico as foreign bank participation rose over the period 1997 to 2005.

3. Data

Our primary data consist of quarterly banks' balance sheets and unaudited information on the number of branches, deposit accounts, and loan accounts, from the Comisión Nacional Bancaria y de Valores (CNBV), the banking regulatory and supervisory authority in Mexico. While balance sheets are available at the bank level, data on branches, deposit and loan accounts were obtained per bank per municipality. In other words, we have information on the number of branches, deposits and loans for each bank in each of 1,192 municipalities for each quarter from 1997 through 2005.[7] We also have information on the ownership type of all banks and the mergers and acquisitions that took place over the period 1997 through 2005 (Aguilar and Cabal, 2004).

Since our objective is to examine changes in outreach, we focus exclusively on retail banks. We do not consider banks that only have a presence in Mexico City and are clearly either niche or investment banks. Hence, there are both domestic and foreign banks that are left out of the analysis for this reason. Table A1 lists the 14 banks included in our aggregate analysis as

[7] Mexico has over 2,400 municipalities; however, detailed information is available for 1163 municipalities. For 29 of the 32 Mexican states ("entidades federativas"), a category labeled "others" aggregates information for the smallest municipalities in each state. Hence, in total we have information on 1192 municipalities.

they existed at the end of 2005 and, in parentheses, the banks that merged with any of these 14 banks during the sample period 1997 to 2005. It is important to note that we exclude Banco de Azteca, a domestic bank that entered the system in 2002 with a large branch network and high loan account penetration, because this bank operated as the consumer finance arm of a retail household item store (Electra) prior to 2002. Our findings are thus not driven by the conversion of Azteca into a bank. In our bank-level analysis, we focus only on large retail banks. Specifically, we limit our sample to the five large banks that were acquired by foreigners and to Banorte, the only remaining large domestic bank. The reason for restricting the sample in this way is that for the purpose of including a valid control group, Banorte is truly the only institution comparable in size and in operation to the foreign acquired banks.

From the data discussed above, we create different indicators of outreach. In particular, following previous work (Beck, Demirguc-Kunt and Martinez Peria, 2007a), we develop both indicators of access to (i.e., the possibility to use) and the actual use of financial services. In terms of access, we focus on the presence of bank branches across municipalities both at the aggregate, i.e. Mexico-wide level (share of municipalities served), the bank level (number of municipalities served) and the bank-municipality-level (probability of a bank being present or operating a branch in a specific municipality). We also consider the number of branches per capita at the aggregate level and the log of the number of branches of a specific bank at the Mexico-wide and the municipality level. These indicators are proxies for the extent to which the Mexican population as a whole and across different municipalities has geographic access to bank services as well as the geographic outreach effort of individual banks.

While easy to understand and interpret, branch penetration has its shortcoming as an access indicator. First, technology has allowed banks to use alternative delivery channels such as

phones and the Internet. Second, the presence of a branch in a specific municipality has its limit as a physical access indicator, as we do not know the geographic distribution of the population.[8]

The presence of a branch in a municipality, and thus the physical possibility to use banking services, is only one dimension of bank outreach. Even if people have physical access, they might face other barriers, such as socio-economic restrictions, or they might not see the need for financial services. In the absence of time series data on restrictions such as account fees or documentation requirements, we therefore consider two indicators of the actual use of financial services: the number of deposit and the number of loan accounts. Specifically, we consider deposit (loan) accounts per capita at the country level, as well as the number of deposit (loan) accounts for each bank over time and for each institution in each municipality in every quarter. These indicators serve as proxy variables for the extent to which the Mexican population as a whole and across municipalities uses deposit and loan services and for the extent to which different banks reach out to their clients of these two services, on the aggregate and for each municipality.

As in the case of branch penetration, the deposit and loan account measures have their shortcomings. First, they do not capture the quality of services received by customers. Second, customers might have several deposit or loan accounts, so that these indicators are imperfect measures of the actual share of population using deposit and lending services in the banking system. However, Beck, Demirguc-Kunt and Martinez Peria (2007a) and Honohan (2007) show that these account indicators are good proxy variables for the share of the population that uses banking services.

[8] Specifically, the population center of a municipality without a branch might be geographically very close to another municipality with a branch.

To measure foreign bank presence, we use information on the ownership type of specific banks as well as data on the overall market share of majority foreign-owned banks. In our aggregate analysis, we use balance sheet information across all Mexican retail banks to calculate the share of deposits (in terms of amounts) held by foreign-owned banks.[9] In our bank-level analysis, we construct virtual banks, i.e. we treat banks that merged during the sample period as one unit throughout the analysis.[10] Doing so yields a sample of six large retail banks, five of which ended the sample period as foreign-owned, and Banorte, which remained domestic during the sample period. We identify foreign-acquired banks with a dummy variable that takes on value one for the five banks that ended the sample period as foreign-owned starting with the quarter after the acquisition (we label this variable Foreign Acquisition).

Finally, our empirical analysis also incorporates a number of control variables. In the aggregate analysis, we control for Mexico's GDP per capita in constant prices. In the bank-level regressions, we control for a number of time-variant bank characteristics, such as size, loan-asset ratio, return on assets, operating costs and net interest margins, computed from financial statements. In some bank-municipality-level regressions, we interact the foreign acquisition dummy with GDP per capita or the share of rural population at the municipality level in 1994. GDP and population data come from the Instituto Nacional de Estadística, Geografía e Informática (INEGI), Mexico's statistical institute.[11]

[9] Our results remain unchanged if we measure foreign bank presence by the share of loans granted by foreign banks.
[10] Take the case of Banamex and Citibank. The latter acquired Banamex in 2001; we treat the two banks as one throughout the sample. Prior to 2001, we add the data for both banks to create one consolidated institution. We do this to avoid the artificial jump in outreach measures (branches, loans and deposits) that we would otherwise observe at the time of the merger. We consider the merged bank to be foreign starting in 2001 since Citibank operations were very small relative to Banamex prior to 2001.
[11] GDP data at the municipality level was constructed from value added information derived from the 1994 Economic Census conducted by INEGI. The share of rural population is defined as the share of population living in towns/villages with fewer than 2,500 inhabitants. Population data at the municipality level (both total population and the share of rural population) come from the 1995 Conteo de la Poblacion conducted by INEGI.

4. Methodology

To analyze how outreach changed as a result of foreign bank acquisitions we exploit the variation in our data along the three dimensions of time, municipalities, and banks. Specifically, we conduct (i) country-level time-series regressions, with data aggregated across all banks and municipalities, (ii) time-bank panel regressions, with data aggregated for each bank and each quarter over all municipalities, and (iii) time-bank-municipality panel regressions, with data for each bank within each municipality and each quarter. We discuss each specification in turn.

We investigate changes in outreach for the overall Mexican banking system by running the following specification:

$$Y_t = \alpha \text{ Foreign Share}_t + \beta \text{ GDP per capita}_t + \varepsilon_t \quad (1)$$

where Y is one of our four outreach measures - Share of municipalities with bank branches, bank branches per capita, deposit accounts per capita and loan accounts per capita – measured in quarter t. Foreign Share, our measure of foreign bank presence, is the percentage of deposits held by foreign-owned banks. GDP per capita, measured in constant pesos, is introduced to control for changes in economic conditions that might affect the demand and supply of financial services. The coefficient α indicates whether there is a positive, negative or insignificant relationship between foreign bank participation and outreach over time at the country level. Since the deposit and loan account data for some banks show unexplainable large jumps, we control for these outliers by including quarterly dummy variables for these periods. Further, in the deposit and loan accounts per capita regressions, we introduce step variables that equal one after Bancomer (later merged with BBVA) changed its classification of deposit and loan accounts.[12]

[12] Bancomer started including passbook savings accounts in their deposit account numbers in the second quarter of 2002, while there was a significant change in the classification of loan accounts in the first quarter of 1998.

We estimate three versions of equation (1): one where the outreach indicators are aggregated for all banks in the system, one where we only add up the outreach measures for the domestic banks and, finally, one where we only consider the outreach indicators for the five banks that became foreign-owned during the sample period. Looking separately at the outreach indicators for domestic and foreign banks allows us to determine the reaction of both groups of banks to the increasing presence of foreign banks.

Next, we examine the relationship between bank-level outreach and foreign bank acquisitions, by estimating the following equation:

$$Y_{i,t} = \alpha \text{ Foreign Acquisition}_{i,t} + b_i + q_t + \varepsilon_{i,t} \quad (2)$$

where Y refers to the log of the (i) number of municipalities where bank i is present at time t, (ii) number of branches, (iii) number of deposit accounts, and (iv) number of loan accounts for bank i in time t. We include bank- and quarterly dummies, b_i and q_t, respectively. Foreign acquisition is a dummy that equals one starting with the period after bank i was acquired by a foreign bank. We include all outreach indicators in logs, so that α can be interpreted as the approximate percentage change in outreach following foreign acquisition. We estimate equation (2) only for the banks that became foreign-owned during the sample period plus Banorte, the only large bank that remained domestic during the sample period.[13] By focusing on the six largest banks, we avoid that our results are driven by the smaller banks, which had little outreach throughout the whole sample period. Also, for identification purposes, it is important to have a valid control group. Banorte is the only domestic bank that fits this criterion, since it is the only institution that compares in size and outreach to the banks that were eventually acquired. The coefficient on Foreign Acquisition indicates how outreach changed after the top five banks in

[13] Since we have only six banks, we do not present results with standard errors clustered by banks.

Mexico were acquired by foreigners banks compared to (i) before acquisition, (ii) banks that have not been acquired yet, and (iii) Banorte, which was never acquired by foreigners during the sample period. To take account of the large jumps in deposit and loan accounts for some banks in some quarters, we drop these observations from the regression, while at the same time including the step dummies for Bancomer in the deposit account and loan account regressions as discussed above. In robustness tests, we control for other time-variant bank characteristics such as bank assets, loan asset ratios, overhead costs and net interest margin and confirm our findings.

To assess the relationship between foreign acquisition and outreach within banks within municipalities, we utilize the following specification:

$$Y_{i,k,t} = \alpha \text{ Foreign Acquisition}_{i,t} + m_k + b_i + q_t + \varepsilon_{i,k,t} \quad (3)$$

where k is the municipality indicator and m_k are municipality fixed effects. We allow for correlation across the error terms of each municipality by computing clustered standard errors. In this specification, α indicates the effect of foreign acquisition on outreach by bank i in quarter t. As in the case of the equation (2), we include only the five banks acquired by foreigners and Banorte to properly identify the effect of acquisitions and to prevent small banks with little outreach from biasing our results.

We estimate Equation (3) using two different functional forms depending on the measure of outreach we consider. First, we use logit regressions to estimate the likelihood that a bank is present in a given municipality and given quarter as function of foreign acquisition, controlling for municipality, bank, and time effects. The marginal effects estimated from these logit regressions capture the "extensive" margin of foreign acquisition. Second, we use OLS regression to estimate the effect of foreign acquisition on the log of the number of branches, deposit and loan accounts in municipalities where the banks acquired by foreigners are present.

Here too, we control for bank, time and municipality fixed effects. These regressions capture the "intensive" margin, as they do not include municipalities in quarters with no presence by bank i.[14] Finally, both in the case of the logit and OLS estimations, we present regressions where we allow for a differential effect of foreign bank presence across municipalities according to their level of economic development and their degree of urbanity by including interaction terms of Foreign Acquisition with municipality-level GDP per capita and the share of rural population in 1994.

5. Results

We begin by exploring simple correlations between foreign bank participation and banking outreach at the aggregate, Mexico-wide, level in the form of graphs. Also, we graphically depict how measures of outreach changed among the foreign-acquired banks after their acquisition. We then present regression results using time-series data for Mexico. Next, we turn to bank-level regressions, before presenting results using the bank-municipality panel. In all cases, we use quarterly data.

5.1. Foreign bank participation and outreach – ocular econometrics

Figures 1 through 4 illustrate developments in banking outreach and foreign bank participation in Mexico for the period 1997-2005. Specifically, we graph each of the outreach indicators together with the share of deposits held by foreign-owned banks. Figure 1 suggests a positive co-movement between the share of municipalities with bank presence and the measure of foreign bank participation. Figure 2 shows a negative association between branches per capita

[14] As in the aggregate regressions, we include dummy variables to control for anomalous jumps in deposit or loan account numbers.

and the importance of foreign banks, while Figure 3 shows first an increase then a decrease in deposit accounts per capita with the increase in foreign bank penetration. Figure 4 suggests a strong negative co-movement between loan accounts per capita and foreign bank participation until 2004. However, after this period both variables are trending upwards.

While the graphs described above show the aggregate changes in outreach as foreign bank presence rose, Figure 5 displays our four outreach indicators for the five banks that became foreign-owned eight quarters before and after acquisition. Hence, while figures 1 through 4 incorporate both the behavior of domestic and foreign banks, Figure 5 looks only at the latter. Specifically, we normalize municipalities served, number of branches, number of deposit accounts and number of loan accounts to 100 in the quarter of acquisition (time t) and then average these indicators for all five banks that were acquired by foreigners for the eight quarters before and after their respective acquisition dates. While there is little movement and perhaps a slight increase in the municipalities served, both the number of deposit accounts and the number of branches fall after acquisition, to around 90% of the level at the time of acquisition. Most dramatic, however, is the decline in the number of loan accounts. The largest decline, however, happens in the two years leading up to the acquisition when banks reduce their loan accounts by over 40%, while after acquisition, the number of loan accounts declines by another 25%.

These univariate graphic illustrations are just that - illustrations. They do not control for other factors affecting outreach. Hence, we now turn to regression analysis for more formal hypothesis testing.

5.2. Foreign bank participation and outreach – the country-level evidence

Table 3 presents regressions using country-level data across 36 quarters between 1997 and 2005. The results in Table 3 Panel A show a positive association between the participation of foreign-owned banks and the share of municipalities served. On the other hand, we find a negative correlation between the foreign bank deposit share and branches, deposits, and loans per capita. These results suggest that, overall, Mexico witnessed an increase in the number of municipalities with banking services after five of the largest banks were taken over by foreign shareholders, while at the same time branches were closed in previously banked municipalities and deposit and loan use across the Mexican territory declined.

In terms of economic significance, we find that our regressions predict that a 67 percentage point increase in the foreign bank share (the actual change observed between 1997 and 2005) would result in a 4.4 percentage point increase in the share of municipalities served, relative to an initial share of 54 percent. On the other hand, this same increase in foreign bank participation is predicted to lead to a decline in branches, deposits, and loans per 1,000 people of 0.02, 46.6, and 0.21, respectively. This compares to initial values of 0.08 for branches, 268 for deposits and 1.2 for loans, all expressed per 1,000 people. Hence, across the board the effects of changes in foreign bank participation appear to be significant.

Table 3 Panel B and C consider the aggregate behavior of outreach measures for all domestic and, separately, all banks that became foreign-owned, respectively. We find that while the share of municipalities served by foreign banks increased along with the rise in foreign bank participation, domestic banks were present in fewer municipalities as the foreign bank share increased. On the other hand, the number of branches per capita declined for both foreign and domestic banks along with the rise in foreign bank participation. While deposits per capita fell for foreign banks, we do not observe a decline for domestic banks in response to the increase in

foreign bank presence. Finally, loans per capita among foreign banks fell as their presence increased, while loans per capita rose among domestic banks.

In summary, the evidence in Table 3 shows that while more municipalities were being served as foreign bank penetration rose, branch penetration fell for all banks in the system. Deposits and loans per capita dropped for banks that became foreign and for Mexico as a whole, given the importance of these five banks in the system, but the decline in loans was partly offset by the behavior of domestic banks, which seemed to have increased the number of loans as foreign banks gained market share in Mexico. We also find that GDP per capita is positively and significantly associated with branch penetration of all banks and of the five banks that became foreign-owned, while it is positively and significantly associated with loan accounts per capita of all banks and the domestic banks.

The results above are robust to a number of alternative estimations not shown but available upon request. First, the results remain the same if we lag the measure of bank participation to allow for a delayed response to ownership changes. Second, our findings do not vary if we control for changes in bank concentration, as measured by the share of deposits held by the top three banks in Mexico. As foreign banks acquired domestic banks concentration levels increased from the range of 50 to 60 percent. Some might argue that observed changes in outreach might be driven by changes in concentration as opposed to foreign presence. This does not appear to be the case in Mexico.

5.3. Foreign bank acquisitions and outreach – the bank-level evidence

While the aggregate regressions quantify the overall effect of foreign bank participation on outreach, bank-level regressions enable us to examine changes in outreach for each bank after acquisition. Specifically, Table 4 presents bank-level regressions including the five banks that were acquired by foreigners - namely Banamex, Bancomer, Bital, Inverlat, and Serfin- and Banorte, the only remaining large domestic bank.[15] Here the variable of interest is the foreign acquisition dummy which takes the value of one after the acquisitions. The results in Table 4 Panel A suggest that after foreign acquisition banks began to operate in a larger number of municipalities and increased their branch penetration, but at the same time the number of deposit and loan accounts dropped.[16] These regressions control for bank and time specific effects, thus the effect of lower outreach after the acquisition by foreign banks is relative to the average level of outreach of each bank over the sample period 1997 to 2005 and the average level of outreach across the six banks in a specific quarter. These findings are confirmed when we control for changes in Mexican GDP per capita instead of quarterly dummies.

The regressions in Panel B show the robustness of our findings to including several time-variant bank-level characteristics. Specifically, we include the log of assets to proxy for size, the loan-asset ratio to control for the extent of retail orientation, return on assets to capture banks' profitability and operating costs relative to total assets and net interest margins as a share of assets to account for variations in efficiency. Foreign acquisition continues to enter significantly, with the same sign and with almost identical coefficient sizes as in Panel A. Furthermore, none of the bank-level characteristics enters significantly.[17]

[15] As discussed above, we do not include the smaller domestic banks, as they do not seem to be an appropriate control group.

[16] When we focus only on the banks that were acquired by foreigners, the foreign acquisition dummy only enters significantly and negatively in the loan accounts regression.

[17] They only become significant if we drop the bank dummies. Hence, it appears that financial characteristics are only significant in explaining cross-bank differences in outreach.

The economic effects of foreign acquisition are quite large, especially when it comes to loans. Foreign acquisition led to a 6 percent increase in the number of municipalities served and a 7 percent increase in the number of branches. On the other hand, it resulted in a 12 percent decline in deposits accounts and 60 percent fewer loan accounts.[18] For the number of municipalities served and deposit and loan accounts, these results are largely consistent with what is observed in Figure 5 and the results of Table 3 Panel C, while they are different for the number of branches for which Figure 5 shows a decrease rather than an increase as in Table 4. The result on the number of branches is also in contrast to the aggregate finding in Table 3 of a decline with higher foreign bank participation. The difference in these results might be driven by the fact that while the bank level regressions include time dummies to control for country wide trends, the estimation in Table 3 only controls for Mexico's GDP per capita.

5.4. Foreign bank acquisitions and outreach – the bank-municipality-level evidence

While the results using country-wide time-series data for Mexico show the aggregate effect of foreign bank participation on outreach and the bank-level regressions allow us to identify changes in outreach following acquisitions, the bank-municipality regressions enable us to assess the effect of foreign acquisition on outreach as a function of municipality characteristics. Further, given that for each of the six banks we have information on 1,192 municipalities over 36 quarters between 1997 and 2005, these specifications give us greater power and allow us to verify whether the findings at the national and bank-level hold up when we focus on a smaller geographical entity.[19] All regressions include municipality, bank and

[18] While the log specification allows interpreting the coefficient on the foreign acquisition dummy as percentage change for small numbers, the exact percentage change is $\exp(\alpha)-1$.

[19] There are over 2,400 municipalities in Mexico; however, the available data aggregate the branches, deposits and loans for some of the smaller municipalities into a broader category labeled "others". There are 29 states which

quarter dummies, so that we measure the effect of foreign acquisition relative to the average for each bank, municipality and time period. Panels A, B and C present (i) the baseline regression with the foreign acquisition dummy, (ii) regressions with the foreign acquisition dummy and its interaction with GDP per capita and (iii) regressions with the foreign acquisition dummy and its interaction with the rural population share, respectively.

Panel A suggests that the likelihood of bank presence in a given municipality increases after acquisition by a foreign bank, while the number of deposit and loan accounts decreases. Foreign acquisition enters positively and significantly in the logit regression and negatively and significantly in deposit and loan account regressions. It enters negatively, but insignificantly in the branch regressions. The economic significance is similar to the regression in Table 4: foreign acquisition leads to a 3% increase in the likelihood that the bank is present in the municipality, a 24% decrease in deposit accounts and a 60% decrease in the number of loan accounts.

The Panel B results suggest that richer municipalities experience an increase in branches after foreign bank acquisition and a smaller decrease in the number of loan accounts. The interaction of foreign acquisition with municipality-level GDP per capita enters positively and significantly in the number of branches and loan account regressions, but insignificantly in the logit and deposit account regressions. Comparing the coefficient sizes on the foreign acquisition dummy and the interaction terms suggests that the effect of foreign bank acquisition on the number of branches of a given bank in a given municipality is positive only above 3,100 Pesos GDP per capita in 1994. However, the effect is statistically significant only for municipalities with GDP per capita above 19,000 pesos (those in the top 1 percentile of the distribution). In the case of loan accounts, except for municipalities with over 45,000 Pesos in per capita income

report this "other" category. Combined the municipalities included under the "other" category account for less than 3 percent of the Mexican population.

(those in the top 0.01 percentile), all other municipalities experienced a reduction in the number of loan accounts after foreign acquisitions. The increase in the likelihood of bank presence and the decrease in the number of deposit accounts after foreign acquisition, on the other hand, are independent of the GDP per capita level of the municipality.

The Panel C regressions suggest that the change in the likelihood of bank presence and the number of bank branches after foreign acquisition depend on the degree of urbanity, while rural municipalities experienced a stronger decrease in the number of deposit and loan accounts. The foreign acquisition dummy enters positively (negatively) and significantly in the logit and branch (deposit and loan accounts) regressions, while its interaction with the share of rural population enters negatively and significantly in all regressions. The coefficient sizes suggest that only municipalities with less than 66% rural population share experienced an increase in the likelihood of bank presence after the bank was acquired by foreigners. In fact, the effect is positive and statistically significant for municipalities with a share of rural population below 50 percent. For municipalities with a share of rural population above this percentage the effect is negative but not significant. Similarly, from the coefficient sizes we can infer that only municipalities with a share of rural population below 26% (i.e., 28.8 % of municipalities) experienced an increase in branches after foreign acquisition. However, this increase is statistically significant only for municipalities in the bottom 5 percentile of the distribution of the rural share (i.e., those with a rural share close to 1.5 percent). Municipalities with a rural share above 50 percent experienced an economically and statistically significant decline in the number of branches. The negative impact of foreign acquisition on the number of deposit and loan accounts is exacerbated for rural municipalities. While municipalities with 22% rural population share (25^{th} percentile) experienced a decrease of 22% (60%), municipalities with 71% rural

population share (75th percentile) experience a decrease of 34% (68%) in the number of deposit (loan) accounts.

Summarizing, the bank-municipality regression results confirm our aggregate finding that the probability of bank presence in a municipality increased after foreign acquisition, while the number of deposit and loan accounts decreased. The positive effect of the geographic extension of foreign banks seems to be limited to urban areas, however, while the negative effect of foreign acquisition on deposit and loan account penetration seems stronger in rural and poorer areas. Foreign acquisition has a positive impact on branch penetration exclusively in very urban and rich areas.

6. Conclusions

Foreign bank entry is a new and significant phenomenon that many developing countries are experiencing nowadays. Though a literature has emerged analyzing the impact of this trend on bank efficiency, stability, and access to small business finance, to our knowledge, no study has examined the implications for banking sector outreach. Using country-, bank- and bank-municipality- level data, this paper analyzes how outreach changed in Mexico during a period of rapidly rising foreign bank presence resulting from foreign acquisitions. Our results suggest some contrasting patterns. While more municipalities got access to a bank branch, deposit and loan penetration in per capita terms decreased. The decrease in loan penetration by banks that became foreign was partially off-set by the remaining – domestically owned – portion of the banking system. Specifically, domestic banks reacted to the retrenchment by the foreign acquired banks by expanding their number of loans. Across municipalities, the decline in outreach was more pronounced in poorer and especially in more rural areas. Specifically, while all areas

experienced a lower number of deposit and loan accounts after foreign acquisitions, branch penetration increased in very rich and urban municipalities, but decreased in rural areas.

What drives the observed changes in outreach? A number of competing explanations might be consistent with our findings. First, changes in outreach might be driven by a need to reduce inefficiencies built before the 1994 crisis. Second, the observed outreach patterns might reflect a deliberate strategy by foreign banks to rationalize their operations focusing on the upper end of the market (that is on the richer and more urban clients) consistent with those that argue that foreign banks "cherry pick" their clients. Finally, a response to demand factors might also explain our findings. In particular, the decline in loan and deposit accounts might result from a drop in demand due to higher prices or non-price barriers established by foreign banks. In turn, higher prices might reflect better services or could also result from banks' desire to attract high-end clients. Similarly, non-price barriers could be consistent with the notion that foreign banks deliberately cherry pick or might be due to tighter enforcement of regulations like anti-money laundering rules (e.g., foreign banks might require more forms of identification to open accounts due to tighter regulations imposed by the home country supervisor). Though a very important question, assessing which of these factors explains our results is beyond the scope of this paper and will have to be settled by future research.

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Table 1: Bank ownership over time in Mexico

	1990	1994	1995	1997	1999	2000	2001	2002	2005
Total number of banks	20	33	46	41	34	32	29	30	27
Government-owned banks	18	0	0	0	0	0	0	0	0
Private domestically-owned banks	1	31	29	21	17	13	11	12	12
Foreign banks	1	2	17	20	17	19	18	18	15
	Citibank	Citibank	Citibank	Citibank	Citibank	Citibank	Citibank-Banamex	Citibank-Banamex	Citibank-Banamex
			BBVA	BBVA	BBVA	BBVA-Bancomer	BBVA-Bancomer	BBVA-Bancomer	BBVA-Bancomer
		Santander Negocios	Santander Negocios	Santander Negocios	Santander Mexicano-Serfin	Santander Mexicano-Serfin	Santander Mexicano-Serfin	Santander Mexicano-Serfin	Santander-Serfin
						Scotiabank Inverlat	Scotiabank Inverlat	Scotiabank Inverlat	Scotiabank Inverlat
			ABN-AMRO	ABN-AMRO	ABN-AMRO	ABN-AMRO	ABN-AMRO	ABN-AMRO	ABN-AMRO
				American Express	American Express	American Express	American Express	American Express	American Express
			Bank of America	Bank of America	Bank of America	Bank of America	Bank of America	Bank of America	Bank of America
			Boston	Boston	Boston	Boston	Boston	Boston	
			Nations	Nations					
			Rep.Nat. of NY	Rep.Nat. of NY	HSBC	HSBC	HSBC	HSBC	HSBC
			JP Morgan	JP Morgan	JP Morgan	JP Morgan	JP Morgan	JP Morgan	JP Morgan
				First Chicago	Bank One	Bank One	Bank One	Bank One	
			Chase	Chase	Chase	Chase			
			Chemical Bank						
						Deutsche	Deutsche	Deutsche	Deutsche
			Tokio	Tokio	Tokio	Tokio	Tokio	Tokio	Tokio
				Comerica	Comerica	Comerica	Comerica	Comerica	Comerica
			Dresdner	Dresdner	Dresdner	Dresdner	Dresdner	Dresdner	
			ING	ING	ING	ING	ING	ING	ING
				GE Capital	GE Capital	GE Capital	GE Capital	GE Capital	GE Capital
			Fuji	Fuji					
			BNP	BNP	BNP	BNP	BNP		
			Societe Generale	Societe Generale					
								Credit Suisse	Credit Suisse

Source: Aguilar and Cabal (2004).

Table 2: Foreign acquisitions of Mexican banks

Year	Acquirer	Target	Resulting share of bank assets held by foreign banks
1997	Santander	Mexicano	14.63% [1]
1999	Santander	Serfin	31.34% [2]
2000	BBVA	Bancomer	48.04% [3]
2000	Scotiabank	Inverlat	55.36% [4]
2001	Citibank	Banamex	75.50% [5]
2002	HSBC	Bital	81.86% [6]

[1] Banco Santander and Grupo Invermexico sign an agreement in 1996q4.
The official merger happens in 1998 but in practice banks operate as one since 1997q1.

[2] In 1999q3, Serfin is taken over and absorbed by Santander Mexicano.
The legal merger takes place in 2005 but in practice the management change occurs in 1999q3.

[3] In 2000q3, BBVA acquires Bancomer.

[4] Scotiabank acquires a majority of the shares of Inverlat in 2000q4.

[5] Citibank acquires Banamex in 2001q4.

[6] HSBC agrees to acquire Bital in 2002q4, the official merger takes place in 2003q2.

Table 3: Foreign bank participation and outreach - Aggregate time-series evidence

Regressions for deposit accounts per capita include the following dummies to control for outliers: first and second quarter of 1997; fourth quarter of 1998; second and fourth quarter of 2000; first, second, and third quarter of 2001; first and second quarter of 2003; first, third and fourth quarter of 2005. Regressions for loan accounts per capita include the following dummies to control for outliers: second, third and fourth quarter of 1998. We also include step dummies in the deposit (loan) accounts that take on value one starting in the second quarter of 2002 (first quarter of 1998). Robust t-statistics are in brackets. *, **, and *** denote significance at 10, 5, and 1 percent levels, respectively. Panel A shows results using data aggregated at the country level across all banks. Panel B (C) aggregates data at the country level for all domestic (foreign) banks only.

	Share of municipalities with bank branches	Branches per 1,000 people	Deposit accounts per 1,000 people	Loan accounts per 1,000 people
	Panel A: Aggregating across all banks			
Foreign bank share	0.065094***	-0.000279***	-0.696016***	-0.003246*
(% of total deposits)	[9.00]	[17.20]	[3.35]	[2.03]
Country GDP per capita	-0.301911	0.002739***	7.23757	0.138755*
(in 000s of constant pesos)	[1.02]	[2.92]	[0.71]	[1.75]
Constant	57.470569***	0.045465***	175.426981	-0.306646
	[13.00]	[3.11]	[1.11]	[0.26]
Observations	36	36	36	36
R-squared	0.79	0.8636	0.8665	0.7548
	Panel B: Aggregating across domestic banks			
Foreign bank share	-0.030743***	-0.000039***	0.013142	0.000997*
(% of total deposits)	[8.02]	[12.99]	[0.30]	[1.96]
Country GDP per capita	-0.159144	-0.000027	6.391565**	0.052511**
(in 000s of constant pesos)	[1.09]	[0.23]	[2.67]	[2.32]
Constant	29.531449***	0.015454***	-65.025841*	-0.675619*
	[13.38]	[8.57]	[1.74]	[1.95]
Observations	36	36	36	36
R-squared	0.7615	0.8958	0.7144	0.476
	Panel C: Aggregating across banks that became foreign			
Foreign bank share	0.066603***	-0.000239***	-0.725645***	-0.004458***
(% of total deposits)	[10.10]	[16.97]	[4.76]	[3.94]
Country GDP per capita	0.035758	0.002766***	1.804921	0.062524
(in 000s of constant pesos)	[0.13]	[3.24]	[0.30]	[1.09]
Constant	47.3226***	0.030010**	225.703282**	0.681267
	[11.77]	[2.25]	[2.43]	[0.78]
Observations	36	36	36	36
R-squared	0.8599	0.8464	0.8847	0.8845

Table 4: Foreign bank acquisitions and outreach – Bank-level evidence

In the regressions for log of deposit accounts we drop the following observations since they are outliers: Banamex in first and second quarter of 1997; Bital-HSBC in third and fourth quarter of 2005; Banorte in the first quarter of 2005; Scotiabank in fourth quarter of 1998 and second quarter of 2000. In the regressions for log of loan accounts we drop Santander in the fourth quarter of 1998 and and Bital in the third and fourth quarter of 1998. We include step dummies in the observations for Bancomer in the deposit (loan) accounts regression that take on value one starting in the second quarter of 2002 (first quarter of 1998). Robust t-statistics are in brackets. *, **, and *** denote significance at 10, 5, and 1 percent levels, respectively.

	Log of Number of Municipalities	Log of Number of Branches	Log of Number of Deposits	Log of Number of Loans
	Panel A: Baseline regressions			
Foreign Acquisition	0.057890***	0.070215***	-0.122763**	-0.910356***
	[3.73]	[3.70]	[2.57]	[8.28]
Constant	5.393508***	6.741254***	13.697280***	9.892710***
	[98.33]	[178.36]	[136.53]	[35.42]
Observations	216	216	204	212
R-squared	0.9815	0.9809	0.9433	0.8186
Time Dummies	Yes	Yes	Yes	Yes
Bank Dummies	Yes	Yes	Yes	Yes
	Panel B: Controlling for bank characteristics			
Foreign Acquisition	0.057497***	0.069036***	-0.125089***	-0.909125***
	[3.65]	[3.58]	[2.61]	[8.22]
Log of total Assets	-0.005024	-0.003071	0.056151	0.083717
	[0.25]	[0.13]	[0.79]	[0.59]
Loan-Asset-ratios	0.067251	-0.033846	-0.069002	-0.146222
	[1.11]	[0.43]	[0.51]	[0.34]
ROAs	0.13455	-0.58799	0.032328	-0.307775
	[0.46]	[0.73]	[0.03]	[0.08]
Overheads to assets	-0.453741	0.042109	0.523555	3.020553
	[1.23]	[0.06]	[0.50]	[0.86]
Net interest margin to assets	-0.067329	0.601727	-0.639713	-1.062852
	[0.30]	[1.39]	[0.82]	[0.45]
Constant	6.089909***	7.579741***	13.094561***	10.326767***
	[22.75]	[23.99]	[15.73]	[5.62]
Observations	216	216	204	212
R-squared	0.9819	0.9815	0.9441	0.8214
Time Dummies	Yes	Yes	Yes	Yes
Bank Dummies	Yes	Yes	Yes	Yes

Table 5: Foreign bank acquisitions and outreach – Bank-municipality regressions

Regressions for deposit accounts per capita. include the following dummies to control for outliers for municipalities where the respective bank is present: Banamex in first and second quarter of 1997; Bital-HSBC in third and fourth quarter of 2005; Banorte in the first quarter of 2005; Scotiabank in fourth quarter of 1998 and second quarter of 2000. Regressions for loan accounts per capita include the following dummies to control for outliers: Santander in the fourth quarter of 1998 and Bital in the third and fourth quarter of 1998 for municipalities where the respective bank is present. We also include step dummies in the deposit (loan) accounts regression for municipalities with presence of Bancomer that take on value one starting in the second quarter of 2002 (first quarter of 1998). Robust t or z- statistics are reported in brackets. *, **, and *** denote significance at 10, 5, and 1 percent levels, respectively. Standard errors are clustered at the municipality level.

	Probability of bank presence	Log of Number of Branches	Log of Number of Deposits	Log of Number of Loans
	Panel A: Baseline regressions			
Foreign Acquisition	0.028747***	-0.000961	-0.271011***	-0.919578***
	[4.31]	[0.12]	[13.29]	[26.76]
Constant		-0.092524**	7.844438***	1.831116***
		[2.25]	[144.64]	[23.63]
Observations	117496	62910	59072	49892
R-squared	0.3892	0.8771	0.6971	0.7237
Bank Dummies	Yes	Yes	Yes	Yes
Time Dummies	Yes	Yes	Yes	Yes
Municipality Dummies	Yes	Yes	Yes	Yes
	Panel B: Interacting with GDP per capita			
Foreign Acquisition	0.020788**	-0.012427	-0.296040***	-0.996525***
	[2.36]	[1.25]	[10.79]	[25.79]
Foreign Acquisition*	0.000004	0.000004*	0.000008	0.000022***
GDP per capita	[1.43]	[1.83]	[1.16]	[3.92]
Constant		-0.095603**	7.849883***	1.819210***
		[2.33]	[144.42]	[23.79]
Observations	116554	62630	58808	49730
R-squared	0.3906	0.8774	0.6971	0.7252
Bank Dummies	Yes	Yes	Yes	Yes
Time Dummies	Yes	Yes	Yes	Yes
Municipality Dummies	Yes	Yes	Yes	Yes
	Panel C: Interacting with share of rural population			
Foreign Acquisition	0.076010***	0.025017*	-0.179474***	-0.806132***
	[3.49]	[1.86]	[5.60]	[18.55]
Foreign Acquisition*	-0.001147**	-0.000949**	-0.003369***	-0.004592***
share rural pop.	[2.34]	[2.54]	[3.98]	[4.01]
Constant		-0.096152**	7.861984***	1.818202***
		[2.35]	[146.19]	[23.77]
Observations	116554	62630	58808	49730
R-squared	0.3909	0.8775	0.6977	0.7252
Bank Dummies	Yes	Yes	Yes	Yes
Time Dummies	Yes	Yes	Yes	Yes
Municipality Dummies	Yes	Yes	Yes	Yes

Table A1: Banks in the sample

Bank	Ownership
Banregio	Domestic
Bansi	Domestic
Inbursa	Domestic
Interacciones	Domestic
Invex	Domestic
Ixe	Domestic
Mifel	Domestic
Scotiabank (Inverlat)	Foreign
Citibank (Banamex, Confia)	Foreign
BBVA (Bancomer, Promex)	Foreign
HSBC (Bital, Republic of NY, Atlantico, Interestatal, Sureste)	Foreign
Banorte (Bancentro, Bancrecer, Banpais)	Domestic
Santander (Mexicano, Serfin)	Foreign
Bajio (Industrial)	Domestic

Figure 1: Foreign Bank participation and share of municipalities with branches

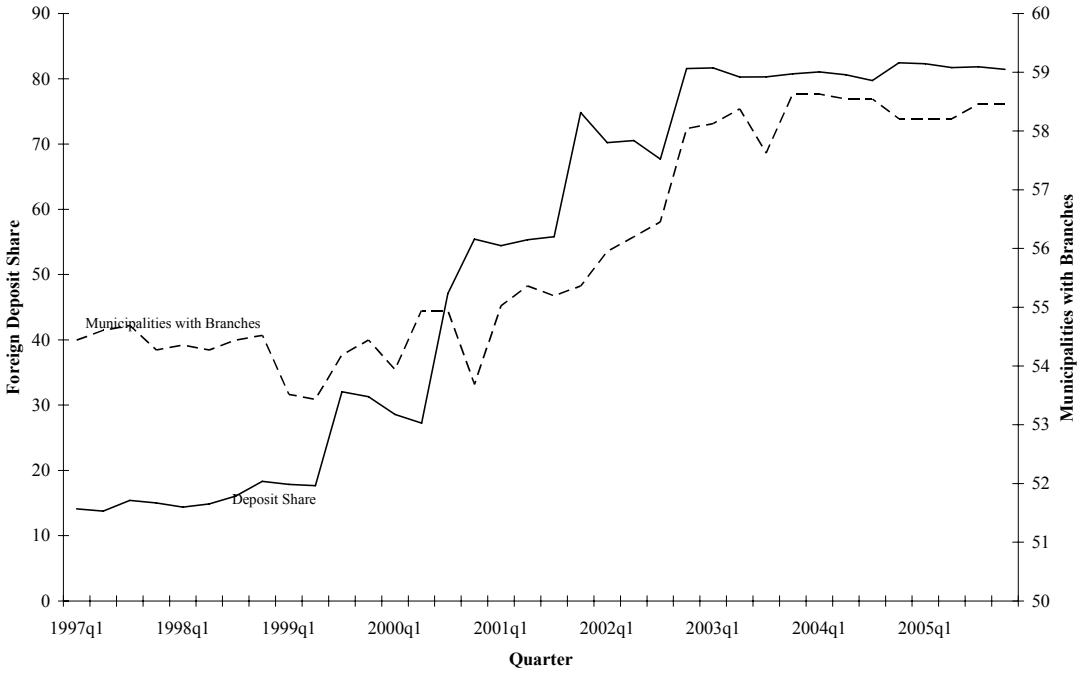

Figure 2: Foreign Bank participation and branches per capita

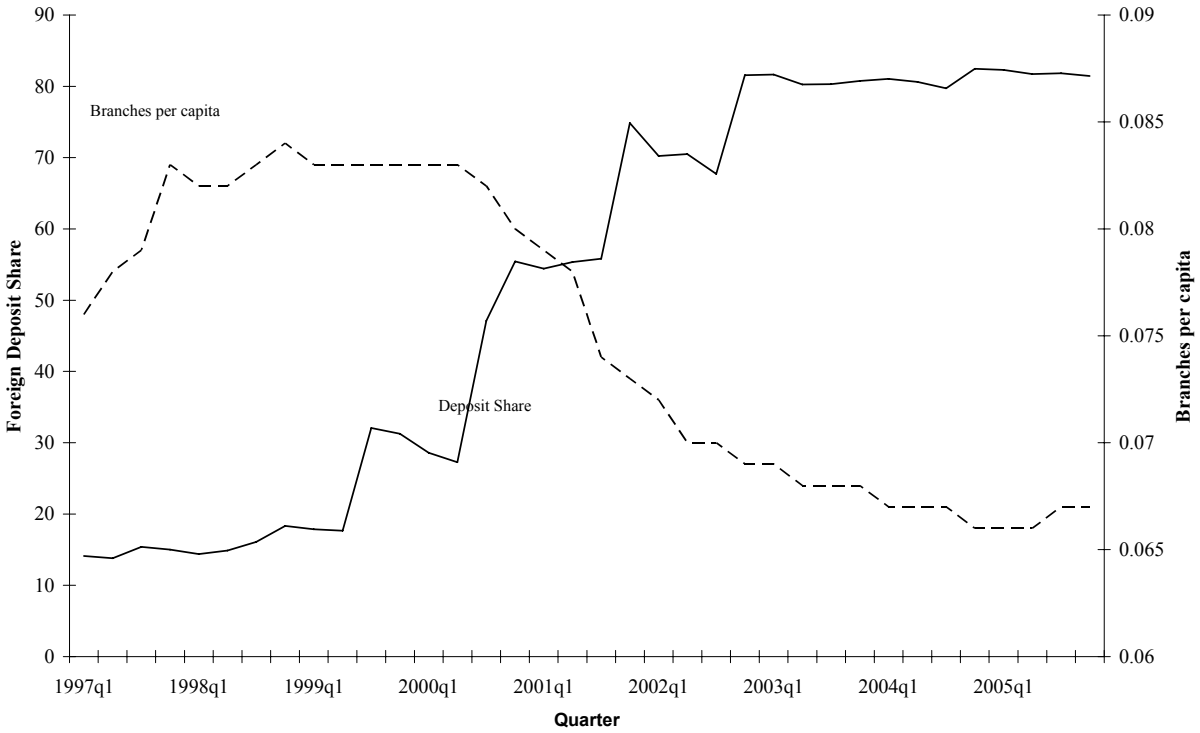

Figure 3: Foreign Bank participation and Deposit Accounts per capita

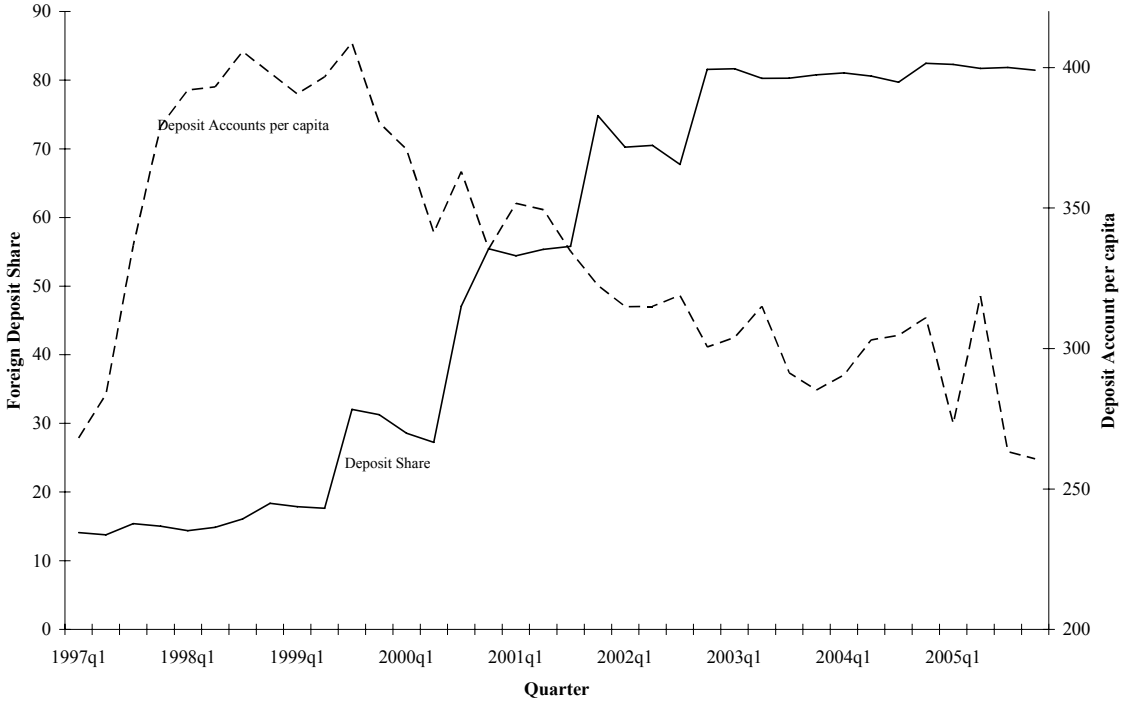

Figure 4: Foreign Bank participation and Loan Accounts per capita

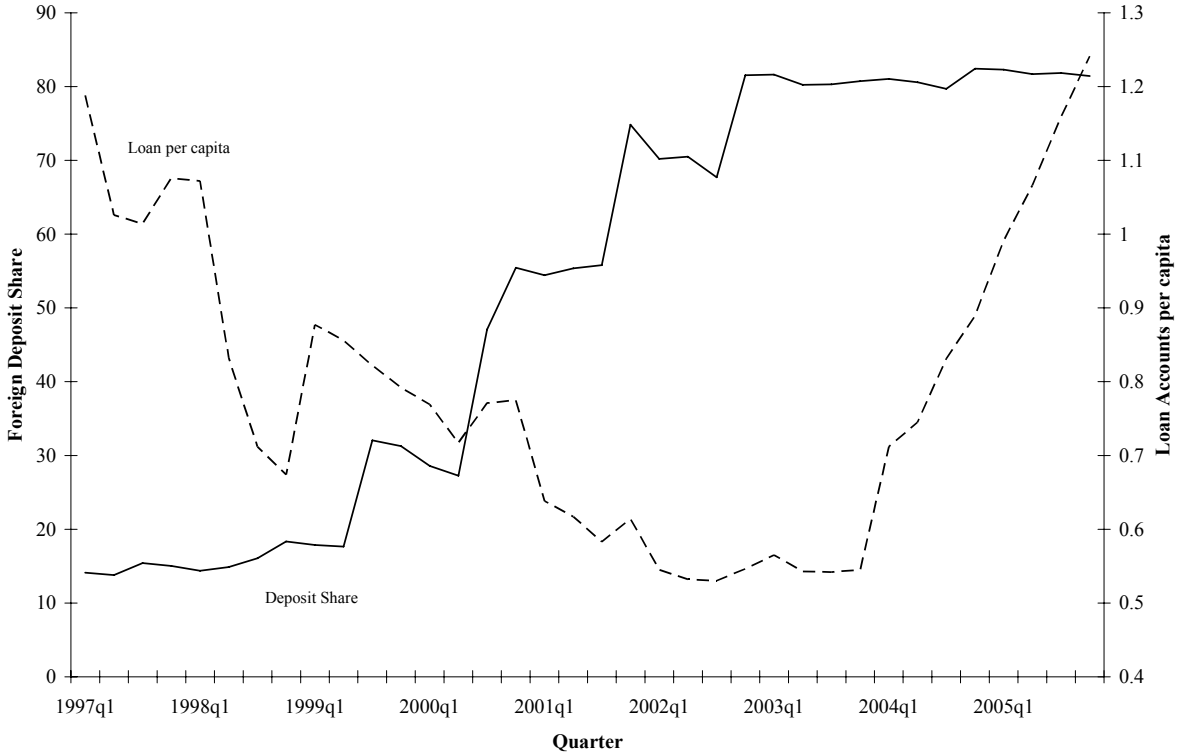

Figure 5: Foreign Bank acquisition and outreach