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Why Do Japanese Non-Local Regional Banks Enter Other Prefectures Under the Region-Based Relationship Banking Policy?

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Abstract

In this study, we investigate the market characteristics of prefectures in which non-local regional banks of other prefectures choose to enter and the motivations of such banks for doing so, considering the Japanese government's requirements for regional financial institutions to play an active role in stimulating local economies. In particular, by pooling prefecture-level data, the market characteristics of prefectures that experience more entrances by non-local regional banks compared with other prefectures are examined. It was found that entrance by non-local regional banks is more common in prefectures where high-performing companies are active. Therefore, it can be considered that non-local regional banks that are not satisfied with lending opportunities in their home prefectures enter other prefectures to increase their lending opportunities to high-performing companies. This study contributes by clarifying why many regional banks do not concentrate on businesses within their local regions and intentionally enter other prefectures, which is in contrast with the intent of the region-based relationship banking policy.

Keywords: region-based relationship banking, non-local regional banks, entries into other prefectures, characteristics of regional markets, expanding lending opportunities.

JEL Classification: G21

1. Introduction

In the theoretical debate around the financial deepening hypothesis, financial structure is regarded as a significant factor for economic growth (Stiglitz 1985; Allen and Gale 1999; Levine 2002). However, previous studies have shown no clear empirical evidence about the relationship between financial deepening and growth. For instance, Arestis *et al.* (2001), Shan and Morris (2001), and Shan *et al.* (2002) found that the hypothesis that financial development leads to economic growth was supported in only a few of the countries surveyed. On the other hand, Beck and Levine (2004) found that stock markets and banks positively influence economic growth after controlling for country-specific effects and potential endogeneity. While these studies consider the economic growth at the country level, none of them consider the regional economic growth in a specific country. Although the opinions of previous studies on the causal relationships between banks and economic growth are in disagreement, the Japanese government has been promoting region-based relationship banking since 2003. The government considers that the banking system plays an important role in regional economies; therefore, the main purpose of the region-based relationship banking policy is to leverage financial institutions to boost the economies in each prefecture. Interestingly, only regional financial institutions, except for city banks that have nationwide branch networks, are required to practice region-based relationship banking. Across Japan, there are more than 500 regional financial institutions, including first- and second-tier regional banks, credit associations, and credit cooperatives. With a few exceptions, regional banks have a larger presence than the other types of regional financial institutions in each prefecture. In general, regional banks have most of their branch networks inside the prefectures where their headquarters are located. Therefore, it can be considered that they are suitably positioned to conduct region-based relationship banking and activate regional economies, which is also a view of the Japanese government. However, contrary to the objective of the policy, many regional banks have expanded their branch networks into other prefectures where their headquarters are not located.

In Section 2, we review previous studies on bank branch expansion. Although some studies have investigated the relationship between bank consolidations and subsequent changes in bank branches, only a few studies have investigated the determinants of bank branch expansion independently, most of which suggest that banks tend to enter markets where economic wealth is higher; thus, the presence of high-performing companies is expected to attract more banks to an area. In addition, Harimaya and Kondo (2012) revealed that the more non-local regional banks expanded their branch networks beyond the prefectures where their headquarters are located, the less they

provide financing to their local markets and small and medium enterprises (SMEs)¹.

The study aims to clarify why Japanese non-local regional banks choose to enter other prefectures in the face of strict government regulation requiring regional financial institutions, including non-local regional banks, to actively stimulate their local economies by lending to local SMEs. In particular, the characteristics of prefectures where many non-local regional banks of other prefectures enter are investigated. The results suggest that non-local regional banks that are dissatisfied with commercial lending opportunities in their own prefectures will seek growth opportunities by expanding their branch network into more lucrative regions.

The remainder of this paper is organized as follows. Section 2 reviews previous studies on market entries by financial institutions. Section 3 discusses the analytical method and data used in this study. Section 4 describes the empirical results and robustness checks, with a summary and conclusion presented in Section 5.

2. Literature Review

Previous studies have analyzed the characteristics of local markets that banks choose to enter². Amel and Liang (1997) investigated whether banks consider the profits of incumbent firms and other market characteristics when they enter local markets; they found that banks are likely to enter markets that have high profits and that population and population growth are the important determinants for bank entry. Feinberg (2008) analyzed entry decisions by credit unions and concluded that they are more likely to enter markets that are large and where real income growth is high. Feinberg (2009) examined the determinants of entry used by banks and thrift institutions and found that these institutions are more likely to enter markets where population growth and per capita income growth are higher, and they are less likely to enter markets with stricter regulations³.

Non-US-based studies that have investigated these relationships include Calcagnini *et al.* (2002), who reported that banks in Italy seek opportunities in markets where they already have a presence; thus, the ratio of communes to their branches in a province is large. For banks in Spain, De Juan (2003) found that those with large number of branches in a market are more likely to open new branches in those markets.

Previous studies that mainly focused on the effects of mergers and acquisitions (M&As) on bank entries are as

¹ Regional banks that have branches outside the prefectures where their headquarters are located are often called “non-local regional banks.” Most of the regional banks in Japan are non-local regional banks. Hereafter, we call those types of regional banks as “non-local regional banks.”

² Masson and Shaanan (1982), Dunne *et al.* (1988), and others have analyzed entries of manufacturing firms.

³ In Japan, at present, no regulations are imposed on bank entries. Thus, banks are free to select the locations to build new branches.

follows. Keeton (2000) investigated factors that encourage new bank formation and showed that market size, population growth, per capita income growth, and merger activities have positive effects on new bank formation. Seelig and Critchfield (2003) examined the determinants of de novo entries of banks and thrift institutions and demonstrated that per capita income, population, and in-market mergers affect de novo entries positively, but unemployment rates influence them negatively. Berger *et al.* (2004) analyzed the determinants of de novo entries of banks and revealed that market size and income growth have positive effects on new entries and the probability of entry increases in regions where M&As have occurred⁴.

Previous studies have analyzed the characteristics of regions where banks establish many branches. Cetorelli (2002) investigated the relationships between market characteristics and the number of banks operating in each market and demonstrated that there are more bank branches in regions where per capita income and employment rates are higher. Cohen and Mazzeo (2010) examined the relationships between regional market structures and the sizes of branch networks of multimarket banks, single-market banks, and thrift institutions. They found that all three types of financial institutions have more branches in regions where competition with multimarket banks is most severe. Single-market banks and thrift institutions do not tend to establish branches in regions where competition with similar institutions is more severe, and all three types have many branches in regions with larger populations. Dick (2007) regarded branch densities in a region as one of the bank's service quality indicators and estimated the determinants of these expansions. In his study, population and median income were both found to have a positive effect on branch densities in a region.

3. Methodology and Data

By pooling prefecture-level data over several years, the determinants of branch expansion by non-local regional banks are identified and examined. With regard to branch expansion, we consider both the circumstances at the end of the fiscal year and those of the new entrants in each year. Thus, we employ both stock and flow variables for the number of bank branches at the prefectural level as dependent variables. The details are as follows.

For stock variables, we employ the total number of branches in each prefecture of non-local regional banks whose headquarters are located in other prefectures (*Stock*). However, in the cases of cross-prefectural mergers during the sample period, branches of surviving banks in a prefecture where the headquarters of acquired banks had been located are not regarded as entrance branches following the mergers. Similarly, if non-local regional

⁴ Some previous studies, including Avery *et al.* (1999) and Damer (2007), also investigated this theme.

banks are affiliated with the same bank holding company with each bank's headquarters located in separate prefectures, branches outside the prefectures where their own headquarters are located are also not regarded as entrance branches, as it is natural to assume that they do not decide branch strategy independently. For example, consider a bank holding company with subsidiaries Bank B and Bank C. The headquarters of B and C are located in separate prefectures. We do not consider the branches of Bank B (C) located in the prefecture where headquarters of Bank C (B) are located as entrance branches. In addition, for a flow variable, we employ the data on new entrance branches from other prefectures within each fiscal year (*Entry*). We use the following independent variables in this estimation.

Population represents the population of each prefecture and a proxy for market size. Because there are more potential customers in larger markets, banks that have many branches in those markets might expect opportunities to serve more customers. In addition, because a customer's needs for retail instruments such as housing loans, financial products, and investment trusts are larger in those markets, financial institutions might be able to generate higher profits by supplying those types of financial services. If non-local regional banks, whose headquarters are located in other prefectures, are fascinated with these types of markets and enter those prefectures actively, then the coefficient of *Population* will be positive. *Population* is converted into a natural logarithm.

GDP represents the GDP of each prefecture and a proxy for economic activity and vitality in each regional market. It can generally be said that there are many high-performing companies in high-income prefectures and that economic activities in those regions are more vigorous. These markets are attractive for non-local regional banks seeking high profits because there are more opportunities to lend and the default risks of firms in these markets are lower. If many non-local regional banks enter these markets, then the coefficient of *GDP* will be positive. *GDP* is converted into a natural logarithm.

GDP2 represents the GDP for secondary industries in each prefecture and a proxy for manufacturing business activities. Manufacturing industries play a very important role in Japan, whose economic structure largely depends on the processing trade. In addition, there are many opportunities to lend and more interest income can be expected for banks in regional markets whose sizes of secondary industries are larger because the funding requirements of secondary industries are larger than those of others. If non-local regional banks of other prefectures are fascinated with and actively enter these markets, then the coefficient of *GDP2* will be positive. *GDP2* is converted into a natural logarithm.

There is a possibility that non-local regional banks may consider not only the stock levels of the above variables

but also the growth of those variables when they decide to enter other markets. Therefore, the growth rates of these variables from previous year are treated as independent variables, similar to previous studies in foreign countries. These are represented by *PopulationG*, *GDPG*, and *GDP2G*, respectively.

Nonperform represents the average nonperforming loan ratio of regional banks in each prefecture and is calculated by weighting the assets of each regional bank. It is natural to assume that the lending abilities of regional banks in prefectures where *Nonperform* is larger are reduced owing to the low profitability of firms in those regions. Non-local regional banks of other prefectures might pay attention to these situations and try to increase lending opportunities by entering the prefectures where *Nonperform* is large. If non-local regional banks of other prefectures simulate these behaviors, then the coefficient of *Nonperform* will be positive. On the other hand, it can be considered that if there are more non-high-performing companies whose default risks are higher in prefectures where *Nonperform* is large, then it might not be suitable for banks to lend in these markets. If regional banks of other prefectures tend to avoid entering these markets, then the coefficient of *Nonperform* will be negative.

Both *HHI* and *Largestshare* are proxies for the competitive environment among financial institutions in regional markets. *HHI* represents the Herfindahl–Hirschman Index, which is calculated using data on the loans and bills discounted of regional banks and credit associations whose headquarters are located in the same prefecture. There might be less room for non-local regional banks to enter highly concentrated markets because a few local banks and credit associations control the entire operation of a regional market. If so, then the coefficient of *HHI* will be negative.

However, *HHI* calculated using the data from Japanese financial institutions may not be accurate in providing a perfect index to demonstrate the prefectural competitive environment because the prefectural breakdown of data on the loans and bills discounted of each bank is not disclosed⁵. Therefore, to solve these problems, *Largestshare* is also used as a proxy for prefectural competitive environment. It represents the proportion of loans and bills discounted of the largest regional bank in each prefecture⁶. A particular local bank may have a monopoly position in a prefecture whose *Largestshare* is large; therefore, it might be very difficult for non-local regional banks from other prefectures to find new customers even if they enter such prefectures. In this case, the

⁵ Only the data on loans and bills discounted of the largest bank in each prefecture are disclosed by “Financial Map.”

⁶ Berger and Hannan (1989), Tokle and Tokle (2000), and others used the share of the top three banks in a region; Feinberg (2001, 2003) and others used the share of the top two banks in a region as a proxy for market concentration. However, because there are some prefectures that disclose only data from the largest bank, we use the share of the largest bank in each prefecture to secure samples.

coefficient of *Largestshare* will be negative.

The analytical period is from FY2007 to FY2010, which followed the promotion of a “permanent” region-based relationship banking policy. Data on the branch numbers of regional banks were retrieved using the content of CD-ROMs from “Directory on Japanese Finance,” edited by the Japan Financial News Co., Ltd. Data on financial statements of individual banks and individual credit associations were obtained from Nikkei Needs, “Analysis of Financial Statements of All Banks,” edited by the Japanese Bankers Association, and “Financial Statements of All Credit Associations,” edited by the Consultant of Financial Books Co., Ltd. Data on loans and bills discounted of the largest bank and each type of financial institution in each prefecture were derived from “Financial Map,” edited by the Japan Financial News Co., Ltd. Prefectural data such as population were quoted from “Financial Resources of a Nation,” edited by Asahi Shimbun.

The descriptive statistics of variables used in the present study are presented in Table 1.

Table 1. Descriptive Statistics

4. Estimation Result

4.1 Estimation Results Using *Stock* as the Dependent Variable

In this section, we analyze the characteristics of prefectures where there are many branches of non-local regional banks, whose headquarters are located in other prefectures, by using the data of stock branches, i.e., *Stock*, as a dependent variable⁷. In particular, we pool data from 46 prefectures in Japan from FY 2007 to FY 2010 and a panel analysis is performed⁸. The coefficient of correlations of *Population* and *GDP*, *Population* and *GDP2*, and *GDP* and *GDP2* are 0.926, 0.893, and 0.876, respectively. Because these correlations are very strong, we use these as independent variables in separate equations. We use independent variables of the previous year of dependent variables in our estimations; i.e., there is a one-year lag between independent and dependent variables

⁷ Dependent variables are converted into natural logarithms. However, we added 0.1 to the branch number of Yamanashi prefecture in FY 2009 and FY 2010 and converted them into natural logarithms because those two branch numbers are 0. We do not regard the branches in Tottori prefecture of Sanin Godo bank, whose headquarters is located in Shimane prefecture, as branches of a bank whose headquarters is located in another prefecture because most of them had been the branches of Fuso bank, whose headquarters was located in Tottori prefecture, and then converted to branches of Sanin Godo bank after the consolidation in 1991.

⁸ We removed Okinawa Prefecture from samples because it is located significantly away from other prefectures and it is not easy for non-local regional banks of other prefectures to enter Okinawa Prefecture. Practically, there are no branches of non-local regional banks of other prefectures in Okinawa Prefecture in the analytical periods considered in the present study.

to remove simultaneous equation bias. The estimation results are presented in Table 2.

Table 2. Estimation Results Using *Stock* as the Dependent Variable

The coefficients of *Population* are significantly positive at the 1% or 5% level; i.e., non-local regional banks actively enter prefectures where the market size, as measured by population, is larger. Because there are generally more business chances for banks and demands for retail services are larger in larger markets, it can be considered that non-local regional banks in other markets are attracted to such markets. This is consistent with the tendencies found in previous studies such as Amel and Liang (1997).

The coefficients of *GDP* are positive and significant at the 1% or 5% level. It is natural to consider that banks in economically rich prefectures enjoy lower risk lending opportunities because there are many high-performing companies that are active in those markets. Therefore, non-local regional banks of other prefectures actively enter economically rich regions to get higher returns by doing business with these types of firms. This is also consistent with some previous studies that showed income factors in a region are the determinants of bank entrances.

The coefficients of *GDP2* are significantly positive at the 1% or 10% level. It can be considered that the prefectures where business activities of secondary industries are active are attractive for non-local regional banks of other prefectures that are not satisfied with only the lending opportunities in their home prefectures because the funding requirements of secondary industries are extremely large, as mentioned in previous section. Therefore, the positive values of the coefficients of *GDP2* will mean that non-local regional banks of other prefectures have actively entered these prefectures to take advantage of increased lending opportunities to firms that engage in secondary industries and whose funding requirements are larger.

The coefficients of *Largestshare* are negative and significant at the 1% level in all estimations. Even if non-local regional banks of other prefectures enter prefectures where the market power of a particular local bank is significantly strong, i.e., the monopoly tendency is very strong, it is difficult for the entrant bank to attract new customers in these prefectures. Thus, there is a possibility that non-local regional banks will abstain from entering these types of regions⁹.

⁹ Berger and Dick (2007) investigated whether banks that enter regional markets earlier can expand their shares in those markets and showed that these tendencies could be found. Therefore, if non-local regional banks of other prefectures enter a market early, then they might be able to compete with local banks that have stronger powers in that market.

The coefficients of *Nonperform* are significantly positive at the 10% level in two estimations of all measures. Judging from these two results, we can consider that non-local regional banks from other prefectures will enter the prefectures where local regional banks hold large non-performing loans and whose lending abilities are weak for the purpose of maximizing these lending opportunities. However, we are unable to make this assertion as stable results could not be obtained for this variable.

4.2 Estimation Results Using *Entry* as the Dependent Variable

In the previous section, we used stock data from the branches of non-local regional banks at the end of each fiscal year. In this section, we use data for new entry branches data in each year of non-local regional banks. In estimation, we pool data from 46 prefectures from FY2007 to FY2010, as in the previous section. Because there are not necessarily many prefectures that experience new entries from other prefectures in each year, we do not use the number of new entry branches itself as the dependent variable. Instead, we estimate a probit model by using dummy variables, which takes 1 if a prefecture experiences a new entry (even if it is more than one) in a year and takes 0 if a prefecture does not experience any new entry in a year, as dependent variables. The estimation results are presented in Table 3.

Table 3. Estimation Results Using *Entry* as the Dependent Variable

Both the coefficients of *GDP* and *GDP2* are significantly positive at the 5% level in all cases. These results are the same as those in the previous section, and they reflect that new entries by non-local regional banks of other prefectures are performed so that they can lend to active firms and secondary industry firms with large funding requirements¹⁰. To confirm that these results are robust, we also estimated local tax revenue in each prefecture (*Tax*) as a proxy for economic wealth and vivacity of economic activity in a prefecture. Moreover, the coefficients of *Tax* are significantly positive at the 1% or 5% level and these results are consistent with above interpretations.

Prestockshare (%) represents the ratio of branches of non-local regional banks whose headquarters are located in other prefectures to total branches of banks and credit associations in each prefecture. Similar to other

¹⁰ We also estimated an ordered probit model by using new entry branch numbers as the dependent variable and could qualitatively achieve the same results.

independent variables, this variable is also lagged by one year¹¹. Because many non-local regional banks of other prefectures enter the prefectures where *Prestockshare* is large (judging from stock branches), there is a possibility that these markets are attractive for non-local regional banks of other prefectures. The coefficients of *Prestockshare* are positive and significant at the 10% level in half estimations of all measures. Thus, it can be said that there is a tendency for more non-local regional banks of other prefectures to enter prefectures where many branches of non-local regional banks of other prefectures have already located.

The coefficients of *Nonperform* are significantly negative at the 5% or 10% level in six estimations of all measures. It can be said that non-local regional banks of other prefectures abstain from entering prefectures where nonperforming loans held by local regional banks are large. It can generally be considered that there are many firms whose financial positions are not sound in regions where local banks hold large nonperforming loans; i.e., prefectures in which dealing with many high-performing companies cannot be expected are not attractive for entry by non-local regional banks of other prefectures.

Regarding the proxy variables of competitive environment among financial institutions in the regional markets, the coefficients of both *HHI* and *Largestshare* are negative and significant at the 1% or 5% level in all estimations. Thus, it can be said that non-local regional banks of other prefectures do not enter prefectures where oligopoly tendencies are strong. It might be difficult for non-local regional banks of other prefectures to obtain new excellent customers in these prefectures because the market powers of a few local regional banks are significantly strong in such markets.

All of the coefficients of *GDPG*, *TaxG*, and *GDP2G* are insignificant. One of the reasons may be that significant growth has not been observed in the sample period of the present study because of economic stagnation caused by the subprime shock and Lehman Brothers collapse. In addition, there is a possibility that financial institutions determine new branch establishments carefully by considering not only short-term economic performance but also macroeconomic effects such as GDP, which will not change largely in the short term, because establishing a new branch is a high-risk, high-cost investment. On the other hand, the coefficients of *PopulationG* are significantly positive at the 1% or 5% level. Therefore, many non-local regional banks of other prefectures might pay attention to whether market sizes are increasing and whether stable demand for financial services in the newly entered prefecture will be expected in the future.

¹¹ The data on the number of banks and credit association branches in each prefecture were obtained from “Financial Resources of a Nation.”

5. Conclusions

In the present study, we investigated the characteristics of prefectures in which non-local regional banks of other prefectures choose to enter as many non-local regional banks expand their branch networks outside the prefectures where their headquarters are located, even though regional financial institutions, including non-local regional banks, are required to practice region-based relationship banking by the Japanese government in recent years. In other words, the present study aims to understand the motivations of non-local regional banks to enter other prefectures while still required to actively lend to local firms and stimulate local economies.

Our results can be summarized as follows. First, by using the total number of branches (*Stock*) as a dependent variable, we found that more non-local regional banks enter the prefectures whose market sizes, which are measured by population, are large. It may be because there are many potential customers in such prefectures. Second, we found that there are many branches of non-local regional banks from other prefectures in these prefectures where both the total value of GDP and secondary industry GDP are large. The reason for the former can be explained by considering that the business activities of high-performing companies are active in the prefectures where GDP is large, and the reason for the latter can be considered that funding requirements of secondary industries are extremely large. In other words, non-local regional banks from other prefectures enter unexploited prefectures for the purpose of increasing profits by lending to firms in those areas. Regarding the effects of the competitive environment on bank entries, the result that entries into the prefectures where a particular local regional bank acts monopolistically are few, which is perhaps due to the difficulty experienced by non-local regional banks from other prefectures in finding new excellent customers.

Next, we analyzed the characteristics of prefectures where more non-local regional banks of other prefectures have entered by using data on newly established branches in each prefecture in each year. From these results, we found almost the same tendencies as in the analysis of data from the total number of branches mentioned before; i.e., non-local regional banks from other prefectures actively enter prefectures where the total value of GDP and secondary industry GDP are large. In addition, the results indicate that annual economic growth in each prefecture is not necessarily considered but the growth of market size measured by population is regarded as an important factor for non-local regional banks from other prefectures to determine where they should enter. Therefore, there is a possibility that regional banks from other prefectures pay more attention to prefectures where potential customers are increasing, and therefore, stable demand for financial services will be able to be expected in the future.

Judging from this analysis, it can be considered that non-local regional banks that are not satisfied with lending

opportunities in their home prefectures select other prefectures where the funding requirements of high-performing companies are larger and where they are able to expand their lending opportunities. It is possible that regional banks that are joint stock companies cannot avoid entering other prefectures where higher profits can be expected at some levels. On the other hand, regional banks that also possess the characteristics of regional financial institutions should lend to activate local economies and businesses and to foster local firms and industries, according to the concept of region-based relationship banking that is required by government. Therefore, we consider that entries by non-local regional banks into other prefectures should be done only for realizing the profits necessary to activate their own local economies (e.g., expanding their revenue base), thereby improving their ability to invest in riskier businesses in their home prefectures.

Further research is required to investigate the effects of entries into other prefectures by regional financial institutions, including non-local regional banks, on both local economic performances and the funds required by local businesses and SMEs.

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Table 1. Descriptive Statistics

	<i>STOCK</i>	<i>ENTRY</i>	<i>POPULATION</i>	<i>POPULATIONG</i>	<i>GDP</i>	<i>GDPG</i>
Mean	38.659	0.457	2731907	-0.284	109379.4	-1.524
Median	20.000	0.000	1792634	-0.324	57594.00	-1.401
Maximum	176.000	6.000	12609912	0.813	923005.0	8.166
Minimum	0.100	0.000	595331.0	-1.137	18883.00	-10.738
Std. Dev.	43.298	1.110	2583931	0.404	144999.4	2.989
Observations	184	184	184	184	184	184

<i>GDP2</i>	<i>GDP2G</i>	<i>TAX</i>	<i>TAXG</i>	<i>Prestockshare</i>	<i>NONPERFORM</i>	<i>HHI</i>
27903.75	-3.961	408813.8	-0.070	8.148	3.821	4518.827
18552.50	-4.132	187374.5	1.246	7.670	3.630	4780.518
146934.0	47.585	5497272.	20.137	19.632	9.698	27317.09
3025.000	-24.085	53718.00	-28.126	0.070	1.9162	614.640
28277.67	8.533	751279.4	11.105	4.723	1.047	2325.394
184	184	184	184	184	184	184

<i>LARGESTSHARE</i>
45.347
45.675
72.805
4.0785
13.404
184

Table 2. Estimation Results Using *Stock* as the Dependent Variable

Variable	Coefficient (t-value)	Coefficient (t-value)	Coefficient (t-value)	Coefficient (t-value)	Coefficient (t-value)	Coefficient (t-value)
CONSTANT	-10.475*** (-3.339)	-3.341 (-0.892)	-6.476*** (-3.348)	-1.169 (-0.459)	-2.094 (-1.422)	2.112 (1.201)
<i>Population</i>	0.923*** (4.295)	0.536** (2.244)				
<i>PopulationG</i>	0.120 (0.530)	0.167 (0.754)				
<i>GDP</i>			0.845*** (4.924)	0.503** (2.516)		
<i>GDPG</i>			0.004 (0.670)	0.007 (1.183)		
<i>GDP2</i>					0.517*** (3.483)	0.272* (1.772)
<i>GDP2G</i>					-0.001 (-0.383)	0.001 (0.304)
<i>Nonperform</i>	0.050* (1.914)	0.048* (1.844)	0.028 (1.090)	0.024 (0.960)	0.017 (0.634)	0.019 (0.711)
<i>HHI</i>	0.000 (0.190)		0.000 (0.347)		0.000 (0.337)	
<i>Largestshare</i>		-0.033*** (-3.096)		-0.032*** (-2.992)		-0.039*** (-3.865)
adj-R ²	0.114	0.182	0.132	0.174	0.070	0.145
χ^2 statistics	4.158	4.335	4.737	4.461	5.778	3.193
Observations	184	184	184	184	184	184
Selected model	Random effect model	Random effect model	Random effect model	Random effect model	Random effect model	Random effect model

*Significant at the 10% level; ** Significant at the 5% level; *** Significant at the 1% level.

Table 3. Estimation Results Using *Entry* as the Dependent Variable

Variable	Coefficient (z-value)	Coefficient (z-value)	Coefficient (z-value)	Coefficient (z-value)	Coefficient (z-value)	Coefficient (z-value)
<i>Population</i>	0.021 (0.496)	0.045 (0.988)				
<i>PopulationG</i>	0.943*** (2.705)	0.872** (2.428)				
<i>GDP</i>			0.095** (1.968)	0.127** (2.546)		
<i>GDPG</i>			-0.026 (-0.568)	-0.027 (-0.583)		
<i>Tax</i>					0.104** (2.119)	0.180*** (3.530)
<i>TaxG</i>					-0.033 (-0.918)	-0.030 (-0.809)
<i>GDP2</i>						
<i>GDP2G</i>						
<i>Prestockshare</i>	0.029 (1.168)	0.016 (0.679)	0.043* (1.811)	0.026 (1.104)	0.043* (1.800)	0.002* (1.674)
<i>Nonperform</i>	-0.057 (-0.424)	-0.075 (-0.559)	-0.257** (-2.077)	-0.245** (-2.010)	-0.268** (-2.118)	-0.235* (-1.887)
<i>HHI</i>	-0.000** (-1.978)		-0.000*** (-2.945)		-0.000*** (-2.876)	
<i>Largestshare</i>		-0.017** (-2.118)		-0.024*** (-3.281)		-0.020*** (-2.675)
<i>dum2008</i>	-0.150 (-0.497)	-0.173 (-0.574)	-0.259 (-0.875)	-0.276 (-0.930)	-0.027 (-0.069)	-0.084 (-0.217)

<i>dum2009</i>	-0.540* (-1.665)	-0.569* (-1.759)	-0.753** (-2.112)	-0.771** (-2.165)	-1.009** (-2.064)	-0.999** (-2.023)
<i>dum2010</i>	-0.532 (-1.597)	-0.594* (-1.794)	-0.813** (-2.083)	-0.862** (-2.220)	-1.443 (-1.627)	-1.399 (-1.560)
Log-Likelihood	-82.748	-82.559	-85.969	-84.987	-85.728	-84.006
Observations	184	184	184	184	184	184

Table3. (Continued)

Variable	Coefficient (z-value)	Coefficient (z-value)
<i>Population</i>		
<i>PopulationG</i>		
<i>GDP</i>		
<i>GDPG</i>		
<i>Tax</i>		
<i>TaxG</i>		
<i>GDP2</i>	0.105** (2.021)	0.140** (2.615)
<i>GDP2G</i>	-0.013 (-0.846)	-0.014 (-0.900)
<i>Prestockshare</i>	0.043* (1.804)	0.025 (1.083)
<i>Nonperform</i>	-0.237* (-1.935)	-0.219* (-1.805)
<i>HHI</i>	-0.000*** (-3.027)	
<i>Largestshare</i>		-0.025*** (-3.374)
<i>dum2008</i>	-0.325 (-1.055)	-0.344 (-1.114)

<i>dum2009</i>	-0.809** (-2.231)	-0.827** (-2.279)
<i>dum2010</i>	-0.818** (-2.275)	-0.865** (-2.408)
Log-Likelihood	-85.571	-84.506
Observations	184	184

*Significant at the 10% level; ** Significant at the 5% level; *** Significant at the 1% level.