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Patterns and Determinants of Entry in Rural County Banking Markets

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Abstract

Recent work on entry has focused on structural determinants of the number of firms in a market rather than on the role of profits; profits are viewed as both difficult to measure accurately and less relevant in explaining equilibrium numbers of firms in a market. In this paper I consider 115 rural markets in the U.S., and both describe and explain patterns of bank and thrift entry over the past 10 years, with particular interest in the decisions of top bank holding companies to enter rural markets and the influence their presence has on entry of smaller banking institutions. The paper explores several dimensions of entry and competition in rural banking markets. One descriptive feature of interest is the surprisingly small number of markets in which monopoly banking is likely to be a concern. In terms of explaining both numbers of banks across markets and gross and net entry within markets, market size and its growth seem to be major factors, consistent with recent literature. The role of leading bank holding companies is found to be important in stimulating entry of smaller rivals. This result is consistent with earlier work suggesting that merger and acquisition activity tends to stimulate de novo entry, while also with the view that large firm presence may be a signal to potential entrants of future growth prospects in the market.

Key words: Entry, Rural banking, Local banking markets

JEL classification: G21, L11

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I. Introduction

While entry is arguably the most important theoretical concept in industrial organization, there has been relatively little examination of patterns of entry in local financial services markets. In part this may reflect the fact that until the past 10 years, bank entry (in the U.S. at least) was much more limited by regulation than was entry into manufacturing and most service sectors in the economy.

Nevertheless there have been studies supporting a pro-competitive role for bank entry, as well as finding profit signals to drive entry in the expected manner. However, most of these studies looked at bank entry in the pre-Riegle-Neal Act period. Furthermore, many examined entry in a wide range of local markets including some where geographic boundaries are (necessarily) somewhat arbitrary indicators of true market boundaries and hence measurement of entry and changes in number of firms is problematic.

Recent work on entry has focused on structural determinants of the number of firms in a market rather than on the role of profits; profits are viewed as both difficult to measure accurately and less relevant in explaining equilibrium numbers of firms in a market. This paper applies this focus to local banking markets. In this paper I consider 115 rural markets in the U.S., and both describe and explain patterns of bank and thrift entry over the past 10 years, with particular interest in the decisions of top bank holding companies to enter rural markets and the influence their presence has on entry of smaller banking institutions.

II. Previous work on bank entry -- determinants and effects

While earlier work on banking markets examined similar issues,[1] Amel and Liang (1997) present interesting results on bank entry fairly closely related to this paper's focus. They jointly explain bank profits and entry over the 1977-88 period for about 2000 rural counties and about 300 urban markets (metropolitan statistical areas). Entry is defined as the establishment of a new bank or branch in a market by a firm not currently having a branch or bank in the market; acquisitions of existing firms are not considered entry. They find that supranormal profits promote entry as does population and population growth, and that entry has the anticipated pro-competitive effect of reducing profits – though only in rural markets.

Pilloff (1999), focusing on rural counties, explores the role of "big banks" in determining profits of smaller banks. The sample consisted of a cross-section of 1728 banks in 762 rural counties (spread over 39 states) for the June 1995-June 1996 period. Pilloff finds the presence of both large and regionally prominent banks to increase profitability of small local banks, consistent more with a reduction in competition due to this presence than with enhanced competition which might result from the greater ability of big banks to limit the market power of locally dominant firms.[2] In somewhat the same vein, Berger et al (2004), Seelig and Critchfield (2003), and Keeton (2000) have all found – though with somewhat differing definitions of merger activity and samples – that merger activity generally tends to promote de novo entry. These findings are consistent with merger activity and/or the presence

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[1] There has of course been an enormous empirical literature on entry more generally – usually based on manufacturing industry data. Just a few references to point to here are Dunne, Roberts and Samuelson (1988), Masson and Shaanan (1982), Geroski (1995), Feinberg and Shaanan (1997). The earlier banking entry literature includes Hanweck (1971), Rose (1977). The work by Bresnahan and Reiss (1991) has stimulated a new wave of research explaining entry, most often in smaller isolated markets.
[2] While not directly related to the issue of bank entry, Akhavein et al (2004) shares the focus here on rural banking markets.

of "big banks" in a market as signaling to potential entrants the opportunities for supranormal profits to be earned.

Cohen and Mazzeo (2003), while not directly examining entry, assess the competitive relationships in non-metropolitan U.S. markets among single-market banks, multi-market banks, and thrift institutions. Extending work of Bresnahan and Reiss (1991), they endogenous market structure (i.e., net entry) and use existing numbers of market participants in order to identify parameters of bank profit functions. These – in turn – enable them to find significant evidence of product differentiation among the three types of depository institutions.

III. Definitions and Measurement Issues

In exploring the issue of bank entry, it is important to start with some definitional matters. Much of the recent Industrial Organization literature on entry starting with Bresnahan and Reiss (1991) has equated explaining entry to explaining the number of market participants; as Toivanen and Waterson (forthcoming) note this assumes all participants —including incumbents -- can be viewed as equally placed in making a decision each period to enter or remain in the industry, and ignores differences among firms and sunk entry costs. In counting firms, this literature also assumes that all market participants have access to the same technology and same input prices, so have identical costs.[3] Essentially what is explained is *net entry* (entry minus exit) rather than simply the forces determining the flow of new arrivals to the market (and as found in Dunne et al. (1988), there is much "churning" in manufacturing markets, with significant amounts of both gross entry and gross exit, yet little net entry).

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[3] Bresnahan and Reiss (1991) do discuss how their method can be adjusted when firms to differ in both entry costs and variable costs, however, there is no sense in their empirical work of the differing impact of entry when entrants are quite small (or for that matter large) relative to incumbents.

The analysis below examines both net and gross entry, though some of the measures used for both are unconventional. In terms of gross entry, most previous studies – all those considered in the previous section – have defined entry as *de novo* entry, excluding acquisitions of existing banks. The definition used in this paper is broader, with a focus on the financial strength added to an isolated local community rather than on whether a new physical branch of a bank not previously in the market has arrived (although small de novo entry is also examined).

Generally, entry is viewed as the introduction of new capacity into a market, and as such one would not view the acquisition of an existing bank branch by a new owner as entry. While for a manufacturing industry this seems clear, in a services sector this may be too narrow a view of "capacity" – the view taken in this paper is that while exchanging ownership of a particular bank (or bank branch) between two small holding companies, or simply two small ownership groups, should not be viewed as entry, the incorporation of an independent institution or member of a small bank holding company (BHC) into a top50 BHC does increase the *financial* capacity of that acquired bank (or branch) and may increase its ability to compete in the local market. Acquisitions of this sort are regarded here as a type of entry (on the other hand the sale of a local institution between two top50 BHCs is not regarded as entry).[4]

In explaining gross entry, consider the role played by an existing top50 BHC in the market; while one might predict that new entrants (especially smaller ones) might be scared off by their presence, I expect to find a positive impact, especially for smaller *de novo* entrants. This is consistent with Toivanen and Waterson (forthcoming) who explain patterns of fast food entry

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[4] In explaining top50 BHC entry into small markets it is likely that some of this might be considered "incidental entry" with the acquisition of small banks occurring as part of a broader corporate acquisition policy.

in the UK by market structure and find that the presence of a major rival increases entry (this

presence is viewed as a proxy for future growth and a means of learning by the potential

entrant).[5] It is interesting to examine differential determinants of small bank and top50 BHC

entry, with some expectations that the latter banks would be better able to surmount

information asymmetries between incumbent and entrant banks which otherwise could limit

entry.[6]

Bresnahan and Reiss (1991) take the view that isolated rural markets are best suited to

testing hypotheses regarding entry, generally because of the difficulty in accurately drawing

market boundaries in metropolitan areas or even in rural counties adjacent to MSAs. This

approach is adopted here as well, considering only rural counties at least one county removed

from an MSA and not adjacent to any other sample county.   In terms of measuring entry,

Bresnahan and Reiss focus on relatively homogenous personal services, and the numbers of

such firms (generally equivalent to the number of practitioners) are explained via an ordered

probit estimation. As noted above, implicit is the notion that the product is homogeneous and

firms are equally sized (or have the same cost functions). In banking, where there is

tremendous variability in sizes and market shares, simply counting numbers of firms may not

be the best indicator of the nature of competition in a market. Therefore, in this paper two

additional measures are employed. One is the number of bank offices in a market, which may

respond better to changes in market size than the number of banks. In addition, as an

alternative to counting numbers of firms of varying sizes, one can use the Herfindahl-based

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[5] It is also consistent with economic geography models of location choice, which have focused on FDI (see, for a
recent paper, Head and Mayer (2004)). To the extent that a top50 BHC presence in a market is a proxy for recent
merger and acquisition activity in the market, a positive impact on *de novo* entry is consistent with the Berger et al
(2004) and Keeton (2000) studies as well.
[6] See Dell'Ariccia et al. (1999) for a theoretical treatment of this issue.

numbers-equivalent (defined below), and both explain this in cross-sections and its changes over time as an indicator of net entry.

IV. Descriptive Statistics

The data sources used are the FDIC's Summary of Deposits Data, and the Federal Reserve System's National Information System, along with Census population estimates, and BEA personal income estimates. Tables 1 and 2 present some descriptive statistics on the sample of 115 non-metropolitan BLS "labor market areas" (LMAs) for 1994, 1999, and 2004.[7] Initially, counties – no more than 3 from any one state -- were chosen from all those at least one county away from a metropolitan statistical area and not adjacent to another in the sample. Some of these were then expanded by adding one or two adjacent counties to correspond to the BLS labor market areas.[8] The choice of 5-year intervals in examining entry was obviously arbitrary, dictated both by the desire to limit data requirements as well as by the lack of guidance on the timing of entry which would be of greater importance if annual data were utilized.

Many of the markets are quite small, with an average population in 1999 of 29,000 (ranging in size from 1,300 to 147,000). The mean number of banking institutions per market was 5.4 that year (with little variation over the ten year period), while the mean number of bank branches was 11.3. As many of the financial institutions in these markets have very small market shares, simple counts may overstate the degree to which competition prevails in a market. In addition to counting banks and thrifts,[9] I also calculate the Herfindahl numbers-equivalent (the reciprocal of the Herfindahl index of market concentration). Widely used in the

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[7] The sample of LMAs is presented in the appendix.
[8] Four of these counties were in labor market areas which changed geographic boundaries over the sample period; these were dropped from the analysis.
[9] Unless otherwise noted any reference to banks concerns both banks and thrifts.

Industrial Organization literature, the Herfindahl Index (often also referred to as the Herfindahl-Hirschman Index or sometimes just the HHI or H index) is simply the sum of squared market shares of all firms in a market. If all n firms in a market were equal in size, the Herfindahl Index would be equal to $1/n$ (if market shares are calculated as fractions, as $10,000/n$ if market shares are given as percentages), which gives rise to the interpretation of its reciprocal as a "numbers-equivalent".

The mean Herfindahl numbers-equivalent (again, combining banks and thrifts) is 3.6 in 1999, roughly constant (showing a very slight increase) over the 1994-2004 period, suggesting little real net entry over the decade. By way of comparison, the Horizontal Merger Guidelines issued jointly by the Federal Trade Commission and U.S. Department of Justice regard an HHI over 1800 (or 0.18 with fractional market shares) as indicative of a "highly concentrated" market – this would correspond to a "numbers-equivalent" of 5.6.

The average population per bank/thrift is only about 5,000. And despite their small size, more than half of these rural markets had a member bank of a top50 bank holding company in 1994. Considerable (gross) entry was recorded, with 40 percent of the counties recording a new non-top100 BHC or independent (i.e., small) bank entry by 1999 and 31 percent showing small bank entry between 1999 and 2004. Top50 BHCs entered in 29 percent of the markets between 1994 and 1999 and 16 percent of the markets between 1999 and 2004. There was some form of gross entry -- whether by de novo small firms, top50 entrants (whether de novo or acquiring smaller firms), or second50 entrants (again either de novo or acquiring smaller firms) – in 57 percent of the markets in 1999 and 41 percent of them in 2004.

The data suggest surprisingly low thresholds for multiple banks and thrifts -- only below populations of around 2300 does monopoly banking seem the norm. Five of the six markets with mean populations of 2300 or less over the 1994-2004 period had monopoly banks or thrifts all three years.[10] In contrast, of the 21 somewhat larger markets up to 10,000 in population, only 3 had monopoly banks in any of the three years.

An even clearer threshold emerges in terms of total market deposits required to support more than one bank/thrift: all 7 markets with deposits of $30 million or less in 1999 had monopoly banks all 3 years. Only one county with deposits greater than that had a monopoly bank/thrift (and that one -- Hyde County, North Carolina – did have a second bank in one of the years examined).

At the other end of the spectrum there are four relatively large markets which may be outliers in the sample, two in Hawaii, one in South Carolina, and one in California – all with at least 115,000 in population all three sample years, while the next largest is more than 20,000 smaller. Results presented below seem not to be very sensitive to the inclusion of both these very large and the very small rural markets.

There are some unusual patterns of market structure among the sample counties. For example, Custer County, Oklahoma has a numbers-equivalent in 1999 of 9.1 (11 actual institutions, with 16 banking offices) with a population of 26,000, while Pike County, Ohio with a population of 27,500 and a numbers-equivalent of 1.9 (3 actual banks, with a total of 5 offices). Rutland County, Vermont has a number-equivalent of just under 4 (though 7 banks,

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[10] An issue for future research is to investigate the presence of other financial institutions, especially credit unions, in these monopoly banking counties.

with 22 offices) serving a population of 63,000 and total deposits of $781 million.   Some of these differences may be explained in the statistical analysis below. However, to some extent, these differences may reflect problems of market definition; in addition, there are also likely to be county-varying determinants not dealt with in what follows, and these will merit attention in future work.

Two examples illustrate how the three alternate measures of market structure (and net entry, in looking at changes over time in these measures) can yield somewhat perspectives on competitive forces in local markets. First consider Humboldt County, California: between 1994 and 2004 the number of banking institutions in the market fell from 9 to 7, a 29% decline. However the decline in number of branches, from 33 to 30, was a smaller 9% fall. And, as the exiting banks/thrifts were quite small, there was only a small increase in the Herfindahl index and a correspondingly small, 4%, reduction in the numbers-equivalent of banks/thrifts in the market. Which of these better captures the magnitude of net entry (here net *exit*) in Humboldt county? Consider Wayne County, Indiana: between 1999 and 2004, there was an increase in numbers from 9 to 10 (an 11% increase) and an increase in branches from 33 to 39 (an 18% increase) – but the leading firm increased its market share substantially such that market concentration *increased* and there was a 10% *decline* in the numbers-equivalent measure. Was there net entry or net exit?

The answer is that different measures of net entry may be better suited to answering different questions. Increased numbers of institutions (even where new arrivals are quite small) likely reflect positive profit signals. Increased branches may provide better consumer service and be viewed as a measure of improved quality in a market. Increased number-equivalents (or – the same thing – reduced market concentration) may predict more active future price and quality competition in a market.

V. Regression Results

Before discussing regression results, it should be acknowledged that the specifications employed are quite simple. One factor, not previously discussed, which may influence both the number of banks and branches – and changes over time --in a particular market is the regulatory environment; while the federal Riegle-Neal Act of 1994 promoted interstate bank branching, regulatory measures differing by state (either directly or indirectly) may impact bank entry.[11] Berger et al. (1995) present a detailed discussion of recent regulatory changes in U.S. banking; based on their appendix table B6, I construct a binary variable for the nature of state-level banking regulation, LIBERAL, which equals one if no more than one of the following activities was forbidden as of the time of publication of their article: limited branching, statewide branching, limited multibank holding companes, statewide multibank holding companies, interstate multibank holding companies.[12]

The first set of results explains the number of market participants – separately examining actual numbers of banks/thrifts, their Herfindahl-based numbers-equivalent, and the number of banking offices in a market. Initially, the three cross-sections for 1994, 1999, and 2004 were analyzed separately, but estimated coefficients were quite similar and results presented below are based on a pooled regression analysis, with year fixed effects. Table 3 shows the results. A log specification seemed to offer the best fit and that is what is presented in the table and discussed below, but alternative specifications yielded similar qualitative findings.

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[11] For example, a recent paper by Hannan (2005) discusses how removing ATM surcharge bans may discourage small firm entry in a state.

[12] An alternative, requiring that none of the activities were forbidden at the state level, was also tried. The results were quite similar to those reported below in explaining market structure and net entry, though this regulatory variable had no significant impact on gross entry.

One clear result, holding for all three measures of market structure, is that both population size and affluence are major determinants of the number of banking institutions and branches in a market. Also, not surprisingly, bank/thrift presence shows a stronger response to differences in per capita income than to population differences. The negative year dummies are of some interest, suggesting that there would have been a significant reduction in numbers in these markets (between 25 and 35 percent reduction between 1994 and 2004 in numbers, numbers-equivalent, and branches of banks/thrifts) if not for the strong growth in personal income (and some population growth) which occurred in the decade following the Riegle-Neal Act.

In columns (2), (4), and (6), I attempted to investigate whether the past five-year's population growth might influence the number of financial institutions in a market. Past growth, controlling for the current levels of population and income per capita, has an (initially) surprising negative and significant impact; however, one interpretation of the negative impact of past deposit growth is simply that the number of banks is slow to adjust to changes in economic activity in a market. Rapidly growing counties just have fewer banks (at any point in time) than would be predicted based only on current deposit levels.

In all specifications in Table 2, the nature of state-level regulation of bank entry – pre-Riegle-Neal – seems to make a considerable difference (and the magnitude of the effect is remarkably similar in all three years, though these results are not presented here). Markets in states with more restrictive regulation had up to 20 percent more banks and branches than those in more liberal regimes. One explanation for this pattern could be the protection of relatively inefficient banking institutions in these states, even after federal reform of banking.

One might expect that the same factors explaining differences in the numbers of banks/thrifts across markets (in particular, market size, measured by population) would also explain changes in numbers within markets over time, and Table 3 presents results on this issue. Given considerable variation in estimated coefficients between the two time periods, pooling was not warranted and results explaining net entry are presented separately for the 94-99 and 99-04 intervals.

The impact of population is as expected, with a ten percent increase in population predicted to increase bank numbers by between 5 and 8 percent (somewhat smaller impact on the market's numbers-equivalent measure of market structure and on the number of branches). However the impact of per capita income is surprising – more affluent markets show declines in numbers in the 94-99 period, increases in the 99-04 period. One explanation for this pattern is to view the initial period as a transition of federal reform where the dominant force in "lucrative" markets was consolidation from outside, followed by a more stable period in which both independents and other bank holding companies entered the more affluent communities. The restrictiveness of state banking regulation (as of the beginning of the period) seems not to play a significant role in net entry over the past decade. Furthermore, a dummy variable indicating the presence at the beginning of each period of a top50 BHC in the market is generally not significant.

Finally, consider various measures of gross entry. For both the 1994-1999 and 1999-2004 time periods, I explain in a probit estimation the probability of entry of three types: *small* (this is de novo entry by non-top-100 BHCs or independent banks/thrifts), *top50 BHC* (mostly, but not all, via acquisition of smaller banks or BHCs), or *total* (either independent, top50 BHC, or second50 BHC – which is also a mix of de novo and acquisition of smaller banks and

BHCs). Tables 5 and 6 present results (expressed in marginal effects at mean values, rather than the actual probit coefficients) with gross entry explained very simply by population growth, per capita income, the state-level regulatory variable, and the dummy variable indicating if a top50 BHC was present in the market at the beginning of the period. Results are reported for the two time intervals separately (in Table 4) and for a pooled specification (in Table 5).

Turning first to the Table 5 results, notice that while the pattern of effects is similar in the two time periods, the statistical significance of these effects differs (with generally stronger findings in the earlier period). Small bank entry was encouraged by population growth, statistically significant in both periods, but per capita income's positive influence is not statistically significant in either period.   A leading BHC present in the market seems to encourage small bank entry, though this effect is only significant in the 94-99 period, and more markets in states with more liberal banking regulation seems to have less gross entry by independents – though this latter effect is only (weakly) significant in the latter period. Top50 BHC entry is encouraged by population growth and in previously restrictive banking regimes, though only in the 94-99 (transition) period. As for total entry, this is stimulated by per capita income, top50 BHC presence, population growth, and in previously restrictive banking regimes; most of these effects being statistically significant at conventional levels.

Table 5 presents results from the pooled probit estimation. These results are stronger, and may be thought of as average effects over the entire ten year period. It appears that the probability of both small bank entry and total entry (which includes small, top50 BHC and second50 BHC entry) are somewhat better explained than is the likelihood of top50 BHC entry (suggesting perhaps that some of the latter type may be considered "incidental entry"

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motivated by factors in other markets). Controlling for other factors, gross entry was lower in the later period – with about a 20 percentage point lower likelihood of entry of all types than in 94-99. The probability of small bank entry within a 5-year period is 19 percentage points higher when a leading BHC is present in the market than in the alternative; the probability that entry of any type occurs is 22 percent higher with an existing top50 BHC in the market.

Population growth has a significantly significant impact on gross entry of all types – a 10 percent increase implying a 20 percentage point increase in the probability of small de novo entry, a 30 percentage point increase in the probability of entry of any kind. Market affluence –as proxied by income per capita – has a positive impact in encouraging gross entry, but only statistically significant for total entry. The significant impact of restrictive state-level regimes in increasing gross entry (of all types) seems inconsistent with the Table 2 findings showing these protected markets to have more banks/thrifts and branches in all three years. However, this pattern may be explained by "too many" inefficient banks in these markets being protected from competition from outside in the earlier years, while Riegle-Neal stimulated gross entry of more efficient banks in the later years. Note that Table 3 found little or no impact of the regulatory variable on net entry, consistent with the changing nature of banks rather than net numbers in previously restricted markets.

Returning to the role of a top50 BHC presence in a market, its importance in encouraging entry (especially small firm, *de novo* entry) is consistent both with the top50 BHC's presence serving as a proxy for future growth in the market and with the argument that previous acquisitions/consolidation in rural markets have left some customers dissatisfied with out-of-market control and longing for new independent (possibly local) bank options.

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VI. Conclusions

This paper has attempted to explore several dimensions of competition in rural county banking markets. One descriptive feature of interest is the surprisingly small number of markets in which monopoly banking is likely to be a concern. In terms of explaining both numbers of banks across markets, and net and gross entry within markets, market size and its growth seem to be major factors. Alternative measures of net entry are influenced – not surprisingly – in similar fashion by market size and growth. Gross entry seems to have been especially stimulated, post-Riegle-Neal, in markets under previously restrictive regulatory climates.

The role of leading bank holding companies is found to be important in stimulating entry of smaller rivals. This result both confirms earlier work suggesting that merger and acquisition activity tends to stimulate de novo entry, while also consistent with a view that large firm presence may be a signal to potential entrants of future growth prospects in the market. Further work is needed to explore the nature of competition in rural banking markets, in particular the smaller markets where only one or two banks/thrifts seem feasible. The role of credit unions and other non-traditional banking sources in these markets may prove to be important.

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Table 1. Descriptive Statistics (n=115)

	Mean	Min	Max
Population 1994 (thousands)	27.71	1.39	137.71
Population 1999 (thousands)	29.01	1.31	146.97
Population 2004 (thousands)	29.79	1.22	162.97
Deposits 1994 ($millions)	268.96	7	1186
Deposits 1999 ($millions)	311.44	8	1685
Deposits 2004 ($millions)	376.98	7	2468
Personal Income 1994 ($millions)	463.55	26.26	2435.90
Personal Income 1999 ($millions)	599.94	24.56	3772.62
Personal Income 2004 ($millions)	729.16	28.66	5016.11
Income Per Capita 1994 ($thousands)	16.02	10.37	26.97
Income Per Capita 1999 ($thousands)	19.76	12.04	37.00
Income Per Capita 2004 ($thousands)	23.30	16.34	39.94
Number of Banks 1994	5.30	1	18
Number of Banks 1999	5.42	1	18
Number of Banks 2004	5.56	1	19
Numbers-equivalent 1994	3.58	1	11.40
Numbers-equivalent 1999	3.60	1	11.12
Numbers-equivalent 2004	3.65	1	10.29
Number of Branches 1994	11.28	1	50
Number of Branches 1999	11.95	1	54
Number of Branches 2004	12.22	1	63
Top 50 BHC in 1994	0.52	0	1
Top 50 BHC entry 1999	0.29	0	1
Independent entry 1999	0.40	0	1
Total entry 1999	0.57	0	1
Top 50 BHC entry 2004	0.16	0	1
Independent entry 2004	0.31	0	1
Total entry 2004	0.41	0	1
Liberal (State Regulatory Measure)	0.81	0	1

Table 2. Explaining banks/thrift presence in a market
(t-statistics in parentheses below estimated coefficients)

	Dependent Variable					
	ln Banks/Thrifts		ln Numbers-Equivalent		ln Branches	
	(1) all 3 years	(2) 99,04 only	(3) all 3 years	(4) 99,04 only	(5) all 3 years	(6) 99,04 only
ln Population	0.47 (23.59)	0.50 (19.27)	0.35 (18.23)	0.38 (15.15)	0.75 (32.91)	0.79 (27.93)
ln Per Capita Income	1.13 (9.27)	1.15 (7.93)	0.78 (6.61)	0.81 (5.75)	1.20 (8.61)	1.21 (7.57)
percent Population Growth, past 5 years	--	-0.01 (2.83)	--	-0.01 (2.93)	-	-0.02 (4.55)
Liberal State Regulation	-0.22 (4.24)	-0.21 (3.45)	-0.15 (3.08)	-0.17 (2.82)	-0.22 (3.71)	-0.21 (3.14)
Dummy 1999	-0.24 (4.36)	--	-0.17 (3.27)	--	-0.22 (3.48)	--
Dummy 2004	-0.41 (6.12)	-0.21 (3.80)	-0.30 (4.70)	-0.17 (3.22)	-0.40 (5.24)	-0.25 (4.10)
Constant	-10.67 (9.15)	-11.14 (7.87)	-7.27 (6.48)	-0.776 (7.49)	-11.55 (8.69)	-11.88 (7.65)
R^2	0.71	0.73	0.58	0.61	.80	0.83
Adjusted- R^2	0.70	0.72	0.57	0.60	.80	0.82
Observations	345	230	345	230	345	230

Table 3. Explaining Percent Change in Banks/Thrifts, Numbers-Equivalents, Branches (Net Entry)
(t-statistics in parentheses below estimated coefficients)

Dependent Variable (all percent changes)

	Banks/Thrifts		Numbers-Equivalent		Branches	
	(1) 94-99	(2) 99-04	(3) 94-99	(4) 99-04	(5) 94-99	(6) 99-04
Population Growth	0.53 (2.10)	0.78 (3.05)	0.42 (1.65)	0.65 (2.59)	0.54 (1.82)	0.52 (1.78)
ln Per Capita Income	-21.08 (2.29)	14.40 (1.66)	-17.64 (1.92)	18.67 (2.21)	-13.47 (1.24)	3.68 (0.37)
Top 50 BHC in market	3.59 (1.05)	-0.43 (0.14)	1.06 (0.31)	-0.17 (0.06)	-7.46 (1.84)	1.26 (0.37)
Liberal State Regulation	-2.42 (0.59)	-1.02 (0.29)	-3.14 (0.77)	-7.06 (2.04)	-2.34 (0.48)	2.38 (0.59)
Constant	209.03 (2.31)	-140.62 (1.62)	176.14 (1.95)	-180.71 (2.14)	144.36 (1.35)	-36.57 (0.37)
R^2	0.09	0.12	0.06	0.14	.07	0.04
Adjusted- R^2	0.06	0.09	0.03	0.11	.04	0.01
Observations	115	115	115	115	115	115

Table 4. Explaining probability of gross entry, Marginal effects, Separate Time Periods
(z-statistics in parentheses below estimated marginal effects)

| | 1994-1999 | | | 1999-2004 | | |
| | Small Entry | Top50 Entry | Total Entry | Small Entry | Top50 Entry | Total Entry |
	(1)	(2)	(3)	(4)	(5)	(6)
Top50 BHC present	0.25	0.13	0.28	0.12	0.10	0.16
	(2.50)	(1.40)	(2.62)	(1.21)	(1.34)	(1.51)
ln Per Capita Income	0.16	0.29	0.60	0.29	0.04	0.39
	(0.57)	(1.14)	(1.92)	(1.00)	(0.21)	(1.24)
Percent Population Growth, Past 5 years	0.02	0.02	0.02	0.03	0.00	0.03
	(2.09)	(2.34)	(2.25)	(3.10)	(0.43)	(3.26)
Liberal State Regulation	-0.16	-0.34	-0.36	-0.22	-0.10	-0.27
	(1.25)	(2.80)	(2.94)	(1.89)	(1.10)	(2.19)
Chi-squared	16.19	17.43	27.79	21.55	3.69	26.14
"Pseudo"-R-squared	0.10	.13	0.18	0.15	0.04	0.17
Observations	115	115	115	115	115	115

Table 5 Explaining probability of gross entry, Marginal effects, Pooled Probit
(z-statistics in parentheses below estimated marginal effects)

	Small Entry	Top50 Entry	Total Entry
	(1)	(2)	(3)
Top50 BHC present	0.19	0.11	0.22
	(2.74)	(1.82)	(2.91)
ln Per Capita Income	0.23	0.15	0.54
	(1.16)	(0.94)	(2.36)
Percent Population Growth,	0.02	0.01	0.03
Past 5 years	(3.64)	(2.06)	(3.85)
Liberal State Regulation	-0.19	-0.21	-0.32
	(2.17)	(2.82)	(3.63)
1999-2004 Dummy	-0.09	-0.14	-0.22
	(1.17)	(2.20)	(2.63)
Chi-squared	37.72	23.77	57.70
"Pseudo"-R-squared	0.13	.10	0.18
Observations	230	230	230

Appendix. List of labor market areas in sample

1.   Bethel   AK
2.   Nome   AK
3.   Clay   AL
4.   Conecuh   AL
5.   Marengo   AL
6.   Clark   AR
7.   Stone   AR
8.   Pope/Yell   AR
9.   Apache   AZ
10.   Humboldt   CA
11.   Chaffee   CO
12.   Kit Carson   CO
13.   Holmes   FL
14.   Suwannee   FL
15.   Taylor   FL
16.   Emanuel   GA
17.   Upson   GA
18.   White   GA
19.   Hawaii   HI
20.   Kauai   HI
21.   Maui   HI
22.   Adams   IA
23.   Jefferson   IA
24.   Kossuth   IA
25.   Custer   ID
26.   Idaho/Lewis ID
27.   Jasper   IL
28.   Knox/Warren   IL
29.   Williamson   IL
30.   Daviess   IN
31.   Fulton   IN
32.   Wayne   IN
33.   Ford   KS
34.   Graham   KS
35.   Woodson   KS
36.   Butler   KY
37.   Graves   KY
38.   Pulaski   KY
39.   Concordia LA/Adams MS
40.   Franklin   LA
41.   Winn   LA
42.   Knox   ME
43.   Somerset   ME
44.   Washington   ME
45.   Iron   MI
46.   Oscoda   MI
47.   Missaukee/Wexford MI
48.   Cass/Crow Wing MN
49.   Redwood   MN
50.   Roseau   MN
51.   Benton   MO
52.   Macon   MO
53.   Shannon   MO
54.   Calhoun   MS
55.   Lincoln   MS

56.   **Newton   MS**
57.   **Garfield   MT**
58.   **Jefferson/Lewis&Clark MT**
59.   **Pondera   MT**
60.   **Hyde   NC**
61.   **Polk   NC**
62.   **Dunn   ND**
63.   **Lamoure   ND**
64.   **McHenry/Renville/Ward ND**
65.   **Adams/Clay NE**
66.   **Garden   NE**
67.   **Lincoln/Logan/McPherson NE**
68.   **Coos NH/Essex VT**
69.   **Sullivan   NH**
70.   **Colfax   NM**
71.   **Grant   NM**
72.   **Lincoln   NM**
73.   **Douglas   NV**
74.   **Elko/Eureka NV**
75.   **Franklin   NY**
76.   **Paulding   OH**
77.   **Pike   OH**
78.   **Vinton   OH**
79.   **Custer   OK**
80.   **Delaware   OK**
81.   **Pushmataha   OK**
82.   **Curry   OR**
83.   **Grant   OR**
84.   **Sherman   OR**
85.   **Cameron   PA**
86.   **Snyder   PA**
87.   **Allendale   SC**
88.   **Beaufort/Jasper SC**
89.   **Mellette   SD**
90.   **Miner   SD**
91.   **Cumberland   TN**
92.   **Dyer   TN**
93.   **Lewis   TN**
94.   **Edwards   TX**
95.   **Jeff Davis   TX**
96.   **Gray/Roberts TX**
97.   **Emery   UT**
98.   **Millard   UT**
99.   **Highland   VA**
100.   **Lunenberg   VA**
101.   **Wythe   VA**
102.   **Orleans   VT**
103.   **Rutland   VT**
104.   **Washington   VT**
105.   **Ferry   WA**
106.   **Garfield   WA**
107.   **Adams   WI**
108.   **Forest   WI**
109.   **Price   WI**
110.   **Doddridge/Harrison/Taylor WV**
111.   **Webster   WV**

112.   **Wyoming   WV**
113.   **Campbell   WY**
114.   **Sublette   WY**
115.   **Uinta   WY**