Recent spatial and structural changes in commercial banking: A case study of Ohio

Spatial and structural reorganization of commercial banking in the U.S. result directly from changes in technology, markets, competition and regulation. Specifically, change in both the number and location of banking facilities, coupled with the growth of regional bank holding companies has fashioned a new map of banking in many states. For Ohio, this process has proceeded rapidly following the passage of a statewide banking statute in 1979. Analysis of changes in banking facilities from 1978 to 1992 shows a decline in the number of banks, an increase in branches, concentration of employment and assets in large regional banks located in metropolitan areas, and higher levels of competition within and between local markets. These developments affect access to credit at the local level.

Recent changes in technology, markets, competition, and regulation have wrought changes in the organizational and spatial structure of commercial banks in the United States (Rose 1987). Once the exclusive domain of commercial banks, investment and borrowing alternatives are increasingly offered by non-bank financial services firms and even large manufacturing firms such as General Motors through its issuance of credit cards. As Harrington (1992 137-38) notes, "Stripped of their exclusivity, commercial banks have widened their scope of operations ... by diversifying their geographic bases for deposits, loans and services." The intensification of these trends has resulted in a structural reorganization of banking institutions, cost cutting, the provision of new services and products, the adoption of information technology, and pressure for relief from regulatory restrictions on market expansion.

A number of studies have documented the spatial reorganization of commercial banking in the U.S. (Kaufmann, Mote and Rosenblum 1983; Wheeler and Dillon 1985; Holly 1987; Lord 1987;1992). This line of research stresses changes in banking at a national level, focusing on the concentration of asset control (Wheeler and Dillon 1985), and it documents spatial transfers of asset control via merger and acquisition activity (Lord 1987; 1992). Another set of studies treats the regional implications of banking activity, especially the role of regional income, supply

![Map of Metropolitan Areas of Ohio](image-url)
of loanable funds, and interest rates (Moore and Hill 1982; Moore, Karaska and Hill 1985; Dow 1987; Harrison and McGregor 1987). This genre of research examines how changes in the availability of money and credit, when combined with a more integrated national banking system, differentially affect the economic development prospects of regions.

Our concern in this paper is on the impact of bank restructuring at the local market level, typically a county or a group of contiguous counties in the case of metropolitan areas (Sansons and Storm 1993) which normally serves as a single banking market for competitive analysis and for data reporting by the Federal Deposit Insurance Corporation (FDIC). We examine aspects of the changing spatial distribution of commercial banking activity in the state of Ohio for the period 1978 to 1992, which resulted from a combination of deregulation and banking industry response to competitive challenges from out-of-state banks and non-bank financial organizations. We attempt to show how changes in the distribution of banking facilities (banks and branches) introduced structural changes in rural and metropolitan banking markets. We relate these changes to population growth and to market expansion by large banking organizations headquartered in the state’s largest metropolitan areas (Figure 1).

Despite considerable interstate acquisition of banking assets by Bank Holding Companies (BHCs) in recent years (Lord 1987; 1992), the states retain control over branching and interstate banking through their legislative oversight authority. Ohio BHCs have been among the most aggressive acquirers during the past decade, at both the intrastate and interstate levels. Less than 25 percent of Ohio’s banking assets are controlled by out-of-state institutions, making Ohio a suitable candidate for the study of structural changes in banking resulting from intrastate consolidation and market expansion. In this regard, structural changes involve the numbers of banks, branches, and regional banks, as well as the expansion of branch networks of large bank holding companies.

CHANGES IN BANK STRUCTURE

The era of interstate banking began in Ohio in 1979, when the state legislature permitted banks headquartered in one county to operate branches in other counties in the state. In 1985 new regulations allowed regional reciprocal banking with fourteen other states, and in 1988 national reciprocal interstate banking commenced, subject to some restrictions on the total amount of deposits which could be controlled by out-of-state banks (Jones and Puls 1987). These changes encouraged Ohio-based bank holding companies to embark upon a merger and acquisition process which substantially altered the structure of commercial banking in the state. This coincided with a large number of interstate acquisitions by Ohio-based BHCs as well as with a much smaller number of takeovers of Ohio banks by out-of-state institutions (Lord 1987; 1992). On balance, Ohio-based BHCs have been much more aggressive, accounting for a net gain of $36.7 billion in assets controlled, between 1982 and 1990 (Lord 1992). At the intrastate level, takeover activity resulted in a net reduction of 208 banks between 1978 and 1992, a 42.9 percent decline. A total of 276 chartered banks were operating in Ohio as of June 30, 1992. Simultaneously, the number of operating branches (including drive-up facilities) increased from 2,333 to 2,928, a 25.5 percent gain (FDIC 1992). These changes occurred despite relative stagnation in the state’s population over the same period. Structural changes affecting banks ultimately resulted in rearrangements in the spatial distribution of bank facilities.
Figure 2: Number of Banks and Branches, 1978 and 1992

source: FDIC, 1978 and 1992
In 1978, prior to state deregulation, eight counties contained ten or more banks (Figure 2). Of these, four were in the central counties of the Metropolitan Statistical Areas (MSAs) which contained the cities of Canton, Cleveland, Columbus, and Dayton. The suburban counties of these metropolitan areas all had at least three banks, with the majority having from six to nine banks. By 1992, counties with ten or more banks had increased to fourteen, and now included the cities of Cincinnati, Hamilton-Middletown, and Toledo.

In 1978, only four counties contained 100 or more bank branches, each one the central county of a metropolitan area (Figure 2). By 1992, two additional counties reached the 100 branch plateau. Both sets of maps reveal that the highest concentrations of banks and branches are found in the most urbanized areas of the state, and then

**Figure 4: Percent Change in Population, 1978-1992**

**Figure 3: Change in Bank Facilities, 1978-1992**

source: FDIC, 1978 and 1992

Figure 5: Banks and Branches per 10,000 Population, 1978 and 1992

source: calculated by authors
decrease with increasing distance away from the metropolitan areas. Rural areas contain the fewest banks and branches, with only those in close proximity to an urban area, northern Ohio in particular, showing larger numbers of facilities. Absolute changes in bank facilities over the study period evidence a similar pattern (Figure 3). The largest increase in both banks and branches occurred in metropolitan and adjacent counties. Rural counties, especially in the south, either decreased or changed not at all in the number of facilities.

POPULATION CHANGE AND BANK STRUCTURE

From 1978 to 1992 Ohio experienced major shifts in population. High rates of growth, those ten percent or greater, dominated in the more rural counties and in the southern and central portions of the state (Figure 4). Moderate growth, less than ten percent, was found in many suburban counties of the MSAs and in adjacent rural counties. With the exceptions of Columbus and Lima, all the major cities experienced losses in population. The greatest population declines, greater than five percent, were found in the counties along the Pennsylvania and West Virginia borders, and in Cuyahoga county (Cleveland). These large losses coincided with the decline of jobs in steel, automobiles, rubber, appliances, and other durable goods industries, which dominated employment in the region until the 1970s. Other highly industrialized cities, such as Cincinnati, Akron, Canton, Lorain and Mansfield, all lost population as well, but their losses were less than five percent. Of the rural counties in the state, only nine saw negative change, and these were located mainly in the central and western portions of the state.

When the location of banks and branches is related to the distribution of population, a rural-urban dichotomy is apparent. In both 1978 and 1992, the ratio of banks and branches per 10,000 population is higher in the heavily rural counties of the northwest and southeast (Figure 5). This division deepens over time, particularly with respect to branches. The urbanized axis from Cleveland in the northeast to Cincinnati in the southwest changed relatively little in terms of banking facilities to population.

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BANKS92 - Number of banks, 1992
BRAN92 - Number of branches, 1992
POP92 - Population, 1992
POPCHNG - Population change, 1978-1992
BANKCHNG - Change in number of banks, 1978-1992
BRANCHNG - Change in number of branches, 1978-1992

Table 1: Correlation Matrix of Banking Indicators
Figure 6: County Based and Non-County Based Banks

Figure 7: Regional Banks, 1984 and 1992
served from 1978 to 1992. Thus, increases in rural and suburban population growth were apparently compensated for by increases in the number of facilities serving the population.

A number of factors may account for this trend. First, rural and suburban population growth takes place at lower densities and is more spatially dispersed. In these areas, more facilities are required in order to reduce travel time and distance for customers who are spread out over a relatively wide area. Second, automated teller machines and drive-through branches are more prevalent in densely populated urban areas, thereby reducing the number of bricks and mortar branches relative to population. In more sparsely populated areas, electronic banking is more costly per transaction because of lower population thresholds. Third, rural areas have fewer financial services alternatives to banks, giving commercial banks a monopoly in the provision of products and services of a financial nature. A final factor may be the combination of greater population growth and increased competition for customers by a smaller number of large regional bank holding companies. Banks compete with each other on the basis of services and convenience at the retail level. The search for increased market share can be achieved in part by the provision of full service banking facilities in the early stages of a competitive cycle.

However, a matrix of correlation coefficients for six variables related to bank facilities and population change supports the proposition that quantitative changes in the number of banks and branches over the period 1978 to 1992 resulted more from structural developments in the industry than from change in population (Table 1). Population change over the period shows almost no correlation with both variables measuring

![Figure 8: Spatial Distribution of Bank One Offices, 1984 and 1992](image)

source: FDIC, 1984 and 1992
Figure 9: National City and BancOne Offices, 1984 and 1992

Source: FDIC, 1984 and 1992
change in bank facilities. If banking organizations were making market extension decisions based solely on population growth or, conversely, were withdrawing facilities from contracting markets, the associated coefficients would be both large and positive. Bank holding companies were, therefore, reinforcing their positions in existing markets through acquisitions, as evidenced by the strong positive correlations between the change measures for banks and branches, and in the number of banks and branches in 1992.

REGIONAL BANKS AND BANK HOLDING COMPANIES

Commercial banking organizations have responded to recent changes in their operating environment in a number of ways. Legislation permitting statewide banking, coupled with increased merger and acquisition activity, has led to an expansion in the size of banking markets. Thus, larger banks and bank holding companies have expanded their operations, largely through branch networks, to become more regional in scope. We define regional banks as those institutions which have enlarged their market areas to include counties contiguous and even non-contiguous to their county of origin. This is accomplished in a number of ways. Banks may either open new branches in contiguous counties or purchase branches already located in these counties. Bank holding companies may purchase independent banks, and absorb their branches into the larger branch system of the acquiring banks. Finally, bank holding companies may acquire existing banks, and operate them as wholly owned subsidiaries, while at the same time changing the name to reflect the new ownership. Banc One (the official holding company name), Ohio's largest BHC, re-names each of its acquisitions to reflect both Banc One ownership and the scope of the market it serves (e.g. Bank One Akron; Bank One Youngstown, etc.).

In 1992, at least one-half of the counties in Ohio contained four or more banks head-quartered outside the county (Figure 6). The highest values related to non-county based banks are found in the MSAs of Cleveland, Columbus, Dayton, Cincinnati and Toledo where two or more regional banks compete directly. The suburban counties of metropolitan areas showed a high level of non-county based banks. Figure 7 shows the distribution of regional banks in 1984 and 1992. Although by 1992 the concentrations of regional banks had increased, they are primarily an urban phenomenon. Northwestern Ohio, which is predominantly rural, is void of competition between regional banks, as are the rural counties bordering West Virginia. Regional banks seem to concentrate their facilities in the metropolitan areas and expand their markets only into neighboring counties. The lack of a threshold customer base, and subsequently the saturation of a local market by independent banks and possibly one regional bank, may account for the relative absence of regional banks in rural counties.

The growth of the Bank Holding Companies (BHCs) in Ohio was fueled by takeover and merger activity, resulting in shifts in the relative positions of several BHCs during the 1980s. By the end of the decade, Banc One had emerged as the largest BHC, and it also engaged in substantial interstate acquisitions. Although headquartered in Columbus, Banc One has a large presence in every metropolitan market except Toledo (Figure 8). Its branches can be found in a large number of non-metropolitan counties as well, making it the nearest thing to a state-wide bank. Banc One also qualifies as a superregional bank in that it owns and operates banks in several states, including Texas.

Another approach to market expansion involved the merger of two other BHCs and
the subsequent restructuring of their respective market areas. In 1984, National City Corp. acquired the second ranked BancOhio Corp. which served metropolitan and non-metropolitan markets throughout the state. At the time, National City operated almost exclusively in Cleveland and Akron (Figure 9). By 1992, National City had divided the state into submarkets by absorbing BancOhio’s offices and branches in the urban and suburban northeast, by focusing BancOhio’s activities on the center of the state around Columbus, and by shedding BancOhio’s branches around Cincinnati and Dayton. These actions reinforced National City’s market share in its traditional base region, took advantage of BancOhio’s established image and customer base in the Columbus area, and eliminated a weak competitive presence in the southwest where other bank holding companies were already strong or had recently entered.

Five other regional BHCs, in addition to Banc One and National City, expanded their markets within the state during the 1980s, largely through mergers and acquisitions. The net result of the expansion and contraction of offices by the seven major regional bank holding companies served to intensify competition in all of the major metropolitan banking markets. Enabled by a more permissive regulatory environment, the BHCs used the market extension merger to create the semblance of a statewide market for banking. Of the seven regional BHCs, six operate in the Columbus area, five compete in greater Cleveland, four are in Cincinnati, and three find a market in Dayton. Only Toledo among the major metropolitan areas has been bypassed by most Ohio regional bank holding companies. This may result from a combination of a stagnant economy and Toledo’s proximity to Detroit where several large Michigan banks compete. The remaining non-metropolitan counties of Ohio have their commercial banking needs served by small, locally owned banks, branches of banks based in nearby counties, or branches of one or more of the regional BHCs.

DISCUSSION

The map of commercial banking in Ohio looks considerably different in 1992 from 1978. This is due, in large part, to regulatory relaxation at both the state and national levels, structural changes in the manner in which banks do business, and increased competition as banks sought new markets for their products and services as well as new depositors. In 1978, the state was comprised of numerous small, local banking markets based largely on county boundaries, and several large markets centered on the state’s major cities. The majority of banks operated with a modest asset base, were locally owned and labor intensive, and they maintained small branching networks. Branch banks were largely an urban phenomenon maintained by large banks with metropolitan-wide operations. In response to competitive pressures during the 1980s, banks employed two strategies to maintain and enlarge their deposit base and markets, while simultaneously expanding into new, geographically distant markets: the market extension merger, and the spatial expansion of facilities in the form of branches and automated teller machines.

The net result of this activity has been a reduction in the number of banks, an expansion in the number of branches, and higher levels of competition among large, metropolitan based banks. Increases in both banks and branches in more rural areas has accompanied an expanding population to some degree. But population change alone does not account for most of the structural changes in banking. The spatially dispersed nature of rural and suburban settlement requires additional retail banking facilities, as reflected by increases in banking facilities.
According to the Ohio Bureau of Employment Services (OBES) growth in banking employment from 1986 to 1995 will take place exclusively in metropolitan areas (OBES 1988). More efficient use of technology and demand for mainly technical-professional-managerial expertise account for this trend. Innovation in telecommunications technology permits migration of decision-making up the management hierarchy within a regional banking organization. Thus, loan application procedures can be handled at the local branch, while approval can be secured within a matter of hours from a regional or main office located elsewhere in the state. This trend involves a separation of the workforce into routine (low value-added) and non-routine (high value-added) operations (Christopherson 1989). Occupations associated with the former can be located throughout a bank’s facilities, while high value-added jobs tend to gravitate to more central locations.

By expanding their deposit base through merger and acquisition, bank holding companies are also breaking down regional financial separability. As subregional units within a state economy become more integrated into a regional or national banking system, the ability of a local branch or subsidiary bank to meet local credit demand beyond its own capacity to do so will depend on the relationship of local deposit growth to credit expansion (Dow 1987). In theory, local branches can finance local credit by borrowing from a head office rather than by entering the national market, as independent banks do. A locally soft deposit base relative to credit expansion can restrict the ability of branches to compete for credit within a branch bank system. Thus, depressed regional economies (rural areas, inner cities) could suffer from liquidity shortages as head offices allocate credit more liberally to locales of perceived stronger economic activity (Dow 1987). Further-

more, structural changes in commercial banking can alter the concentration of assets and deposits in local banking markets, thereby restricting competition (Lord 1990).

CONCLUSIONS

Regulation, technology, and competition define the playing field for commercial banking in the United States. Changes in the number and location of banking facilities, as banks respond to changing competitive environments, affect not only employment growth and decline at the local level, but also influence local economic development prospects. As locales become more integrated into regional and national banking systems, distant head offices exert greater control over the supply of loanable funds and the local level. Banks make both direct and indirect contributions to local employment growth through their own expansion and contraction and by virtue of their ability to provide or withhold liquidity through credit. The implications of the latter are far more profound for regional economic development prospects than are the former. Evidence from Ohio suggests that structural changes in commercial banking affect every region of the state, thereby altering the competitive balance within and between local banking markets. More in-depth research is required on this dynamic and important sector of the rapidly expanding services industries as the nation moves increasingly toward a national banking system.

REFERENCES


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The Great Lakes Geographer Vol. 1, No. 2 (1994)