Conclusions and Policy Implications

Local banks may behave differently from nonlocal banks because of superior access to local information, greater commitment to local prosperity, and differences in technology or risk management, both of which tend to be related to bank size. A large body of empirical research exists on the impacts of deregulation, concentration, and out-of-market entry on bank behavior. This research has focused on changes in loan portfolio size, allocation, and quality, as well as in operating efficiency, risk management, loan and deposit pricing, and small bank competitiveness following liberalization or bank consolidations. Research results provide evidence that liberalization often affects bank behavior and that large banks often behave differently from small banks. However, this research does less to address the underlying issue of whether these differences are beneficial or detrimental to local economies.

Another line of research has sought to relate financial market structures to economic growth. Both international and domestic studies have found important positive linkages between financial markets and growth. The research presented here extends this line of inquiry by relating bank market structure and regulatory change to economic growth at the local market level. A central issue is the distribution of previously documented positive relationship between geographic deregulation and State-level growth among metropolitan and nonmetropolitan areas. Other important issues revolve around the impacts of bank market concentration, out-of-market ownership of local bank offices, and out-of-market control of local deposits. To illuminate these issues, we estimated empirical models that relate both shortrun and longrun growth in real per capita personal income to bank market concentration, in-market or out-of-market ownership of local bank offices, and in-market or out-of-market control of local bank deposits. We estimated separate models for metropolitan, nonmetropolitan, and farm-dependent markets. The latter markets are a subset of nonmetropolitan markets and are of interest because of the historical link between these markets and restrictions on bank branching. We estimate longrun models over two time periods. The first—from 1973-84—largely predates liberalization in nonmetropolitan areas, while the second—from 1984-96—coincides with increasing liberalization of geographic banking restrictions.

Our results generally support the importance of the linkage between geographic liberalization and local growth in the short run. Estimates of this impact in metropolitan markets ranged as high as 1.2 percent per year or 87 percent of expected growth rates. Nonmetropolitan markets exhibited a smaller but still important impact of 0.84 percent per year or 53 percent of expected growth rates. These results are qualitatively robust to different specifications, although magnitudes change depending on weighting or on the inclusion of lagged dependent variables. Controlling for market concentration and bank ownership structure did not materially alter these coefficients or their statistical significance, indicating that observed levels of bank market concentration, bank ownership, and deposit control do not capture the impact of liberalization on local shortrun growth. In addition, while F tests indicated that market structure was statistically significant, the location of neither bank office ownership nor deposit control was statistically related to shortrun growth in nonmetropolitan areas. However, in metropolitan areas, out-of-market ownership of bank offices was associated with lower shortrun growth rates, though the magnitude of this effect is economically small.

Results from our longrun model generally support and enrich our shortrun results. Two features are particularly striking. First, no evidence suggested that nonlocal banks are detrimental to local economic growth in rural areas in the more recent period. Second, the impact of nonlocal banks was more positive in rural areas in the later period than in the earlier period, but the reverse was true of metropolitan markets.

Results from farm-dependent markets, however, remind us that these results reflect average and not universal associations. In farm-dependent markets, liberalization was associated with a decrease in shortrun growth and initial levels of out-of-market bank ownership were associated with a fall in longrun growth in the more recent period. However, the shortrun result was not statistically robust to the inclusion of lagged dependent variables to control for local business cycles.

These findings suggest that out-of-market bank mergers or acquisitions need not, *ceteris paribus*, impair local economic growth, and may even have beneficial effects in rural markets. Although the empirical tests

here cannot identify a mechanism by which this effect might operate, they suggest avenues for future research. For example, it is a paradox that liberalization appears to have a more positive association with growth in metropolitan markets than in nonmetropolitan markets, but that out-of-market owned banks, *per se*, appear to be more negatively associated with growth in metropolitan areas.

This research could be extended in a number of directions. For example, future research could explore the association of local growth to the local presence of banks of different asset sizes or of local headquarters of multimarket banks. However, alternative explanations for the apparent connection between geographic liberalization and economic growth beyond measures of bank ownership or observed market structure should also be explored. J&S believe their evidence to be consistent with improved quality of loan portfolios. Other possible explanations may involve improvements in bank operating efficiency and the quality of bank intermediation related to changes in market contestability and the market for control of underperforming banks.