

# THE CONTINGENT NATURE OF PUBLIC POLICY AND THE GROWTH OF U.S. COMMERCIAL BANKING

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**That public policy affects organizational behaviors is well accepted, but less explored is how these effects may depend on other external environmental factors. We investigated policy as a necessary, but not sufficient, condition for understanding the growth of commercial banking in the United States, 1896–1978. We highlight a trade-off for banks between centralized and dispersed growth strategies and show that which strategy prevails depends on how policy enabling branching interacts with technological, economic, and cultural environments. Our findings contribute to understanding the contingent effects of policy on organizations and on the growth of large corporations in the 20th century.**

The effects of public policy on organizations and economic activities have been widely observed. It is now well accepted that policy changes fundamentally alter firms' external environments and mark transitions to new eras (e.g., Davis, Diekmann, & Tinsley, 1994; Dobbin & Dowd, 1997, 2000; Fligstein, 1990; Haveman, Russo, & Meyer, 2001; North, 1981; Russo, 2001). Tests of this view typically center on how changes in policy result in shifts in the types of economic activities that organizations pursue. For instance, Fligstein (1990) showed that laws prohibiting vertical mergers altered firm acquisition activities, resulting in changes in corporate structure and control. Roy (1997) observed that changes in property laws enabled dispersed ownership and thus spurred the corporate revolution by allowing firms to finance large-scale manufacturing enterprises. And Dobbin and Dowd, in their series of studies of the early railroad industry in Massachusetts, showed that changes in state and federal policies altered market logics; as the authors put it, "Public policy establishes the ground rules of competition and thus creates varieties of market behavior" (Dobbin & Dowd, 1997: 501; Dobbin & Dowd, 2000). This line of research has contributed to organizational theory by showing the importance of state action for constructing not only economic systems but also the structures and strategies of firms.

But there are a number of reasons why we think this perspective may, in fact, overemphasize the importance of public policy and that a contingent perspective on the effects of policy may lead to more refined organizational theory. It has long been established that organizations are simultaneously

embedded in and affected by multiple environmental conditions (for a recent review, see Scott and Davis [2007]). For example, several studies have shown that the effect of one environmental condition on organizations is often contingent on other environmental conditions. Bartley and Schneiberg (2002) observed that the effect of interest groups on the regulation of fire insurance rates varied depending on the extent to which the fire insurance field had become standardized. Mizruchi, Stearns, and Marquis (2006) documented that the effects of interfirm networks on firms' use of debt varied over time depending on the degree to which finance was legitimized as an occupation. More relevant to our focus, Haveman, Rao, and Paruchuri (2007) provided preliminary evidence that policy effects on organizations may be sensitive to other environmental features. Such effects were not their primary theoretical concern, yet their results showed that laws authorizing bureaucracy in savings and thrift associations did not stimulate the development of such organizations until two additional environmental factors emerged—news media and role model organizations.

A more systematic perspective on the contingent nature of policy can deepen understanding of the fundamental nature of policy effects. Is whatever power policy has entirely its own, or is it supported or suppressed by other factors? The implication of this question is both theoretically and practically far-reaching. If policy effects are characterized by contingency, previous studies that focus on the main effects of policy may be misspecified, resulting in imprecise or even incorrect conclusions. And in the realm of practice, the degree to which policy effects are con-

tingent would require policy makers to take other enabling or constraining conditions into account when stipulating and implementing policy.

In this study, we investigated the contingent nature of policy, with the orienting premise that policy is just one of the environmental conditions that organizations face and has more or less powerful effects on organizations to the extent that it interacts with other environmental conditions. Our empirical investigation of this proposition focused on U.S. commercial banking during the period from 1896 to 1978. Specifically, we examined how branching policy, which stipulates whether banks in a state can establish branch offices outside of their headquarters location, affected banks' pursuit of two different types of growth strategy—centralized and dispersed—and how this policy interacted with other environmental conditions. Banks pursuing a centralized strategy established fewer but larger branches with narrower geographical coverage, and those pursuing a dispersed strategy established a greater number of smaller branches with wider geographic coverage. This setting was ideal for our study because, until 1978, a bank's retail branch locations were limited to the state in which it was headquartered and, as a result, there were 48 different banking systems within the contiguous states. Banking policies and other environmental conditions (i.e., technical, economic, and cultural) varied considerably, not only over the course of the 20th century but also across the states, constituting a natural laboratory in which to study the contingent effects of policy on organizations. Having both cross-sectional and longitudinal variance in environmental conditions allowed us to overcome the empirical limitations of prior studies, most of which observed only longitudinal variation in environmental conditions by focusing on one state or by considering the United States as a whole (e.g., Dobbin & Dowd, 1997, 2000; Fligstein, 1990; Roy, 1997); for exceptions, see Wade, Swaminathan, and Saxon (1998) and Schneiberg and Bartley (2001).

Through investigation of bank growth in the 20th century, we also contribute to understanding the growth of large corporations in the United States. A central and longstanding debate in this literature is the extent to which the growth of large corporations was a direct result of technical advances (Chandler, 1977) or of shifts in public policy (Fligstein, 1990; Roe, 1994; Roy, 1997). More recently, research has focused on cultural resistance to large-scale organizations (Schneiberg, 2002; Schneiberg, King, & Smith, 2008), particularly with respect to commercial banking (Marquis & Lounsbury, 2007; Roe, 1994). But given the importance of contingent explanations noted above, these studies, in giving

prominence to only one type of environmental condition, probably offer only partial accounts of the growth of large organizations. By considering policy, technical, economic, and cultural factors simultaneously and showing not only that they are all important but also that their effects are contingent upon one another, we provide a more nuanced and comprehensive account of the growth of large organizations in the United States.

Finally, our investigation of the growth of U.S. banking organizations has a number of other implications. Banking organizations and their influence on society have long been the focus of research and public policy, dating back to the debates between Jefferson and Hamilton (Brandeis, 1914; Calomiris, 1993; Davis & Mizruchi, 1999; Lounsbury, Hirsch, & Klinkerman, 1998; Marquis & Lounsbury, 2007; Mintz & Schwartz, 1985; Mizruchi, 1982, 1992). Our investigation of the mechanisms and processes underlying banking growth provides important insights into where and how economic power has consolidated in the United States. Furthermore, although today thousands of dispersed retail outlets can be seen in a variety of industries, such organizations are only a recent phenomenon (Ingram & Rao, 2004) and represent the ascendance of modernization in the organizational realm (Haveman & Rao, 1997). By investigating the growth of multi-unit organizations in banking, we contribute to an understanding of how modernization processes have unfolded in U.S. society.

## ORGANIZATIONAL GROWTH IN 20<sup>TH</sup> CENTURY U.S. BANKING

During the 20th century, the U.S. commercial banking industry underwent a dramatic transformation in which single-unit, community-focused firms were replaced by large, multibranch systems typically headquartered in urban areas. At the turn of the 20th century, for example, there were over 13,000 commercial banks in the United States, only 87 of which had any branches (and those 87 operated a mere 112 branch locations). But a century later, approximately 6,500 commercial banks operated more than 80,000 branch locations. This change over time presents an important theoretical and empirical puzzle that we address here: What underlying mechanisms and processes led to this transition?

### **Bank Characteristics and Growth Strategies in the Early 20th Century**

As a first step to understanding how policy and other environmental conditions might influence bank growth, we highlight three characteristics of

banking that are central to organizational growth: the production-distribution link (simultaneity of production and distribution), intraorganizational coordination (pooled interdependence), and agency relationships (characteristics of monitoring and control systems). Our argument is that (1) as a result of these characteristics, banks during our study period faced an important trade-off between centralized and dispersed growth strategies and (2) their external environments influenced which growth strategy they pursued.

**Link between production and distribution.** Creating a product and then delivering it into the hands of consumers is perhaps the most fundamental act of a business organization. For industrial firms of the type described by Chandler (1977), production and distribution were two fundamentally different activities. Production typically occurred at a central venue, frequently a large factory, as a way to maximize economies of scale. But for service firms selling intangible products, such as bank accounts, accounting services, hotel stays, hospital procedures, and even air travel, no central production site exists, and production and distribution are not two separable processes (Upah, 1980; Zeithaml, Parasuraman, & Berry, 1985). For these firms, Carman and Langeard noted a “simultaneity of production and consumption” (1980: 1), whereby the product does not exist until it is delivered into the hands of a customer. To the extent that customers are often distributed over different geographic locations, this simultaneity results in a close connection between geography and the growth of service firms such as banks. Thus, the key to the growth of large banks is leveraging a central office that can manage a large number of dispersed locations.

**Intraorganizational coordination.** The link between production and distribution is likely to affect the coordination of intraorganizational activities. Thompson (1967: 54) described three fundamental types of interdependence among intraorganizational activities (examples of organizations exhibiting each type of interdependence are in parentheses): pooled interdependence, whereby “each part renders a discrete contribution to the whole and each is supported by the whole” (branches of an organization that do not have any direct connection); sequential interdependence, whereby X must act before Y can act (a subunit that produces parts for an assembly line); and reciprocal interdependence, whereby each unit’s outputs become inputs to—and thus pose contingencies for—the other units (an organization with both operations and maintenance functions). Nadler and Tushman (1997) suggested that pooled interdepend-

dence is the most fundamental to understanding the growth of service organizations, such as banks, that serve consumers through geographically dispersed retail outlets. Because production of goods for service firms is distributed among many outlying locations, intraorganizational interdependence takes the form of a hub-and-spoke network. There is continual back-and-forth between the hub and each spoke, both for agency reasons and to ensure standardization of production (Langeard, Bateson, Lovelock, & Engler, 1981), but there is little contact between the spokes.

**Agency relationships.** Related to the above two characteristics are the agency relationships between management and employees, particularly the ways that employees are monitored and controlled. For banks, as well as for other service firms whose production occurs in a distributed fashion, monitoring and controlling employees takes on different dimensions than it does for manufacturing firms, whose large factories allow for close monitoring (Perrow, 2002). Since service products are not tangible, “face-to-face visibility in the delivery system, the personnel, the site, and the equipment that create” (Carman & Langeard, 1980: 8) the products are essential components of those products. A number of possible agency issues require monitoring by an organization’s central office. For example, significant risk of heterogeneously delivered services exists (Zeithaml et al., 1985); that is, “many different employees may be in contact with an individual consumer, raising a problem of consistency of behavior” (Langeard et al., 1981: 16). Making sure that outlying offices and personnel reflect the wishes of the central office is therefore of paramount importance. This can be accomplished in two ways, as documented in early treatises on bank branching (Chapman & Westerfield, 1942). First, employees can send reports, daily or otherwise, to keep headquarters abreast of the activities of outlying functions. Second, traveling agents from headquarters can visit and inspect outlying locations. Both types of monitoring result in a transportation-intensive information system for managing the agency relationship. For organizations trying to expand, such a system imposes the trade-off discussed below.

**Tension between centralized and dispersed growth strategies.** The bank characteristics discussed above created a set of growth challenges, which resulted in a trade-off between centralized and dispersed growth strategies, especially during the historical period we examine. The simultaneity of production and distribution determined that banks’ growth was conditioned on their ability to directly reach more customers. Before the advent of

modern information technology, such as automated teller machines (ATMs) and online banking, it was essential to establish bank offices geographically close to customers. Banks could pursue the centralized strategy of establishing a small number of large-scale operations to deliver services in areas with a higher concentration of customers (e.g., urban centers). But when such large offices reached a saturation point, banks sought to establish branches outside of centralized areas in order to reach more customers in dispersed locations. Such outlying branches were typically smaller because dispersed customers did not support large bank operations. Thus, banks that expand geographically may be larger organizations in terms of aggregate financial measures, but they may also be “spread more thinly” as they focus on a greater number of geographically dispersed areas.

The extent and size of a bank’s outlying branches are also likely to be limited by its internal resource constraints associated with coordination and agency issues. During the time of the study, centralized management at headquarters was considered a “best practice” in branch administration. “Experience has proved,” it was observed at a conference session of the American Institute of Banking in 1923, “that the best way to proceed in selling the service of branch banks is to center everything in connection with it at the main office” (American Institute of Banking, 1923: 110). In addition, a paper trail was legally required for all transactions (Chapman & Westerfield, 1942), so coordinating and monitoring branches was costly in that it relied on extensive physical transportation of documents and of monitoring personnel. Because of the difficulty of monitoring, banks typically limited the size of outlying locations for risk management purposes (Chapman & Westerfield, 1942). As branches grew in size, the dispersed local managers increasingly controlled banks’ assets and reputations. To reduce this risk, banks preferred to establish a number of smaller branches as opposed to a few larger ones.

Finally, the effects of the centralized/dispersed trade-off were reinforced by the change in the role of a bank’s headquarters location that took place when the bank pursued a dispersed strategy. Geographic expansion beyond its headquarters location is a profound strategic change for a firm (Ingram & Baum, 1997). When a bank was pursuing a centralized strategy, all attention was focused on how to grow in one central area. But under the dispersed strategy, the attention of the headquarters shifted to centralized management of branches, which reduced the focus on growth in that central area, and thus the overall size of bank locations.

Below, we develop hypotheses to detail how this trade-off between the centralized and dispersed growth strategies is salient to understanding how different features of external environments led to different growth patterns of U.S. banks during the early 20th century.

### CONTINGENT EFFECTS OF POLICY ON U.S. BANKING GROWTH

We developed a series of hypotheses addressing how public policy, technological, economic, and cultural features of banks’ environments and the interactions between policy and the other features influenced how, when, and where banks grew. As noted above, bank growth during the historical period we examined was characterized by a trade-off between two strategies: the centralized strategy, manifested in the large size of branches, and the dispersed strategy, manifested in the wide geographical spread of branches. Our initial hypotheses address how the public policy that allowed branching affected the geographic dispersion and location size of banks. We then considered how other external environmental conditions (i.e., technological, economic, and cultural) moderated the effects of branching policy on bank dispersion and location size. Other environmental conditions could only affect geographic dispersion if branching was legally allowed, but banks could increase their local operations’ sizes regardless of the policy governing branching. We therefore also considered the main effects of technology, economic conditions, and cultural environments on bank location size.

#### Public Policy and Organizational Growth Strategies

For much of U.S. history, well into the 20th century, the U.S. government heavily regulated major industries, including banking, transportation, communication, utilities, health care, and agriculture (Wholey & Sanchez, 1991). Policy influences the types of economic activity undertaken by directly shaping the opportunity structure in markets. For example, Dobbin and Dowd’s (1997) analysis indicated that three public policies—public capitalization, procartel, and antitrust—differentially affected the founding of railroads by influencing capital availability and competitive intensity in Massachusetts from 1825 to 1922. Roy (1997) suggested that property laws opened up the possibility of large manufacturing corporations by making dispersed ownership possible. And Campbell and Lindberg (1990) showed that when states changed or threatened to change property laws, organiza-

tions were stimulated to search for new forms of organization, which brought about organizational transformation.

In many service industries, such as banking, growth leading to the large-scale organizations seen today is frequently achieved by establishing geographically dispersed branches. However, the practice of establishing multiple business locations was legally constrained for many service industries throughout much of the 20th century. During the 1920s and 1930s, more than half of the states enacted anti-chain-store laws; such laws remained on the books in 13 states as late as 1970 (Ingram & Rao, 2004). More recently, anti-chain-store policies have been enacted by communities and municipalities, most notably in California, to protect local businesses (Hampton, 2004). As a result, anti-chain-store policies have greatly constrained service firms from growing by establishing new branches. Likewise, the banking industry was heavily regulated at both the federal and state levels for much of its history, and thus bank growth predicated on establishing new branches was likely to be contingent on the restrictiveness of state policy regulating branching (Roe, 1994). Such policies varied significantly from state to state. Some state-level policies permitted unit banking, whereby banks are permitted to operate in only one location (thus precluding branches); some permitted statewide banking, whereby banks are permitted to operate branches throughout a state; and some permitted limited statewide banking, which permits only limited operation of branches.<sup>1</sup> Moreover, state policy regulating bank branching underwent a transformation during the 20th century, with the number of unit-banking states declining and the number of branch-banking states increasing dramatically (Calomiris,

1993). Thus, we anticipated that banks were likely to exhibit variation in pursuing the dispersed growth strategy, depending on the restrictiveness of their state branching policies.

*Hypothesis 1a. In states with less restrictive branching policy, bank locations are likely to be, on average, more geographically dispersed.*

However, as discussed above, banks' growth decisions entail a fundamental trade-off. Banks that are encouraged by more liberal branching policy to adopt a dispersed strategy are likely to have smaller individual locations. To restate briefly, this trade-off is due to both external and internal constraints on geographic growth. Before branching was legally allowed in a particular state, banks could grow only in that state by focusing on large operations in the areas around their headquarters. When branching was not legally restricted, banks were stimulated to establish branches in dispersed areas to reach more customers. For a number of reasons, these branches were likely to be smaller. Dispersed population centers were typically too small to support large bank operations. There were also internal resource constraints resulting from paper-based coordination and monitoring systems. Because of the difficulty in monitoring, the headquarters typically limited the size of outlying branches for risk management reasons. Finally, because the option of pursuing a dispersed strategy made banks less dependent on the centralized strategy to achieve growth, the role of a bank's headquarters changed from serving customers to coordinating and monitoring the outlying branches, lessening the focus on growing in the headquarters area.

*Hypothesis 1b. In states with less restrictive branching policy, banks are likely to have, on average, smaller individual locations.*

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<sup>1</sup> These are ideal types, the definitions of which may vary slightly among states. Our categorizations are based on various Federal Reserve Bulletins and on prior studies of branching policy (Fischer, 1968; Welldon, 1910). Variation within these ideal types can touch on three main areas, and in all instances our treatment of these differences follows prior work by the Federal Reserve. First, in a few cases, particularly in unit-banking states early in the 20th century, branching restrictions were a matter of practice, enforced by state banking commissions rather than explicit laws. Second, there was variation in how restricted the branching was in limited-statewide-banking states. It was typically very proscribed—e.g., limited to two offices or within a very restricted geographic area. Further, a state could be classified as having statewide banking when, in fact, banks could expand throughout the state only by acquisition (Kroszner & Strahan, 1999), not by establishing de novo branches.

## **Technology Environments and Organizational Growth Strategies**

Policy that allows branching makes growth by geographic expansion a feasible strategy for banks. But geographic expansion creates coordination and monitoring issues; banks' headquarters need to coordinate and monitor outlying branches in dispersed locations (Nadler & Tushman, 1997; Thompson, 1967). These coordination and monitoring issues lend importance to technology that helps mitigate the difficulties created by geographic dispersion. During the early period of bank growth, the development of transportation technology helped stimulate banks to expand geographically, provided the policy in a state allowed

branching; expansion of the roadway infrastructure, in particular, helped bank headquarters coordinate and inspect local branches.<sup>2</sup> This view is consistent with Greve's (2000, 2002) spatial density dependence model, which emphasized the importance of transportation infrastructure to the spread of retail organizations such as banks during this time period.

Bank headquarters coordinated and monitored branches in two primary ways. First, large volumes of bank documents were frequently transferred from branches to headquarters. An early treatise on the operation of bank branches by Chapman and Westerfield (1942) described a range of paper systems for monitoring branch activities, including duplicate records, daily reports, and the documentation of personnel, financial statements, and general business conditions. Early credit management systems and procedures for branch banks described extensive physical processes in place to manage geographically dispersed credit (Whipple, 1935). Headquarters' reliance on paper systems was reinforced by legal regulations requiring a paper trail for transactions, which necessitated the daily physical transport of extensive amounts of records (Chapman & Westerfield, 1942).

Second, auditors from headquarters traveled to inspect branches. A history of Comerica Bank recorded that "auditors, known as the 'eyes and ears of management,' traveled to all locations to check accounts and records" (Comerica, 1999: 19–20). Otherwise, headquarters could not effectively coordinate and monitor branches, as illustrated by the early history of the First and Second Banks of the United States. This firm was organized as a multi-bank company, but its units were operated more as independent subsidiaries than as branches of a central organization because "in a time of slow communication and transportation, it was impossible

for a head office to exercise day-to-day supervision over a network of branches" (Robertson, 1968: 28). Similarly, according to early historical descriptions, the distances between the Bank of America's branches led it to operate more like a confederation than a "well-knit, smoothly running, uniform organization" (James & James, 1954: 96). These historical accounts suggest that outlying units posed significant challenges to coordination and monitoring that were met by advances in transportation technology. This, in turn, suggests that when branching is allowed, advanced transportation technology is likely to induce banks to expand geographically.

*Hypothesis 2a. The positive effect of branching policy on the dispersion of banks' locations is likely to be stronger, on average, in states with a more advanced transportation infrastructure.*

To the extent that a dispersed growth strategy entails establishing smaller branches in areas of sparser population than that of the urban centers, it incurs higher coordination and monitoring costs. These costs can be mitigated, however, by advanced transportation technology. All else being equal, then, the more advanced a state's transportation technology is, the more likely banks are to pursue the dispersed growth strategy into more remote areas, rather than a centralized strategy, and the smaller their branches are likely to be.

*Hypothesis 2b. The negative effect of branching policy on the size of banks' locations is likely to be stronger, on average, in states with more advanced transportation infrastructure.*

We suggest that, besides moderating the effects of branching policy, transportation technology is likely to affect the size of banks' locations directly, regardless of whether geographic expansion is allowed. One effect of progress in transportation is to diffuse a population geographically, as residents are able to live farther from their places of work. As a state's population spreads out, its banking infrastructure necessarily diffuses. If branching is not allowed, there are opportunities to found small banks to meet the needs of a geographically dispersed population. For example, in a study of early bank locations, Southworth (1928: 118) found that, as local travel options expanded following "the advent of the automobile," there was a push to establish new banks in less-populated areas, leading, for example, to "small independent banks . . . in Chicago [being] established." Thus, whether or not branching is allowed in a state, progress in that state's transportation technology is likely to de-

<sup>2</sup> Other commonly studied technologies, such as the telephone and the railroad, were not as essential in this setting. Regarding the telephone, legal restrictions required a paper trail for bank transactions, so banks were required to physically transport extensive transaction records daily, even for transactions that technically could be done by telephone (Chapman & Westerfield, 1942). Further, although rail transportation could help address document transfer, the branches would need to be along rail lines that connected them with bank headquarters, which was a significant constraint on bank growth. Thus, according to bank manuals from this time, roadways, which connected headquarters more directly with outlying locations, were the most essential technology for document and personnel transfer (Chapman & Westerfield, 1942).

crease the average size of bank locations in that state.

*Hypothesis 2c. In states with more advanced transportation infrastructure, the size of individual bank locations, on average, is likely to be smaller.*

### **Economic Environments and Organizational Growth Strategies**

Along with institutional and technology environments, economic environments affect organizational growth. For example, general economic conditions (e.g., income per capita) need to be developed enough to create sufficient market demand (Nohria, Dyer, & Daltzell, 2002). But we suggest that two other economic conditions, urbanization and degree of business competition, are of particular importance for understanding why banks grow in either a centralized or a dispersed fashion.

**Urbanization.** Since services such as banking are greatly contingent on how customers are distributed geographically, urbanization—the degree to which a state's population is concentrated in cities—is likely to influence their growth strategies. Histories of a number of banks suggest that the urbanization that occurred during the 20th century was a prime driver in banks' growth (Collis, 1926; Fischer, 1968; Klebaner, 1990). Urbanization, like the transportation technology discussed above, cannot affect banks' geographic dispersion in a particular state unless branching is allowed in that state. But when branching is allowed, urbanization should suppress the effect of branching policy in stimulating a dispersed strategy, since geographic expansion is less attractive as a growth strategy when customers and businesses are more concentrated in cities. As a result, banks in states with greater urbanization are likely to be less dispersed geographically but to have larger locations. In contrast, banks in states with less urbanization would likely pursue a dispersed strategy and establish a larger number of smaller branches. Thus, we suggest that a state's urbanization moderates the effects of that state's branching policy on bank dispersion and location size.

*Hypothesis 3a. The positive effect of branching policy on banks' geographic dispersion is likely to be weaker, on average, in states with higher urbanization.*

*Hypothesis 3b. The negative effect of branching policy on the size of individual banking locations is likely to be weaker, on average, in states with higher urbanization.*

In line with the historical studies mentioned above, we also suggest that urbanization is likely to increase the size of individual bank locations, whether or not branching is allowed (Collis, 1926; Fischer, 1968; Klebaner, 1990). Examples of how banks grew as cities expanded abound. A history of NationsBank tied the growth of the company to the growth of urban areas (Covington & Ellis, 1993), a link made more explicit in a history of Detroit-based Comerica Bank, which recounts that the firm's services were limited when the city was sparsely settled, but as Detroit grew, so did the bank (Comerica, 1999). Collis's (1926) early description of branch banking suggested that the growth of cities directly led to bank growth. The foregoing discussion suggested that urbanization directly affects bank growth patterns. The greater the urbanization and, hence, the more concentrated the population in a state, the more likely banks are to pursue a centralized as opposed to a dispersed strategy, which will be reflected in greater location size.

*Hypothesis 3c. In states with greater urban populations, banks are likely to have, on average, larger individual banking locations.*

**Business competition.** Another important economic factor likely to influence banking growth is the degree of competition among banks in a state. In general, competition among firms has been shown to reduce profit margins (e.g., Porter, 1980) and threaten organizational survival (e.g., Carroll & Hannan, 2000). For example, Baum and Mezias (1992) showed how hotels in environments where there were greater numbers of similar, competing hotels experienced higher mortality. When firms compete intensely by pursuing the same strategy, that strategy is less likely to bring competitive advantage, therefore becoming less attractive (Barney, 1986; Peteraf, 1993). In accordance with the above rationale, we contend that business competition suppresses banks' pursuit of either growth strategy, dispersed or centralized.

When branching policy allows geographic expansion, banks are likely to pursue the dispersed strategy in order to grow. However, if competition in pursuing the dispersed strategy is intense, banks are likely to be discouraged from expanding geographically because competition tends to lower the return from dispersion. Therefore, in states with higher competition among banks, branching policy is less likely to stimulate geographic expansion and banks are therefore less likely to be geographically dispersed. Similarly, Haveman and Nonnemaker (2000) showed that entry and growth of savings and loans in California was directly related to geographic

market size. Higher competition among firms in the same market effectively shrinks the market size, reducing firms' tendency to enter and grow.

Moreover, the dispersed strategy, if its value is dampened by high competition, is less likely to constitute an attractive alternative to the centralized strategy, so banks may instead pursue the centralized strategy even if branching is allowed. The net result is that the effects of branching policy on the geographic dispersion and the size of individual bank locations, as captured by Hypotheses 1a and 1b, are weaker when competition among banks is more intense.

*Hypothesis 4a. The positive effect of branching policy on banks' geographic dispersion is likely to be weaker, on average, in states with more intense competition among banks.*

*Hypothesis 4b. The negative effect of branching policy on the size of individual banking locations is likely to be weaker, on average, in states with more intense competition among banks.*

Finally, competition among banks will likely decrease the size of bank locations, regardless of whether branching is allowed in a state. When branching is not allowed in a state, banks pursue the centralized strategy primarily in the urban centers where they are headquartered. To the extent that the sizes of such markets are largely fixed within a given time period, increasing competition among banks simply means that the relative sizes of the markets and profit margins decrease so that it becomes less attractive for banks to expand their operation in those markets (Haveman & Nonnemaker, 2000; Porter, 1980). When branching is allowed in a state, banks can also pursue the dispersed strategy. But to the extent that population in areas outside of urban centers is sparser, bank locations are likely to be smaller there than in urban centers. Moreover, intense competition means that banks are likely to compete with each other in these markets as well. This intense competition may force banks to scale back the sizes of their locations, because their profit margins are relatively low. Under all of these circumstances, then, intense competition reduces the size of bank locations.

*Hypothesis 4c. In states with more intense competition among banks, the size of individual bank locations, on average, is likely to be smaller.*

## Cultural Environments and Organizational Growth Strategies

A long-standing tradition in organizational theory has focused on how cultural factors influence organizational strategies and forms (e.g., Dobbin, 1994; Haveman & Rao, 1997; Haveman et al., 2007; Ingram & Simons, 2000; Lounsbury, 2007). Important for our study of banking is how U.S. bank growth was affected by a deep-seated general mistrust of centralized power, particularly with regard to large banks. Tocqueville (1835/2000), for example, during his extended trip to the United States in 1831 and 1832, focused on how local organizations developed as an antidote to centralized state and economic powers, an important tension surfaced by other influential sociological analyses (e.g., Lipset, 1963; Mills, 1956). Along the same lines, Marquis and Lounsbury (2007) recently showed that community-based resistance to centralized banking power is still an important cultural logic that influences industry dynamics.

During the time period of our study, local agrarianism was a particularly important cultural logic that promoted community-oriented banking (Roe, 1994). In many cases, this effect stemmed from farmers' interest in having a close banking relationship. For example, Roe (1994) described how farmers and small-town residents fervently supported local banking because locally focused banks would presumably continue supplying credit during economic downturns. Calomiris (1993) similarly documented that farmers have valued local banking throughout U.S. history up to the present and that this cultural support was essential to maintaining a decentralized banking system. Recent analyses of bank lending to small farms have also suggested that the tight ties between farmers and local banks are persistent considerations for understanding the structure of the U.S. banking industry and the sizes of local banks (Akhavain, Goldberg, & White, 2004). More generally, others have found that agrarian resistance to centralized power provided an alternative logic as modernization proceeded and have noted specifically how smaller-scale mutual firms developed in insurance and other industries as alternatives to large organizations (Schneiberg, 2002; Schneiberg et al., 2008).

Following these previous studies, we suggest that the presence of actors with an agrarian logic in a state is likely to have two implications for bank growth in that state. First, when the relaxation of state branching policy encourages banks to expand geographically, these actors are likely to resist banks' geographical expansion and thus moderate the effects of the state's branching policy. Banks

that do expand into different geographical areas are likely to be perceived as powerful corporations lacking a local orientation and strong concern for local interests (Wright, 2001). Actors representing the agrarian logic are therefore likely to resist banks' geographical expansion. Such actors might, for example, patronize local banks instead of banks focused on branching and publicly voice their negative opinion about the latter (see also Carroll and Swaminathan [2000] and Marquis and Lounsbury [2007] for accounts of similar types of resistance). Although organized collective action is critical for enacting antibranching policy, as in the case of anti-chain laws (Ingram & Rao, 2004), ongoing, less-organized resistance is important for preventing banks from expanding geographically when branching is legally allowed. Such resistance might render geographic expansion less attractive as a growth strategy for banks, especially when the resistance is strong. Consequently, the effects of policy that allows banks to pursue geographic expansion posited in Hypotheses 1a and 1b are likely to be reduced in states with a greater agrarian presence.

*Hypothesis 5a. The positive effect of branching policy on the geographic dispersion of banks' locations is likely to be weaker, on average, in states with a greater agrarian presence.*

*Hypothesis 5b. The negative effect of branching policy on the size of banks' locations is likely to be weaker, on average, in states with a greater agrarian presence.*

Second, in line with recent studies of bank lending to small farms (Akhavain, Goldberg, & White, 2004), a greater agrarian presence in a state is likely to keep banks locally oriented, which causes them to grow by increasing the size of local operations, regardless of whether or not branching is allowed. When branching is not allowed in a state, actors with an agrarian logic provide support for community-oriented institutions, a favorable condition for

banks increasing their local operations (Marquis & Lounsbury, 2007). When branching is allowed in a state, actors with an agrarian logic are likely to resist banks' geographic expansion, as pointed out above. Banks are then likely to resort to the alternative strategy outlined above—growing the size of their individual locations.

*Hypothesis 5c. In states with a greater agrarian presence, banks are likely to have, on average, larger individual locations.*

Table 1 summarizes our hypotheses. As a whole, they elaborate the core argument that, although branching policy is a baseline condition, different transportation infrastructures, economic conditions, and cultural environments—as well as their interactions with branching policy—in different states affected banks' pursuit of the dispersed or the centralized growth strategy.

## METHODS AND ANALYSIS

To test our predictions, we examined annual state-level banking organization for all the contiguous U.S. states from 1896 through 1978. The turn of the 20th century was the ideal starting point for this analysis because there were virtually no multiunit banks in the country at that time and expansion was just becoming a debated topic (Calomiris, 1993). Moreover, a reliable series of state-level data became available in 1896. (All data on state banking characteristics are from Flood [1998] and Federal Deposit Insurance Corporation [FDIC] annual publications [<http://www2.fdic.gov/hsob/index.asp>].) We ended our study in 1978 because this was the year that banks began interstate branching. Following Schneiberg and Bartley (2001), we performed state-year analyses to determine average bank growth for each state. To address the issue of simultaneity, we lagged our independent variables by one year, so our analyses were based on 3,893

**TABLE 1**  
Summary of Hypotheses and Empirical Support

Theorized Variables	Geographic Dispersion	Empirical Support	Location Size	Empirical Support
Branching policy	H1a (+)	Yes	H1b (–)	No
Transportation infrastructure			H2c (–)	Yes
Transportation infrastructure × branching policy	H2a (+)	Yes	H2b (–)	Yes
Urbanization			H3c (+)	Yes
Urbanization × branching policy	H3a (–)	No	H3b (+)	No
Business competition			H4c (–)	Yes
Business competition × branching policy	H4a (–)	Yes	H4b (+)	Yes
Agrarian presence			H5c (+)	Yes
Agrarian presence × branching policy	H5a (–)	Yes	H5b (+)	Yes

state-year observations (83 observations for every state except Oklahoma, which became a state in 1907, and New Mexico and Arizona, which became states in 1912).

Bank-level data might have produced a finer-grained test because we would have been able to observe individual banks' strategies, but such data are not available for this early and extended historical period. We believe, however, that examining our hypotheses at the state level is valid, since our focus was comparing differences in banks' external environments (policy, technological, economic, and cultural) across rather than within states to see whether, on average, banks in one state were significantly larger and more dispersed than those in another. Further, our finer-grained, qualitative data on the history of certain individual banks and bank associations also support our underlying theory.

### Dependent Variables

Our empirical strategy for testing our arguments was to examine whether the different policy, technological, economic, and cultural conditions in each state created cross-state variation in bank growth along two dimensions: bank geographic dispersion and bank location size. *Bank geographic dispersion*, which captures growth achieved by the dispersed strategy, was measured as the percentage of bank locations in a given state that were outside of a bank's headquarters location. This is a direct measure of the extent to which banks relied on outlying locations. These data were from various years of the *Federal Reserve Bulletin*, which annually publishes counts of branches at the state level, indicating whether or not branches are in banks' head-office cities.<sup>3</sup> *Bank location size* was meant to

<sup>3</sup> Because the Federal Reserve published these and historical counts only sporadically before 1929, a small amount of data for missing years between 1896 and 1929 are linearly interpolated. Comprehensive data exist for 1896–1910, 1924, and 1929, and by examining other publications, such as state statutes, which were published by the Federal Reserve in 1925, we were able to identify some but not all changes between 1910 and 1924. Because (1) this early period was mostly characterized by small numbers of outlying branch locations and (2) these values appear to be stable, interpolating these few values should not be an issue. We also performed a number of robustness checks on our results to verify that the interpolated variables did not have any undue influence on the results, and we are very confident that this is the case. For example, analyses without the interpolated values show even stronger effects for variables of interest than the presented models do. Additional analyses with-

capture bank growth achieved by the centralized strategy, whereby banks establish large branches without necessarily expanding geographically. The typical measure of a bank's size—its overall financial assets—reflects the results of both the dispersed and centralized growth strategies. In order to estimate whether states had banks with greater or lesser degrees of focus on large locations, we took the total banking assets in each state for each year from 1896 through 1978 and divided it by the total number of banking locations for that year, including both the headquarters and the branches.

### Independent Variables

**Branching policy.** Because state restrictions on branching varied considerably, we created annual state-level legal-environment histories for all 48 states in the sample from 1896 to 2001. To construct these regulatory histories of state branching policy, we examined more than 15 secondary sources and, in many cases, the actual statutes; see the Appendix for more detail. As noted above, laws sanction three primary types of branching: unit banking, where there is no branching allowed; statewide branching, where banks can branch throughout the state; and limited statewide branching, where banks can branch within a circumscribed area. As we describe above in footnote 2, the definitions of these types vary somewhat state-to-state; in coding the states' branching policies, we relied on precedent set by the Federal Reserve Bulletin and previous research (Fisher, 1968; Kroszner & Strahan, 1999; Welldon, 1910). To capture the variation in regulation, we created a dummy variable coded 1 to indicate a state that allowed statewide branching and 0 otherwise.<sup>4</sup>

**Technological infrastructure.** Because our transportation hypotheses focus on expansion beyond centralized population areas, we obtained data on states' nonurban (i.e., rural) roadway mileage from various issues of *Highway Statistics*, an annual

out observations before 1929 also returned results quite similar to those reported.

<sup>4</sup> Separate analyses were also run with variables indicating whether or not a state allowed any branching (i.e., 1 = "statewide and limited statewide"). These results were quite similar, although some effects were less statistically significant than the reported results. We felt, however, that the current operationalization was the best because, in most cases, limited statewide branching was highly circumscribed (e.g., branches could only be within sight of the headquarters). Thus our arguments about coordination and agency relationships are more appropriately tested in states where branching capabilities were more expansive.

publication of the U.S. Department of Transportation. These data became available at the state level in 1923; we extrapolated the series back to 1896.<sup>5</sup> Because the outlying highway system did not grow significantly until after 1923, the extrapolation of these values should not bias the analyses; the results are consistent when the extrapolated data are excluded. Although many different technology systems might be important for the coordination needs of banks (e.g., railroads, telephones, and telegraph), we emphasize the development of roadways because, as discussed above, during our study period banks relied primarily on road transportation to monitor outlying branches and to transfer paper documents and money between branches and headquarters.

**Economic conditions.** As discussed above, we focused on two economic conditions that influenced bank growth. *Urbanization* was measured as the percentage of the state's population living in urban areas. We collected population data from the U.S. Census Bureau at ten-year intervals beginning in 1900, the intervening years being interpolated.<sup>6</sup> Following Carroll and Hannan (2000), we measured *business competition* as the number of banks in a given state (log-transformed to correct a skewed distribution).<sup>7</sup> This measure of business competition was consistent with our theorizing and

historical studies of competition in U.S. commercial banking (Wright, 2001).

**Cultural resistance.** As discussed above, our theorizing mainly concerned ongoing resistance by actors with an agrarian logic. Accordingly, the greater the number of such actors, the stronger the likely resistance against banks' geographical expansion. To capture the influence of cultural resistance, we included a variable, *agrarian presence*, that measured the number of farms in a given state (log-transformed to correct a skewed distribution). The data for this measure were collected from the U.S. Department of Agriculture's historical database on farms.

### Control Variables

We included in our analysis a number of controls to account for possible alternative explanations and confounding processes. *Per capita income*, a measure of wealth, was collected for each state from the Bureau of Economic Analysis and, prior to 1929, from *Population Redistribution and Economic Growth, 1870–1950* (Lee et al., 1957). Controlling for per capita income can address two particular issues. First, to the extent that per capita income reflects economic fluctuations in the U.S. economy, a control variable for it should be a proxy for the demand for banking services. Second, recall that urbanization, which reflects the geographic concentration of population in a state, is important for understanding bank growth in the early 20th century. To the extent that urbanization often correlates with per capita income, as it does in this study ( $r = .69$ ), controlling for per capita income can help tease out the effect of population concentration from general economic conditions.

During our period of study, some major changes in federal regulations might have had an impact on the growth of the commercial banking industry (Calomiris, 1993). Therefore, we used dummy variables to divide our period of study into (1) the period prior to the Federal Reserve Act (*pre-Federal Reserve*, 1896–1913), (2) the period after the Glass-Steagall Act (*post-Depression*, 1934–1978), and (3) the period between these two acts (1914–1933), which serves as the reference category. As another way to account for the temporal dimension of our study, we included a linear *time trend* variable to account for the fact that some of our key variables, such as transportation and urbanization, were growing over time (see Dobbin and Dowd [1997] for a similar strategy of using period variables with a time trend).

We also controlled for other factors that may have had an important influence on bank growth.

<sup>5</sup> To accomplish this, we used the percent change in total annual national highway mileage (for which there are data back to 1900) to guide our determination of how much rural mileage increased each year. By 1900, the end of this data series, total national mileage was reduced to 100. To get the 1896 to 1899 values, we linearly interpolated for each state under the assumption that in 1896 there were 0 miles of national highway.

<sup>6</sup> Prior to 1950, the U.S. Census Bureau defined urban area as all territory, persons, and housing units in incorporated places of 2,500 or more persons. After 1950, the U.S. Census Bureau's definition of urban area changed slightly to territory, persons, and housing units in urbanized areas and, outside urbanized areas, in all places, incorporated or unincorporated, that had 2,500 or more persons. This definition has remained substantially unchanged ever since. To check whether the 1950 change affected our results, we included a period dummy with 1 indicating years after 1950; the results (available from the authors upon request) were not materially different from the reported results.

<sup>7</sup> We thank an anonymous reviewer for pointing out that competition is likely to be localized in banking and thus our state-level measure may not accurately tap competition for banks. In supplementary analyses, we found that urbanization was a statistically significant moderator of competition, reinforcing a negative effect on dispersion, suggesting that competition was at least partially localized.

*Percent manufacturing*, measured as the percentage of manufacturing employment in a state, captures the variation among states of an important economic constituency that relies on banking services, has an interest in banking growth, and has been shown to be an important lobby for banking law changes (Abrams & Settle, 1993). These data were collected from *Historical Statistics of the States of the United States* (Dodd, 1993) and the U.S. Census Bureau. *State population* (data from the U.S. Census Bureau) was also included to account for state size. *Square miles* measured the size of a state as a way to take into account that a state's highway mileage is to some extent a function of its size, that size may also influence the number of farms, and that size can also directly influence bank dispersion. To control for the alternative growth strategy available to banks, we included the lagged *average bank size* and the number of branches in the given state in our analyses of bank geographic dispersion. In the analyses of bank location size, we included bank geographic dispersion.

### Statistical Models

Primary considerations in deciding the appropriate model for our analyses included (1) multiple observations for each state and (2) a high degree of autocorrelation between a given year and the previous year. Given this time series panel structure, we used Prais-Winston regression with a panel-specific autoregressive disturbance structure (the "xtpcse" command in STATA, with autocorrelation = "psar 1"). In such situations, Beck (2001) recommended a model with panel-corrected standard errors. Durbin-Watson tests confirmed the existence of autocorrelation in our panels. The Prais-Winston estimator is a generalized least squares (GLS) estimator corrected for first-order serially correlated residuals specific to each panel (i.e., within states as opposed to across the entire data set, as is customary with time series analyses).

One possible concern with our analyses and results is endogeneity; an independent variable included in the regression model may be a choice rather than a random variable, correlating with unobservable factors in the error term. Usually, endogeneity can be addressed either by explicitly controlling for those unobservable factors in the analyses or by estimating a two-stage model (Greene, 2008; Millimet, 2001). In this context, the enactment of branching policy in a state could be endogenous and due to some unobservable factors that might systematically bias the effects of our independent variables on our dependent variables.

For example, a strong agrarian presence in a state could suppress both the passage of branching policy and banks' geographic expansion. If we did not control for this factor, the estimated effect of branching policy on banks' geographic dispersion would have been biased. Similarly, other factors, such as business competition among banks, transportation technology, urbanization, and per capita income could all affect both the passage of branching policy and our dependent variables. Since we could largely identify these major factors, including them in our analyses lessened endogeneity concerns. Confirming this observation, the estimated results were very similar when we used two-stage instrumental variable models (the "xtivreg" command in STATA), with branching policy and its interactions designated as endogenous (or instrumented) variables and the degree of progressive laws in a state as our instrumental variable (an index of progressive laws, based on Fishback and Kantor's [2000] database). This instrument was selected because the degree of progressivism in a state influences how corporations and the state interact (Haveman et al., 2007; Schneiberg, 2002) and is likely related to the likelihood of adopting branching laws, yet not specifically related to our dependent variables, which tap organizational growth strategies. These results are available upon request.

## RESULTS

Table 2 presents the descriptive statistics and the correlation matrix. Tables 3 and 4 present the results of regression equations for the analyses of bank geographic dispersion and bank location size. For ease of comparison, the models are presented in the same sequence.

### Bank Geographic Dispersion Analyses

Table 3 indicates whether environmental conditions account for cross-state variation in banks' geographic dispersion, indicating whether banks in different states with different environmental conditions were likely to pursue the dispersed growth strategy. Model 1 is the baseline model, with all control variables. Models 2 and 3 test Hypothesis 1a. The difference between these two models is whether agrarian presence, transportation technology, urbanization, and business competition are included. Regardless, the estimated coefficients for branching policy in both models are statistically significant with a positive sign, supporting Hypothesis 1a and suggesting that banks in states with more liberal branching policies were on average

TABLE 2  
Descriptive Statistics and Correlation Matrix

Variables	Mean	s.d.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
1. Bank geographic dispersion	0.15	0.21																		
2. Bank location size	7.84	1.36	.50																	
3. Branching policy	0.31	0.46	.56	.07																
4. Agrarian presence	11.11	1.24	-.42	-.28	-.32															
5. Transportation infrastructure	2.23	0.83	.46	.82	.01	-.03														
6. Urbanization	0.50	0.21	.36	.79	.03	-.32	.55													
7. Business competition	5.44	1.15	-.55	-.16	-.51	.81	.05	-.01												
8. Agrarian presence × branching policy	3.22	4.91	.51	.02	.99	-.21	-.003	-.02	-.42											
9. Transportation infrastructure × branching policy	0.69	1.12	.72	.22	.92	-.33	.21	.15	-.50	.90										
10. Urbanization × branching policy	0.16	0.26	.68	.25	.89	-.45	.14	.30	-.55	.83	.91									
11. Business competition × branching policy	1.40	2.20	.42	-.004	.96	-.15	-.01	-.03	-.33	.99	.87	.80								
12. State population	14.35	1.08	.06	.38	-.21	.63	.47	.44	.68	-.15	-.11	-.14	-.10							
13. Per capita income	0.96	0.51	.58	.82	.11	-.42	.65	.69	-.19	.06	.26	.31	.03	.23						
14. Percent manufacturing	0.07	0.05	.15	.40	.05	-.19	.17	.64	.06	.03	.09	.17	.04	.29	.29					
15. Average bank size	1.45	1.37	.72	.92	.25	-.39	.69	.81	-.32	.19	.41	.47	.14	.35	.81	.44				
16. Square miles	6.46	4.72	-.06	-.07	-.08	.18	.04	-.10	.09	-.06	-.06	-.06	-.07	.02	.02	-.52	-.09			
17. Time trend	41.87	23.53	.58	.86	.08	-.22	.92	.51	-.18	.04	.27	.21	.01	.28	.78	.09	.76	.01		
18. Post-Depression	0.54	0.50	.50	.77	.11	-.16	.75	.43	-.23	.08	.26	.21	.04	.23	.61	.05	.69	.01	.86	
19. Pre-Federal Reserve	0.22	0.42	-.33	-.61	-.03	.09	-.83	-.35	.05	-.01	-.20	-.13	.01	-.20	-.37	-.07	-.46	-.02	-.72	-.58

more likely than banks in states with more restrictive branching policies to establish geographically distant branches—that is, pursue the dispersed strategy.

Model 4 tests Hypothesis 2a. The estimated coefficient of the interaction between branching policy and transportation infrastructure is statistically significant with the predicted positive direction, supporting Hypothesis 2a. To assess the moderating effect of transportation infrastructure, we used the estimated equation ( $0.05 \times \text{branching policy} + 0.04 \times \text{branching policy} \times \text{transportation infrastructure}$ ). All else being equal, when transportation infrastructure takes a low value of 0.20 (the mean), the passage of statewide branching policy decreases average bank geographic dispersion in that state by about 13 percent. When transportation infrastructure takes the high value of 0.52 (1 s.d. above the mean), the passage of statewide branching policy increases average bank geographic dispersion in that state by about 18 percent.

The effects of two economic conditions—urbanization and business competition—on bank geographic dispersion are tested in models 5 and 6, respectively. Model 5 addresses Hypothesis 3a, which predicts that the effect of branching policy on average bank geographic dispersion is weaker in states with higher urbanization. The estimated coefficient for the interaction between branching policy and urbanization is statistically significant, but the sign is the opposite of our prediction, failing to

support Hypothesis 3a.<sup>8</sup> Model 6 tests Hypothesis 4a, which predicts that the effect of branching policy on average bank geographic dispersion is weaker in states with more intense business competition among banks. The interaction term between branching policy and business competition is negative and significant as predicted, supporting Hypothesis 4a.

Model 7 tests Hypothesis 5a, which predicts that the effect of branching policy on average bank geographic dispersion is weaker in a state with a stronger agrarian presence. The estimated coefficient for the interaction between branching policy and agrarian presence is statistically significant with the predicted negative sign, supporting Hypothesis 5a. Model 8 is a full model with all of the variables.

### Bank Location Size Analyses

Table 4 presents the results of analyses testing whether environmental conditions in a state affect

<sup>8</sup> The history of the commercial banking industry suggests one possible explanation for this unexpected result. As noted, before branching was allowed, establishing large operations in urban centers was the only way for banks to grow in most states (Fischer, 1968). As a result, competition among banks in urban centers was intense and, when branching was allowed, banks might therefore have been driven to expand geographically. This tendency might have been stronger for banks located in bigger urban centers where competition was more intense.

TABLE 3  
External Environments and Bank Geographic Dispersion, 1896–1978<sup>a</sup>

Variables	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7	Model 8
Hypothesis 1a: Branching policy		0.04* (0.01)	0.03* (0.02)	0.05* (0.01)	0.01 (0.01)	0.20* (0.03)	0.27* (0.04)	0.11 <sup>†</sup> (0.06)
Hypothesis 2a: Transportation infrastructure × branching policy				0.04* (0.01)				0.06* (0.01)
Hypothesis 3a: Urbanization × branching policy					0.04** (0.02)			-0.001 (0.03)
Hypothesis 4a: Business competition × branching policy						-0.03* (0.00)		-0.07* (0.01)
Hypothesis 5a: Agrarian presence × branching policy							0.03* (0.00)	-0.02* (0.01)
Transportation infrastructure			-0.01 (0.01)	-0.02** (0.01)	-0.01 (0.01)	-0.01 (0.01)	-0.04* (0.01)	-0.01 (0.01)
Urbanization			-0.19* (0.05)	-0.18* (0.05)	-0.15* (0.05)	-0.23* (0.05)	-0.23* (0.05)	-0.25* (0.05)
Business competition (density)			-0.06* (0.01)	-0.06* (0.01)	-0.05* (0.01)	-0.04* (0.01)	-0.05* (0.01)	-0.04* (0.01)
Agrarian presence			-0.07* (0.01)	-0.08* (0.01)	-0.07* (0.01)	-0.08* (0.02)	-0.07* (0.01)	-0.08* (0.01)
State population	-0.01 (0.01)	-0.01 (0.01)	0.12* (0.01)	0.12* (0.01)	0.11* (0.01)	0.11* (0.01)	0.12* (0.01)	0.10* (0.01)
Per capita income	0.02** (0.01)	0.02* (0.01)	0.03* (0.01)	0.03* (0.01)	0.02* (0.01)	0.02* (0.01)	0.02* (0.01)	0.02* (0.01)
Percent manufacturing	-0.50* (0.17)	-0.38** (0.15)	-0.08 (0.13)	0.03 (0.14)	-0.13 (0.14)	-0.04 (0.13)	-0.09 (0.13)	0.28** (0.14)
Average bank size	0.03* (0.00)	0.03* (0.00)	0.01* (0.00)	0.01* (0.00)	0.01** (0.00)	0.01* (0.00)	0.01** (0.00)	0.02* (0.00)
Square miles	0.00 (0.00)	-0.00 (0.00)	0.00* (0.00)	0.02* (0.00)	0.00** (0.00)	0.00 (0.00)	0.00 (0.00)	0.01* (0.00)
Time trend	0.00* (0.00)	0.00* (0.00)	0.00* (0.00)	0.00* (0.00)	0.00* (0.00)	0.00* (0.00)	0.00* (0.00)	0.00* (0.00)
Pre-Federal Reserve	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)
Post-Depression	0.01 (0.00)	0.01 <sup>†</sup> (0.00)	0.01* (0.00)	0.01* (0.00)	0.01* (0.00)	0.03* (0.00)	0.01* (0.00)	0.02* (0.01)
Constant	-0.09 (0.13)	-0.18 (0.11)	-0.61* (0.09)	-0.61* (0.09)	-0.66* (0.10)	0.56* (0.09)	-0.63* (0.09)	-0.60* (0.09)
R <sup>2</sup>	0.17	0.30	0.51	0.67	0.50	0.54	0.48	0.81

<sup>a</sup> Standard errors are in parentheses; two-tailed for all variables;  $n = 3,893$  for 48 states from 1896 to 1978.

<sup>†</sup>  $p < .10$

\*  $p < .05$

\*\*  $p < .01$

**TABLE 4**  
**External Environments and Bank Location Size, 1896–1978<sup>a</sup>**

Variables	Model 9	Model 10	Model 11	Model 12	Model 13	Model 14	Model 15	Model 16	Model 17	Model 18	Model 19	Model 20
Hypothesis 1b: Branching policy	0.03 (0.02)	0.03 (0.02)	0.03 (0.02)	0.03 (0.02)	0.01 (0.02)	0.03 (0.02)	0.01 (0.02)	0.00 (0.02)	0.06 (0.04)	-0.18 <sup>†</sup> (0.09)	-0.45* (0.16)	-0.65* (0.22)
Hypothesis 2b: Transportation infrastructure × branching policy								-0.04 <sup>†</sup> (0.02)				-0.07** (0.03)
Hypothesis 3b: Urbanization × branching policy									-0.09 (0.08)			0.12 (0.11)
Hypothesis 4b: Business competition × branching policy										0.04** (0.02)		-0.00 (0.03)
Hypothesis 5b: Agrarian presence × branching policy											0.06** (0.01)	0.04* (0.03)
Hypothesis 2c: Transportation infrastructure												
Hypothesis 3c: Urbanization												
Hypothesis 4c: Business competition (density)				1.93* (0.21)			2.48 (0.21)	2.49* (0.21)	2.51* (0.21)	2.51* (0.21)	2.52* (0.21)	2.50* (0.21)
Hypothesis 5c: Agrarian presence					-0.11* (0.02)		-0.10* (0.02)	-0.10* (0.02)	-0.10* (0.02)	-0.12* (0.02)	-0.11* (0.02)	-0.11 (0.03)
State population	0.12* (0.04)	0.12* (0.04)	0.18* (0.04)	0.02 (0.04)	0.20* (0.04)	-0.02 (0.04)	0.22* (0.04)	0.22* (0.04)	0.22* (0.04)	0.22* (0.04)	0.21* (0.04)	0.21* (0.04)
Per capita income	0.29* (0.03)	0.29* (0.03)	0.26* (0.03)	0.28* (0.03)	0.31* (0.03)	0.13* (0.05)	-0.07 (0.05)	-0.07 (0.05)	-0.07 (0.05)	-0.07 (0.05)	-0.07 (0.05)	-0.07 (0.05)
Percent manufacturing	6.54* (0.62)	6.56* (0.62)	7.15* (0.61)	4.36* (0.63)	7.00* (0.61)	6.69* (0.60)	4.93* (0.61)	4.93* (0.61)	4.91* (0.61)	4.93* (0.61)	4.89* (0.60)	4.89* (0.60)
Geographic dispersion	-0.10 (0.09)	-0.11 (0.09)	-0.21** (0.09)	-0.15 <sup>†</sup> (0.09)	-0.33* (0.10)	-0.13 (0.09)	-0.38* (0.10)	-0.36* (0.10)	-0.37* (0.10)	-0.37* (0.10)	-0.39* (0.10)	-0.36* (0.10)
Square miles	0.02 (0.01)	0.02 (0.01)	0.02 <sup>†</sup> (0.01)	0.01 (0.01)	0.02 <sup>†</sup> (0.01)	0.02 <sup>†</sup> (0.01)	0.01 (0.01)	0.01 (0.01)	0.01 (0.01)	0.01 (0.01)	0.01 (0.01)	0.01 (0.01)
Time trend	0.04* (0.00)	0.04* (0.00)	0.05* (0.00)	0.03* (0.00)	0.04* (0.00)	0.04* (0.00)	0.05* (0.00)	0.05* (0.00)	0.04* (0.00)	0.04* (0.00)	0.05* (0.00)	0.05* (0.00)
Pre-Federal Reserve Act	-0.07* (0.01)	-0.07* (0.01)	-0.08* (0.01)	-0.07* (0.01)	-0.07* (0.01)	-0.07* (0.01)	-0.08* (0.01)	-0.08* (0.01)	-0.08* (0.01)	-0.08* (0.01)	-0.08* (0.01)	-0.08* (0.01)
Post-Depression	0.04* (0.01)	0.04* (0.01)	0.03** (0.01)	0.04* (0.01)	0.05* (0.01)	0.04* (0.01)	0.04* (0.01)	0.04* (0.01)	0.04* (0.01)	0.04* (0.01)	0.04* (0.01)	0.04* (0.01)
Constant	3.69* (0.58)	3.64* (0.58)	2.29* (0.61)	4.61* (0.47)	3.03* (0.56)	3.66* (0.53)	3.18* (0.48)	3.12* (0.48)	3.16* (0.48)	3.23* (0.48)	3.35* (0.48)	3.34* (0.49)
R <sup>2</sup>	0.86	0.87	0.87	0.91	0.88	0.87	0.92	0.92	0.92	0.92	0.92	0.92

<sup>a</sup> Standard errors are in parentheses; two-tailed for all variables;  $n = 3,893$  for 48 states from 1896 to 1978.

<sup>†</sup>  $p < .10$

\*  $p < .05$

\*\*  $p < .01$

average bank location size, indicating whether banks in different states with different environmental conditions were likely to pursue the centralized growth strategy. Model 9 is the baseline model. Models 10 through 15 test the main effects of branching policy, transportation technology, urbanization, business competition, and agrarian presence, as predicted by Hypotheses 1b, 2c, 3c, 4c, and 5c, respectively. Models 16 through 19 test whether transportation technology, urbanization, business competition, and agrarian presence moderate the effects of branching policy on average bank location size, as predicted by Hypotheses 2b, 3b, 4b, and 5b, respectively.

Model 10 tests Hypothesis 1b, which predicts that banks in a state with less restrictive branching policy are more likely on average to have smaller bank locations. The estimated coefficient for branching policy is positive and nonsignificant, suggesting no clear relationship between branching policy and average bank location size in a state. However, models 18 and 19 show that when the predicted interaction variables are included, the estimated coefficients for branching policy become negative and at least marginally significant, as is consistent with our prediction. This finding, although not completely in line with our original prediction, nonetheless provides support for our broader thesis that one cannot consider the main effect of a policy independently of the other environmental conditions with which that policy interacts.

Model 11 tests Hypothesis 2c and provides support for the prediction that banks in states with greater transportation infrastructure are less likely on average to have larger locations. In model 12, the estimated coefficient for urbanization is positive and significant as predicted, supporting Hypothesis 3c. The result shows that banks in states with higher urbanization are more likely on average to have larger locations. Model 13 tests Hypothesis 4c, which predicts that banks in states with more intense interbank competition are less likely on average to have larger locations. The estimated coefficient for business competition is negative and significant as predicted, supporting Hypothesis 4c. Model 14 tests Hypothesis 5c, which predicts that banks are more likely on average to have larger locations in states with a stronger agrarian presence. Although the estimated coefficient for agrarian presence is not significant in model 14, it is positive and significant as predicted in model 15, the model with all the hypothesized main effects, supporting Hypothesis 5c. This finding suggests that when two states have the same levels of transportation technology, urbanization, and business competition,

agrarian presence becomes an important factor leading banks to have larger locations.

Model 16 tests Hypothesis 2b, which predicts that the effect of branching policy on bank location size is stronger in a state with a more advanced transportation infrastructure. The estimated coefficient for the interaction between branching policy and transportation technology is negative and significant ( $p < .06$ , two-tailed test), providing marginal support to Hypothesis 2b. Model 16 shows that the effect of branching policy on average bank location size depends on the condition of a state's transportation infrastructure. Figure 1 illustrates this relationship.

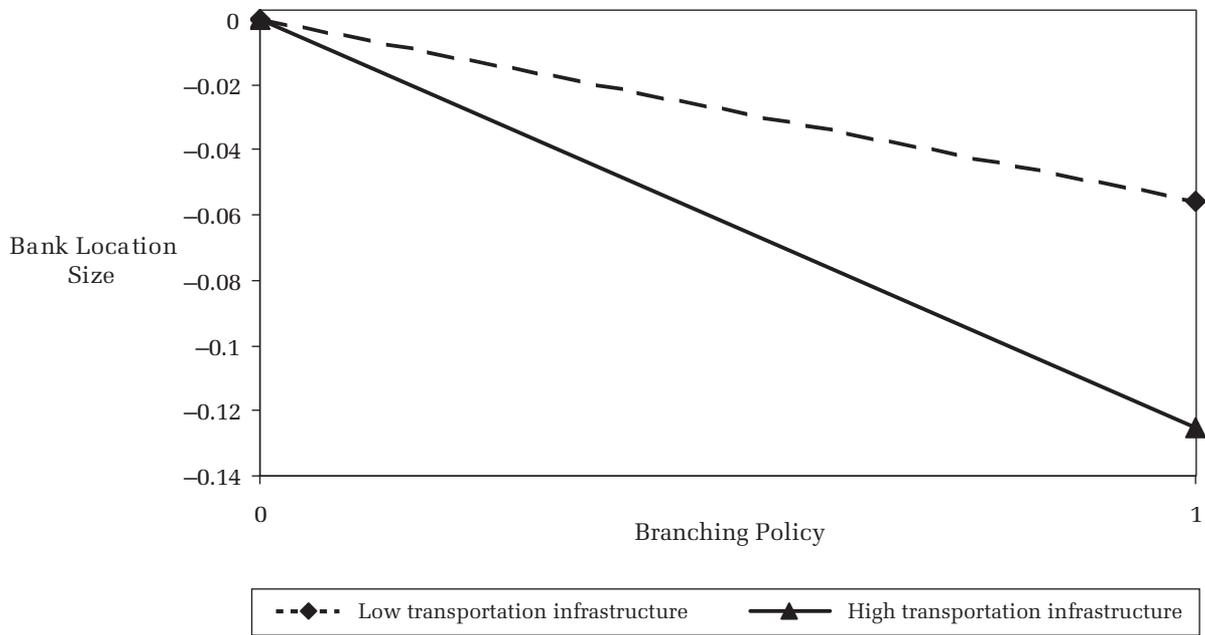
Model 17 tests Hypothesis 3b, which predicts that the negative effect of branching policy on average bank location size is weaker in a state with higher urbanization. The estimated coefficient for the interaction between branching policy and urbanization is not significant; the analysis does not support Hypothesis 3b.

Model 18 tests Hypothesis 4b, which predicts that the negative effect of branching policy on bank average location size is weaker in a state with stronger business competition among banks. The estimated coefficient for the interaction between branching policy and average business competition is positive and significant as predicted, supporting Hypothesis 4b. Although the main effect of branching policy is not significant in models 10 and 15, when the interaction between branching policy and agrarian presence is entered in model 18, the main effect of branching policy becomes marginally significant and negative as predicted. Figure 2 illustrates the moderating effect of business competition.

Model 19 tests Hypothesis 5b, which predicts that the negative effect of branching policy on average bank location size is weaker in a state with a stronger agrarian presence. The estimated coefficient for the interaction between branching policy and agrarian presence is positive and significant as predicted, supporting Hypothesis 5b. Recall that in models 10 and 15, the main effect of branching policy was not statistically significant. However, when the interaction between branching policy and agrarian presence was entered in model 19, the main effect of branching policy became significant and negative as predicted. Figure 3 illustrates the moderating effect of agrarian presence.

To summarize, the two sets of analyses presented above corroborate each other to lend strong support to our arguments. First, there appeared to be a trade-off between two distinct growth strategies for banks during our study period: the environmental conditions we theorize about exhibit uniformly op-

**FIGURE 1**  
**Bank Location Size and the Interaction between Branching Policy and Transportation Infrastructure**

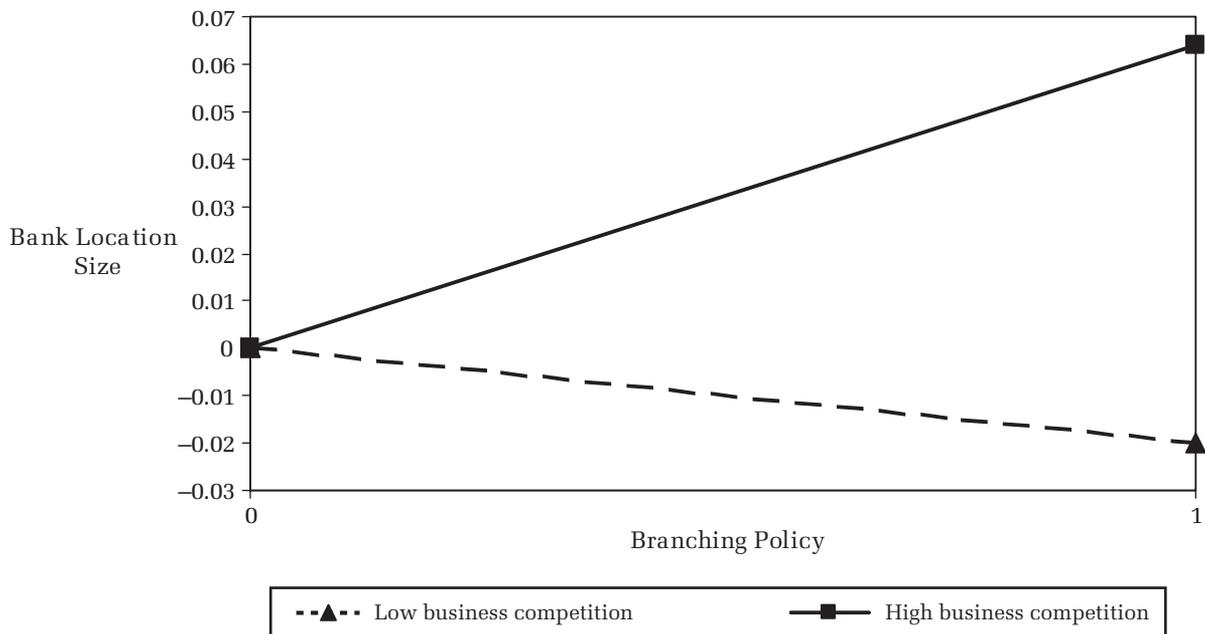


posite effects on bank geographical dispersion and bank location size, which capture the dispersed and the centralized growth strategy, respectively. Second, the environmental conditions that shape the strategy pursued by banks in a given state, and the effects of policy on banks' growth strategy, are highly contingent on technological, economic, and cultural conditions.

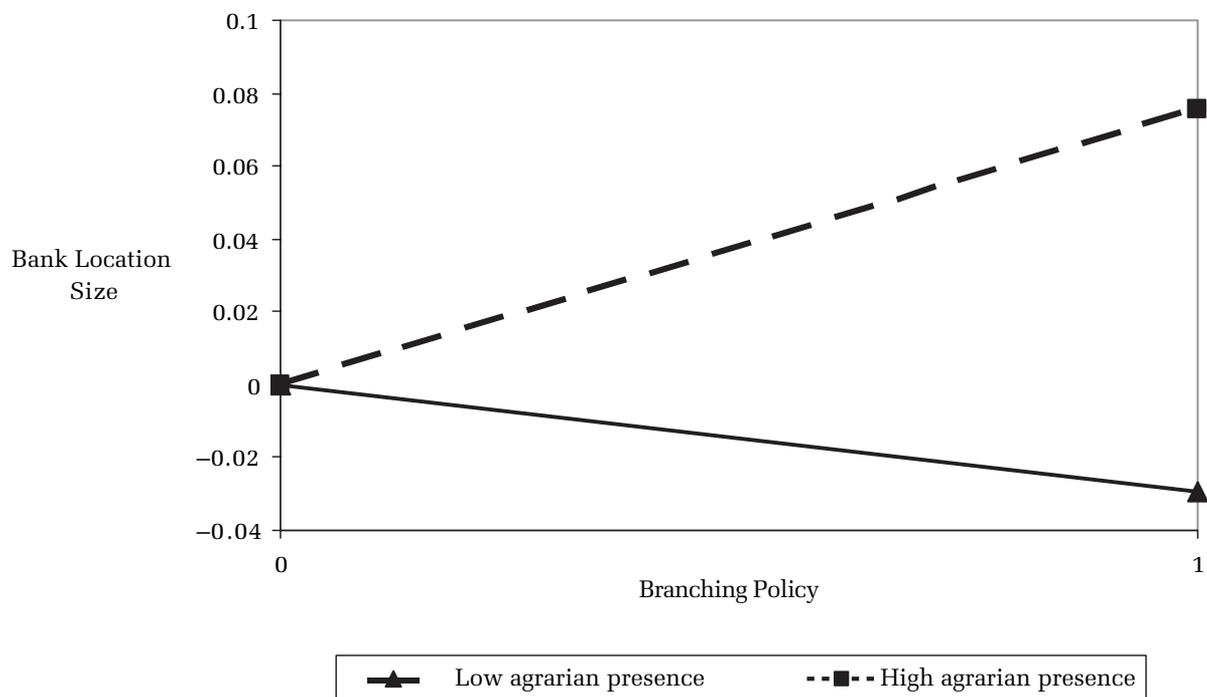
**DISCUSSION AND CONCLUSIONS**

This study was primarily motivated by our interest in understanding policy effects on organizations. Although previous studies have invoked an image of policy as "powerful regardless," we suggest that policy is best understood as "contingent" in the sense that its effects on organizations are

**FIGURE 2**  
**Bank Location Size and the Interaction between Branching Policy and Business Competition**



**FIGURE 3**  
**Bank Location Size and the Interaction between Branching Policy and Agrarian Presence**



likely to depend on the other environmental conditions in which the organizations are embedded.

To investigate our thesis, we examined the growth of U.S. commercial banking in the 20th century. We argued and showed that this growth entailed a trade-off between a centralized strategy of establishing a few large units within a narrow geographic area and a dispersed strategy of establishing a larger number of smaller units spanning a wide geographic area. We further demonstrated that (1) a policy allowing branching in a particular state led banks in that state to pursue the dispersed strategy and (2) this effect became stronger when transportation technology (roadways in particular) was more advanced in that state but became weaker when interbank competition was intense or agrarian presence was strong. The effects of a state's branching policy on banks' pursuit of the centralized strategy were also highly contingent on that state's transportation technology, interbank competition, and agrarian presence. Moreover, both progress in transportation technology and increased interbank competition discouraged banks from pursuing the centralized strategy, but urbanization encouraged it. Together, these findings provide strong support for our arguments about bank growth during the early 20th century. Building on these findings, we now highlight some major implications of this study.

### Public Policy and Organizations

This study contributes to research on how policy affects organizations, an important theme in organizational theory. Previous studies have documented that policy changes often have powerful effects on organizations by creating fundamental shifts in the external environment (e.g., Davis et al., 1994; Dobbin & Dowd, 1997, 2000; Guthrie & Roth, 1999; Haveman et al., 2001; Russo, 2001). Our results, though echoing these studies, also suggest that they might overemphasize the effect of policy changes. This point is important for organizational theory because these prior studies may either misspecify or inaccurately model the effects of policy. We showed that, although the enactment of a state branching policy stimulated banks to grow geographically, the effects of such a policy also depended on its interaction with the state's technological development, economic conditions, and underlying cultural features. Our results lead us to conclude that the environments that organizations face are complex and multifaceted and that a given policy exerts a powerful impact only in the presence of other, supporting factors. Future research may want to focus on explicating the contingent effects of policy on organizational behaviors more generally.

These contingent effects of policy on bank growth in the United States are pictured vividly in

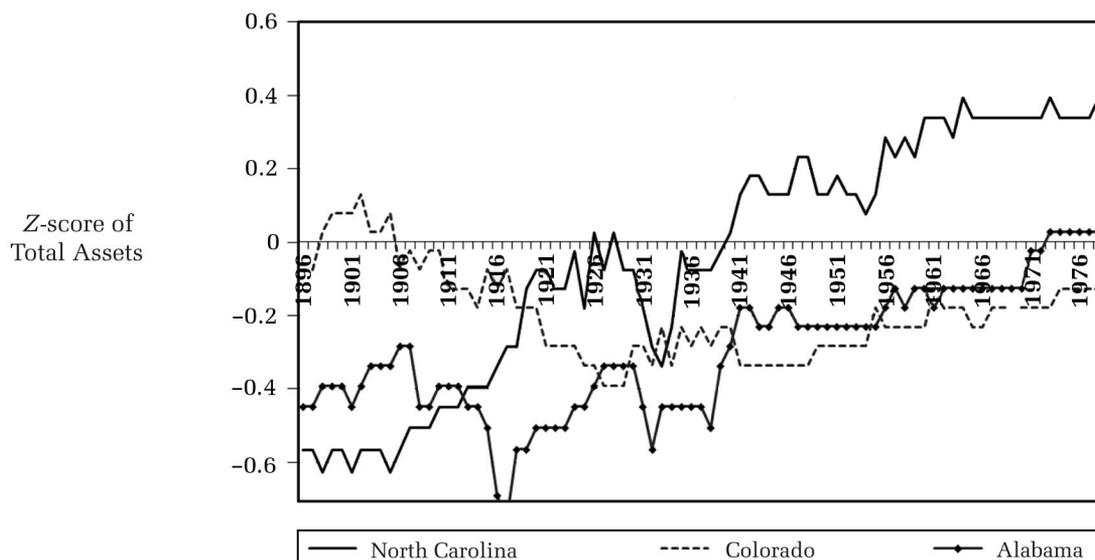
Figure 4, which depicts relative bank size in three states with dramatically different regulatory histories. Throughout the 20th century, North Carolina permitted statewide branching, and Colorado prohibited it; Alabama started as a unit-banking state but initiated limited statewide banking in 1935. The y-axis plots the z-score of total banking assets for each state, which relates each state-year observation to the mean value of bank size in all 48 contiguous states for that year. Although North Carolina allowed statewide branching, the relative size of its banking industry did not surpass those of Colorado and Alabama until the late 1910s, when other environmental features, such as transportation technologies, had improved sufficiently to allow bank expansion. The state's banks gradually increased as transportation technology continued to progress. This pattern suggests that the powerful effect of liberal branching policy on bank growth was not unleashed until other supportive environmental conditions were available. Colorado, which prohibited bank branching for the entire 20th century, remained in the lower half of the distribution, suggesting that its policy did indeed influence (that is, impede) growth, even when other environmental factors advanced. Alabama's banking growth did not begin until after branching policy was liberalized, at which point the state's transportation technologies were already advancing. In line with our broader theoretical points, this suggests that the standard perspective on how public policy impacts bank growth (e.g., Stiroh & Strahan, 2003) may not fully capture this process and that a contingent perspective on policy effects may be more accurate. The

comparison of these three states also suggests the more general point that a contingent perspective is particularly useful in understanding dynamics over time and reinforces our assumption that certain sequences of external changes may have been responsible for the patterns of large firms that we observe today. That is, policy may be the necessary condition for organizational growth, yet it is by no means sufficient in and of itself to assure that growth.

### The Growth of Large Organizations in the 20th Century

This study also has implications for debates on how large-scale U.S. organizations emerged and developed (e.g., Chandler, 1977; Fligstein, 1990; Roy, 1997). First, as noted, prior explanations are largely monocausal, giving prominence to only one set of environmental conditions (policy, technology, economy, or culture). We proposed instead an integrated approach to investigating how different types of environmental conditions affected the growth of large organizations independently and interactively. Our findings largely confirm the value of this approach by showing that the rise of large-scale organizations to a dominant position in U.S. society was a highly complex process unfolding in multifaceted historical environments. The value of our approach is not simply to pool these different environmental conditions together but to show how a contingent perspective on external environments and their influence on organizations provides a more nuanced understanding of where, when, and why large organizations grew.

FIGURE 4  
Relative Size of Banks in Three States, 1896–1978



These findings are also important more generally because they address the significant tension underlying U.S. modernization processes. For example, although dispersed retail outlets have become the norm in the United States, there is still significant local resistance to this dispersion (Marquis & Lounsbury, 2007). Our findings track both sides of this contentious process, the underlying mechanisms that lead to centralization and dispersion, and the features of society that resist the growth of large-scale firms. This debate over centralized versus decentralized political and economic organization has its roots in the core philosophical positions of the two major political parties present at the founding of the United States. The Republicans, led by Thomas Jefferson, preferred decentralized political and economic systems with community-oriented control of banks. The major opposing party, the Federalists, led by Alexander Hamilton, preferred centralized political and economic systems with large, multiple-branch, national banks. Friedland and Alford noted that “the persistent tendency for Americans to construct decentralized state structures, to separate governmental powers, to prevent the emergence of national banks . . . derives in part from a culturally contingent concept of power, embedded in a notion of liberty derived from the original settlers’ experience of a highly intrusive English state” (1991: 246). This historical tension is underexplored in examinations of how U.S. industries evolved and are currently structured. Although nationally oriented establishments, such as Wal-Mart and Starbucks, have made extensive inroads in developing large chain organizations, they have also been targets of the negative sentiments of community actors wanting to maintain local character and local economic bases (Ingram & Rao, 2004). Our study helps expose this fundamental tension; future researchers may want to examine the recursive tension between culture and public policy on this issue and how it influences other industries.

Studying the growth of a service industry such as banking contributes to understanding of the growth of large-scale service organizations. In spite of the dramatic increase in service firms in the second half of the 20th century (Nohria, Dyer, & Daltzell, 2002), much of the theorizing about the growth of large U.S. organizations has been about manufacturing firms. Our focus on the underlying mechanisms and processes that enable or constrain growth for service firms contributes to a fuller understanding of the rise of large organizations by extending the focus beyond manufacturing firms. Our findings from the banking industry can be generalized to a number of other major service industries. For example, hotel services, like banking ser-

vices, are characterized by the simultaneity of production and distribution/consumption. As such, they depend on the geographic distribution of customers—usually travelers. Prior research suggests that the growth strategy for hotels, and the development of hotel chains and motels, also changed as technical and legal environments developed in the 20th century (Gomes, 1985; Ingram, 1996; Seely, 1987). However, our theory and findings may not be fully generalizable to all types of service firms, a category that includes many industries with distinctive characteristics. For example, the mutual fund industry is similar to banking in that it provides financial services, yet it is very different in that its products are individually customized and are created and managed by a centralized pool of expert labor. As a result, the mutual fund industry is centralized in locations (New York and Boston) that have deep pools of professionals as well as healthy markets for such products (e.g., Lounsbury, 2007). Similarly, the growth dynamics of service industries that rely on professional labor, such as law and accounting, are probably different from those of banking (Greenwood & Suddaby, 2006). How large-scale organizations appeared in such service industries may therefore warrant separate consideration in future studies.

### Implications for Policy Makers

The contingent effects of branching policy on banks’ growth strategies suggest that when policy makers attempt to influence a society and economy, they need to understand how technological, economic, and cultural conditions might enable or constrain their policies. This awareness suggests two possible strategies in response. Policy makers could divide their policy objectives into stages and begin by implementing those portions of the policy that are supported by existing conditions. Alternatively, policy makers could initially target their policy to specialized geographic areas with more supportive environments. Both these approaches are exemplified by the Chinese government’s economic reformation policy in the 1980s and 1990s, which gradually introduced market principles to a planned economy (Guthrie, 1999). The reforms were carried out in phases and, early on, the Chinese created “special economic zones”—such as Shenzhen, which borders Hong Kong—to be areas of special reform.

Our analysis furthermore suggests a particular link between technology and policy that is important for policy makers, particularly those in emerging economies. Improvements to the technical infrastructure might be necessary if certain policy measures are to have their desired effects. Certainly many more tech-

nological tools are available today than in the early 20th century, and the extent to which a given policy's effectiveness depends on technology in the contemporary economy is an open question. But the transformative impact of modern technology, such as the computer and the information technology that goes with it, suggests that technology still constitutes an important condition for the effectiveness of policy. For example, although interstate bank growth following 1978 is clearly the result of a significant policy change, some have suggested that information technology advances also contributed significantly to that growth (Kroszner & Strahan, 1999). This tension may be particularly salient in emerging economies. For example, despite the Indian government's extensive regulatory measures intended to encourage greater rural coverage by banks, approximately 70 percent of the rural population still lacks access to a local bank, partly for lack of such technological infrastructure as transportation (Timmons, 2007).

Prior research has shown how underlying cultural factors impact policy and its effects (Dobbin, 1994); our findings reveal how the deep interaction between policy and culture may have practical implications as well. For example, one implication of our results is that policy makers should take underlying cultural factors into account when anticipating the intended effects of policy. Recent research has shown how economic and social environments are highly complex (Friedland & Alford, 1991; Lounsbury, 2007; Scott, Ruef, Mendel, & Caronna, 2000) and thus, though policy may reflect majority will, there may be significant pockets of resistance or social movements that condition the intended effects (Davis, McAdam, Scott, & Zald, 2005; Schneiberg et al., 2008). Thus, identifying the heterogeneous cultural beliefs and their organization may be important when implementing policy. For example, it is surprising that lawmakers focused so extensively on the efficiency aspects of bank consolidation when they passed the Riegle-Neal Interstate Banking and Branching Efficiency Act in 1994. Ignoring the cultural dynamics underlying local banking led to the irony that this act, which had been designed to encourage large banks, resulted in a flowering of smaller community banks (Marquis & Lounsbury, 2007).

Although 1978—the beginning of interstate competition in U.S. banking—was a natural breakpoint for our analyses, a lingering question is the degree to which the subsequent banking market reflected the states' varied historical backgrounds of policy, technology, and economics. Anecdotal evidence, such as the fact that North Carolina and Ohio are headquarters states for large interstate chains, suggests that the environmental trajectories of certain states may have conferred advantages to their

banks. Similarly, other researchers have suggested that understanding the disparate historical backgrounds of firms and industries across nations can provide traction on questions of global competitiveness and might help explain how some firms come to dominate global environments (North, 1990). Japan's longtime emphasis on state sponsorship led to international success in the automotive and electronics industries, while Germany came to dominate the synthetic dye industry as a result of the lack of patent controls relative to Britain and France (Murmans, 2003). A more recent example is a debate within the European Union about the status of companies and industries that previously enjoyed significant state support (*Economist*, 2004; Theil, 2004), suggesting that these firms have advantages attributable to their historical backgrounds. Thus, a further implication—extending our findings to a more general level and suggesting some contemporary implications—is that the histories of firms' external environments may be essential to understanding their current structure and success.

## REFERENCES

- Abrams, B. A., & Settle, R. F. 1993. Pressure-group influence and institutional change: Branch-banking legislation during the Great Depression. *Public Choice*, 76: 687–705.
- Akhavain, J., Goldberg, L. G., & White, L. J. 2004. Small banks, small business, and relationships: An empirical study of lending to small farms. *Journal of Financial Services Research*, 26: 254–261.
- American Institute of Banking (AIB). 1923. *Proceedings of annual convention*. New York: AIB.
- Barnett, W. P., & Carroll, G. R. 1993. How institutional constraints affected the organization of early American telephony. *Journal of Law, Economics and Organization*, 9: 98–126.
- Barney, J. B. 1986. Strategic factor markets: Expectations, luck, and business strategy. *Management Science*, 32: 1231–1241.
- Bartley, T., & Schneiberg, M. 2002. Rationality and institutional contingency: The varying politics of economic regulation in the fire insurance industry. *Sociological Perspectives*, 45: 47–79.
- Baum, J. A. C., & Mezas, S. J. 1992. Localized competition and organizational failure in the Manhattan hotel industry, 1898–1990. *Administrative Science Quarterly*, 37: 580–604.
- Berger, A., Kashyap, A., & Scalise, J. 1995. The transformation of the U.S. banking industry: What a long, strange trip it's been. In W. Brainard & G. L. Perry (Eds.), *Brookings papers on economic activity*, vol. 2: 55–218. Washington DC: Brookings Institution.

- Bradford, F. 1940. *The legal status of branch banking in the United States*. New York: American.
- Brandeis, L. D. 1914. *Other people's money: And how the bankers use it*. New York: F.A. Stokes.
- Calomiris, C. 1993. Regulation, industrial structure, and instability in U.S. banking: A historical perspective. In M. Klausner & L. J. White (Eds.), *Structural change in banking*: 19–115. New York: New York Business One/Irwin Publishing.
- Campbell, J. L., & Lindberg, L. N. 1990. Property rights and the organization of economic activity by the state. *American Sociological Review*, 55: 634–647.
- Carman, J. M., & Langeard, E. 1980. Growth strategies for service firms. *Strategic Management Journal*, 1: 7–22.
- Carroll, G., & Hannan, M. T. 2000. *The demography of corporations and industries*. Princeton, NJ: Princeton University Press.
- Carroll, G. R., & Swaminathan, A. 2000. Why the microbrewery movement? Organizational dynamics of resource partitioning in the U.S. brewing industry. *American Journal of Sociology*, 106: 715–762.
- Chandler, A. D., Jr. 1977. *The visible hand: The managerial revolution in American business*. Cambridge, MA: Harvard University Press.
- Chapman, J. M., & Westerfield, R. B. 1942. *Branch banking: Its historical and theoretical position in America and abroad*. New York: Harper.
- Collis, C. W. 1926. *The branch bank question*. New York: MacMillan.
- Comerica Bank. 1999. *Promises kept: The story of Comerica, 1849–1999*. Detroit: Comerica Bank.
- Covington, H., & Ellis, M. 1993. *The story of NationsBank*. Chapel Hill: University of North Carolina Press.
- Davis, G. F., Diekmann, K. A., & Tinsley, C. H. 1994. The decline and fall of the conglomerate firm in the 1980s: The deinstitutionalization of an organizational form. *American Sociological Review*, 59: 547–570.
- Davis, G. F., & Mizruchi, M. S. 1999. The money center cannot hold: Commercial banks in the U.S. system of corporate governance. *Administrative Science Quarterly*, 44: 215–239.
- Davis, G. F., McAdam, D., Scott, W. R., & Zald, M. N. (Eds.). 2005. *Social movements and organization theory*. New York: Cambridge University Press.
- De Tocqueville, A. 1835/2000. *Democracy in America*. New York: Bantam.
- Dobbin, F. 1994. *Forging industrial policy: The United States, Britain, and France in the railway age*. New York: Cambridge University Press.
- Dobbin, F., & Dowd, T. J. 1997. How policy shapes competition: Early railroad foundings in Massachusetts. *Administrative Science Quarterly*, 42: 501–529.
- Dobbin, F., & Dowd, T. J. 2000. The market that antitrust built: Public policy, private coercion, and railroad acquisitions, 1825 to 1922. *American Sociological Review*, 65: 631–657.
- Dodd, D. 1993. *Historical statistics of the states of the United States*. Westport, CT: Greenwood Press.
- Economist*. 2004. A smaller national champion: French industrial policy. 371: 59–61.
- Fischer, G. C. 1968. *American banking structure*. New York: Columbia University Press.
- Fishback, P. V. M., & Kantor, S. E. 2000. *A prelude to the welfare state: The origins of workers' compensation*. Chicago: University of Chicago Press.
- Fligstein, N. 1990. *The transformation of corporate control*. Cambridge, MA: Harvard University Press.
- Flood, M. D. 1998. *United States historical data on bank market structure, 1896–1955*. Computer file, ICPSR version; M. D. Flood [Ed.], Concordia University, Montreal [producer]; Interuniversity Consortium for Political and Social Research, Ann Arbor, MI [distributor].
- Friedland, R., & Alford, R. 1991. Bringing society back in: Symbols, practices and institutional contradictions. In W. W. Powell & P. J. DiMaggio (Eds.), *The new institutionalism in organizational analysis*: 232–262. Chicago: University of Chicago Press.
- Gomes, A. J. 1985. *Hospitality in transition*. New York: American Hotel & Motel Association.
- Greene, W. H. 2008. *Econometric analysis* (6th ed.). Upper Saddle River, NJ: Pearson/Prentice Hall.
- Greenwood, R., & Suddaby, R. 2006. Institutional entrepreneurship in mature fields: The big five accounting firms. *Academy of Management Journal*, 49: 27–48.
- Greve, H. R. 2000. Market niche entry decisions: Competition, learning, and strategy in Tokyo banking, 1894–1936. *Academy of Management Journal*, 43: 816–836.
- Greve, H. R. 2002. An ecological theory of spatial evolution: Local density dependence in Tokyo banking, 1894–1936. *Social Forces*, 80: 847–879.
- Guthrie, D. 1999. *Dragon in a three-piece suit: The emergence of capitalism in China*. Princeton, NJ: Princeton University Press.
- Guthrie, D., & Roth, L. M. 1999. The state, courts, and maternity policies in U.S. organizations: Specifying institutional mechanisms. *American Sociological Review*, 64: 41–63.
- Hampton, A. 2004. Chain stores locked out: Supes give neighbors power over businesses. *San Francisco Examiner*, March 24.
- Hannan, T. H., & Prager, R. 1998. The relaxation of entry barriers in the banking industry: An empirical investigation. *Journal of Financial Services Research*, 14: 171–188.
- Haveman, H. A., & Rao, H. 1997. Structuring a theory of moral sentiments: Institutional and organizational co-

- evolution in the early thrift industry. *American Journal of Sociology*, 102: 1606–1651.
- Haveman, H. A., & Nonnemaker, L. 2000. Competition in multiple geographical markets: The impact on growth and market entry. *Administrative Science Quarterly*, 45: 232–267.
- Haveman, H. A., Russo, M. V., & Meyer, A. D. 2001. Organizational environments in flux: The impact of regulatory punctuations on organizational domains, CEO succession, and performance. *Organization Science*, 12: 253–273.
- Haveman, H. A., Rao, H., & Paruchuri, S. 2007. The winds of change: The progressive movement and the bureaucratization of thrift. *American Sociological Review*, 72: 117–142.
- Ingram, P. L. 1996. *The rise of hotel chains in the United States, 1896–1980*. New York: Garland.
- Ingram, P. L., & J. A. C. Baum. 1997. Chain affiliation and the failure of Manhattan hotels, 1898–1980. *Administrative Science Quarterly*, 41: 68–102.
- Ingram, P., & Simons, T. 2000. State formation, ideological competition, and the ecology of Israeli workers' cooperatives, 1920–1992. *Administrative Science Quarterly*, 45: 25–53.
- Ingram, P., & Rao, H. 2004. Store wars: The enactment and repeal of anti-chain-store legislation in America. *American Journal of Sociology*, 110: 446–487.
- James, M., & James, B. 1954. *Biography of a bank: The story of Bank of America*. New York: Harper.
- Klebaner, B. 1990. *American commercial banking: A history*. Boston: Twayne.
- Kroszner, R. S., & Strahan, P. E. 1999. What drives deregulation? Economics and politics of the relaxation of bank branching restrictions. *Quarterly Journal of Economics*, 114: 1359–1398.
- Langeard, E., Bateson, J. E. G., Lovelock, C. H., & Eiglier, P. 1981. *Marketing of services: New insights from consumers and managers*. Report No. 81–104, Marketing Science Institute, Cambridge, MA.
- Lee, E., Miller, A., Brainerd, C., & Easterlin, R. 1957. *Population redistribution and economic growth, United States, 1870–1950*. Philadelphia: American Philosophical Society.
- Lipset, S. M. 1963. *The first new nation: The United States in historical and comparative perspective*. New York: Basic.
- Lounsbury, M., Hirsch, P., & Klinkerman, S. 1998. Institutional upheaval and performance variation: A theoretical agenda and illustration from the deregulation of commercial banking. In J. A. C. Baum (Ed.), *Advances in strategic management*, vol. 15: 129–146. Greenwich, CT: JAI Press.
- Lounsbury, M. 2007. A tale of two cities: Competing logics and practice variation in the professionalizing of mutual funds. *Academy of Management Journal*, 50: 289–307.
- Marquis, C., & Lounsbury, M. 2007. Vive la resistance: Consolidation and community-level professional counter-mobilization in U.S. banking. *Academy of Management Journal*, 50: 799–820.
- Millimet, D. 2001. *What is the difference between “endogeneity” and “sample selection bias”?* <http://www.stata.com>.
- Mills, C. W. 1956. *The power elite*. New York: Oxford University Press.
- Mintz, B., & Schwartz, M. 1985. *The power structure in American business*. Chicago: University of Chicago Press.
- Mizruchi, M. S. 1982. *The structure of American corporate networks: 1904–1974*. Beverly Hills, CA: Sage.
- Mizruchi, M. S. 1992. *The structure of corporate political action: Interfirm relations and their consequences*. Cambridge, MA: Harvard University Press.
- Mizruchi, M. S., Stearns, L. B., & Marquis, C. 2006. The conditional nature of embeddedness: A study of borrowing by large U.S. firms, 1973–1994. *American Sociological Review*, 71: 310–333.
- Murmann, J. P. 2003. *Knowledge and competitive advantage: The coevolution of firms, technology, and national institutions*. Cambridge, U.K.: Cambridge University Press.
- Nadler, D. A., & Tushman, M. L. 1997. *Competing by design: The power of organizational architecture*. New York: Oxford University Press.
- Nohria, N., Dwyer, D., & Dalzell, F. 2002. *Changing fortunes: The rise and fall of the industrial corporation*. New York: Wiley.
- North, D. C. 1981. *The economic growth of the United States, 1790–1860*. Englewood Cliffs, NJ: Prentice-Hall.
- North, D. C. 1990. *Institutions, institutional change, and economic performance*. Cambridge, U.K.: Cambridge University Press.
- Perrow, C. 2002. *Organizing America: Wealth, power, and the origins of corporate capitalism*. Princeton, NJ: Princeton University Press.
- Peteraf, M. A. 1993. The cornerstones of competitive advantage: A resource-based view. *Strategic Management Journal*, 14: 179–191.
- Porter, M. 1980. *Competitive strategy*. New York: Free Press.
- Robertson, R. M. 1968. *The comptroller and bank supervision*. Washington, DC: Office of the Comptroller of the Currency.
- Roe, M. J. 1994. *Strong managers, weak owners: The political roots of American corporate finance*. Princeton, NJ: Princeton University Press.
- Roy, W. 1997. *Socializing capital: The rise of the large*

- industrial corporation in America*. Princeton, NJ: Princeton University Press.
- Russo, M. V. 2001. Institutions, exchange relations, and the emergence of new fields: Regulatory policies and independent power production in America, 1978–1992. *Administrative Science Quarterly*, 46: 57–86.
- Schneiberg, M., & Bartley, T. 2001. Regulating American industries: Markets, politics, and the institutional determinants of fire insurance regulation. *American Journal of Sociology*, 107: 101–146.
- Schneiberg, M. 2002. Organizational heterogeneity and the production of new forms: Politics, social movements and mutual companies in American fire insurance, 1900–1930. In M. Lounsbury & M. Ventresca (Eds.), *Research in the sociology of organizations*, vol. 19: 39–89. Greenwich, CT: JAI.
- Schneiberg, M., King, M., & Smith, T. 2008. Social movements and organizational form: Cooperative alternatives to corporations in the American insurance, dairy and grain industries. *American Sociological Review*, 73: 635–667.
- Scott, W. R., Ruef, M., Mendel, P. J., & Caronna, C. A. 2000. *Institutional change and healthcare organizations: From professional dominance to managed care*. Chicago: University of Chicago Press.
- Scott, W. R., & Davis, G. F. 2007. *Organizations and organizing: Rational, natural, and open systems perspectives*. Upper Saddle River, NJ: Pearson/Prentice Hall.
- Seely, B. E. 1987. *Building the American highway system: Engineers as policy makers*. Philadelphia: Temple University Press.
- Southworth, S. D. 1928. *Branch banking in the United States*. New York: McGraw-Hill.
- Stiroh, K. J., & Strahan, P. 2003. Competitive dynamics of deregulation: Evidence from U.S. banking. *Journal of Money, Credit and Banking*, 35: 801–828.
- Theil, S. 2004. What could they be thinking? France riles neighbor Germany with its efforts to promote “national champion” companies. *Newsweek*, June 21: 38.
- Thompson, J. D. 1967. *Organizations in action*. New York: McGraw Hill.
- Timmons, H. 2007. An antiquated banking system holds back development in India. *International Herald Tribune*, March 16.
- Upah, G. D. 1980. Mass marketing in service retailing: A review and synthesis of major methods. *Journal of Retailing*, 56(3): 59.
- U.S. Department of Agriculture. *Historical database on farms*. [http://www.nass.usda.gov/Statistics\\_by\\_State/index.asp](http://www.nass.usda.gov/Statistics_by_State/index.asp). Accessed January 27.
- Wade, J. B., Swaminathan, A., & Saxon, M. S. 1998. Normative and resource flow consequences of local regulations in the American brewing industry, 1845–1918. *Administrative Science Quarterly*, 43: 905–935.
- Welldon, S. 1910. *Digest of state banking statutes*. Washington, DC: National Monetary Commission.
- Whipple, H. 1935. Credit management in branch banking. *Banking* (four part series): February: 20–21, 68; March: 20–21, 69; April: 42–43, 70; May: 42–43, 84–85.
- Wholey, D. R., & Sanchez, S. M. 1991. The effects of regulatory tools on organizational populations. *Academy of Management Review*, 16: 743–767.
- Wright, R. E. 2001. *Origins of commercial banking in America, 1750–1800*. Lanham, MD: Rowman & Littlefield.
- Zeithaml, V. A., Parasuraman, A., & Berry, L. L. 1985. Problems and strategies in services marketing. *Journal of Marketing*, 49: 33–46.

## APPENDIX

### Assembling Data on Historical Intrastate Banking Laws

Historical data on intrastate banking regulations for the 48 contiguous U.S. states were collected from numerous sources. A survey by the Comptroller of the Currency, reported in Chapman and Westerfield (1942), contains information on branching regulations in 1896. We used this survey, cited by a number of sources as the first survey of branch banking in the United States, as our starting point in compiling histories of bank laws. For this early period, we also examined the *Digest of State Banking Statutes* compiled in 1910 by Welldon. Bradford's (1940) *The Legal Status of Branching in the United States* contains data from a periodic publication of the Federal Reserve for the years 1910, 1924, 1929, 1932, 1936, and 1939. We also collected data from the Federal Reserve publication, “State Laws Relating to Branch Banking” (*Federal Reserve Bulletin*, March 1925, April 1930, July 1932, November 1936, October 1939, July 1951). Fischer's (1968: 62–63) state-by-state breakdown of intrastate banking and regulations between 1924 and 1967 documents the years of legal change. The Federal Reserve's *Compilation of Federal and State Statutes Relating to Branch Banking*, published in December 1956 and October 1967, contains the statutes at those times. For the period after 1967, we used *A Profile of State-Chartered Banking* (various years), published biannually by the Conference of State Bank Supervisors. Berger, Kashyap, and Scalise (1995) summarized laws since 1960, and Hannan and Prager's (1998) “The Relaxation of Entry Barriers in the Banking Industry: An Empirical Investigation” reports data from 1986 to 1994. For some of the earlier years for which we had to make assumptions about branching regulations, we relied on Fischer (1968), who maintains that regulation during this period was in many cases by custom rather than law. We followed his assessment of the type of branching enforced in a given state. For the few cases for which we did not have branch-law information for a particular year, we assumed the legal history to be continuous (e.g., if we had information that Illinois was a unit-banking state in 1911 and 1915, we assumed it to be a unit-banking state from 1912 to 1914).



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