

# ACQUISITIONS AS EXAPTATION: THE LEGACY OF FOUNDING INSTITUTIONS IN THE U.S. COMMERCIAL BANKING INDUSTRY

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**This study focuses on how founding institutions impact intraorganizational capabilities and how such imprints may have different external manifestations in subsequent historical eras. We introduce the concept of *exaptation* to organizational theory, identifying an important process whereby the historical origin of a capability differs from its current usefulness. Three founding conditions—branching policy, modernization, and political culture—influenced banks' development of capabilities for managing dispersed branches, and these capabilities subsequently led to variation in banks' propensity to engage in acquisitions.**

Men make their own history, but they do not make it as they please . . . but under circumstances existing already, given and transmitted from the past.

-Karl Marx

Why and how does the past continue to influence the present? In a classic sociological statement, Stinchcombe theorized that organizations founded in a given external environment “must construct their social systems with the social resources available” and that their social systems (e.g., internal structures, processes, and cultural features) maintain this founding imprint primarily because “traditionalizing forces, the vesting of interests, and . . . ideologies may tend to preserve the structure” (1965: 168–169). Subsequent organizational studies have supported what has come to be known as Stinchcombe’s imprinting hypothesis regarding the enduring influence of founding environments. For example, differences in founding conditions at least partly predict contemporary variation in firm strategies (Boeker, 1988; Kimberly, 1975), firm growth (Eisenhardt & Schoonhoven, 1990), rates of organizational change (Tucker, Singh, & Meinhard, 1990), organizational structure (Meyer & Brown,

1977), and organizational mortality (Carroll & Hannan, 1989; Romanelli, 1989; Swaminathan, 1996).

But research building on Stinchcombe’s insight has been surprisingly narrow, focusing mainly on resource and market environments that are directly related to organizations’ economic performance and competitiveness (Johnson, 2007; Lounsbury & Ventresca, 2002), such as population density that affects organizational resource environments (Carroll & Hannan, 1989; Swaminathan, 1996), industry sales and concentration (Eisenhardt & Schoonhoven, 1990; Romanelli, 1989), market stages (Eisenhardt & Schoonhoven, 1990), and technology (Marquis, 2003). Although such environments are important, they are only a small portion of the “richly textured n-dimensional space in which organizations navigate” (Lounsbury & Ventresca, 2002: 3). Relatively little attention has been paid to other essential components of a firm’s environment, such as public policy and cultural factors (Scott, 2001; Stinchcombe, 1965). As Johnson observed, institutional environments at founding, especially deep-seated beliefs and norms, “appear . . . not only in the form of resources that can be strategically mobilized but also in the form of schemas and discourses” (2007: 118) that have a persistent subsequent impact on organizations. Thus, Lounsbury and Ventresca called for revisiting Stinchcombe’s (1965) statement about social structure in order to stimulate more “institutionally-rich studies” (2002: 3).

Such a focus can fill critical gaps in understanding of the imprinting of founding environments and contribute to institutional research by showing

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how and why *past* institutional environments continue to influence contemporary organizational behaviors. Prior institutionally oriented imprinting research has only shown that firms founded in different time periods—and therefore presumably different environments—exhibit variation in their contemporary structures and behaviors (Kimberly, 1975; Meyer & Brown, 1977; Tucker, Singh, & Meindard, 1990). But attempting to discern institutional influences through time period effects only roughly captures founding institutional conditions (Schneiberg & Clemens, 2006). More importantly, as Johnson (2007) noted, a limitation of imprinting research is that the main focus is on demonstrating the links between macrolevel conditions at founding and subsequent organizational outcomes while remaining largely speculative about the intraorganizational processes that create the observed links.

This study responds to this critique and to Lounsbury and Ventresca's (2002) call to reorient imprinting research to be more "institutionally-rich" by identifying and theorizing intraorganizational processes through which founding institutional environments imprint organizations. Institutional environments, be they formal rules such as public policy and laws (North, 1990; Scott, 2001) or informal beliefs and norms reflected in culture (Douglas, 1986; Meyer & Rowan, 1977; Selznick, 1949), explicitly or implicitly delineate behavioral boundaries for organizations. When entrepreneurs adapt to external pressures at the founding of their organizations, institutional environments (e.g., public policy and political culture that are present at the time of founding) are likely to be internalized as they are reflected in organizational processes, routines, structures, and cultural templates, which broadly constitute organizational capabilities (Helfat, 2003; Winter, 2003). These organizational capabilities frequently are institutionalized and thus persist as they become repositories of organizational knowledge (Baron, Hannan, & Burton, 1999; Kogut & Zander, 1992; Kriauciunas & Kale, 2006; Nelson & Winter, 1982; Tripsas, 1997), and since actors in organizations become cognitively committed to inherited cultural scripts and routines (David 1994; Johnson, 2007; Reger & Palmer, 1996; Selznick, 1949; Zucker, 1977). Because of these processes of intraorganizational inertia, the legacy of founding institutional conditions is imprinted in organizations.

But institutionalized organizational capabilities, developed as adaptive responses to founding institutional conditions, may also be *exapted* for new uses that are different from original uses but made possible by external environmental changes. "Exaptation," a concept developed by evolutionary bi-

ologists, refers to a process in which *features adapted for a particular purpose in a particular environment are used for another purpose in a subsequent environment* (Gould, 1980, 1991). For example, the bladder that fish developed initially for buoyancy during swimming subsequently became usable as a lung, allowing animals to breathe on land. Similarly, the compact disc, originally conceived as a more durable replacement for vinyl phonograph records, subsequently became used as a data storage medium for computers (Dew, Sarasvathy, & Venkataraman, 2004). We find that imprinted capabilities originally developed for bank branch management became useful for a new purpose—bank acquisition management and integration—after an environmental shift. We thus uncover a rarely attended-to imprinting phenomenon: deeply established and often unobservable organizational capabilities developed as adaptive responses to founding conditions may result in different external manifestations as environmental conditions change. In previous studies, imprinting effects have been assumed to be shown by the same external features or behaviors of firms being maintained entirely or partially over time (e.g., Boeker, 1988; Meyer & Brown, 1977), obscuring less visible and often unanticipated manifestations of founding imprints.

Our empirical context is the U.S. banking industry, which has a number of features useful for investigating our theoretical issues. First, historically, federal and state-level legislation has limited banks' activities to the state in which they were headquartered. As a result, the 48 contiguous U.S. states were characterized by unique institutional environments before deregulation of the industry in 1978, so the industry constituted a natural laboratory in which to investigate how founding institutional environments imprinted organizations. Two particular institutional conditions were important for bank operation and growth: state branching policy, which governed the extent to which banks could establish branches outside of the city in which they were headquartered, and a political culture that constituted a resistance to the encroachment of large corporations. The process of modernization enabled banks to take advantage of increasingly expansive public policy, but cultural beliefs that valorized community control of banking limited bank expansion (Marquis & Huang, 2009; Roe, 1994; Schneiberg, King, & Smith, 2008). We highlight two particular manifestations of the specific political culture prevalent at the time of the founding of many banks—local agrarianism and the Progressive movement—and examine: (1) social movements of agrarians mobilized by the Grange

(Schneiberg et al., 2008), (2) the presence of actors that identified with agrarian values (Marquis & Huang, 2009; Marquis & Lounsbury, 2007), and (3) popular opinion aligned with Progressivism (Haveman, Rao, & Paruchuri, 2007).

Second, banks founded in states in which institutional environments encouraged them to establish many branches were more likely to develop the necessary capabilities for managing these branches at founding. To the extent that these capabilities could be “exapted” to help a bank realize acquisition management and integration, seen at the time to be a significant competitive advantage (Winter & Szulanski, 2001; Zollo & Winter, 2002), the period following the industry deregulation starting in 1978 provides a rare opportunity to detect the imprinted capabilities that resulted from banks’ founding institutional environments. As we theorize and analyze below, some banks, because of founding institutional environments that fostered or retarded the development of capabilities for managing dispersed branches, may have been better equipped than other banks to compete via acquisition following deregulation.

We used multiple methods and a number of research strategies to establish that founding institutional environments imprinted banks by creating variation in their development of the capabilities needed to manage dispersed branches. Given the extremely long study window necessary for imprinting research, it was not possible to measure organizational capabilities directly for each bank. So, first, we conducted extensive historical analyses of four different types of materials to understand the external environments of early U.S. banks and how they differed in their organizational capabilities: (1) early banking industry periodicals, (2) historical series of early bank annual reports, (3) proceedings of conferences on banking operations and publications of state and national banking associations, and (4) secondary sources on banking history, banking processes, and individual bank histories. We used these materials to ground our hypotheses.<sup>1</sup> Second, our analytical strategy was to develop corollary hypotheses to triangulate and elaborate the underlying imprinting mechanisms. Besides theorizing about the effects of founding institutional conditions, we considered modernization processes as contingencies to our hypothesized policy effects, as previous studies have sug-

gested (e.g., Haveman & Rao, 1997; Marquis & Huang, 2009). Finally, we quantitatively analyzed a database of over 200,000 observations of the approximately 25,000 U.S. banks that existed from 1978 to 2001. To account for plausible alternative explanations, we included many relevant control variables and conducted supplementary analyses to more closely examine the proposed mechanism that created the imprinting effect.

Below, we develop historically informed theory and hypotheses about the effect of founding public policy and political cultural environments on banks’ intraorganizational capabilities and how those capabilities can be useful in a subsequent historical environment that encourages acquisitions. Our results generally support our hypotheses. Taken as a whole, the broader implications of our contributions are that institutions have a complex and chronologically multilayered influence on organizations: Organizational behavior is shaped by both present and past institutional pressures, and both influences operate through intraorganizational processes.

#### **FOUNDING INSTITUTIONS, EXAPTATION, AND ACQUISITIONS IN THE U.S. COMMERCIAL BANKING INDUSTRY**

Since the late 1970s, the numerous U.S. industries that have undergone extensive deregulatory pressure have proven to be a fertile context in which to further understanding of the effects of environmental change on organizations (Haveman, Russo, & Meyer, 2001; Lounsbury, Hirsch, & Klinkerman, 1998). In particular, the U.S. banking industry has been dramatically transformed over the 30 years since extensive deregulation began in 1978 (Berger, Kashyap, & Scalise, 1994; Calomiris, 2000; Marquis & Lounsbury, 2007). It was believed at the time that the U.S. banking system, composed of many small, local banks, was inefficient and ill-suited to compete globally. As a result, the government initiated a series of deregulatory actions with the specific goal of driving consolidation through acquisitions in order to reduce the number and increase the average size of banks (Marquis & Lounsbury, 2007; Stiroh & Poole, 2000).

Previously, a bank’s growth and expansion had been limited to the state its headquarters were in. But a series of legal changes broadened banks’ potential markets, so banks from the contiguous states’ 48 diverse institutional, economic, and technological environments began competing with one another on a national scale. During this period, both shifts in the external environment (Berger et al., 1994; Marquis & Lounsbury, 2007) and chang-

<sup>1</sup> Space considerations prevent us from fully describing our historical approach. A detailed summary of these historical materials and methods is available from the authors upon request.

ing ideas about the benefits of scale and efficiency (Stiroh & Strahan, 2003) motivated banks to grow. Substantial evidence points to consolidation as the defining feature of this period (Davis & Mizruchi, 1999; Marquis & Lounsbury, 2007) and to acquiring other banks as the means by which banks have subsequently grown and prospered (Stiroh & Poole, 2000). The resulting acquisition market was intense and profoundly changed the industry. As shown in Figure 1, industry assets grew significantly from 1980 to 2001, while the number of commercial banks shrank from nearly 13,000 to fewer than 7,000. Figure 2 portrays the extensive number of bank acquisitions in the U.S. between 1978 and 2001, averaging 200 per year and exceeding 300 in a few of those years.

Despite the sheer number of acquisitions, banks exhibited considerable variation in the intensity of their acquisition activities. What accounts for such variation? Existing research and our own historical investigation suggest that (1) banks' possession of certain capabilities may partially account for their greater propensity to acquire other banks during this period of transition from state environments to a national environment, and (2) these capabilities may have been exapted from branch management capabilities that these banks developed as adaptive responses to founding institutional conditions.

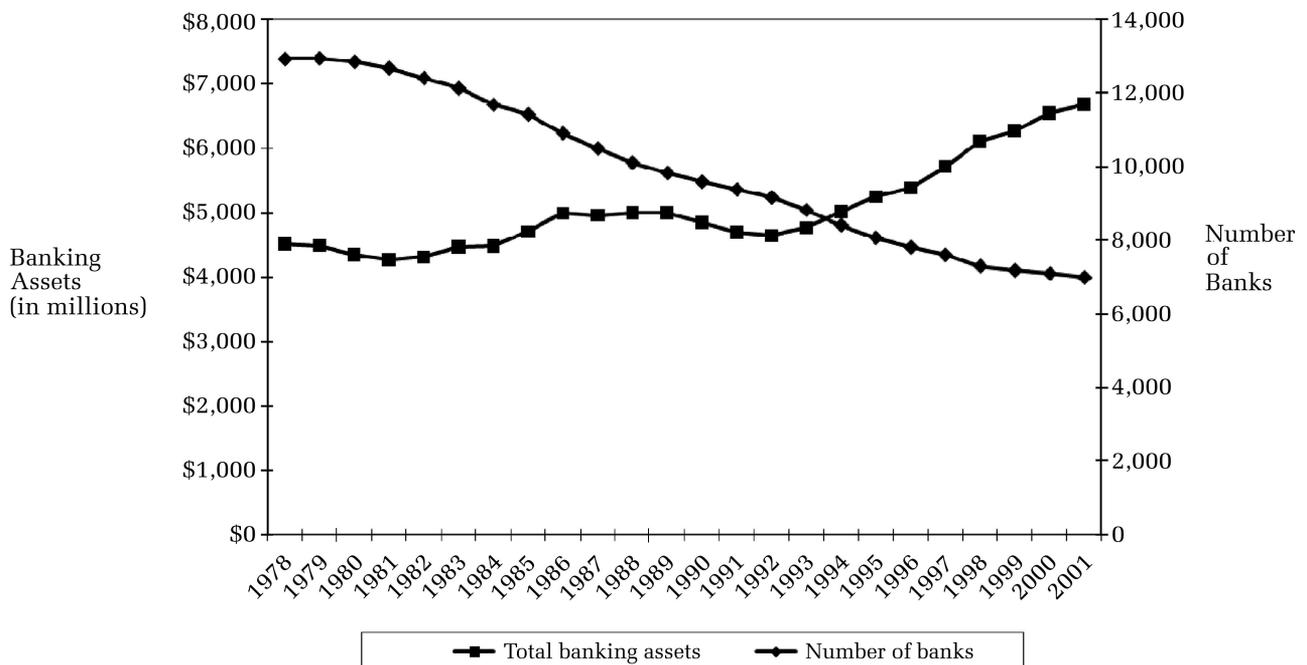
Banks acquire other banks to expand their geographic and/or product markets by converting acquired banks into local affiliates or branches (Win-

ter & Szulanski, 2001). To make this growth strategy work, it was important to successfully integrate and manage acquired banks (Winter & Szulanski, 2001; Zollo & Singh, 2004). Studies of bank acquisition procedures (Szulanski, 2000; Winter & Szulanski, 2001; Zollo & Singh, 2004) have documented the complexity of integration and suggested that well-developed integration and coordination processes are likely to be a key strategic advantage for banks that engage in acquisitions and that possessing these capabilities results in a greater likelihood that those banks will acquire others. In other words, banks possessing such capabilities may be more likely to conceive of and thus to engage in acquisitions than other banks.

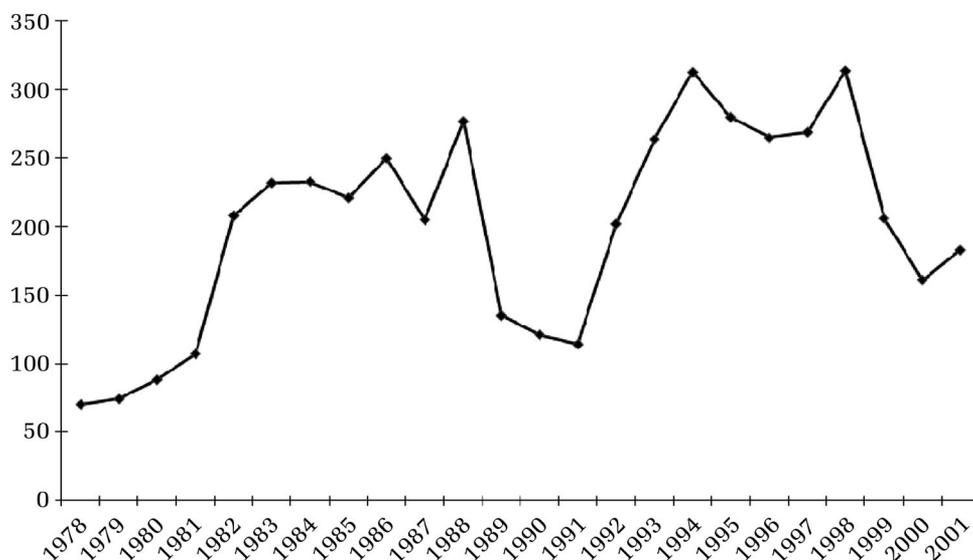
Furthermore, banks' capabilities for integrating and managing acquired banks might have been exapted from existing capabilities that were originally developed for a different purpose: branch management. Banks that had already developed capabilities in managing dispersed branches were at advantage in the sense that they could deploy their branch management capabilities to integrate and manage acquired banks. In more general terms, the characteristic that raised the fitness of banks in this new environment (i.e., acquisition capabilities) had a nonadaptive origin (Dew, 2007): early experience with branching.

Table 1 summarizes how the exaptation between branch management and acquisition can occur. Our historical investigations uncovered the typical pro-

**FIGURE 1**  
Number of Banks and Total Banking Assets (Inflation Adjusted), 1978–2001



**FIGURE 2**  
**Number of Bank Acquisitions, 1978–2001**



cedures and infrastructures branching banks developed to manage dispersed branches, and we suggest that these procedures and infrastructures are likely to be instrumental for banks' acquisitions. After a bank acquires other banks, it needs to determine and manage its relationships with the acquired banks (Puranam, Singh, & Zollo, 2006; Winter & Szulanski, 2001; Zollo & Singh, 2004). Many questions arise. For example, How should acquisitions be monitored? How should business transactions between a bank and its acquired banks be constructed? What management and operational procedures should be used in the acquired banks? Research has shown that, regardless of how much autonomy a bank gives to its acquired affiliates, having a set of well established routines, procedures, and infrastructure elements is critical for managing relationships with acquired affiliates and thus making acquisitions work (Winter & Szulanski, 2001; Zollo & Singh, 2004). To the extent that branching management needs to address a similar set of issues, such intraorganizational capabilities for managing branches provide an advantage in pursuing acquisition as a growth strategy.

Exaptation emphasizes that certain features developed as adaptive responses to initial environmental conditions can be well suited for some new purposes after environmental changes (Dew et al., 2004; Gould, 1991). The concept provides a particularly useful tool that can guide understanding of how founding institutions imprint organizations, in that although external environments change, organizational behaviors may enact adaptive responses to those changes in a way that reflects the

organizations' founding conditions. Figure 3 depicts both our general model of imprinting and exaptation and the specific application to the U.S. commercial banking industry analyzed in this study. The basic causal process proposed to connect the historical period of origin with the contemporary period of use is as follows: founding institutional conditions lead to initial organizational structures and processes that enable banks' geographical dispersion (Marquis & Huang, 2009); this early experience provides durable capabilities for managing dispersed units (Zollo & Singh, 2004); and, following the deregulation that allowed banks to dramatically expand their businesses to interstate markets, banks with these imprinted capabilities then were more likely to engage in subsequent acquisitions of other banks.

Of particular importance for our research purposes are the imprinting effects of early institutional factors such as public policy and political culture. Prior to 1978, states varied considerably in their branching policies, which govern the ability of banks to establish geographically dispersed branches outside of a headquarters location (Roe, 1994). Banks pursuing the dispersed strategy needed to manage dispersed branches and therefore develop corresponding capabilities, but banks pursuing a concentrated strategy of focusing on a limited geographic area did not. We have shown (Marquis & Huang, 2009) that which strategy banks pursued and thus whether they developed capabilities for managing multiple units were influenced by branching policy and other features of the external environment in a state. We thus consider how

**TABLE 1**  
**Applicability of Bank Branch Management Capabilities to Bank Acquisition Management and Integration**

Management Capabilities Developed by Branching	Examples of Use in Bank Branch Management	Examples of Applicability to Bank Acquisition Management and Integration
<i>Monitoring Infrastructures and Routines</i>		
Centralized management reporting system	<p>In many cases, having a separate set of books at the headquarters was required by law (AIB, 1923).</p> <p>Bank of America's success in establishing early branch offices in Los Angeles, the result of centralized management reporting system (James &amp; James, 1954).</p>	Although Banc One's constituent banks were given substantial operational freedom, the key to high performance for the bank was their centralized reporting system (McCoy, Frieder, & Hedges, 1994; Winter & Szulanski, 2001).
Communication with and socialization of agents	Management meetings between headquarters and branch managers, and traveling auditors from the headquarters visiting branches frequently cited as standard practice of branch management at Bank of America (Chapman & Westerfield, 1942); Comerica Bank (Comerica, 1999); Dollar Savings and Trust Company (AIB, 1924), Citibank (Mayer, 1997).	<p>Internal committees, conferences, and management travel connect dispersed parts of the organization set up following acquisitions (Covington &amp; Ellis, 1993; McCoy, Frieder, &amp; Hedges, 1994).</p> <p>During conversion, Banc One trained the personnel of acquired banks (Winter &amp; Szulanski, 2001), and further, codified staffing procedures were important to integrate acquired banks (Zollo &amp; Singh, 2004).</p>
<i>General Business Processes and Routines</i>		
Routinized transaction processing	Transit department and transfer processes for currency and draft between headquarter and branches essential for branch management (e.g., AIB, 1926; Covington & Ellis, 1993).	Well-established routines for transactions between the acquired and acquirers are important as newly acquired banks are converted into local branches (Winter & Szulanski, 2001; Zollo & Singh, 2004).
Standardization (and replication) of internal processes	Best practices in branch management articulated as including common collections procedures, check routing and sorting mechanisms, and standardized management processes (Chapman & Westerfield, 1942).	<p>Aligning and centralizing systems, procedures, and products increases postacquisition performance (Zollo &amp; Singh, 2004).</p> <p>Banc One's success in growing through acquisition depended on its success in replicating its own computer systems, programs, and operating procedures in acquired banks (Winter &amp; Szulanski, 2001).</p>
Information processing	Duplication and bookkeeping processes essential to maintain standardization and consistency (Chapman & Westerfield, 1942; James & James, 1954).	Banc One's local information systems were fully integrated into the overall information system, so that the headquarters has full access to local information (Winter & Szulanski, 2001).

being founded in a branching state influences subsequent acquisitions.

States also varied considerably in political culture, specifically, on the presence of a set of beliefs focused on resistance to large corporations, which promoted community-oriented banking as opposed

to the unlimited growth of large banks (Akhavain, Goldberg, & White, 2004; Calomiris, 2000; Roe, 1994). This set of beliefs is part of a larger, general and deep-seated mistrust of centralized power seen throughout American history (Lipset, 1963; de Tocqueville, 1835/2000; Mills, 1956). Historical re-

**TABLE 1**  
**Continued**

Management Capabilities Developed by Branching	Examples of Use in Bank Branch Management	Examples of Applicability to Bank Acquisition Management and Integration
<i>Organizational Design and Structure</i>		
Centralized hierarchy	Centralized structure seen as best practice: "The best way to proceed in selling the service of branch banks is to center everything in connection with it at the main office." (AIB, 1924)	Centralization as part of integration shown to increase postacquisition performance (Zollo & Singh, 2004).
Regional organizational infrastructures	Bank of America's early regional organization structure credited for why it was able to expand its branch network rapidly (James & James, 1954).	Frequent acquirers, Banc One and Nations Bank, used a geographic organizational structure—all functional business lines reported through a regional infrastructure (Covington & Ellis, 1993; Phillips, 2001).
<i>Cultural Templates</i>		
Identity as an organization	Banks with branching experience "think" in ways that promote geographic expansion (Covington & Ellis, 1993; McCoy, Frieder, & Hedges, 1994). Banks in rural areas have community-focused names reflecting a deep commitment on the part of these banks to remaining as single-unit organizations (e.g., Brockman, 1956)	The name NationsBank was explicitly chosen to make bank expansion and geographically dispersed acquisitions easier (Covington & Ellis, 1993).

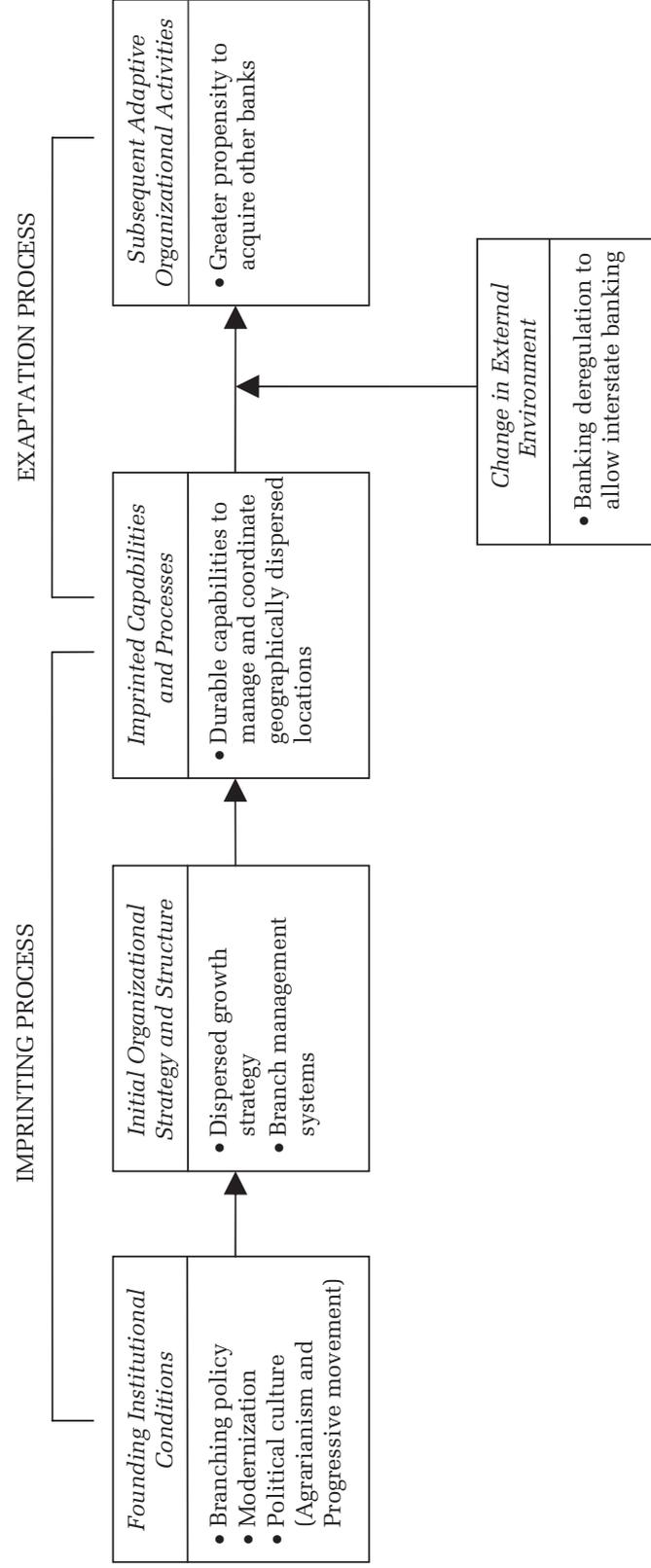
search has identified two important manifestations of this political culture condition that may play a role in bank activities: local agrarianism and Progressivism. Local agrarianism comprised efforts to promote the interests of farmers and local communities through either organized social movements (Schneiberger et al., 2008) or ongoing actions of individuals (Marquis & Huang, 2009). Progressivism was a more widespread ideology, one thrust of which was the need for dispersed power and opposition to monopoly of all sorts, particularly monopolies of large corporations resulting from modernization (Brandeis, 1914; Kolko, 1963; Rodgers, 1982; Tindall & Shi, 1999; Wiebe, 1967).

We suggest that these two institutional conditions, when present at the time of banks' foundings, were likely to imprint the banks by shaping the initial development of intraorganizational capabilities for managing dispersed branches. It is well established in institutional research that formal rules create coercive pressure for organizations to conform, and informal beliefs and norms exert their impact to the extent that conformity confers legitimacy in the eyes of key audiences (Scott, 2001). Thus, institutions such as policy and political culture explicitly or implicitly delineate behavioral

boundaries and templates for organizations (DiMaggio & Powell, 1983; Meyer & Rowan, 1977; North, 1990; Selznick, 1949). When creating new organizations, entrepreneurs are often constrained to act within the boundaries set by institutional conditions. These models often persist when they are institutionalized within organizations (Baron et al., 1999; Johnson, 2007). Providing observations more specific to the banking industry, Reger and Palmer showed in their study of how banks responded to deregulation that "managers relied on cognitive maps that reflected obsolete industry boundaries rather than configurations representative of the deregulated marketplace" (1996: 22). And other researchers have similarly highlighted how idiosyncratic interfirm conventions such as information channels, leadership conventions, and role types, which become established early in organizations, led to institutional persistence (Beckman & Burton, 2008; Burton & Beckman, 2007; David, 1994). We argue that one manifestation of branch management capabilities imprinted during a bank's founding is a greater propensity to engage in acquisitions after banking deregulation began in 1978.

Below, we develop a set of historically grounded hypotheses to elaborate the arguments outlined

**FIGURE 3**  
**A General Model of Imprinting and Exaptation with Application to the U.S. Commercial Banking Industry**



above. We first examine how the branching policy in a state at a bank's time of founding ("founding branching policy") affected banks' contemporary acquisition activities by considering both its main effect and its interaction with modernization of transportation technology and urbanization. We then examine how a founding political culture of local agrarianism and Progressivism affected banks' contemporary acquisition activities by conceiving of these cultural conditions as constraints that dampened the imprinting effect of founding branching policy.

### **Founding Legal Environment and Intraorganizational Coordination Capabilities**

Throughout U.S. history banking, has been heavily regulated at both the state and federal levels (Roe, 1994). Until deregulation, states had different laws concerning whether or not banks could establish offices in locations other than their headquarters. There were two "ideal types" of branching laws: *unit banking* laws restricted banks' operations to a single location, precluding branches, and *statewide banking* laws permitted banks to operate branches throughout a state. Some states had hybrid legislation, *limited statewide banking*, which permitted branch operation within a clearly delineated geographic area.

There is considerable historical evidence that banks in states with less restrictive branching policies were more likely to pursue a dispersed strategy, establishing branches outside of their headquarters locations (Marquis & Huang, 2009). When banks pursue a dispersed strategy, their intraorganizational activities are typically characterized by pooled interdependence (Nadler & Tushman, 1997), whereby "each part renders a discrete contribution to the whole and each is supported by the whole" (Thompson, 1967: 54). Such interdependencies create coordination challenges for banks. For example, in an address to the 1928 conference of the American Institute of Banking (AIB; the educational arm of the American Bankers Association), a Bank of America executive highlighted the need for standardization and consistency of bank services provided in outlying branches (Langeard, Bateson, Lovelock, & Eiglier, 1981). Because of these issues, centralized management was considered the best practice of branch management at the time. "Experience has proved," it was observed at the 1924 AIB meeting, "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." For the same reason, centralization was sometimes a legal requirement for banks pursuing

the dispersed strategy; in Massachusetts, for example, branch offices were required to keep their entire set of customer and account documents at the central office (AIB, 1923).

The need for centralized management of branches and for the associated standardization led banks to develop many important coordination mechanisms for managing outlying locations. For example, Bank of America, a San Francisco bank, established an early set of branches in Los Angeles and developed corresponding infrastructure and processes to manage them (Chapman & Westerfield, 1942), including a network of auditors and systematic reporting functions for monitoring branch activities, common collections procedures, check routing and sorting mechanisms, and standardized management processes (Chapman & Westerfield, 1942; James & James, 1954). These infrastructures and processes as a whole constituted Bank of America's capabilities for centrally managing dispersed branches.

For Bank of America and many other banks, such capabilities, initially developed in response to the branching law in a particular state at the time of the bank's founding, became part of the bank's repertoire of knowledge, whether formally codified or informally stored as organizational tradition and culture (Nelson & Winter, 1982). As a result, such capabilities persistently affect the banks to the extent that they could be easily retrieved when needed (Kogut & Zander, 1992). Persistence was also possible because actors in organizations tend to follow inherited organizational scripts and routines (David, 1994; Johnson, 2007; Selznick, 1949; Zucker, 1977). For example, in their case study of two similar companies founded by the same family under different ideological systems (socialism and capitalism), Kogut and Zander (2000) observed that the two companies developed different capabilities and routines regarding innovation, resulting in different innovation rates. Such differences persisted even when the environment changed dramatically, following the collapse of communism in East Germany.

To the extent that banks' capabilities for managing geographically dispersed branches—developed in response to the institutional environments at founding—tend to persist, they are likely to provide contemporary strategic advantages for banks pursuing growth through acquisitions after the 1978 deregulation. Historians have asserted that such a link exists, postulating that the coordination capabilities that Bank of America developed early on subsequently allowed it to grow, particularly via acquisitions (James & James, 1954). More generally, researchers have shown such capabilities to be es-

essential for the growth of multiunit organizations (Greve & Baum, 2001). For instance, Ingram (1996) showed how the development of hotel accounting, a systematic method of tracking outlying locations, led to the growth of hotel chains. Regarding bank acquisition capabilities, replicating some of the home institution's procedures in acquired organizations is central to the acquisition process (Winter & Szulanski, 2001; Zollo & Singh, 2004). This would be considerably easier for banks that already have management structures and processes for addressing geographically dispersed operations. Zollo and colleagues (Zollo & Singh, 2004; Zollo & Winter, 2002) have suggested that the same type of codification of procedures and capabilities detailed in our historical investigations of early branching manuals likely facilitates acquirers' integration of satellite organizations. As noted above, historical records provide numerous details of interunit coordination practices and structures developed early by banks founded in states allowing statewide branching. In keeping with research on the institutional persistence of such capabilities (David, 1994; Kogut & Zander, 1992; Reger & Palmer, 1996), we therefore suspect that, under current legislation encouraging acquisitions, when such capabilities take on increased importance (Zollo & Singh, 2004; Zollo & Winter, 2002), banks founded in states allowing statewide branching enjoy a competitive advantage over banks founded in unit-banking states, where such coordination practices and structures were not as salient.

*Hypothesis 1. Banks founded in states in which statewide banking was unrestricted are more likely to grow by acquisition following deregulation than banks founded in other states.*

### **Modernization Processes at Founding and Bank Geographical Expansion**

Although laws may be a necessary condition for bank expansion, they are often not sufficient; bank expansion has typically required available resources to support geographic growth (Marquis & Huang, 2009). Haveman and Rao (1997) observed that in the early 20th century, a particularly important external environmental change was modernization, which had great influence on organizational forms. Therefore we consider two other founding environmental conditions related to the modernization of the U.S. that are particularly important for banking: development of transportation technology, and urbanization. We suggest that technology environment and urbanization at founding are likely to accentuate the imprinting effect of branch-

ing policy on banks' propensity to engage in acquisitions after 1978.

**Founding technology environment.** The extent to which branching policy will affect banks' development of capabilities to manage dispersed branches depends in part on transportation technology. For instance, in earlier research (Marquis & Huang, 2009), we showed that in U.S. states that allowed branching, more developed transportation technology led to greater geographical dispersion of bank branches. We argued that transportation was necessary for a dispersed strategy because of the need for banks to (1) track the flow of funds between units, (2) monitor outlying locations, and (3) maintain consistent standards across units. Before the advent of modern information technology, banks coordinated activities and monitored outlying branches in two primary ways: (1) personnel interaction between headquarters and outlying locations and (2) transfer of documents such as checks, currency, account documents, and daily reports of activities. Accomplishing these activities effectively required advanced transportation technology.

Historical research recounts the system of traveling agents that banks and other early service-oriented firms used to monitor outlying locations (Chandler, 1977). For example, as the history of Comerica Bank records, "Auditors, known as the 'eyes and ears of management,' traveled to all locations to check accounts and records" (1999: 19–20). Further, the historical record also illustrates that "best practices" of branch management at the time included frequent meetings between branch managers and headquarters staff to maintain consistency in culture and procedures. For example, as one participant at a branch management seminar at the 1924 AIB conference, the president of Dollar Savings and Trust Company in Youngstown, Ohio, described: "Our branch managers are asked to attend a staff meeting at least twice a week. All of the branch managers come into the main office on Tuesday and Friday mornings" (AIB, 1924: 104). These two features, travel by head office personnel to the outlying locations and by branch managers to headquarters, suggest that banks relied extensively on the extant transportation infrastructure for successful coordination among bank locations.

Second, banks used paper-intensive information systems to conduct banking business in a dispersed fashion and to keep headquarters abreast of local branch operations. The use of internal communication processes as a control mechanism spread as modernization advanced (Yates, 1989) and, in the case of banks, the law often required physical transfer of large volumes of paper documentation,

checks, and currency between headquarters and local branches. Further, in a not uncommon practice, as noted above, Massachusetts required all banks with branches to have duplicate books for each branch at headquarters (AIB, 1923). Chapman and Westerfield (1942), in a treatise on the management of branch-banking organizations, described a range of paper systems that were essential to the conduct of bank branching. These included duplicate records and daily reports as well as documentation of personnel, financial statements, and general business conditions, all of which had to be physically transported from outlying locations to headquarters. Furthermore, ease of “the transportation of funds” (i.e., currency itself, or bank drafts), was one of the key features allowing a bank to grow through branching (Chapman & Westerfield, 1942: 142). To accomplish the matching of loans and deposits, banks had “transit departments,” which, as described in a history of NationsBank, were “the critical point in banking where what goes out is reconciled with what comes in” (Covington & Ellis, 1993: 58).<sup>2</sup>

These historical accounts suggest that to supervise and coordinate geographically dispersed branches poses significant challenges that might be met by advances in transportation technology. Banks could not expand geographically under a restrictive state branching policy, yet when statewide branching was allowed, the existence of an advanced transportation infrastructure in a state enabled its banks to solve monitoring and coordination problems. As a result, these banks were more likely to expand geographically and therefore more likely to develop capabilities for managing dispersed branches. According to the rationale developed above, such capabilities, which tend to persist, were likely to provide contemporary strategic advantages for banks engaging in acquisitions after deregulation began in 1978.

*Hypothesis 2. The positive effect of a less restrictive founding branching policy on acquisitions following deregulation is likely to*

*be stronger in states with more advanced founding transportation infrastructure.*

**Urbanization at founding.** Growth in industries such as banking that provide services directly to customers is greatly contingent on how customers are distributed geographically. The level of urbanization in a state—the degree to which its population is concentrated in cities—is therefore likely to influence bank growth. A number of histories of the early banking industry suggest that urbanization processes in the 20th century directly led to banks’ growth via the advent of intracity branches (Collis, 1926; Fischer, 1968; Klebaner, 1990). The link between bank branching and increasing urbanization is documented in a historical recounting of the growth of Michigan-based Comerica Bank: “When most Detroiters still lived around the downtown area, one office served the bank well. As the population moved to the edges of the core city and beyond, banks, like other retailers, had to follow if they wished to remain competitive in serving customers” (Comerica Bank, 1999: 31). However, the strategies available to banks to keep up with the expansion of cities differed, depending on the restrictiveness of state branching policy. For example, since branching was permitted in Michigan, banks simply established branches to serve increasingly dispersed customers as Detroit expanded (Southworth, 1928). But in Illinois, where branching was prohibited, more small independent banks were founded to meet the needs of dispersed customers as Chicago grew (Southworth, 1928). Thus, banks founded in a state with high urbanization were likely to establish intracity branches when branching was allowed and, as a result, develop branch coordination capabilities likely to provide contemporary strategic advantages for banks pursuing acquisitions after deregulation began.

*Hypothesis 3. The positive effect of a less restrictive founding branching policy on acquisitions following deregulation is likely to be stronger in states with greater founding urbanization.*

### **Founding Political Cultural Environment and Resistance to Bank Geographical Expansion**

Political culture, “the fundamental values, sentiments and knowledge that give form and substance to political processes” (Pye, 1995: 965), is reflected in social groups’ widely shared beliefs, attitudes, and norms concerning the ways that political and economic life ought to be carried out (Almond & Verba, 1963; Wilson, 1992). Political culture is a subjective orientation that is shaped by socializa-

<sup>2</sup> For example, Harry Bishoff, manager of the transit department for the First National Bank of St. Louis, described how the transit department in a large bank is essentially a network of paper flows, with the transit department at the headquarters as the hub, coordinating items such as “checks that originate in the morning [mail]” to “letters coming from correspondents and containing a large volume of checks payable outside St. Louis” to payments routed to the Federal Reserve or the many country banks that did not clear their checks through the Federal Reserve (AIB, 1926: 223–238).

tion processes and thus varies among the cultures and subcultures in a larger political system (Inglehart, 1990). The influence of political culture on organizations is consequential yet underexplored (Haveman et al., 2007; Scott & Davis, 2007; Stinchcombe, 1968). To keep our discussion of political culture and its implications manageable, we narrow our focus to elements of political culture that would have had a direct influence on the geographic spread of banks during our study period.

Because business organizations have impinged on almost all aspects of social life since industrialization (Arrow, 1974; Davis & Marquis, 2005; Perrow, 1991), they have often become the targets of political and other movements that aim to promote their beliefs (Davis, McAdam, Scott, & Zald, 2005). As Stinchcombe noted “Institutions and value patterns are partly sustained because the population at large believes in them” (1968: 112). To the extent that followers of certain political beliefs constitute important stakeholders (e.g., customers, creditors, employees), organizations face pressure to conform to these political beliefs in their business practices. When practices of organizations contradict prevailing political beliefs, resistance by the followers of the beliefs often ensues (Almond & Verba, 1963). This type of influence is of particular relevance for understanding how political culture influenced banking.

The particular political culture in the United States that affected the geographical expansion of banks is a longstanding set of suspicions about large organizations (Marquis & Huang, 2009; Marquis & Lounsbury, 2007; see also Dobbin, 1994; Lipset, 1963; Mills, 1956). The origin of this set of political beliefs can be traced back to the founding of the United States and the debates between Jefferson and Hamilton over the respective merits of centralized and decentralized economic and political structures. The Republicans, led by Thomas Jefferson, preferred decentralized political and economic systems with community-oriented control of banks, and the major opposing party, the Federalists, led by Alexander Hamilton, preferred centralized political and economic systems with large, multiple-branch, national banks (Hammond, 1957). Prior research has identified two distinct manifestations of the former set of deep-seated political beliefs, local agrarianism and Progressivism, that constrained and resisted banks' geographical expansion (Mahoney, 2001). In addressing local agrarianism, we focus on both organized resistance mobilized by social movement organizations and resistance by individual agrarian actors. In considering Progressivism, we focus on popular opinion

in the form of votes garnered in elections by Progressive candidates.

**Agrarian resistance at founding.** For much of U.S. history, local agrarianism was a particularly important political logic that promoted community-oriented banking and resisted bank branching (Calomiris, 2000; Mahoney, 2001; Marquis & Huang, 2009; Roe, 1994). 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 (2000) 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. Banks that expanded into different geographical areas were likely to be perceived as powerful corporations that lacked local orientation and for which outside interests were therefore likely to trump local interests. As a result, agrarian actors were likely to resist geographical expansion by banks. This resistance became particularly salient when a state's branching policy allowed geographical expansion (Marquis & Huang, 2009). We suggest that the resistance of local agrarianism to large and geographically dispersed banks has implications for whether or not banks pursued a dispersed strategy and therefore developed coordination capabilities at the time of their founding.

Local agrarianism resisted banks' geographic expansion through both organized social movements and unorganized efforts by individuals. The expression of political beliefs through social movements is now a well established theme in organizational theory (Davis et al., 2005; Haveman et al., 2007; Schneiberg et al., 2008). Particularly relevant for our focus on resistance to large corporations is the National Grange of the Patrons of Husbandry (the Grange), an agrarian activist organization founded in the mid 19th century to promote the practices and values of farmers through locally affiliated “granges” in different states (Buck, 1963; Gardner, 1949; Nordin, 1974; Robinson, 1966). One of the Grange's activities was to resist large-scale commercial banks because the latter did not support farmers' interests—for example, they charged exorbitant interest rates for loans to farmers (Robinson, 1966). Large and impersonal banks without strong local attachments were considered as less sympathetic to farmers. As Howard documented, “[the] Grange viewed their local banks as community institutions, sympathetic with their credit needs. Large banking interests, they feared, would drain local money to the large cities, making it unavailable to farmers” (1992: 137). The Grange

resisted the intrusion of large banks into local communities by establishing their own banks or cooperatives as alternatives to commercial banks (Buck, 1963; Robinson, 1966). These resistance efforts reflected the Grange's general approach of establishing cooperative and mutual organizations in different industries, as alternatives to corporate capitalism (Schneiberg et al., 2008).

The views of these activists and organized farmers would no doubt be well known to banks and bankers, because not only did their activities and positions garner significant press coverage (e.g., *New York Times*, 1889), but also, in fact, many community bankers were members of the Grange and attended their regular meetings (Harshaw, 1925), viewing the organization as an ideal marketing channel and way to get to know possible clients (Brockman, 1956). We suggest that in states where branching policy encouraged newly founded banks to pursue geographical expansion, greater Grange presence might function as a counterforce to expansion strategies because of the organization's resistance to branch banking and the close connection between bankers and Grange-oriented farmers. Given that such locally oriented banks had little need to manage dispersed branches, they were less likely to develop the coordination capabilities that would be needed to pursue an acquisition strategy after 1978.

*Hypothesis 4. The positive effect of a less restrictive founding branching policy on acquisitions following deregulation is likely to be weaker in states with a greater founding presence of agrarian social movement organizations.*

Besides the Grange movement, a greater presence of actors with agrarian beliefs might also constrain the geographical expansion of large banks and foster locally oriented banks, as historical evidence suggests that the process of lending to farmers encouraged banks to be locally oriented. First, agricultural lending was a specialized business that required significant interaction between bankers and farmers.<sup>3</sup> Although other types of bank lending

are based either on characteristics of the borrower or secured by a hard asset, the key to agricultural lending is "crop risk," which requires knowledge of items such as local soil and land conditions (Harshaw, 1925). Loans to farmers were usually short term, spanning the planting season from March 1 of a current year to March 1 of the next year and requiring frequent interaction between farmer and banker (Brannan, 1926; Clingerman, 1989). Bankers thus in many cases came to be seen as the essential "go between for the people of the (agrarian) community" (Laughlin, 1920: 624). Another common practice among banks at the time, as reported by the cashier of the Grove City National Bank of Grove City, Pennsylvania, was conducting agricultural surveys for the purpose of establishing agricultural development programs for banks' catchment areas (Harshaw, 1925). Banks typically hired individuals for their agricultural department who had a farm background, and these individuals were frequently involved in day-to-day farming operations of clients, from fixing windmills to helping with the harvest, as described in a memoir by Clingerman (1989), a manager of a bank farm department in 1940s Nebraska. Further, farmers were also frequently involved in the governance of banks in agrarian areas; research suggests banks had farmers on their boards as a means of gathering local information and attracting clients (Mizruchi, 1996). As described by the president of the American National Bank, Richmond, Virginia, in regard to banks in the South, "Many bank officers and directors are farmers themselves, and this is not confined to the small town bank, for many of those actively connected with the larger institutions are either farmers or have for some period of their lives had experience which enables them to appreciate many of the problems confronting agriculture" (Sands, 1920: 743).

This need for close relationships as a prerequisite for doing business with farmers constrained banks' geographical expansion, which necessarily resulted in their being less locally focused and less able to serve farmers with idiosyncratic demands. Banks that expand geographically try to standardize across branches using a set of well-defined operational routines and procedures to achieve cost efficiency. This practice is dubbed "replication" or the

<sup>3</sup> This is indicated by a considerable number of publications devoted to "banker-farmer" relations. For example, the agricultural section of the American Bankers Association published *Banker-Farmer* beginning in 1913 (*Bankers Magazine*, 1915). *Farm Credit Leader* was published by the Farm Credit Administration of Omaha four to six times a year between January 1944 and December 1973. One of the authors examined all issues of *Farm Credit Leader*. The motto of this publication was "dedicated for the constructive leadership in the field of credit

for farmers and ranchers in Iowa, Nebraska, South Dakota, and Wyoming." Typical stories in the *Farm Credit Leader* include reports of loan activities across the states, stories about which banks led the lending for the period, information on the fees of various banks, the importance of record keeping for farming, how farmers could improve their credit standing, and interest rate trends.

“McDonald’s approach” (Szulanski, 2000; Winter & Szulanski, 2001). As a result, it is difficult for large banks to develop the kind of close relationships that farmers expect to have with banks and that local community banks provide to farmers. Thus, large banks were readily characterized as impersonal and indifferent to local and farmers’ interests, leading to deep-seated distrust of large banks by farmers (Calomiris, 2000; Marquis & Huang, 2009; Roe, 1994). By contrast, as noted, local community banks devoted enormous efforts to cultivating close relationships with farmers, which not only helped farmers get highly customized services and favorable interest rates, but also, probably more importantly, ensured farmers that banks would continue to lend to them during bad seasons (Roe, 1994). Farmers might therefore use local banks and publicly voice their negative opinions about banks engaged in branching (see Marquis and Lounsbury [2007] for an account of another, similar, type of resistance). Such resistance may render geographic expansion a less attractive growth strategy, especially when the resistance is strong.

In sum, even when a state’s branching policy encouraged newly founded banks to pursue geographical expansion, the strong presence of local agrarian actors in that state might function as a counterforce. Farmers might resist patronizing large banks, and bank founders likely shared the agrarian political cultural beliefs and so tended to found banks that were locally oriented and less likely to expand their geographical scope, even if branching were allowed. Given that locally oriented banks had little need to manage dispersed branches, they were less likely to develop the coordination capabilities that would be needed to pursue an acquisition strategy after 1978.

*Hypothesis 5. The positive effect of a less restrictive founding branching policy on acquisitions following deregulation is likely to be weaker in states with a greater founding presence of agrarian actors.*

**Progressive presence at founding.** Progressivism was a “political movement that addressed ideas, impulses, and issues stemming from modernization of American society” and differed from the above-mentioned agrarianism in that it was more focused on cities (Harriby, 1999: 41; Wiebe, 1967). Although often labeled a “movement,” Progressivism was not tightly organized in the traditional sense of social movements, but was rather a general spirit of reform as a reaction to the vast social and economic changes brought about by industrialization in the early part of the 20th century (Haveman et al., 2007; Tindall & Shi, 1999). But

lack of organization does not mean that Progressivism did not impact the American society. Rather, Progressivism “established much of the tone of American politics throughout the first half of the century” (Harriby, 1999: 41) and was a “powerful wind that blew across the political-cultural landscape” (Haveman et al., 2007: 125). As a whole, Progressives advocated and promoted a wide-ranging agenda in areas such as democracy, efficiency, regulation of large corporations, and social justice (McCormick, 1981; Rodgers, 1982).

One particular issue concerning Progressives, consistent with their general advocacy of the dispersion of power, was the increasing power of large corporations that resulted from industrialization (McCormick, 1981; Rodgers, 1982; Roe, 1994). Progressives’ protests against large corporations, both in the streets and in elections, were abundant. For example, before 1906, the Southern Pacific Railroad “was the largest land owner, the biggest employer, and the richest enterprise” in California, and even the state government “was subservient to” its interests (Haveman et al., 2007: 124). The untrammelled power of the Southern Pacific Railroad invited vehement protests by Progressives after 1906 and was subsequently undermined after Progressive activists mounted a successful candidate in the 1910 gubernatorial election that defeated the Southern Pacific’s candidates.

Large banks and financial interests were a particularly visible target for Progressive reform. One of the key documents of the Progressive era, Louis Brandeis’s (1914) *Other People’s Money, and How the Bankers Use It*, details extensive moral outrage at the concentration of power in large banks and bankers as a result of industrialization and the need for the population to resist this process. For example, in various states Progressives pushed for the passage of “blue-sky” laws, which benefited small rather than large banks by restricting the sale of securities. Mahoney (2001), for example, showed that Progressive political coalitions strongly influenced the rapidity with which a state adopted a blue-sky law, building on prior historical research that documents the Progressive mobilization in many U.S. states for restricting the growth of financial interests (Macey & Miller, 1991; Roe, 1994).

Given Progressives’ general distaste for large and powerful financial interests, the greater presence of Progressives in a state was more likely to constrain the geographical expansion of banks through branching to the extent that geographical expansion inevitably increased banks’ market size and thus power to influence markets. As a result, even if a state allowed branching, newly founded banks were less likely to engage in geographical expansion.

sion through branching if the state had a greater presence of Progressives. On the one hand, Progressives in a state tended to resist geographical expansion that created large banks. On the other, their greater presence in a state also increased the likelihood that founders of banks might share Progressive ideologies and thus establish banks focused on serving local communities. Either way, the presence of Progressives would attenuate the effect of branching law in stimulating banks to expand geographically. As a result, banks founded in states with a greater presence of Progressives were less likely to develop capabilities for managing dispersed units, capabilities that were instrumental for engaging in acquisition as a growth strategy after the 1978 deregulation.

*Hypothesis 6. The positive effect of a less restrictive founding branching policy on acquisitions following deregulation is likely to be weaker in states with a greater founding presence of Progressive political support.*

## METHODS AND ANALYSES

### Sample and Units of Analysis

To test the foregoing hypotheses regarding the imprinting of founding institutional environments, we focused on all U.S. commercial banks that existed between 1978 and 2001 in the 48 contiguous U.S. states. Using annual end-of-year Commercial Bank and Bank Holding Company files (Federal Reserve Bank of Chicago, 2004), we constructed a database of more than 220,000 observations corresponding to the approximately 25,000 banks that existed during this period. Owing to missing observations for some financial variables, we tested our predictions on a data set that includes 201,868 observations.<sup>4</sup> We defined banks at the highest level of ownership (i.e., all subsidiaries were included in one observation that corresponds to the bank designated the primary bank), presuming decision-making authority regarding major strategies such as acquisitions to reside at that level (Zollo & Singh, 2004).

<sup>4</sup> Most of the missing observations were organizations that existed for only one year. Because we used lagged variables, these firms fell out of the analysis, there being no prior-year values. The results were similar when we used contemporaneous values that enabled us to include the firms that existed for only one year.

### Dependent Variable

**Bank acquisition.** Bank acquisition was measured by a dichotomous variable with 1 indicating that a bank acquired another bank in a given year and 0 otherwise. Alternative approaches might use a count of a bank's acquisitions in a given year. We chose to dichotomize this variable and use logistic regression analysis for several reasons. First, our theory and hypotheses relate to the propensity to engage in acquisition, rather than its frequency, in a given year. Second, more than 80 percent of the bank-year observations that were greater than 0 were 1. Finally, we were more confident about data quality and completeness using a dichotomous variable. Many acquisitions of what were single firms according to our definition of highest-level ownership were coded in these databases as multiple acquisitions if more than one subsidiary was acquired (i.e., if a large bank comprising a number of separate legal entities was acquired, the database reflects the total number of entities acquired). Therefore, by coding our dependent variable in this way, we avoided any potential biases from single acquisitions being counted multiple times.

### Independent Variables

**Founding legal environment.** Annual, state-level histories of the legal environments of all 48 states in the sample from 1896 to 2001 were created using the procedures described in Marquis and Huang (2009). To develop these regulatory histories, we examined more than 15 secondary sources as well as, in many cases, actual state statutes. Regulations were divided into three categories: full statewide banking (i.e., no geographic restrictions on locations); unit banking (banks limited to one location); and limited statewide banking (branching permitted, but restricted in some way). *Founding branching policy* was a dummy variable with 1 designating full statewide banking and 0 otherwise. This measurement strategy was appropriate because limited statewide banking was typically quite restricted. Branching was sometimes limited by geography (e.g., within the county or city in which a bank was headquartered), sometimes by number (e.g., only one or two branches permitted), and sometimes by an even more narrow criterion (e.g., permitted only *within sight* of the headquarters).<sup>5</sup>

<sup>5</sup> Running the models with a dichotomous dependent variable that reflected whether branching in any form was permitted (i.e., limited and statewide were one category) yielded similar results, albeit in some instances

**Founding modernization processes.** This study focuses on two particular manifestations of modernization processes: development of transportation technology and urbanization. To test Hypothesis 2, regarding the moderating effect of *founding transportation infrastructure*, we created a measure of transportation infrastructure for each state-year that reflected the growth of U.S. roadways.<sup>6</sup> One possibility was to operationalize this as total mileage, but we were unable to locate the complete data for the target historical period. We identified two alternative operationalizations for which we were able to locate the requisite data for almost the entire period: annual state-level capital spending on roadways and annual state-level highway maintenance. These data were culled from *Highway Statistics*, an annual publication of the U.S. Department of Transportation, for the appropriate years. Capital spending on roadways should reflect the expansion of highways, and the level of highway maintenance should be a direct function of the extent of roadways. These measures have the additional benefit of likely capturing quality of roads, which would significantly affect transportation capability. Moreover, they reflect characteristics such as road width and number of lanes that a simple measure of mileage would not capture.<sup>7</sup>

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less significant than the reported results. Because, as noted, limited branching was frequently highly restricted (e.g., permitted only within sight of the headquarters), it is unlikely that banks in those states would develop the same coordination capability that those in statewide-banking states developed, so any reduction in significance is not surprising.

<sup>6</sup> Although other communication and transportation technologies played a role, significant historical evidence indicates that the development of roadways was the most important. Even when there was communication between a bank and branch via telephone, for example, transactions had to be physically recorded on a paper "ticket" that was physically transported to the central office (AIB, 1923).

<sup>7</sup> One reviewer questioned the extent to which one can consider increases in transportation infrastructure to be a continuous process whereby "all variance matters" or whether the effects of advances in roadways on our theorized process would be best considered a "threshold" process (i.e., very little marginal effect once a certain level is reached). We believe that our continuous measure is most appropriate for two reasons. First, there were a number of significant technical advances throughout our historical period that resulted in expanded travel ability—for example, the transition from dirt country roads to paved roads, and an increase in the number of lanes on highways, accommodating more drivers. Second, throughout the period, highways continued to ex-

At the national level, since the data became available in 1921, both measures correlate at .95 with total highway mileage. Because these data extend back only to 1921, to be able to use the full range of observations of our other independent variables we extrapolated back from 1921 to 1896.<sup>8</sup> Because highway maintenance and highway capital expenditures were correlated at .97 and both returned similar results in the analyses, we created a principal component factor score of the extent of highway development for each state-year. To test Hypothesis 3, we measured *founding urbanization* as the percentage of the state population that lived in urbanized areas in a given year. The requisite data were obtained from the U.S. Census Bureau at ten-year intervals beginning in 1890, with intervening years being linearly interpolated.

**Founding political cultural environment.** This study focused on two distinct manifestations of political culture: local agrarianism and Progressivism. For local agrarianism, we examined both social movements mobilized by the Grange and the presence of agrarian actors. To test Hypothesis 4, we constructed a variable, *founding Grange membership*, measured as the number of national Grange family members per state at the founding of a bank. Following Schneiberg et al. (2008), we used data from Tontz (1964). This data source presents Grange membership at 12 points in time between 1875 and 1960 but does not contain later data. We linearly interpolated intervening years. Extensive search and discussions with the National Grange headquarters in Washington, DC, did not lead to our finding state-level data for after 1960. Because our key theoretical point regards the political activism of the Grange, and historical evidence suggests

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pand to new areas, giving access to new populations. Clearly there may have been some diminishing returns over time, although these were mainly after 1978.

<sup>8</sup> To accomplish this for both variables, we multiplied the percent of overall highway expenditures in 1921 by the percent change in total national highway mileage (data for which exist back to 1900). For example, in 1921, national maintenance expenditures totaled \$65,000 (11 states had \$0 and 20 states had less than \$200). New York's \$9,000 represented 14 percent of the total. National mileage that year increased by 15 percent (to 55,000 miles), so for New York, for example, we subtracted 15 percent from \$9,000 to get approximately \$7,500. By 1900, the end of this data series, total national mileage was reduced to 100. To get values for 1896 to 1899, we linearly interpolated for each state under the assumption that in 1896 there were 0 miles. Inasmuch as the highway system did not grow significantly until after 1921, the extrapolation and interpolation of these values should not have biased the analyses.

that Grange activism and memberships in the Grange substantially declined in after 1960 (Howard, 1992), we treated banks that were founded after 1960 as if there were no Grange presence at founding. We also ran analyses with only banks founded before 1960, and the results were similar to what we report here.

To test Hypothesis 5, we created the variable *founding agrarian presence*, measured as the number of farms in a given state compared to the overall population (i.e., farmers per capita). As argued above, the presence of agrarian actors affected the founding of banks through (1) individual consumers' resistance and (2) the founders of banks by providing templates of organization. Both effects depended on the number of actors that held agrarian beliefs. The data for this measure, collected from the USDA National Agriculture Statistics Service, cover 1890 to the present (USDA, 2004). As for other variables, we assigned firms founded prior to the start of this data series the value at the start of the series.

To test Hypothesis 6, we constructed *founding Progressive presence*, measured as the political support garnered by Progressive political candidates (i.e., any party that had the word "Progressive" in its name) in elections for national offices (president, senator, representative) in each state at the founding of a bank. These data were obtained from Interuniversity Consortium for Political and Social Research study 7757 (ICPSR, 1994). Elections occur every two years, and the intervening year were interpolated. Although it would have been ideal to also have election data for state-level offices, to the best of our knowledge, such data do not exist in a systematic fashion for the historical period of this study.

### Control Variables

We included control variables measured at both organizational and state levels to account for possible alternative explanations to our arguments and for factors found to affect acquisitions in previous studies (e.g., Davis & Stout, 1992; Palmer, Barber, Zhou, & Soysol, 1995; Stearns & Allan, 1996).

At the organizational level, the two most important controls related to bank acquisitions are performance and size. Bank performance was assessed relatively, as income compared to size—that is, *income/assets* (Stiroh & Poole, 2000)—and bank size was operationalized as *total bank assets*. Values for these financial variables were taken from the databases referenced above and lagged one year. Controlling for these two variables helped us to address one important alternative explanation: that banks

founded in a state allowing statewide branching are likely to engage subsequently in acquisitions, not because of their capabilities for managing multiple units, but because of their performance and size, to the extent that banks allowed to branch out from the time of their founding were more likely to grow larger or perform better than other banks. To account for the possibility of banks learning the coordination capabilities we discussed, we included *years under statewide banking* (the number of years a bank operated under statewide-banking laws), assuming that banks were more likely to learn such capabilities when exposed to such an environment longer. To account for experience in acquisitions (Zollo & Singh, 2004), we included a dummy variable, *previous acquisition*, with 1 indicating that a bank had previously acquired another bank and 0 otherwise. We also included *headquarters in MSA*, indicating that a bank's headquarters was in an urban area (a metropolitan statistical area, or MSA); *bank age*, measured as the number of years since a bank's founding (log-transformed as extreme values existed); and *multibank holding company*, a dummy variable, with 1 indicating that the bank was organized as a multibank holding company and 0 otherwise. Finally, to account for New York's unique early banking history and for its being the financial center of the U.S., we included a dummy variable, *early New York bank*, with 1 indicating a New York bank founded prior to 1900.

In studies of imprinting, it is also important to include controls for contemporary environmental effects (Meyer & Brown, 1977), so we accounted for economic and policy characteristics of a bank's home state. Reflecting the state policy environment, we included variables indicating whether or not a state had *branching law* and further, whether or not it allowed *interstate banking*, both laws being intended to promote acquisitions (Stiroh & Strahan, 2003). We also included a dummy variable indicating whether or not the state was a statewide-banking state in 1978 (*statewide banking in 1978*), the year in which the shift to the national environment began; such major environmental shifts have been theorized to impact imprinting processes (Stinchcombe, 1965), and banks that were statewide prior to deregulation might have been at an advantage in the expanded setting. Contemporary state-level economic conditions measured here were *per capita income* and *urbanization*, calculated using the same sources and methods described above. To control for the contemporary effect of agrarian presence, we also included a contemporaneous measure of farm presence in a state, operationalized as the average *size of farms* in a state. Because of the comparatively recent devel-

opment of industrial agriculture and consolidation of farmland, we feel this is a better contemporaneous measure of farm presence than the number of farmers. We also included the *square miles* of a state to account for spatial differences that may affect transportation infrastructure. Moreover, to the extent that larger states might have higher within-state variation, controlling for this variable helps us partly address the possible concern that our measures of founding conditions at the state level are insensitive to the within-state variation of these founding conditions. To account for the banking markets in each state, we controlled for *the number of banks per capita* (capturing contemporaneous competition among banks) and *average bank size*, both of which were calculated from U.S. Census population figures, data from apposite years of the FDIC Historical Statistics on Banking series (<http://www2.fdic.gov/hsob/index.asp>), and an ICPSR file (Flood, 1998). To account for acquisition waves (Stearns & Allan, 1996), we also included a count of the *number of acquisitions* in the bank's headquarters state in the previous year. In addition to our theorized founding environments, we further included a variable capturing the competition at founding, the number of banks present in a state, a density measure frequently used by ecological studies of imprinting (see, e.g., Carroll & Hannan, 2000).

### Statistical Models

Since we were concerned with whether or not a bank engaged in acquisitions, the dependent variable, *acquisition*, was binary, with 1 indicating that a bank acquired another bank in a given year. Moreover, since we observed banks repeatedly during the study period, we had a cross-sectional time series panel in which observations were unlikely to be completely independent. Given these characteristics of our data, we conducted the analyses using the "xtlogit" command in STATA with the random-effects option. Although both fixed-effects and random-effects options are available, testing the effects of the time-invariant founding environments rendered fixed-effects specification impossible. We nevertheless included year dummy variables to control for any unobserved time effects.<sup>9</sup>

<sup>9</sup> One reviewer questioned the extent to which these laws were exogenous when one is considering future acquisitions of newly founded banks, because banks that were interested in growing may have lobbied to change branching policies. We feel that our findings are robust to these endogeneity concerns for a number of reasons.

## RESULTS

Table 2 provides the descriptive statistics and correlations for the variables included in our analyses. Owing to some high correlations between some of our variables, we took a number of steps to ensure that our estimates were not biased by multicollinearity. First, since testing the hypotheses required the inclusion of interaction terms, we mean-centered the theorized variables before creating the interaction terms. We also conducted variance inflation factor (VIF) tests for all of our models. The only model that had any VIF scores of over ten, the recommended threshold value (Gujarati, 2003), was the full model, model 10, which should be interpreted with more caution than the others.

Table 3 presents the results of our analyses. Model 1 includes control variables at both organizational and state levels, and model 2 adds the main effects of the founding conditions with the exception of founding branching policy. Model 3 tests Hypothesis 1 regarding the main effect of founding branching policy. Models 4 and 5 examine the effect of modernization processes by adding the interaction of founding branching policy with founding transportation infrastructure and urbanization. Models 6 to 9 investigate the effect of founding political culture by adding the interaction of founding branching policy with founding Grange membership, agrarian presence, and Progressive presence. Model 10 is the complete model with all variables.

Several features of the control model, model 1, are worth noting. First, both bank performance and size are significant predictors of banks' propensity to engage in acquisitions. As would be expected, larger banks are more likely to make acquisitions. However, it is banks with lower performance that are more likely to acquire other firms. Although this finding may seem surprising, it is consistent with extensive research that has shown that bank

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First, because we looked at banks' founding environments, for there to be bias, the bank founders would have had to lobby for legal changes many years in advance of their bank's founding. Regulatory approvals cause a one-to-two-year lag in setting up a bank, and legal struggles are typically protracted. We believe that it is unlikely that future bank founders would work so far in advance to shape their environment. Also, historical work (Calomiris, 2000) suggests that newly founded smaller banks were, if anything, more likely to lobby for more restrictive laws. Finally, in our prior work (Marquis & Huang, 2009), we showed through a two-stage instrumental variable approach that branching laws tended to encourage banks to pursue branching regardless of their intention to lobby or not.

TABLE 2  
Descriptive Statistics and Correlations<sup>a</sup>

Variable	Mean	s.d.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30			
1. Acquisition	0.01	0.11																																	
2. Income/assets, $t-1$	0.08	0.10	.00																																
3. Bank total assets, $t-1$ <sup>b</sup>	11.05	1.20	.20	-.04																															
4. Headquarters in MSA	0.45	0.50	.05	.03	.31																														
5. Bank age <sup>b</sup>	4.08	0.67	.01	-.06	.04	-.34																													
6. Multibank holding company	0.49	0.50	.08	-.02	.24	.00	.07																												
7. Previous acquisitions	0.05	0.21	.19	-.01	.34	.07	.02	.16																											
8. Years under statewide banking	7.07	14.60	.06	-.02	.20	.04	.10	.00	.11																										
9. State branching policy	0.48	0.50	.05	-.03	.16	.11	-.20	.17	.12	.43																									
10. Interstate banking law	0.53	0.50	.04	-.04	.15	.08	-.15	.29	.13	.19	.58																								
11. State per capita income	16,377	6,070.7	.04	-.03	.16	.12	-.19	.31	.14	.21	.64	.77																							
12. State urbanization	0.70	0.12	.01	.01	.13	.33	-.27	-.02	.02	-.03	.19	.17	.35																						
13. Number of banks, $t-1$	5.99	0.65	-.04	-.01	-.18	-.02	.09	-.02	-.08	-.48	-.17	-.14	.34																						
14. Average bank size, $t-1$	18.21	1.01	.00	.00	.17	.28	-.17	-.07	.01	-.09	.06	.16	.25	.73	.53																				
15. State number of acquisitions, $t-1$	7.01	10.46	.02	-.01	.03	.06	-.08	.09	.04	-.03	.24	.30	.29	.28	.27	.30																			
16. Early New York bank	0.00	0.05	.00	.00	.06	.03	.05	-.03	.01	.02	.05	.02	.03	.06	-.04	.12	-.01																		
17. Statewide banking in 1978	0.01	0.08	.00	-.02	.03	.03	.00	-.06	-.01	.12	.09	-.09	-.11	.01	-.11	-.03	-.03	.04																	
18. State square miles	8.76	6.82	-.01	.01	-.06	.07	-.16	-.01	-.03	-.10	.05	.01	.01	.38	.51	.40	.32	-.02	-.03																
19. State average farm size	5.86	0.69	-.02	.02	-.20	-.12	-.06	.12	-.03	-.09	.03	-.08	-.04	.09	.15	-.25	.06	-.04	-.03	.53															
20. Founding branching policy	0.17	0.37	.03	.03	.11	.14	-.29	-.10	.04	.49	.29	.10	.12	.11	-.37	.05	-.06	-.02	.11	-.06	-.17														
21. Branching × transportation	0.08	0.54	-.01	.04	.00	.22	-.57	-.07	.00	-.13	.27	.11	.20	.28	-.17	.19	.01	-.01	.04	.11	.04	.33													
22. Branching × urbanization	0.01	0.12	-.01	.03	.02	.24	-.48	-.05	.00	-.18	.23	.08	.20	.42	-.07	.24	.03	.00	.02	.16	.10	.19	.85												
23. Branching × agrarian	0.00	0.02	.01	-.04	-.03	-.24	.52	.07	.00	.08	-.28	-.10	-.21	-.37	.17	-.19	-.01	.01	-.05	-.11	-.04	-.31	-.88	-.95											
24. Branching × Grange	-0.27	1.50	.01	-.04	.03	-.16	.47	.06	.01	.16	-.18	-.10	-.15	-.23	.13	-.14	-.02	.01	-.01	-.05	-.01	-.41	-.68	-.57	.62										
25. Branching × Progressive	0.00	0.02	.01	-.02	.03	-.08	.24	.01	.02	.17	-.09	-.04	-.07	-.07	.09	.00	.01	.00	-.01	.00	-.02	-.10	-.39	-.35	.37	.27									
26. Founding transportation infrastructure	0.08	1.13	-.01	.04	.01	.33	-.86	-.06	-.02	-.12	.12	.09	.12	.31	.02	.26	.10	-.07	.01	.19	.02	.16	.48	.41	-.42	-.32	-.18								
27. Founding urbanization	-0.01	0.24	.00	.03	.11	.44	-.71	-.09	.00	-.12	.14	.12	.24	.68	.08	.52	.14	.05	.03	.11	-.10	.13	.45	.52	-.50	-.31	-.19	.77							
28. Founding agrarian presence	0.00	0.05	.00	-.03	-.10	-.38	.67	.10	.00	.07	-.12	-.11	-.20	-.51	.01	-.42	-.10	-.03	-.03	-.05	.16	-.17	-.37	-.40	.42	.27	.16	-.72	-.69						
29. Founding Grange membership	0.08	3.62	.01	-.04	.07	-.16	.64	.03	.02	.05	-.11	-.07	.00	-.04	.11	.07	-.02	.06	.00	-.13	-.16	-.21	-.30	-.24	.27	.43	.12	-.49	-.25	.23					
30. Founding progressive presence	0.00	0.05	.00	-.01	-.03	-.13	.30	.01	.00	.08	-.03	-.04	-.03	-.09	.00	-.09	-.04	-.02	.00	-.04	.02	-.06	-.14	-.13	.14	.10	.35	-.28	-.25	.21	.19				
31. Founding competition (density)	0.02	0.87	-.03	-.03	-.14	-.03	.18	.04	-.04	-.31	-.23	-.03	.05	.23	.75	.48	.25	.04	-.09	.27	-.04	-.45	-.19	-.14	.23	.23	.13	.01	.09	-.05	.35	.10			

<sup>a</sup>  $n = 201,868$  bank-year observations.

<sup>b</sup> Logarithm.

**TABLE 3**  
**Results of Random-Effects Logistic Regression Analyses of Bank Acquisitions, 1978–2001<sup>a</sup>**

Variable	1	2	3	4	5
<i>Founding conditions</i>					
H1: Branching policy			0.360*	0.234**	0.316*
			(0.096)	(0.102)	(0.098)
H2: Branching policy × transportation				0.297*	
				(0.065)	
H3: Branching policy × urbanization					0.911*
					(0.278)
H4: Branching policy × Grange membership					
H5: Branching policy × agrarian presence					
H6: Branching policy × Progressive presence					
Transportation infrastructure		-0.063	-0.064	-0.084	-0.052
		(0.055)	(0.055)	(0.055)	(0.055)
Urbanization		0.220	0.558	0.483	0.215
		(0.375)	(0.388)	(0.391)	(0.405)
Grange membership		0.006	0.005	0.001	0.004
		(0.053)	(0.011)	(0.011)	(0.011)
Agrarian presence		0.010	1.344	0.595	0.632
		(0.011)	(1.077)	(1.104)	(1.122)
Progressive presence		1.027	-0.160	-0.278	-0.289
		(1.062)	(0.510)	(0.512)	(0.514)
<i>Organizational controls</i>					
Income/assets, <i>t</i> - 1	-4.289*	-3.958**	-4.167**	-4.144**	-4.239**
	(1.653)	(1.805)	(1.817)	(1.819)	(1.822)
Bank total assets, <i>t</i> - 1	0.734*	0.747*	0.751*	0.759*	0.758*
	(0.021)	(0.024)	(0.024)	(0.024)	(0.024)
Headquarters in MSA	0.077	0.045	0.050	0.053	0.054
	(0.060)	(0.066)	(0.066)	(0.066)	(0.066)
Bank age <sup>b</sup>	-0.031	-0.208**	-0.073	0.030	-0.042
	(0.040)	(0.101)	(0.107)	(0.110)	(0.108)
Multibank holding company	0.862*	0.860*	0.863*	0.867*	0.869*
	(0.065)	(0.072)	(0.072)	(0.072)	(0.072)
Previous acquisitions	0.620*	0.600*	0.593*	0.571*	0.572*
	(0.075)	(0.088)	(0.088)	(0.088)	(0.088)
Early New York bank	-0.088	0.181	0.196	0.251	0.264
	(0.214)	(0.486)	(0.486)	(0.488)	(0.488)
<i>Environmental controls</i>					
Years under statewide banking	0.001	0.003	-0.001	0.004 <sup>†</sup>	0.002
	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)
State branching policy	0.212*	0.271*	0.271*	0.227*	0.249*
	(0.073)	(0.082)	(0.081)	(0.082)	(0.082)
Interstate banking law	-0.233**	-0.257**	-0.254**	-0.244**	-0.234**
	(0.094)	(0.106)	(0.106)	(0.106)	(0.106)
State per capita income	-0.000*	-0.000*	-0.000*	-0.000*	-0.000*
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
State urbanization	-0.004	0.763	0.562	0.522	0.491
	(0.331)	(0.512)	(0.518)	(0.516)	(0.518)
Founding bank density	0.070	0.136 <sup>†</sup>	0.070	0.056	0.084
	(0.056)	(0.071)	(0.056)	(0.056)	(0.056)
Number of banks, <i>t</i> - 1	0.077 <sup>†</sup>	-0.362*	0.115	0.207*	0.144**
	(0.045)	(0.054)	(0.071)	(0.075)	(0.072)
Average bank size, <i>t</i> - 1	-0.225*	0.017*	-0.388*	-0.418*	-0.393*
	(0.038)	(0.002)	(0.054)	(0.055)	(0.054)
Number of acquisitions, <i>t</i> - 1	0.018*	0.004	0.017*	0.018*	0.018*
	(0.002)	(0.007)	(0.003)	(0.003)	(0.003)
State square miles	0.005	0.692**	0.005	0.001	0.000
	(0.007)	(0.338)	(0.007)	(0.007)	(0.007)
Statewide banking in 1978	0.654**	-0.136**	0.656 <sup>†</sup>	0.670**	0.665**
	(0.290)	(0.061)	(0.338)	(0.337)	(0.338)
State average farm size	-0.109 <sup>†</sup>	-7.96 <sup>†</sup>	-0.109 <sup>†</sup>	-0.125**	-0.114 <sup>†</sup>
	(0.062)	(1.074)	(0.062)	(0.062)	(0.062)
Constant	-9.229*	0.271*	-7.975*	-8.316*	-6.431*
	(0.608)	(0.082)	(1.076)	(1.080)	(1.150)
Observations	221,923	201,868	201,868	201,868	201,868
Number of groups (banks)	24,712	22,989	22,989	22,989	22,989
Log-likelihood	-11,132.2	-9,499.8	-9,492.8	-9,482.0	-9,487.3

<sup>a</sup> Acquisition = 1. Standard errors are in parentheses.

<sup>b</sup> Logarithm.

<sup>†</sup>  $p < .10$

\*  $p < .05$

\*\*  $p < .01$

**TABLE 3**  
**Continued**

Variable	6	7	8	9	10
<i>Founding conditions</i>					
H1: Branching policy	0.248** (0.102)	0.320* (0.099)	0.341* (0.096)	0.230** (0.103)	0.179 <sup>†</sup> (0.106)
H2: Branching policy × transportation					0.354* (0.111)
H3: Branching policy × urbanization					0.958 (0.656)
H4: Branching policy × Grange membership	-0.074* (0.021)			-0.062* (0.023)	-0.048** (0.023)
H5: Branching policy × agrarian presence		-3.621** (1.553)		-1.968 (1.638)	9.077** (3.667)
H6: Branching policy × Progressive presence			-2.257 <sup>†</sup> (1.255)	-1.693 (1.260)	-1.043 (1.280)
Transportation infrastructure	-0.043 (0.055)	-0.059 (0.055)	-0.064 (0.055)	-0.043 (0.055)	-0.071 (0.057)
Urbanization	0.647 <sup>†</sup> (0.389)	0.483 (0.390)	0.565 (0.387)	0.593 (0.391)	0.328 (0.438)
Grange membership	0.017 (0.011)	0.004 (0.011)	0.004 (0.011)	0.014 (0.011)	0.011 (0.012)
Agrarian presence	1.385 (1.080)	1.284 (1.076)	1.319 (1.080)	1.321 (1.081)	-0.175 (1.224)
Progressive presence	-0.187 (0.509)	-0.248 (0.512)	0.289 (0.556)	0.106 (0.561)	-0.022 (0.565)
<i>Organizational controls</i>					
Income/assets, $t - 1$	-4.196** (1.817)	-4.178** (1.819)	-4.225** (1.818)	-4.242** (1.819)	-4.236** (1.821)
Bank total assets, $t - 1$	0.753* (0.024)	0.755* (0.024)	0.752* (0.024)	0.756* (0.024)	0.760* (0.024)
Headquarters in MSA	0.049 (0.066)	0.052 (0.066)	0.046 (0.066)	0.047 (0.066)	0.049 (0.066)
Bank age <sup>b</sup>	-0.021 (0.108)	-0.032 (0.109)	-0.070 (0.107)	-0.004 (0.109)	0.016 (0.111)
Multibank holding company	0.864* (0.072)	0.866* (0.072)	0.862* (0.072)	0.864* (0.072)	0.866* (0.072)
Previous acquisitions	0.589* (0.087)	0.582* (0.088)	0.595* (0.087)	0.587* (0.087)	0.572* (0.088)
Early New York bank	0.242 (0.486)	0.224 (0.487)	0.196 (0.486)	0.250 (0.486)	0.295 (0.488)
<i>Environmental controls</i>					
Years under statewide banking	0.003 (0.002)	0.001 (0.002)	0.000 (0.002)	0.004 (0.002)	0.006** (0.003)
State branching policy	0.265* (0.081)	0.251* (0.082)	0.267* (0.081)	0.252* (0.082)	0.237* (0.082)
Interstate banking law	-0.256** (0.105)	-0.246** (0.106)	-0.256** (0.106)	-0.252** (0.106)	-0.243** (0.106)
State per capita income	-0.000* (0.000)	-0.000* (0.000)	-0.000* (0.000)	-0.000* (0.000)	-0.000* (0.000)
State urbanization	0.449 (0.517)	0.475 (0.519)	0.556 (0.517)	0.418 (0.517)	0.599 (0.518)
Founding bank density	0.050 (0.056)	0.083 (0.056)	0.074 (0.056)	0.063 (0.057)	0.023 (0.058)
Number of banks, $t - 1$	0.175** (0.073)	0.135 <sup>†</sup> (0.072)	0.122 <sup>†</sup> (0.071)	0.182** (0.073)	0.245** (0.076)
Average bank size, $t - 1$	-0.411* (0.055)	-0.391* (0.054)	-0.384* (0.054)	-0.406* (0.055)	-0.433* (0.055)
Number of acquisitions, $t - 1$	0.017* (0.003)	0.018* (0.003)	0.017* (0.003)	0.018* (0.003)	0.018* (0.003)
State square miles	0.005 (0.007)	0.003 (0.007)	0.004 (0.007)	0.003 (0.007)	0.000 (0.007)
Statewide banking in 1978	0.667** (0.337)	0.660 <sup>†</sup> (0.337)	0.661 <sup>†</sup> (0.337)	0.671** (0.337)	0.679** (0.337)
State average farm size	-0.126** (0.062)	-0.110 <sup>†</sup> (0.062)	-0.108 <sup>†</sup> (0.062)	-0.123** (0.062)	-0.140** (0.062)
Constant	-7.948* (1.071)	-8.156* (1.080)	-8.094* (1.076)	-8.141* (1.077)	-8.175* (1.079)
Observations	201,868	201,868	201,868	201,868	201,868
Number of groups (banks)	22,989	22,989	22,989	22,989	22,989
Log-likelihood	-9,486.7	-9,490.0	-9,491.1	-9,484.9	-9,476.4

acquisitions have a negative impact on performance (Rhoades, 1994). It is particularly interesting to contrast the findings for *years under statewide banking* and *statewide banking in 1978*. First, duration under statewide banking had no effect on acquisitions. This suggests that the alternative learning hypothesis—that banks are able to develop capabilities the longer they are exposed to an environment that allows branching—does not hold in this domain. However, being in a statewide-banking state in 1978 does appear to have had an important positive effect, suggesting that those firms that were in the most liberal environment at the beginning of deregulation were especially well poised to acquire other firms in the new environment. A number of other controls suggested by previous research on acquisitions were also significant, corroborating previous studies.

Model 3 tests Hypothesis 1 regarding the positive effect of being founded in a statewide-banking state on subsequent acquisitions. The estimated coefficient for founding branching policy is statistically significant with the predicted positive sign, supporting Hypothesis 1. According to the estimated equation in model 3 ( $\exp[0.360 \times \text{founding branching law}]$ ), all else being equal, banks founded in a state allowing statewide branching were over 43 percent more likely to subsequently engage in acquisitions than other banks. It is noteworthy that we observed the effects of founding branching law even after controlling for banks' financial and structural characteristics, learning processes, and contemporary environmental conditions, the major alternative explanations. Coupled with the historical evidence discussed above, this link between founding branching policy and banks' tendency to acquire other banks, as shown in model 3, supports our arguments regarding how banks developed capabilities for managing dispersed units.

Models 4 and 5 further support the idea that banks' capabilities are the mechanism linking founding branching policy to their subsequent tendency to acquire other banks. Model 4 tests Hypothesis 2 regarding the moderating effect of founding transportation infrastructure in a state. The estimated coefficient for the interaction term in model 4 is positive and statistically significant, supporting Hypothesis 2. To assess the effect size of founding transportation infrastructure as a moderator, we drew on the estimated equation in model 4 ( $\exp[0.234 \times \text{founding branching policy} + 0.297 \times \text{founding branching policy} \times \text{founding transportation infrastructure}]$ ). All else being equal, when a bank was founded in a state with a low level of transportation infrastructure (1 s.d. below the mean), the bank's propensity to subsequently ac-

quire other banks did not change significantly when the state's branching law changed from unit banking to statewide branching, as the calculated multiplier changes from 1 to 0.923. By contrast, when a bank was founded in a state with a high level of transportation infrastructure (1 s.d. above the mean), the bank's propensity to subsequently acquire other banks increased significantly when the state's branching law changed from unit banking to statewide branching, as the calculated multiplier increases by over 1.8 times (from 1 to 1.808).

Model 5 tests Hypothesis 3 regarding the moderating effect of founding urbanization in a state. As anticipated, the estimated coefficient for the interaction term in model 5 is positive and statistically significant, supporting Hypothesis 3. The finding suggests that although banks founded in states allowing statewide branching were more likely to acquire other banks after deregulation began in 1978 than those founded under other conditions, this effect was stronger for banks founded in states with higher urbanization.

Models 6 to 9 examine the imprinting effect of the political culture. As discussed above, since the political culture could affect banks' development of capabilities for managing dispersed units only when branching was allowed, and since resistance to bank branching was stronger under high levels of the political culture variables we examined, we believed that it was meaningful to only hypothesize the moderating effect of founding political culture. In keeping with our reasoning, the main effects of founding Grange membership, agrarian presence, and Progressive presence are not statistically significant. Model 6 tests Hypothesis 4, regarding the moderating effect of founding Grange membership. The estimated coefficient for the interaction term in model 5 is statistically significant with the anticipated negative sign, supporting Hypothesis 4. Model 7 tests Hypothesis 5, regarding the moderating effect of founding agrarian presence. As expected, the estimated coefficient for the interaction term is negative and statistically significant, supporting Hypothesis 5. Model 8 tests Hypothesis 6, regarding the moderating effect of founding Progressive presence. The estimated coefficient for the interaction term is negative and significant ( $p < .10$ ), marginally supporting Hypothesis 6. These findings suggest that, although a bank founded in a state allowing statewide branching was more likely than other banks to subsequently acquire other banks, the impact of such imprinting became weaker in states with stronger levels of the founding political culture conditions encouraging resistance to the geographical expansion of banks, all else being equal.

Model 9 tests the combined effect of the three political culture conditions. As shown, although the three interaction terms still have the expected negative sign, only the effect for founding Grange membership is statistically significant. We suggest that the results should be interpreted as follows: Table 2 shows that the three founding political cultural conditions do not have highly positive correlations with each other (the highest correlation coefficient is  $-.25$ ), indicating that they are indeed distinct from each other to some extent. However, this does not mean that the effects of the political cultural conditions at founding on banks' geographical expansion, eventually, on their acquisition activities can simply add up; even if the three founding conditions simultaneously affect a bank, the bank could sufficiently respond to the resistance pressure from the three sources with the same decision of reducing or stopping geographical expansion. Thus, to consider the separate effect of the three founding political cultural conditions, one should refer to models 6 to 8. However, model 9 does provide some additional information about the influence of founding political culture environment as a whole. The finding that founding Grange membership appears to have a stronger effect than both founding agrarian and Progressive presence suggests that it is organized social movements that constitute the stronger resistance to banks' geographical expansion. But note as well that the combined effect of the three founding conditions is significantly bigger than that of each of the three founding conditions, as indicated by comparing the log-likelihood of model 9 with the same value for models 6 to 8 separately, suggesting that a political culture of resistance to large organizations reflects a broader environmental force than any of these individual measures taps.

### Supplementary Analyses

Recall that our theorizing suggests the following causal process: founding institutional conditions leads to banks' geographical dispersion, which leads to capabilities for managing dispersed units, which leads to subsequent acquisition (see also Figure 3). We were not able to measure the underlying capabilities but relied on our historical data to provide qualitative evidence for our mechanisms. The findings that support our corollary hypotheses also help flesh out the proposed mechanism. Therefore, even without directly measuring banks' underlying capabilities, we are fairly confident that the observed results in Table 3 are generated by the proposed mechanism.

But to further strengthen this conclusion, we conducted supplementary analyses. We had systematic data with which to measure geographical dispersion as the antecedent of banks' capabilities for managing dispersed units, therefore allowing us to more directly tap into the proposed mechanism. We measured the extent of banks' geographical dispersion with a new variable, *founding location dispersion*, which refers to the percentage of bank locations in a state that were outside of a bank's headquarters location at its founding. Information for this measurement came from apposite issues of the *Federal Reserve Bulletin*. If the founding institutional conditions indeed affected banks' tendency to expand geographically, adding this new variable to our models in Table 3 should have at least partially mediated the effects of founding institutional and other environmental conditions on banks' propensity to acquire other banks. Typically, mediation is shown when the addition of a new independent variable to a regression significantly reduces the effect of a variable already in the equation, and the new variable is significantly predicted by the variable whose effect size shrinks (Baron & Kenny, 1986).

The results presented in Table 4 are striking.<sup>10</sup> In keeping with our expectations, adding founding location dispersion, which is statistically significant with a positive sign, entirely washes out the effects of founding branching policy and founding urbanization, agrarian presence, and Progressive presence, although not those of founding transportation infrastructure and Grange membership. Given that our analyses controlled for bank size as well as other factors, we cannot conceive of any plausible alternative to banks' capabilities for the management of dispersed units that could have linked their geographical dispersion and subsequent acquisition activities. These supplementary analyses provide strong evidence of the suggested mechanism and make us more confident about our interpretations of the observed effects of founding institutional conditions in Table 3.<sup>11</sup>

<sup>10</sup> Banks that were founded between 1993 and 2000 were excluded from this analysis because the government did not publish information on the geographic distribution of branches after 1992. Results presented in Table 3 are the same when using this reduced sample.

<sup>11</sup> We also conducted formal mediation analysis (Baron & Kenny, 1986) to confirm this effect. The Sobel test examining the extent to which location dispersion mediated the effect of branching law on acquisition returned a  $p$ -value of  $.00000754$ , strongly supporting our idea that it is through geographic dispersion and associated branch management capabilities that founding conditions have their effects.

**TABLE 4**  
**Results of Random-Effects Logistic Regression Analyses of Bank Acquisitions, 1978–2001<sup>a</sup>**

Variable	1	2	3
<i>Founding conditions</i>			
Location dispersion	1.051* (0.232)	0.637** (0.278)	0.911* (0.290)
H1: Branching policy	0.162 (0.106)	0.148 (0.108)	0.174 (0.108)
H2: Branching policy × transportation		0.208* (0.077)	
H3: Branching policy × urbanization			0.280 (0.347)
H4: Branching policy × Grange membership			
H5: Branching policy × agrarian presence			
H6: Branching policy × Progressive votes			
Transportation infrastructure	-0.107 <sup>†</sup> (0.058)	-0.120** (0.058)	-0.103 <sup>†</sup> (0.058)
Urbanization	0.592 (0.397)	0.458 (0.400)	0.460 (0.430)
Grange membership	0.008 (0.011)	0.007 (0.011)	0.008 (0.011)
Agrarian presence	1.150 (1.105)	0.702 (1.118)	0.960 (1.134)
Progressive presence	-0.245 (0.511)	-0.271 (0.512)	-0.266 (0.513)
Founding bank density	0.148** (0.058)	0.112 <sup>†</sup> (0.060)	0.143** (0.059)
<i>Organizational controls</i>			
Income/assets, $t - 1$	-4.630** (1.890)	-4.554** (1.885)	-4.630** (1.889)
Bank total assets, $t - 1$ <sup>b</sup>	0.766* (0.025)	0.767* (0.025)	0.767* (0.025)
Headquarters in MSA	0.053 (0.067)	0.054 (0.067)	0.054 (0.067)
Bank age <sup>b</sup>	-0.001 (0.135)	-0.026 (0.134)	-0.023 (0.137)
Multibank holding company	0.863* (0.072)	0.868* (0.072)	0.866* (0.072)
Previous acquisitions	0.571* (0.088)	0.566* (0.088)	0.568* (0.088)
Early New York bank	0.288 (0.489)	0.303 (0.489)	0.300 (0.489)
Years under statewide banking	0.003 (0.002)	0.005** (0.002)	0.003 (0.002)
<i>Environmental controls</i>			
State branching policy	0.255* (0.081)	0.232* (0.082)	0.251* (0.082)
Interstate banking policy	-0.223** (0.106)	-0.225** (0.106)	-0.220** (0.106)
State per capita income	-0.000* (0.000)	-0.000* (0.000)	-0.000* (0.000)
State urbanization	0.458 (0.526)	0.546 (0.526)	0.477 (0.527)
Number of banks, $t - 1$	0.193* (0.074)	0.232* (0.076)	0.193* (0.074)
Average bank size, $t - 1$	-0.455* (0.056)	-0.453* (0.056)	-0.449* (0.057)
Number of acquisitions, $t - 1$	0.019* (0.003)	0.019* (0.003)	0.019* (0.003)
State square miles	0.002 (0.007)	-0.001 (0.007)	0.001 (0.007)
Statewide banking in 1978	0.643 <sup>†</sup> (0.337)	0.659 <sup>†</sup> (0.337)	0.648 <sup>†</sup> (0.338)
State average farm size	-0.100 (0.063)	-0.121 <sup>†</sup> (0.064)	-0.105 <sup>†</sup> (0.063)
Constant	-5.785* (1.190)	-5.771* (1.188)	-5.784* (1.190)
Observations	199,956	199,956	199,956
Number of groups (banks)	22,253	22,253	22,253
Log-likelihood	-9,413.2	-9,409.5	-9,412.9

<sup>a</sup> Acquisition = 1. Standard errors are in parentheses.

<sup>b</sup> Logarithm.

<sup>†</sup>  $p < .10$

\*  $p < .05$

\*\*  $p < .01$

Two-tailed tests.

**TABLE 4**  
**Continued**

Variable	4	5	6	7	8
<i>Founding conditions</i>					
Location dispersion	0.890* (0.241)	1.056* (0.274)	1.011* (0.234)	0.941* (0.278)	0.673** (0.297)
H1: Branching policy	0.109 (0.110)	0.162 (0.106)	0.156 (0.107)	0.100 (0.110)	0.083 (0.114)
H2: Branching policy × transportation					0.337* (0.113)
H3: Branching policy × urbanization					0.550 (0.691)
H4: Branching policy × Grange membership	-0.053** (0.022)			-0.054** (0.023)	-0.044 <sup>†</sup> (0.023)
H5: Branching policy × agrarian presence		0.058 (1.820)		1.117 (1.876)	8.935** (3.706)
H6: Branching policy × Progressive votes			-1.564 (1.264)	-1.354 (1.267)	-0.889 (1.283)
Transportation infrastructure	-0.092 (0.058)	-0.108 <sup>†</sup> (0.058)	-0.107 <sup>†</sup> (0.058)	-0.094 (0.058)	-0.120** (0.059)
Urbanization	0.609 (0.397)	0.594 (0.403)	0.588 (0.397)	0.645 (0.402)	0.432 (0.457)
Grange membership	0.017 (0.012)	0.008 (0.011)	0.007 (0.011)	0.017 (0.012)	0.015 (0.012)
Agrarian presence	1.193 (1.104)	1.150 (1.105)	1.137 (1.107)	1.180 (1.108)	0.071 (1.235)
Progressive presence	-0.237 (0.510)	-0.244 (0.512)	0.070 (0.562)	0.047 (0.562)	-0.019 (0.565)
Founding bank density	0.123** (0.059)	0.148** (0.059)	0.148** (0.058)	0.124** (0.059)	0.074 (0.061)
<i>Organizational controls</i>					
Income/assets, $t - 1$	-4.634** (1.887)	-4.631** (1.890)	-4.669** (1.889)	-4.680** (1.888)	-4.627** (1.886)
Bank total assets, $t - 1^b$	0.766* (0.025)	0.766* (0.025)	0.767* (0.025)	0.766* (0.025)	0.767* (0.025)
Headquarters in MSA	0.051 (0.067)	0.053 (0.067)	0.050 (0.067)	0.048 (0.067)	0.050 (0.067)
Bank age <sup>b</sup>	-0.007 (0.134)	-0.007 (0.135)	-0.009 (0.135)	-0.006 (0.135)	-0.031 (0.138)
Multibank holding company	0.864* (0.072)	0.863* (0.072)	0.863* (0.072)	0.863* (0.072)	0.866* (0.072)
Previous acquisitions	0.574* (0.088)	0.571* (0.088)	0.575* (0.088)	0.577* (0.088)	0.569* (0.088)
Early New York bank	0.312 (0.488)	0.288 (0.489)	0.286 (0.488)	0.308 (0.488)	0.331 (0.489)
Years under statewide banking	0.005** (0.003)	0.003 (0.002)	0.003 (0.002)	0.005** (0.003)	0.007* (0.003)
<i>Environmental controls</i>					
State branching policy	0.254* (0.081)	0.255* (0.082)	0.253* (0.082)	0.257* (0.082)	0.242* (0.082)
Interstate banking policy	-0.227** (0.105)	-0.223** (0.106)	-0.225** (0.106)	-0.229** (0.105)	-0.228** (0.106)
State per capita income	-0.000* (0.000)	-0.000* (0.000)	-0.000* (0.000)	-0.000* (0.000)	-0.000* (0.000)
State urbanization	0.436 (0.524)	0.458 (0.526)	0.466 (0.526)	0.443 (0.524)	0.642 (0.527)
Number of banks, $t - 1$	0.226* (0.075)	0.193* (0.074)	0.196* (0.074)	0.228* (0.075)	0.278* (0.078)
Average bank size, $t - 1$	-0.462* (0.056)	-0.455* (0.057)	-0.450* (0.057)	-0.462* (0.057)	-0.475* (0.058)
Number of acquisitions, $t - 1$	0.018* (0.003)	0.019* (0.003)	0.018* (0.003)	0.018* (0.003)	0.018* (0.003)
State square miles	0.002 (0.007)	0.002 (0.007)	0.002 (0.007)	0.002 (0.007)	0.000 (0.007)
Statewide banking in 1978	0.654 <sup>†</sup> (0.337)	0.643 <sup>†</sup> (0.337)	0.647 <sup>†</sup> (0.337)	0.655 <sup>†</sup> (0.337)	0.666** (0.337)
State average farm size	-0.116 <sup>†</sup> (0.063)	-0.100 (0.063)	-0.101 (0.063)	-0.114 <sup>†</sup> (0.063)	-0.136** (0.064)
Constant	-5.585* (1.188)	-5.784* (1.190)	-5.826* (1.188)	-5.609* (1.188)	-7.539* (1.119)
Observations	199,956	199,956	199,956	199,956	199,956
Number of groups (banks)	22,253	22,253	22,253	22,253	22,253
Log-likelihood	-9,410.5	-9,413.2	-9,412.5	-9,409.7	-9,403.8

## DISCUSSION

This study examined how founding institutional environments, in particular public policy and political culture, leave an imprint on organizations. Unlike prior work (Kimberly, 1975; Meyer & Brown, 1977; Tucker et al., 1990), our investigation focused on articulating the intraorganizational mechanisms that link founding institutional environments and contemporary organizational behaviors. Our theoretical arguments suggest that founding institutional environments, by delineating boundaries for organizations' behaviors, likely lead organizations to develop particular capabilities at founding, which are then institutionalized and persist within the organizations. Moreover, these imprinted intraorganizational capabilities may be exapted for new uses after environmental shifts and thus have different contemporary manifestations.

Our investigation of the imprinting of branching policy and political culture in the U.S. commercial banking industry provides general support for our theory. Our findings suggest that banks founded in a state allowing statewide branching were more likely than banks that were not to acquire other banks following the 1978 deregulation and that this relationship was enhanced when a bank was founded in a state with more advanced transportation infrastructure and higher urbanization. Further, when statewide branching was allowed at founding, a political culture, manifested as the presence of organized Granges, agrarian actors, and Progressives suppressed the effect of founding branching policy on banks' subsequent propensity to acquire other banks. These results as a whole suggest that (1) both founding branching policy and political culture affect banks' development of capabilities to manage geographically dispersed units at the time of the banks' founding and (2) such imprinted capabilities are manifested in banks' subsequent propensity to engage in acquisitions, which requires that very set of capabilities. Below, we outline several major implications of this study.

### Implications for Imprinting Research

This study makes several contributions to imprinting research. First, our work reorients imprinting research to focus on founding institutional environments as opposed to the more frequently studied material environments. We examined two founding institutional environments, public policy and political culture, and showed that they imprinted banks, while controlling for the most common measure of material environments, organizational density (Carroll & Hannan, 1989). Moreover,

we enrich understanding of the lasting effects of founding institutional environments by conducting much finer-grained analyses than the relatively few existing studies include (e.g., Kimberly, 1975; Meyer & Brown, 1977; Tucker et al., 1990).

Second, in this study we not only hypothesized and observed a link between founding institutional conditions and subsequent organizational behaviors, but also articulated and tested the intraorganizational mechanisms giving rise to this link. The intraorganizational mechanism in our context is banks' capabilities for managing dispersed branches, which include, as described in Table 1, the various monitoring infrastructures, organizational design elements, business processes, and cultural templates developed in response to founding institutional conditions. These capabilities were institutionalized within banks and impacted their subsequent behaviors, such as acquisition. Thus, we advance imprinting research by directly addressing Johnson's (2007) criticism that most imprinting studies remain unspecific or speculative about such mechanisms.

Third, this study shows that imprinting is not merely manifested in organizational structures or strategies established at founding that are maintained unchanged or only partially changed over time, which have been the focus of previous studies. Rather, our findings indicate that organizations may show contemporary behaviors and outcomes that are different from what the organizations did at founding, yet are still the result of some deep and unobservable intraorganizational capabilities established when the organizations adapted to founding environmental conditions. Specifically, we found that banks founded in states where branching was possible developed multiunit management capabilities that subsequently enabled them to acquire other firms in an environment favoring acquisitions. This represents an organizational manifestation of a more general phenomenon, exaptation, which was first observed in evolutionary biology (Gould, 1980, 1991) and then later in other domains such as the evolution of technologies (Dew et al., 2004). As Gould noted, "No conceptual tool can be more important than the clear separation of *historical origin* and *current utility*. The false conceptual passage from present function to initial construction ranks with the post hoc fallacy and the confusion of correlation with cause as primary errors of reasoning about temporal sequences" (1991: 45; emphasis in original). As shown in this study, the conceptual rationale underlying exaptation is particularly conducive to understanding imprinting phenomena by establishing the link between historical origin and contemporary manifesta-

tion(s) that often becomes obscure with the passage of time.

Our finding of exaptation has even broader implications for understanding organizational adaptation, which is inherently affected by changes at multiple levels (Greenwood & Hinings, 1996). It is generally believed that inertia and stability may be the rule at both organizational and environmental levels, so that change at either level is seen as detrimental to organizational survival because misfit between organizations and environments results (Baum, 1996; Carroll & Hannan, 2000; Hannan & Freeman, 1977). But we contend that this perspective confounds historical genesis and current utility, and that the extent to which historical changes result in selective pressure has more to do with the degree of alignment, or match, between origin and current use, and less with external changes per se. Our study suggests that an organization can successfully navigate environmental changes to the extent to which it has “features [that can be] co-opted for their present role from some other origin” (Dew et al., 2004: 69). Thus, external changes are not necessarily always detrimental, and there may not necessarily be a “liability of aging” per se (Ranger-Moore, 1997). Baum (1996) similarly argued that there was a need for selection-oriented theories to go beyond age dependence to study some of the underlying mechanisms involved in understanding how age influences selection, and we feel that understanding exaptation is an important step in that direction.

### Implications for Institutional Research

This study, with its focus on founding institutional environments, also contributes to institutional research more generally. First, to date, institutional scholars have mainly examined how institutional pressures affect organizations during the period when these pressures are exerted. But we demonstrate how *past* institutional pressures continue to shape organizational behaviors long after they have vanished from an institutional environment. Our research thus suggests that institutional influences on organizations are chronologically multilayered, so that researchers need to attend not only to current institutional environments but also to historically distant ones to fully appreciate institutional influences.

Recognizing that past institutional conditions may continue influencing organizations also enables one to understand other important institutional processes. Specifically, we show here that external conditions affect organizations to the extent that the organizations engage in adaptive re-

sponses that may be institutionalized inside themselves to exert persistent influence even after the institutional environment has changed. Thus, we depict a process that penetrates multiple institutional levels and bridges actors external and internal to organizations. Moreover, such a process view leads us to uncover that institutional conditions may have unintended consequences for organizations, which, as demonstrated in this study, may be brought about by a rarely attended-to mechanism, exaptation, as discussed above.

Second, this study sheds light on how political values and beliefs make inroads into organizations at founding and are manifested in subsequent organizational practices and behaviors (Selznick, 1949). Some organizational studies have focused on the implications of culture more generally (Dobbin, 1994; Lounsbury, 2007), yet how political culture factors influence organizational strategies and forms has received relatively less attention until very recently (Haveman et al., 2007). But political culture, with its focus on defining how political and economic activities should be organized in a society (Tindall & Shi, 1999; Wilson, 1992), is inherently related to organizations and should constitute an important area of future research. Thus, this study constitutes a much needed effort to enrich understanding of political culture and organizations. Our historical analysis shows that the influence of political culture on organizations often takes multiple forms. External actors with certain political beliefs may organize to influence them (e.g., the Granges) or simply engage in ongoing individual resistance (e.g., farmers' avoidance of large banks). The influence of political culture may also take place internally, when actors inside organizations (e.g., bank founders) share certain political beliefs and thus construct organizations reflecting such beliefs. Accordingly, the influence of political culture can be simultaneously characterized by contestation and value infusion, the combination of which generates the profound impact we observed in this study.

Third, although there is substantial work examining the effects of contemporary public policy on organizations, ours is one of the first studies to show that founding public policy is also essential to understanding contemporary organizational behaviors. Stinchcombe observed that “groups, institutions, laws, population characteristics, and sets of social relations” (1965: 142; emphasis added) are all significant parts of firms' founding environments that will have a subsequent impact. Yet this contention has not been firmly established empirically at the organizational level, although related studies suggest that initial policy or legal environ-

ments set market templates that are likely to persist (Dobbin, 1994; Fligstein, 1996). Our study suggests that uncovering some of the lingering effects of founding legal environments would be a fruitful avenue for future research.

### Limitations and Future Research

This study has some limitations inherent in large-scale historical analysis like ours. First, we proposed that founding institutional conditions induced banks to develop certain intraorganizational capabilities that were subsequently institutionalized and thus persistently influenced the banks. Unable to measure this mechanism directly owing to data unavailability, we labored to flesh it out via different research strategies such as collecting qualitative evidence from bank histories, deriving corollary hypotheses, and measuring and testing antecedents of banks' capabilities. Although fairly confident in our results and conclusions, we admit that one limitation of this study is that we could not directly measure banks' capabilities for managing branches. We feel that this was a trade-off we had to make because observing imprinting effects requires data covering a sufficiently long time period such that precise measurement is a challenge.

Second, when examining the implications of political culture, we focused on the elements of political culture that were relevant to the expansion of banks during our study period, and we based our indicators of these elements on prior studies (e.g., Haveman et al., 2007; Marquis & Huang, 2009; Schneiberg et al., 2008). We recognize that our focus and indicators may be too narrow to fully explore all implications of how political culture affects organizations. We believe that there is a need in future studies for richer characterizations of political culture, using more precise indicators, to unpack how political culture affects organizations.

Third, although one interpretation of our theory and results is that it is difficult to escape the legacy of one's past, the rich literature on organizational learning and change does suggest that at least some elements of firms' behaviors are subject to alteration (Greve, 2003). One variable that we included to control for a potential learning effect was the number of years a bank had been in a statewide-branching state; if banks could learn the requisite coordinating capabilities, greater exposure to statewide-branching laws would be expected to have had a positive effect. However, this variable, though positive, was not consistently statistically significant, suggesting that it was the founding conditions and not exposure to the statewide-branching model over time that had the more profound

effect. Clearly, individual firms and industries are able to remake themselves, yet the boundary mechanisms demarcating when they can or cannot do so have not yet been established. Future researchers may want to further explore the fertile interface between learning and imprinting, as well as that between change and inertia.

Finally, our data are left-censored; that is, our sample includes organizations that were founded before the beginning of the observation window. Other researchers have argued that this condition leads to bias in ecological studies because these organizations have endured previous selection processes (Carroll & Hannan, 2000). Although we agree that left-censoring is not ideal, certain differences between our study and standard ecological studies may lessen the concern on this issue. Our research, unlike ecological research, does not present a life cycle model and therefore does not focus on the standard ecological processes of age and size dependence that are directly related to censoring issues (O'Rand & Krecker, 1990). Instead, our focus is on capabilities that become increasingly important after a major environmental shift (see Baum [1996] for why this distinction is important; see Haveman [1992] for a similar approach). Further, we controlled for variables such as age and existing size that presumably would reflect the firms' trajectory prior to the observation window. Finally, even if some survivor bias does exist, it is not clear how or why this would lead to different effects for our key independent variables.

### Conclusion

The lasting effect of founding institutions on organizational capabilities and strategies after environmental conditions shift is still not a fully answered question. But abundant anecdotal and case-based evidence suggests that understanding a firm's or an industry's historical environments can inform understanding of present growth and structure. A well-known example of founding capabilities being a subsequent detriment is how socialist firms, constrained by their system-specific capabilities, had difficulty in competing in a free market environment (Kogut & Zander, 2000; Kriauciunas & Kale, 2006). Or, consider the early development of airlines such as Southwest and Pacific Southwest in Texas and California, respectively. Both states had very favorable laws for founding an airline. Both also contained large, dispersed population centers that made air travel an attractive alternative to surface travel, leading to the success and development of early capabilities that set a foundation for growth (Freiberg & Freiberg, 1996). In the past

25 years, Southwest has become a major airline, and Pacific Southwest expanded rapidly before being acquired by USAir in 1987. Our results are also consistent with the suggestion that similar early advantages resulted in the growth of North Carolina as a U.S. banking center. Banks in this state, such as Nations Bank, First Union, and Wachovia, likely took advantage of their early experiences with its liberal branching policy to develop coordination capabilities that they subsequently leveraged in the recent acquisition market (Covington & Ellis, 1993; Marquis & Huang, 2009). We hope that our study can stimulate more research into understanding the historical backgrounds of organizations, recognizing that organizations are not only products, but also carriers, of history.

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