

Environmental Uncertainty, Strategic Deviation, and Firm Performance

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Understanding how the institutional transformation process unfolds and the role of strategic choice is a fundamental challenge to organizational research. Under periods of institutional change the adoption of a deviation strategy may be beneficial due to the opportunities afforded by the changing environment and institutional pressures. These arguments suggest that the role of strategic choice may be most influential and important during times of institutional change. We study the role of strategic deviation under uncertainty. By examining the U.S. banking industry during the 1980s, we explore the association between strategic deviation and firm performance when firms undergo radical environmental changes. In addition, we examine how the size of a firm moderates the relationship between strategic deviation and firm performance.

The goal of this study was to examine if a strategy that deviates from industry norms has any effect on firm performance under the unusual uncertainty facing firms during an institutional transformation period after deregulation. Previous studies have examined how external environmental jolts such as deregulation can lead to heightened environmental uncertainty, but the consequences of strategic choice during regulatory change have received scant attention. We tested the hypotheses developed from strategic deviation literature and we posited that smaller firms would be able to dissociate themselves with institutional norms and have more success with deviation strategies.

To test our hypotheses, we examined the U.S. banking industry during the period 1983-1990, a well-noted period of deregulation. The results of this study provide support for our hypotheses on the strategic deviation. Our findings show that firms that pursued strategies that deviated from industry norms outperformed those who followed standard industry behavior during a period of institutional transformation following the passing of deregulatory legislation. In addition, we found that firm size moderates the relationship between strategic deviation and firm performance: smaller firms had greater success at dissociating themselves from institutional pressure to conform. In summary, strategic deviation is positively associated with higher firm performance and this positive relationship is negatively moderated by the firm size. We discuss the roles of strategic choice under conditions of changing norms in industry and conclude with its implications.

Key words: Strategic Deviation, Firm Performance, Environmental Uncertainty

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Adoption of socially accepted organizational templates is often argued to be an effective strategy because of the advantages provided by being viewed as legitimate (DiMaggio & Powell, 1983; Meyer & Rowan, 1977). However, researchers have begun to outline the potential for firm deviation and the benefits of being different from other firms (Beckert, 1999; Deephouse, 1999; McNamara, Deephouse, & Luce, 2002). One of the persistent controversies has been the question of how to deal with institutional change, environmental uncertainty, and the role of strategic choice in the management of institutional pressures and organizations (Beckert, 1999; Lounsbury, 2002; Oliver, 1991). Although extant research on the process of institutional transformation and strategic positioning provides evidence that variation is a possibility and that the competitive positioning of firms is associated with variations in performance (Greenwood, Suddaby, & Hinings, 2002; Lee & Pennings, 2002; Lounsbury, 2002; Oliver, 1992; Thorton, 2002), the performance consequences of deviating from institutional norms *during periods of institutional transformation* are not well understood. Thus, further development of the role of strategic choice during institutional transformation can help researchers and managers better understand the impact of strategic differentiation on firm performance during institutional change.

Previous studies have examined how ex-

ternal environmental jolts such as deregulation can lead to heightened environmental uncertainty (Greenwood et al., 2002; Lee & Pennings, 2002; Oliver, 1992), but the consequences of strategic choice during regulatory change have received scant attention. Organizational theorists and strategic management researchers have proposed opposing views on organizational response to environmental uncertainty. By being different, a firm benefits because it faces less competition. By being similar, a firm benefits because it is recognized as legitimate. We contend that deregulation presents managers a paradoxical dilemma to choose a strategic posture between being similar and being different because high levels of uncertainty lead both to the need for a firm to be different and the need for a firm to be similar. There is evidence that environmental uncertainties are important contingencies to consider when making this choice (Delmas & Tokat, 2005; Smith & Grimm, 1987) and make the choice of appropriate strategies unclear (Haveman, 1993). Unfortunately, existing studies do not provide concrete empirical evidence supporting the theoretical arguments of strategic deviation under uncertain environmental contexts.

The primary goal of this paper is to address these issues by focusing on a number of unresolved questions within the strategic deviation literature. We accomplish this by focusing on the U.S. banking industry during the

1980s—a well noted period of deregulation. The many changes to the institutional logics within the industry raised the level of uncertainty and provided a unique context for examining the association between strategic choice and firm performance during a period of radical environmental changes. First, we focus on the association between strategic deviation and firm performance under conditions of changing institutional norms during which top managers experience heightened uncertainty and opportunities for greater managerial discretion. Second, we examine if the relationship between the strategic deviation and firm performance is contingent on the organizational factors - the size of a firm. This study provides an account of the consequences of strategic choice during industry-wide change while exploring how the firm size moderates the strategic deviation-firm performance linkage. We attempt to contribute to strategic management theory by expanding understanding of deviation behavior and institutional transformation.

This paper is organized as follows. The next section outlines the theoretical background and uncertainty literature using the context of deregulation. The following section establishes hypotheses on strategic deviations. We then describe our research procedures and discuss our analyses and results. Finally, our discussion section outlines implications and suggests avenues for future research.

1. Deregulation in the US Banking Industry

The study of strategic decision making under conditions of uncertainty is not new to the institutional transformation process. Environmental uncertainty has been a central construct of organizational theorists and strategic management researchers for many decades (Duncan, 1972; Milliken, 1987; Simon, 1965). The early work of March and Simon (1958) and Simon's additional work (1965) elucidated the idea that decision makers do not contain all of the necessary information and thus decisions are made under conditions of bounded rationality. Likewise, Milliken (1987) argued that often decision makers do not contain all of the pertinent information on changes in their environment, how these environmental changes will affect their organization, or if their responses to these environmental changes will have the preferred cause and effect relationships. The concept of environmental uncertainty is particularly important in the context of regulatory change and institutional transformation because of the increased levels of uncertainty experienced (Lounsbury, 2002).

Managers usually have access to low cost information and analytical tools such as historical trends, past performance, and other information that can help reduce the level of

uncertainty in their decision making (Mintzberg, 1973). But what happens when the institutional context changes and managers face high levels of environment uncertainty? Such exogenous "jolts" (Meyer, 1982) as regulation and deregulation are market-structuring process (Kahn, 1970), which shape the industry structure, firm strategy, firm performance (Viotor, 1991), and institutional norms (Lee & Pennings, 2002; Oliver, 1992). As deregulation unfolds, a great deal of uncertainty exists as the old institutional norms imposed under regulation are being disseminated and a new set of institutional arrangements is being formed (Beckert, 1999; Lounsbury, 2002). Historical trends, previous performances, and specific market information become obsolete and of little use during deregulatory periods. Under such conditions with high levels of environmental uncertainty, decision makers are likely to be forced to shift emphasis from objective financial data to subjective information and secondary information sources. During periods of such institutional upheaval, the institutional context no longer provides the organizing templates and previously established sources of legitimacy are challenged (Newman, 2000). Likewise, decision makers become unsure of the effectiveness of previously developed routines, scripts and schemas for organizing. Furthermore, the market's willingness to accept new products and services and its possi-

ble reaction to organizational templates almost always contain a great deal of uncertainty.

The change from a regulated regime to a deregulated context is a dramatic environmental shift that transforms institutional norms. As deregulation legislation passes, industries often go through a period of intuitional transformation that begins with a process deinstitutionalization. Oliver defined deinstitutionalization as a "process by which the legitimacy of an established or institutionalized organizational practice erodes or discontinues" (1992: 564). In her paper, she identified functional pressures such as a change in regulatory logics as one of three potential sources of pressure that leads organizations to disregard or question previously agreed upon legitimate practices. Functional pressures arise from such factors as broad changes in the environment and potentially lead decision makers to perceive previously institutionalized activities as no longer possessing the ability to provide an organization with legitimacy. The support for deregulation acting as a source of institutional change or an institutional transformation process has also been supported elsewhere (Fox-Wolfgram et al., 1998; Greenwood et al., 2002). For example, Lounsbury (2002) outlined the deinstitutionalization of existing institutional norms following deregulation in the U.S. finance industry. The institutional transformation caused by the shift in regulatory

policies created heightened uncertainty throughout the finance industry (Lounsbury, 2002). Similarly, Fox-Wolfgram et al. (1998) studied how the passage of the Community Reinvestment Act, an extremely important regulatory issue, changed the institutional environment for U.S. Banks.

Such institutional transformation processes that include deinstitutionalization leave managers with a lack of understanding of the potential impacts of these changes and of the possible consequences of their reactions to these changes. In turn, many of the sources of uncertainty are compounded when firms operate under changing institutional contexts. Such fragmented environments make it difficult for organizations to adapt to or even identify relevant institutional pressures (D'Aunno et al., 1991). For example, broad forms of uncertainty that confront all industry members occur and decision makers perceive their environment or one of its components (e.g., regulatory) as unpredictable and it becomes difficult to predict the impact of such environmental events on a firm and the overall industry (Miller & Shamsie, 1999; Milliken, 1987). Similarly, risks managers perceive in predicating the consequences of individual decisions are exacerbated under deregulation. Heightened levels of uncertainty are also faced from more direct components of the external environment. For example, both competitive uncertainty arising from the actions

of potential or actual competitors (Rajagopalan & Finkelstein, 1992; Sutcliffe & Zaheer, 1998) and consumer uncertainty arising from the actions of actual or potential consumers are likely to be higher as regulations change. Moreover, product market volatility becomes a source of uncertainty as potential product changes and opportunities and the market acceptance of these products are not apparent (Bergh, 1998). When there is uncertainty about the capabilities essential for future competitive advantage, decision making takes on the characteristics of trial and error and becomes exploratory.

Organizational theorists and strategic management researchers have proposed theories on organizational adaptation to environmental uncertainty. Heightened uncertainty that comes with the change in institutional contexts opens up possibilities for challenging the existing norms and engaging in actions to construct new practices and industry norms (Lounsbury, 2002). The uncertainty leads to opportunities for greater managerial discretion in which deviation from existing industry norms increases the possibility for higher performance. Deephouse (1999) argues that a change in environmental conditions both heightens the level of tension between the need for being different and the need for being the same and makes the correct choice less obvious.

II. Strategic Deviation

Researchers have begun to test the belief that an ideal institutional strategic profile (e.g., level of resource deployments along a set of strategic dimensions) exists for a particular industry. Specifically, it has been argued that varying degrees of adherence to such an institutionally accepted strategic profile and thus varying degrees of differentiation from other industry incumbents might be preferred. Some authors have assumed a potential for variation in the resistance, awareness, pro-activeness, and self interest of organizations (Oliver, 1991). This strategic deviation argument has recently received attention in organizational research as scholars argue that firm performance may be related to the degree of conformity to or deviation from institutional forces within an industry (Chen & Hambrick, 1995; Deephouse, 1999; McNamara et al., 2002; Oliver, 1991). A choice to deviate from industry norms is influenced by both external forces and internal perceptions and enactments (Dacin, Goodstein, & Scott, 2002).

During periods of institutional transformation, opportunities to challenge the existing institutional norms and explore new market opportunities are presented. The conforming process is complicated not only because most environments contain multiple institutional

pressures that are sometimes conflicting, but also because beliefs and rules may vary in the degree to which they have become adopted (Zucker, 1983). The process of institutional conformity is further complicated by the fact that such things as agency and interests play a role in the degree of conformity to these institutional pressures (DiMaggio, 1988; Oliver, 1992). This is especially true during periods of institutional transformation, when there is uncertainty about the effectiveness of the old institutional practices and new institutional standards have not widely diffused through the organizational field. For many organizations there remains uncertainty about how to proceed because a new taken-for-granted set of beliefs and rules about legitimacy enhancing practices has not been established yet.

Much of the literature on deviation has focused on the acknowledgment of either variation caused by such items as interests and agency and the process of institutional change (Goodrick & Salancik, 1996; Haveman & Rao, 1997; Lounsbury, 2002; Oliver, 1991) or the basic assumption that a firm with a different strategy faces less competition (Deephouse, 1999; McNamara et al., 2002). In the institutional variation argument, it is suggested that organizations deviate in their acceptance and adaptation of institutional norms. Goodrick and Salancik (1996), for instance, argued for potential variation sug-

gesting that "*complete and uncontested institutionalization is rare and that interests and agency play a role in how organizations adapt to their environment.*" Oliver (1991) suggested that organizations may respond to institutional pressures with acquiescence, compromise, avoidance, or defiance. Similarly, it is suggested that strategic responses to institutional pressures depend on the heterogeneous characteristics of the individual firm (Goodstein et al. 1994). Furthermore, it has been shown that organizational beliefs about institutional practices impact the adoption of those practices (Kostova & Roth, 2002; Townley, 2002). Rather than assume adaptation of institutional norms, it is suggested that organizations responded strategically to institutional pressures (Scott & Davis, 2007).

Similarly, using the resources based view (Barney, 1991; Wernerfelt, 1984) and contestable markets theory (Baumol, Panzar, & Willig, 1982) in multiple studies to analyze banks competing in the Minneapolis - St. Paul metropolitan area, Deephouse and colleagues (Deephouse, 1999; McNamara et al., 2002) argued that a firm that conforms to the strategies of others faces greater competition. The assumption in this argument is that a market has a finite set of resources which similar firms are inevitably forced to compete for. However, a firm that deviates from industry norms faces less competition and is able to protect a unique market condition by

erecting barriers to imitation (Barney, 1991).

The importance of the context of institutional transformation caused by deregulation to the institutional variation or deviation arguments lies with the possibilities for variation and deviation created by the uncertainty conditions. Strategy making is most critical in times of change and in unfamiliar environments. It is in such contexts that the strategy makers of a firm must identify a viable new strategic position or face the potential demise of their enterprise (Gavetto, Levinthal, & Rivkin, 2005). The environment has been considered to be an important factor in strategic management (Child, 1972). The more complex and vibrant the environments become, the greater level of uncertainty a firm must face. High levels of environmental uncertainty experienced in conditions such as deregulation provide a context which affords an opportunity to management to resist institutional forces and carve out a new strategic position. For example, Goodrick and Salancik (1996) argued that while under certain contexts strategic responses may be inappropriate or even "unthinkable", managerial discretion is possible and will be most influential when institutional standards are uncertain.

The arguments for strategic deviation suggest that following deregulation a firm that challenges institutional pressures is afforded an opportunity for variation and will have the potential to carve out a market niche and

face less competition. In other words, uncertainty caused by the institutional change following deregulation provides an opportunity for greater managerial discretion as firms are offered an opportunity to challenge standard practices and construct a new set of operating rules (Lounsbury, 2002). By carving out their own market niche and facing less competition by being different from others, firms will be more likely to increase their performance in the market. Thus, following industry deregulation a strategy that pursues deviation will be positively associated with firm performance.

Hypothesis 1: A firm's strategic deviation will be positively associated with its performance during a radical deregulation.

2.1 Interactions between Strategic Deviation and Firm Size

Effectiveness of a firm's deviation strategy is likely to depend on the characteristics of the individual firms. Large firms tend to be heavily embedded within the institutional framework and it would make them face more penalties for deviating from institutional norms than their smaller counterparts. Greenwood and Suddaby (2006) suggested that resource-rich central players that are heavily embedded within their institutional context have greater difficulties identifying alternative or-

ganizing strategies. In a similar argument, Chen and Miller (1996) maintained that large firms tend to value standard operating procedures designed to achieve reliability and are more likely to focus on proven strategies. Smaller firms, however, could benefit more by being different because they could face less competition. Also, they are more likely to experiment with a wider variety of strategic alternatives and resource deployments (Chen and Miller, 1996). Similarly, they are in a better position to carve out unique niches within organizational fields in an attempt to avoid direct competition with large industry incumbents. Further, small firms are less exposed to normative pressures and tend to be less captive in their institutional environments. In contrast, large firms would stay close to a newly forming industry norm because they have greater concerns for being legitimate for the decisions they make; the cost of exploring and employing alternative strategies is much greater for larger firms.

In the analysis of knowledge strategies utilized by pharmaceutical companies, Gopalakrishnan and Bierly (2006) showed how the size of a firm moderates the relationship between knowledge strategies and technological strength. Specifically, they recommended large firms to adopt a fast follower strategy in a turbulent environment for the reason that larger firms would face higher risks when they deviate from the institutional norm. In a more recent

study, Lee and Huang (2012) suggested that realizing superior performance is dependent on a firm's capability to balance exploratory and exploitative learning. Larger firms could achieve greater success when they take advantage of their superior combinative capabilities engaging both the exploratory and exploitative learning. When smaller firms focus on more specialized areas, it becomes difficult for other firms, small or large, to mimic the strategy. For smaller firms, devoting all their resources to develop a deeper understanding of more specialized areas and concentrating on a narrow niche deviating the newly forming industry norms could result in superior firm performances. Thus, we expect to find smaller firms pursuing a deviation strategy to be more successful during an institutional transformation than large firms.

Hypothesis 2: Firm size will negatively moderate the association between strategic deviation and firm performance.

III. Methodology

3.1 Empirical Context: U.S. Banking Industry in 1980s

To test our hypotheses, we examined the U.S. banking industry during the period

1983-1990. Historically, the banking industry has been one of the most tightly regulated industries in the U.S. (Calomiris, 2000). Government regulation played a major role in the stability of banks by limiting excess competition and maintaining profitability within a clearly defined boundary (Gart, 1994; Roussakis, 1997). Then the regulations strictly imposed on the banks began to change in the late 1970s, and the next decade, i.e., 1980s, became known as 'the era of deregulation' in the U.S. banking industry (Gart, 1994; Hawawini & Swary, 1990; Rose, 1989; Roussakis, 1997). The banking industry in the United States encountered the first wave of regulatory changes when the Congress passed the Depository Institutions Deregulation and Monetary Control Act in 1980 (Gart, 1994, Rose, 1989). This Act reduced the degree of regulatory oversight by phasing out interest rate ceilings, permitting transaction accounts at all depository institutions, rationalizing reserve requirements, increasing federal deposit insurance, and implementing changes that introduced a degree of competitive dynamism (Gart, 1994; Roussakis, 1997). It experienced further reduction of government regulation in 1982 when Congress passed the Garn-St. Germain Depository Institutions Act which expanded the sources of funds available to depository institutions and provided for emergency takeovers of failing institutions (Roussakis, 1997). These two

pieces of legislation served to significantly deregulate the U.S. banking industry, creating unprecedented challenges and increased uncertainties. For this reason, U.S. banking industry during this time period provides an ideal setting for us to examine a drastic institutional transformation which was created by an exogenous shock. Increased discretion afforded to bank managers by the deregulation provides a unique context, which allows us to study the relationship between strategic choice and the firm performance.

3.2 Sample

The sample consists of randomly selected publicly traded bank holding companies (BHCs hereafter) that existed during the period of 1983-1990. A panel data design was employed beginning with 1983, the year after the passage of the Depository Institutions Deregulation and Monetary Control Act and the Garn-St. Germain Depository Institutions Act, resulting in eight panels. Among less than 200 publicly traded BHCs that existed during this 1983-1990 period, the final sample comprises 78 publicly traded BHCs. By covering the period of deregulation in the U.S. banking industry, this panel data design allowed us to longitudinally examine the effect of strategic deviation on firm performance dur-

ing the evolution of institutional transformation. The panel data design here consists of repeated measures in which observations are made on many of the same entities over time. The BHCs in our sample represent approximately 64 percent of the total industry assets as of December 1990. They are well-dispersed geographically and include many of the most significant institutions in the industry.¹⁾ Objective secondary data were collected from several different sources that include annual proxy statements, the S&P Compustat database, the Dun & Bradstreet Reference Book of Corporate Management, and the Sheshunoff Bank Search database which contains information from the Call Reports to the Federal Reserve that all banks must complete quarterly.

3.3 Measures

3.3.1 Dependent variable: Firm performance

Bank performance was measured by return on assets (ROA). ROA is a key performance indicator widely tracked by bankers and bank analysts (Reger et al., 1992). ROA is the most frequently used performance measure in banking industry research (Barnett, Greve, & Park, 1994; McNamara et al., 2003; Mehra, 1996; Reger et al., 1992) and

1) The list of firms is available upon request.

is consistently used for internal and external performance assessment of BHCs (McNamara et al., 2003).

3.3.2 Independent variable: Strategic deviation

It captures the degree to which a firm's strategy departs from the industry strategy norms. The specific strategies examined are asset strategies - the allocation of resources to a certain product market arenas (Haveman, 1993; Mehra, 1996; Reger et al., 1992). We examined 9 strategy variables: individual loans, commercial loans, real estate loans, foreign loans, agricultural loans, cash, securities, trading accounts, and fixed assets (Deephouse, 1999). Each asset strategy is measured as a proportion of total assets. The calculation of this measure is similar to that used in previous research (Carpenter, 2000; Deephouse, 1999). Specifically, each asset strategy for each firm was compared to the industry mean for that particular asset strategy and expressed as a standard deviation (Deephouse, 1999). The following equation illustrates the calculation of the strategic deviation of bank i in year t , where P_{ait} is the proportion of the assets in strategy a for bank i in year t , ABS is the absolute value function, $M(P_{at})$ is the industry mean of asset strategy a in year t , and $SD(P_{at})$ is its standard deviation.

$$\text{Strategic Deviation}_{it} = \frac{ABS [(P_{ait} - M(P_{at}))]}{SD(P_{at})}$$

3.3.3 Control variables

We controlled for *firm age*. Since older firms are likely to be more rigid, firm age may influence organizational action and performance (Wiersema & Bantel, 1992). Since *firm size* differentials might explain some variance in firm performance, we controlled for bank size measured as the natural logarithm of the total dollar value of assets (Richard, 2000). Interest rate exposure is a significant financial risk measure in the banking industry, therefore we controlled for *firm risk* measured as total interest income less total interest expense and expressed as a percentage of average total assets (Sinkey, 1986). We controlled for the *prior firm performance* which might explain some variance in strategic deviation and performance changes (Carpenter, 2000). Prior firm performance was measured as ROA at time $t-1$ (McNamara et al., 2003). We controlled for *market growth* since changes in the resource environment over time may affect competition and firm performance (Porter, 1980). The annual percent change in real total market deposits was included as a control variable (Bergh, 1998). The asset strategies that are the focus of this study do not address the cost side of banking. Since some may be more cost efficient than

others, leading to better performance, the extent of cost reduction (*total expense ratio*) was measured by the ratio of total interest and non-interest expense to total average assets (Dos Santos & Peffers, 1995). We controlled for market share since market leaders are more aggressive than followers in terms of newly created actions (Ferrier, Smith, & Grimm, 1999). Market share was determined based on deposits, consistent with prior bank studies (Deephouse, 1999). Finally, two measures of bank strategy were included to control for bank strategy: product/market mix strategy and product diversity. The product/market mix variables included *personal loans*, *commercial/industrial loans*, *foreign loans*, and *real estate loans* as a percentage of total loans (Reger et al., 1992). The degree of nontraditional banking operations was included to control for fee-based businesses. We calculated this variable as a percentage of non-interest revenues/total revenues to reflect *product diversity* in the bank's strategy (Mehra, 1996).

IV. Analysis and Results

Since the data was both cross sectional and time series in nature, we chose a panel data methodology. We used a firm fixed effects model which involves a generalized least

squares (GLS) estimation using dummy variables for each firm to control for unobserved heterogeneity across the firms (Bergh, 1993). The fixed effect model minimizes potential problems of heteroskedasticity and serial correlation. We also estimated random effects model in which firm-level intercepts are assumed to be normally distributed. Table 1 reports the means, standard deviations, and correlations of all the variables used in the analyses. Generalized least squares (GLS) regression was used to test the hypotheses. Overall, the correlation matrix reveals little evidence of multicollinearity. Given the moderately high correlations among some explanatory variables, there was concern for multicollinearity when the interaction terms were entered in the regression models. Therefore, all variables used to construct interaction terms were mean centered to reduce multicollinearity (Aiken & West, 1991). After the scale transformation, we also calculated variance inflation factors (VIFs) scores for all models to address multicollinearity concerns. VIFs in all models were lower than the threshold value of 10, which suggests that the concern for multicollinearity is minimal (Kennedy, 1998).

The regression results are presented in Table 2. First three columns (Model 1-3) correspond to fixed-effects model and the latter three columns (Model 4-6) report the estimated coefficients from the random-effects

〈Table 1〉 Descriptive Statistics and Correlations

Variable	Mean	S.D.	1	2	3	4	5	6	7	8	9	10	11	12
Prior performance	0.01	0.01	1.00											
Firm age	17.76	9.82	0.04	1.00										
Product diversity	0.28	0.11	-0.02	0.23	1.00									
Firm risk	0.04	0.01	0.11	-0.05	-0.50	1.00								
Total expense ratio	0.09	0.02	-0.28	-0.07	0.16	0.12	1.00							
Real estate loans	0.32	0.14	0.09	0.02	-0.30	0.35	-0.18	1.00						
Commercial loans	0.29	0.10	0.01	-0.06	-0.12	-0.04	-0.01	-0.36	1.00					
Personal loans	0.20	0.11	0.00	0.14	-0.29	0.56	0.01	0.07	-0.26	1.00				
Foreign loans	0.08	0.14	-0.10	-0.05	0.36	-0.56	0.18	-0.53	-0.18	-0.47	1.00			
Market growth	0.07	0.04	-0.02	-0.19	-0.15	0.21	0.32	-0.31	0.17	0.07	0.04	1.00		
Firm size	15.99	1.30	0.02	0.29	0.41	-0.47	-0.00	-0.25	-0.15	-0.32	0.60	-0.08	1.00	
Market share	0.01	0.02	-0.09	0.08	0.25	-0.28	0.22	-0.26	-0.22	-0.23	0.66	-0.01	0.75	1.00
Strategic deviation	5.90	2.63	-0.07	0.07	0.34	-0.29	0.14	-0.27	-0.18	-0.12	0.38	-0.05	0.10	0.23
			(0.06)	(0.05)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.13)	(0.01)	(0.00)

(p-values are reported in parentheses.)

〈Table 2〉 Estimation Results

dependent variable: ROA	Model 1 (FE)	Model 2 (FE)	Model 3 (FE)	Model 4 (RE)	Model 5 (RE)	Model 6 (RE)
Strategic deviation (H1)		0.001** (2.67)	0.000 (1.23)		0.000+ (1.82)	0.000 (0.81)
Strategic deviation X Firm size (H2)			-0.001*** (-3.73)			-0.000* (-2.28)
Firm size		-0.004* (-2.18)	-0.004* (-2.11)		0.000 (0.33)	0.000 (0.36)
Market share	0.132+ (1.82)	0.237** (2.65)	0.227* (2.56)	0.038 (1.52)	0.033 (0.93)	0.033 (0.93)
Firm age	-0.001* (-2.47)	-0.001+ (-1.71)	-0.001 (-1.62)	0.000 (0.24)	0.000 (0.10)	0.000 (0.12)
Product diversity	0.005 (0.55)	0.005 (0.53)	0.008 (0.91)	0.013** (2.85)	0.013** (2.64)	0.015** (3.05)
Firm risk	0.261* (2.51)	0.272** (2.63)	0.326** (3.15)	0.326*** (4.78)	0.335*** (4.74)	0.357*** (5.02)
Total expense ratio	-0.320*** (-9.17)	-0.331*** (-9.27)	-0.321*** (-9.06)	-0.310*** (-12.40)	-0.313*** (-12.06)	-0.312*** (-12.05)
Real estate loans	-0.006 (-0.74)	-0.006 (-0.64)	-0.007 (-0.84)	-0.009+ (-1.75)	-0.007 (-1.40)	-0.005 (-0.86)
Commercial loans	-0.012 (-1.41)	-0.009 (-1.06)	-0.008 (-0.94)	-0.010+ (-1.85)	-0.009 (-1.51)	-0.008 (-1.30)
Personal loans	0.031** (3.19)	0.020* (1.97)	0.011 (1.09)	0.002 (0.35)	0.002 (0.41)	0.003 (0.54)
Foreign loans	0.002 (0.21)	0.001 (0.13)	0.006 (0.54)	-0.001 (-0.14)	-0.002 (-0.29)	0.005 (0.79)
Real market growth (%)	-0.223* (-2.31)	-0.209* (-2.18)	-0.192* (-2.03)	0.039 (1.26)	0.045 (1.43)	0.054+ (1.70)
Prior performance (ROA _{t-1})	-0.002 (-0.04)	0.004 (0.10)	0.002 (0.05)	0.085* (2.46)	0.083* (2.39)	0.089* (2.55)
year1984	-0.001 (-0.77)	-0.000 (-0.27)	-0.001 (-0.46)	-0.003* (-2.31)	-0.003* (-2.13)	-0.003* (-2.17)
year1985	0.003 (0.97)	0.004 (1.11)	0.003 (0.96)	-0.005** (-3.14)	-0.005** (-3.12)	-0.005** (-3.27)
year1986	0.006 (1.10)	0.006 (1.00)	0.005 (0.94)	-0.009*** (-4.20)	-0.010*** (-4.35)	-0.010*** (-4.46)
year1987	0.001 (0.39)	0.002 (0.71)	0.002 (0.53)	-0.007*** (-4.95)	-0.007*** (-4.78)	-0.007*** (-4.96)
year1988	0.003 (0.64)	0.003 (0.65)	0.002 (0.51)	-0.010*** (-5.68)	-0.010*** (-5.75)	-0.010*** (-5.94)
year1989	0.009+ (1.94)	0.009+ (1.93)	0.008+ (1.88)	-0.003* (-2.18)	-0.004* (-2.33)	-0.004* (-2.42)
year1990	0.009* (2.16)	0.008* (2.11)	0.008* (2.03)	-0.002 (-1.44)	-0.002 (-1.59)	-0.002+ (-1.70)
Intercept	0.063*** (3.56)	0.056** (3.16)	0.052** (2.95)	0.024*** (4.14)	0.022*** (3.87)	0.018** (3.08)
F-statistics	8.00	7.91	8.34			
Wald-statistics				259.68	263.58	270.28
Model R ²	0.179	0.193	0.210	0.138	0.143	0.157

$n = 758$, t statistics in parentheses, FE: Fixed effects model, RE: Random effects model

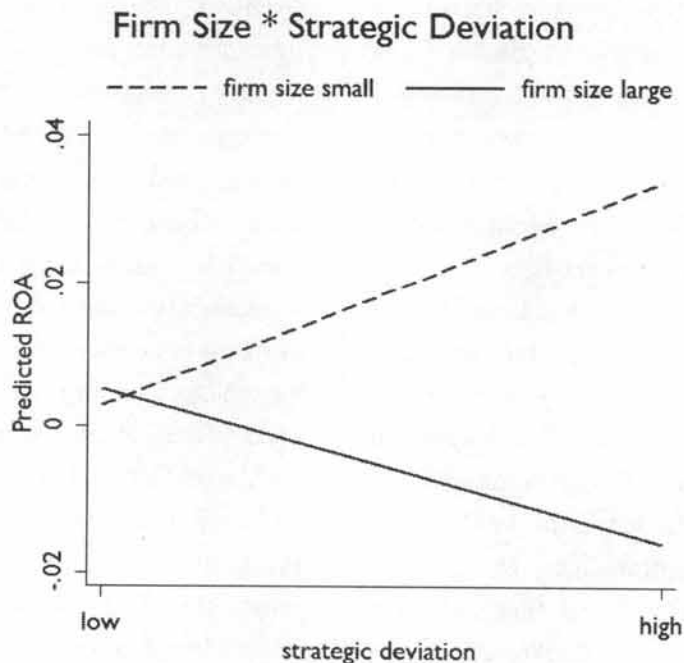
+ $p < 0.10$, * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

models. If the random intercepts and the explanatory variables are correlated, then the random-effects model cannot be estimated consistently (Hsiao, 1986). Only the fixed-effects model can be estimated consistently. We used the Hausman test (1978) to test for this inconsistency in the random-effects model by comparing the fixed-effects and random-effects slope parameters. The statistically significant difference in the parameter estimates from the full models (Model 3 and 6) indicates that the random-effects model is estimated inconsistently ($\chi^2(20) = 122.63$, $p < 0.001$). Hence, we discuss the results

from the fixed effects models (Model 1-3).

Model 1 includes only the control variables. Model 2 adds our main explanatory variable, *strategic deviation*, to test Hypotheses 1. The results of the full model can be found in the third column (Model 3) where we included the strategic deviation and the interaction term, which serve as the tests for Hypothesis 2. It should be noted that in all three models we included the time fixed effects (i.e., dummies for calendar years) to account for unobserved heterogeneity over time.

We posited that there will be a positive re-



〈Figure 1〉 Interactions between Strategic deviation and Firm size

relationship between strategic deviation and firm performance (H1). The result from the Model 2 indicates that the coefficient for strategic deviation is positive and statistically significant ($b = .001, p < .01$), providing support for Hypothesis 1.

In Hypothesis 2, we predicted that firm size negatively moderates the relationship between strategic deviation and firm performance in such a way that the relationship becomes weaker under conditions of large firm size. Results from the Model 3 indicate that the coefficient for the interaction term 'Strategic deviation x Firm size' is negative and statistically significant ($b = -.001, p < .001$). These results provide support for Hypothesis 2. It is shown in *Figure 1* that the strategic deviation has a positive relationship with firm performance under conditions of smaller firm size, but it has a negative relationship with firm performance under conditions of larger firm size.

Among the control variables, the estimation results show that firm risk, total expense ratio, and market growth have expected effects on the firm performances. The greater the firm risk, the higher the performances ($b = .326, p < .01$). The lower the total expense ratio, the higher performances ($b = -.321, p < .001$). It was also found that firms performed better when the market growth was lower ($b = -.192, p < .05$).

V. Discussion

The goal of this study was to examine if a strategy that deviates from industry norms has any effect on firm performance under the unusual uncertainty facing firms during an institutional transformation period after deregulation. We tested the hypotheses developed from strategic deviation literature. We argued that smaller firms would be able to dissociate themselves with institutional norms and have more success with deviation strategies. The results of this study provide support for our hypotheses on the strategic deviation. During a period of institutional transformation following the passing of deregulatory legislation, firms that pursued strategies that deviated from industry norms outperformed those who followed standard industry behavior. In addition, we found support that smaller firms had greater success at dissociating themselves from institutional pressure to conform. While we developed our hypotheses from the new institutional theory perspectives, similar arguments can be built on March (1991) that both the exploratory and exploitative motives may play a role in firms' financial success. Exploration would mean the firms departing from existing knowledge that they have accumulated experimenting with alternatives. Exploration challenges institutionalized knowledge, and

result from activities focused on search, variation, flexibility, experimentation, and risk-taking (March, 1991). While exploration could create new markets in turbulent times, the returns from exploration are often negative and uncertain at best. Large firms may stick to existing knowledge refining and extending existing competences because the returns from the exploitation are often predictable and positive (March, 1991; Jansen et al., 2009).

We acknowledge that the findings from this study should be viewed with caution. First of all, the sample studied here was from a highly regulated mature industry. Organizations operating in industries that are not as highly regulated may have smaller and less noticeable institutional change processes. Moreover, other sectors or organizational fields may have institutional pressures that are less clearly defined (D'Aunno et al., 1991). In contrast, the deregulation of the banking industry during the 1980s starting with the Depository Institutions Deregulation and Monetary Control Act was a major shift in the institutional logics within the industry. Prior to the 1980s regulation played a major role in industry stabilization by limiting excess competition and maintaining profitability within a relatively clearly defined industry. Additional research is needed to discover the extent to which these findings can be extended to other populations of organizations. In addition, this study examined one of the many possible

factors leading to the institutional transformation process. Further research is needed to examine if these findings are consistent when the institutional change process is initiated by other factors such as technological disruptions, competitive discontinuities or institutional entrepreneurship. Such institutional change process may take more of a gradual transformation process or function under different dynamics. Lastly, we acknowledge that our findings are based on correlational analyses, and it does not necessarily show that there is a causal relationship between the strategic deviation and firm performance.

This study opens up several important directions for future research. First, current understanding of the role of strategic choice during times of institutional change is sketchy because little empirical work exists. Future research might explore how strategic choice impacts firm performance under specific types of institutional change. This stream of research can examine how varying forms of strategies such as innovation and diversification impact performance during periods of changing institutional contexts. In addition, the examination of defiance of different institutional pressures also provides possibilities for future research. Second, our findings suggest that firms that differentiated by potentially adopting riskier strategies outperformed firms that adhered to industry

norms in the case of banking industry in the United States. Further research needs to identify if these benefits are short term only. It might be the case that many of these are due to novelty effects of new products. Furthermore, it is unclear if the organizations with a deviation orientation would outperform in the long run by maintaining their strategic position of deviation. It is also needed to examine how the information diffuses and becomes an institutional standard and the time that needs to pass before the diffusion process begins and is completed.

Understanding how the institutional transformation process unfolds and the role of strategic choice is a fundamental challenge to organizational research. Under periods of institutional change the adoption of a deviation strategy may be beneficial due to the opportunities afforded by the changing environment and changing institutional pressures. These arguments suggest that the role of strategic choice may be most influential and important during times of institutional change. One of the revealing aspects is that firms that deviated from industry norms and attempted to disassociate themselves with institutional standards during a fundamentally complex period had higher performance. The role of active management as a means to differentiate oneself and take advantage of opportunities presented by changing institutional contexts cannot be understated.

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불확실한 환경 하의 전략적 일탈이 기업의 성과에 미치는 영향

김봉진* · 송상영**

요 약

본 연구는 불확실한 환경 하에서의 기업의 전략적 일탈과 이에 따른 기업의 성과와의 함의에 대해 고찰하였다. 금융 산업의 탈규제화가 본격적으로 이루어졌던 1980년대, 미국의 은행의 전략적 선택과 그에 따른 기업의 성과간의 관계를 규명하고, 조절변수로서의 기업의 규모가 이들 관계에 미치는 영향에 대해 추가적인 가설을 세우고 실증 연구를 통해 검증하였다. 1983년부터 8년간의 패널 데이터에 고유 효과 모델을 추정한 결과, 제도적 환경의 불확실성이 높은 산업적 상황에서 은행 지주 회사들의 경영 성과가 기업의 전략적 일탈과 양의 상관관계가 있는 것으로 나타났다. 또한, 기업의 규모에 의해서 전략적 일탈이 기업 성과에 미치는 영향이 변화하는 결과를 보였다. 실증 연구 결과를 토대로, 불확실한 환경 하에서의 기업의 전략적 선택의 함의에 대해 논의하고 미래 연구에 대한 시사점을 제시하였다.

주제어: 전략적 일탈, 기업의 성과, 환경적 불확실성, 실증연구

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