COMPETITIVE POSITIONING WITHIN AND ACROSS A STRATEGIC GROUP STRUCTURE: THE PERFORMANCE OF CORE, SECONDARY, AND SOLITARY FIRMS

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Drawing from economic and cognitive theories, researchers have argued that firms within an industry tend to cluster together, following similar strategies. Their positioning in strategic groups, in turn, is argued to influence firm actions and firm performance. We extend this research to examine performance implications of competitive positioning not just among but also within groups. We find that performance differences within groups are significantly larger than across groups, suggesting that some firms within groups develop better resource or competitive positions. We also find that secondary firms within a group outperform both core firms within the group and solitary firms, the latter being those not belonging to any multifirm strategic group. This suggests that secondary firms may be able to effectively balance the benefits of strategic distinctiveness with institutional pressures for similarity. We conclude that the primary implication of strategic groups does not relate to the ability of firms to create stable, advantageous market segments through collusion. Instead, strategic groups represent a range of viable strategic positions firms may stake out and use as reference points. Moreover, our results concerning secondary firms indicate that firm positioning within a group structure can have performance implications. Copyright © 2002 John Wiley & Sons, Ltd.

Numerous researchers have argued that focusing at the extremes of the individual firm level and the aggregate industry level leaves out an important subindustry aggregation, the strategic group (Caves and Porter, 1977; Hatten and Schendel, 1977; Hunt, 1972). Following Porter (1979: 215), a strategic group is defined as a set of companies within an industry pursuing strategies that are similar to each other. Researchers have argued that these group structures are important because of their effect on strategic actions and performance. Initial research from the industrial organization economics (IO) perspective proposed that firms within a group are likely to collude with each other to build mobility barriers around the group (Caves and Porter, 1977). Consequently, firms within a particular strategic group face different conditions from firms in other groups. These conditions will, in turn, lead to similar performance for firms within a group and performance differences across groups (Caves and Porter, 1977; Cool and Schendel, 1987; Fiegenbaum and Thomas, 1990). While

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results to date have been mixed, a meta-analysis of this research stream found evidence of performance differences across strategic groups (Ketchen *et al.*, 1997); and recent research, using arguably better ways of creating strategic groups, reported performance differences across strategic groups (Ferguson, Deephouse, and Ferguson, 2000; Nair and Kotha, 2001).

While most research has focused on performance differences across strategic groups, a few studies have examined performance differences between firms within the same group (Cool and Schendel, 1988; Lawless, Bergh, and Wilsted, 1989). Framed in terms of the emerging resource-based view of the firm, these studies found that firm performance varies significantly within strategic groups, in marked contrast to the earlier IO tradition (Caves and Porter, 1977). Recently, Nair and Kotha (2001) found that both firm-level variables and group membership had significant effects on performance. However, the relative importance of within-group and across-group effects on firm performance remains an open question. We develop competing hypotheses to help fill this gap.

There also has been limited research on heterogeneity within a strategic group. Past research from both economic and cognitive perspectives proposed that firms vary in the degree to which they identify with their strategic group, such that some firms follow the group strategy closely ('core firms') and others follow it less closely ('secondary firms') (cf. Reger and Huff, 1993: 117; Caves and Porter, 1977; Ketchen, Thomas, and Snow, 1993: 1305; Peteraf and Shanley, 1997). The performance implications of this idea have yet to be tested. We develop competing hypotheses from several theoretical perspectives. The resource-based (Barney, 1991) and contestable markets (Baumol, Panzar, and Willig, 1982) perspectives highlight the value of being strategically different, implying secondary firms should have higher performance than core firms. In contrast, other views propose that core firms should have higher performance. The collusion view suggests that core firms are better able to recognize their interdependence and build mobility barriers around themselves (Caves and Porter, 1977). Additionally, building on institutional theory, researchers have proposed that core firms benefit from legitimacy by conforming to strategic recipes (Chen and Hambrick, 1995; Geletkanycz and Hambrick, 1997).

Finally, several studies of strategic groups identified single-firm groups, which we call solitary firms (Cool and Schendel, 1987; Fiegenbaum and Thomas, 1993; Mascarenhas, 1989; Reger and Huff, 1993). Thus, within the overall industry structure, some firms are strategically unique (solitary firms), some are loosely aligned with a multi-firm group (secondary firms), and others are tightly aligned with a multifirm group (core firms). We explore the consequences associated with these different modes of positioning within the industry structure. We supplement the aforementioned theoretical perspectives with the balance perspective that firms may need to maintain balance on the 'competitive cusp' between differentiation and conformity (Deephouse, 1999; Porac, Thomas, and Baden-Fuller, 1989: 414); we infer from this perspective that secondary firms will have greater performance than core or solitary firms. In sum, we examine the performance implications of the strategic decision to be at the core of a strategic group, to be a secondary firm on the periphery of a group, or to stake out a position separate from a strategic group.

Our paper is structured as follows. First, we develop hypotheses using the aforementioned theories about performance differences across and within strategic groups. Second, we describe how we tested the hypotheses in a sample of competing commercial banks. Third, we present the results. Overall, we find that performance differences are greater within strategic groups than across them and that secondary firms outperform both core and solitary firms. These results extend what could be called a revisionist view of strategic groups research that questions the traditional IO view of them (Cool and Dierickx, 1993; Hatten and Hatten, 1987; Lawless *et al.*, 1989; Reger and Huff, 1993). We conclude with implications for future research.

THEORY AND HYPOTHESES

This section presents our basic assumptions and develops three sets of competing hypotheses. Figures 1 and 2 summarize our presentation. Figure 1 traces how we arrived at our theoretical assumptions about industry and strategic group heterogeneity. Figure 2 traces the development of our hypotheses, which are stated in abbreviated form to conserve space. We connect our assumptions and hypotheses to strategic groups research and to
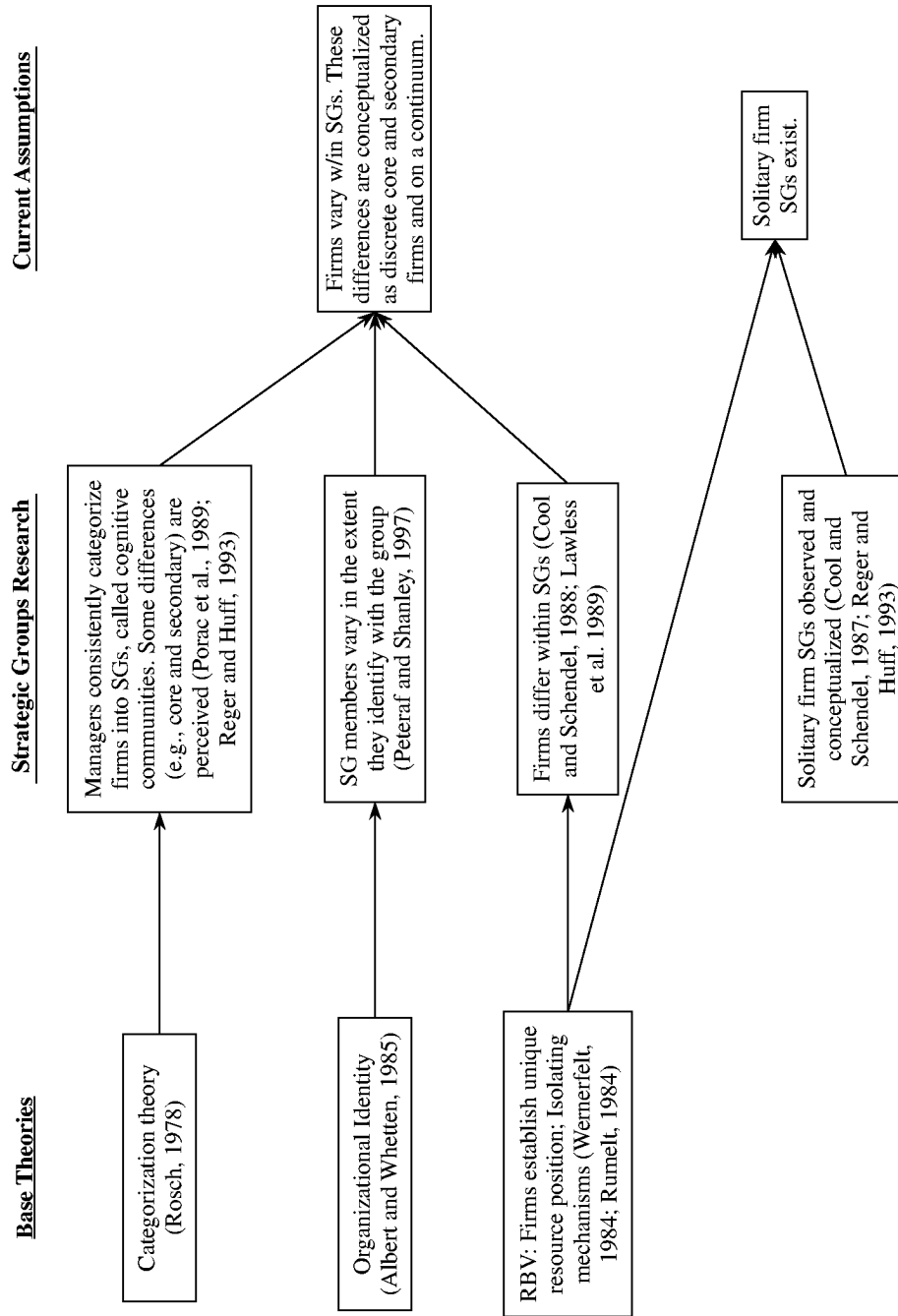
Figure 1.   Selected evolution of assumptions of industry and strategic group (SG) heterogeneity
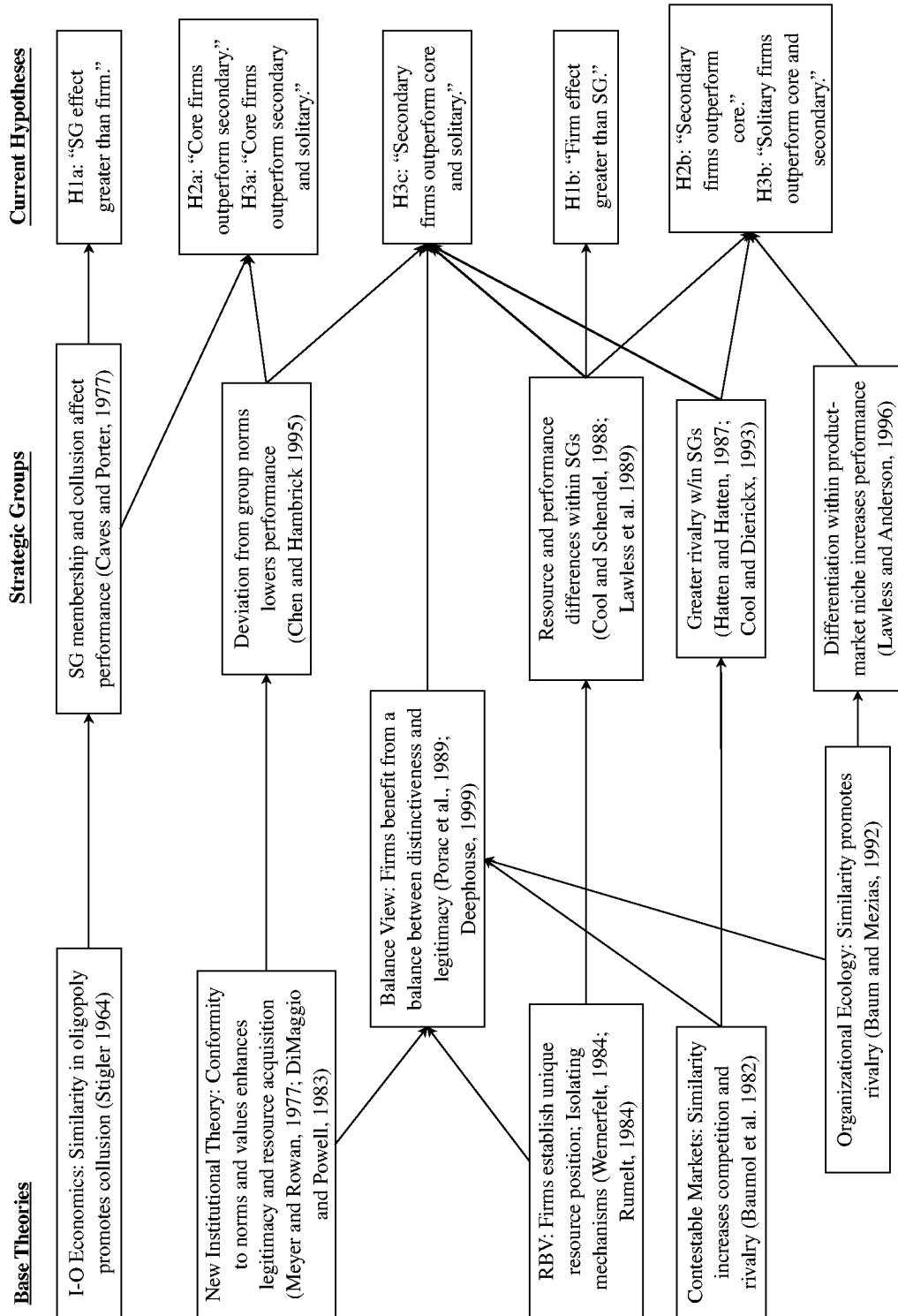
Figure 2.   Selected evolution of strategic group (SG) hypotheses from base theories

seminal research in economics, organization theory, and strategy.

Assumptions about industry and strategic group heterogeneity

Industry heterogeneity is a central issue in IO economics that helps distinguish it from neoclassical microeconomics (Scherer and Ross, 1990). The strategic groups concept developed as part of this tradition (Hunt, 1972; Hatten and Schendel, 1977). Initial research in the IO tradition focused on similarity within strategic groups (Caves and Porter, 1977). Later research from several different perspectives focused on the differences within strategic groups. That is, even though strategic groups are sets of firms pursuing relatively similar strategies (Porter, 1979), differences among firms in a group may exist.

Strategic group researchers applied at least three theoretical traditions to identify differences within a group. First, categorization theory (Rosch, 1978) was applied by researchers of managerial cognition and found that managers perceived differences among members of a strategic group. For instance, managers in the Scottish knitwear industry observed that some large firms produced sports garments like cotton golf sweaters, not just classically elegant wool sweaters (Porac *et al.*, 1989). Managers in Reger and Huff's study of banks (Reger and Huff, 1993: 117–118) identified a set of core firms that defined the basic strategic group recipe and a smaller set of secondary firms that followed the recipe to a lesser degree but were still identified as members of the group. Ketchen *et al.* (1993) mirrored their reasoning and suggested there were core and periphery organizations within configurations. Second, the concept of organizational identity (Albert and Whetten, 1985) was applied to strategic groups by Peteraf and Shanley (1997). They argued that strategic group members could vary in the extent to which they identify with a group. Third, the principle of isolating mechanisms (Rumelt, 1984) and the resource-based view of the firm (Wernerfelt, 1984) were applied in studies using archival strategy data to explain differences among firms in a strategic group (Cool and Schendel, 1988; Lawless *et al.*, 1989). In sum, various theoretical perspectives suggest that firms may vary in the degree to which they identify with their group.

In addition to core and secondary firms within multifirm strategic groups, single-firm groups, or solitary firms, may also exist within the overall industry structure. Some scholars using archival strategy data and cluster analysis identified single-firm groups (Cool and Schendel, 1987; Fiegenbaum and Thomas, 1993; Mascarenhas, 1989). Reger and Huff (1993) speculated about firms that were not in a strategic group, labeling some as misfits with inconsistent strategies and others as idiosyncratic firms whose strategies cannot be easily expressed in the terms used to explain most of the other firms in the industry. The resource-based view of the firm offers a theoretical reason for why there may be solitary firms. These firms seek unique, inimitable bundles of resources and associated product market niches in order to obtain sustained competitive advantage (Barney, 1991; Wernerfelt, 1984).

Taken together, we assume that industries and strategic groups are heterogeneous. Within a strategic group, there can be core and secondary firms based on how closely they follow the strategic group's recipe. Within an industry, there are not only multifirm strategic groups but also solitary firms that are not members of any group. Building on these assumptions, we develop hypotheses as summarized in Figure 2.

Intergroup vs. intragroup performance differences

The traditional view of strategic groups draws from IO economics and proposes that firms within strategic groups collude to competitively isolate themselves from firms outside of their group (Caves and Porter, 1977; Fiegenbaum and Thomas, 1990). Consequently, firms within certain groups create a favorable competitive environment for themselves compared to firms in other strategic groups within the industry. Such collusive actions on the part of firms in a strategic group result in the erection of mobility barriers that limit the ability of outside firms to effectively mimic their strategic position (Dranove, Peteraf, and Shanley, 1998). This collusive activity benefits all firms within the group, leading to similar performance among them. Firms in different groups face heterogeneous competitive environments that vary in munificence and profit potential. These circumstances generate sustainable performance differences between strategic

groups and relatively homogeneous performance within groups (Caves and Porter, 1977).

Even in the absence of collusion, mobility barriers may exist between groups that lead to performance differences across them. Hatten and Hatten (1987) postulated that the costs a firm pays to change groups creates a mobility barrier. McGee and Thomas (1986) identified three broad categories of mobility barriers: market related strategies, industry supply characteristics, and firm characteristics. Many of these do not require collusion to maintain and are costly to surmount, such as distribution channels, economies of scale, and firm boundaries. For example, in the context of the Japanese steel industry, Nair and Kotha (2001) concluded that the type of technology divided the integrated mills from the minimills and resulted in performance differences between the two groups. Similarly, distribution systems have been identified as important barriers in the pharmaceutical and insurance industries (Cool and Schendel, 1987; Ferguson *et al.*, 2000). Social processes at the strategic group level that reinforce cognitive sunk costs may also contribute to mobility barriers (Oliver, 1997; Peteraf and Shanley, 1997). These perspectives all suggest that significant performance differences will exist across groups.

In line with the traditional conceptualization of strategic groups, we first hypothesize that interfirm performance differences will be primarily related to the strategic group in which the firms reside, not to differences across firms within a group.

Hypothesis 1a: Strategic group effects will explain a larger proportion of the variance in firm performance than will firm differences within strategic groups.

We next develop the competing hypothesis that performance differences within a group will be greater than across groups by questioning the assumption of collusion, by reviewing empirical research, and by applying the resource-based view of the firm. The assumption of collusion is an important pillar of the position that performance differences exist across strategic groups (Caves and Porter, 1977). However, there is growing literature in economics and strategy that questions the assumption of collusion. This work builds on Stigler's (1964) observation that collusion depends on industry conditions such as enforcement, the

number of firms in the industry, and the bargaining power of buyers. Instead, there is growing evidence that similar firms exhibit more rivalrous actions.

Research in economics has questioned collusion at the industry level. In their study comparing collusive activity in fragmented vs. concentrated industries, Domowitz, Hubbard, and Peterson (1987) found less evidence of collusive activity than they expected. They concluded that the ability to effectively collude may have been limited among firms due to such factors as credible punishments, buyer power, threat of entry, and elasticity of demand. Research by Kwoka and Ravenscraft (1986) further suggests that effective collusion is difficult to achieve due to coordination difficulties and differences in the costs and benefits of collusion among industry members. Schmalensee (1987) argued that firm-level differences such as their cost bases make effective industry-level collusion difficult. In the banking industry, the empirical site of our study, tests of the collusion hypothesis for explaining performance found little support (Berger, 1995; Smirlock, 1985).

At the strategic group level, three studies using archival data draw on the concepts developed by Stigler (1964) regarding collusion to explain a lack of intergroup performance differences. Lawless and Tegarden (1991) found significant performance differences among groups in industries that had low product differentiation, high entry barriers, and high concentration, but not in industries with the opposite conditions. Cool and Dierickx (1993) also acknowledged that many factors may affect the ability of firms within strategic groups to maintain collusion, such as market segmentation, the degree to which the strategies of groups differed, and the resource asymmetry of strategic groups. They found that intergroup rivalry increased over time as two large strategic groups moved closer in strategic space, suggesting that the previously advantaged group was unable to build effective mobility barriers through collusion. And in the one study we found that specifically tested whether strategic group members contribute to the building of mobility barriers, Fiegenbaum and Thomas (1995) found no support to indicate that such activity exists within strategic groups in the insurance industry.

Researchers applying cognitive theories also questioned the likelihood of effective collusion.

Porac *et al.* (1989) described two types of beliefs organizational decision-makers hold when they construct mental models of their competitors: (1) beliefs about the identity of the firm and its competitors; and (2) beliefs about what it takes to be successful in the competitive environment. Porac *et al.* (1989) go on to describe how firms within strategic groups compare themselves to other firms in their own groups and the means by which they attempt to distinguish themselves from these other firms. Similarly, Fiegenbaum and Thomas (1995) used cognitive theory to propose that firms use their strategic group as a reference point to benchmark against competitors. They used archival data to support this proposition. These arguments suggest that firms are likely to focus on their competitive position within their own group and to be more aware of and reactive to the actions of their own group's members than members of other groups. Consequently, they may exhibit greater rivalrous behavior relative to their own group's members than the members of other groups.

The argument that rivalry is higher within groups than across groups has been supported by research using both archival and cognitive data. Cool and Dierickx stated: 'Group membership may indeed facilitate recognition of mutual dependence and thereby foster implicit understandings. However, such "membership" may also indicate which firms are able to invade each other's market segments when implicit agreements break down' (Cool and Dierickx, 1993: 49). They found significant intra-group rivalry in the pharmaceutical industry using archival data over 20 years. Using cognitive data, Porac *et al.* (1995) found that managers perceived higher rivalry with firms within their own strategic group than with firms in other groups. In a study using the related concept of ecological niches and localized competition (e.g., Baum and Mezias, 1992), Lawless and Anderson (1996) concluded that rivalry was most intense and performance lower among the most similar firms in a niche.

There have been mixed results from empirical tests of performance differences among strategic groups. Some studies found significant performance differences across groups (e.g., Fiegenbaum and Thomas, 1990; Lawless and Tegarden, 1991; Mascarenhas and Aaker, 1989). Others found no significant differences (e.g., Cool and Schendel, 1987; Lewis and Thomas, 1990), which some attribute to equifinality (Thomas and Venkatraman,

1988; Doty *et al.*, 1993). Ketchen *et al.* (1997) performed a meta-analysis on 33 studies consisting of 40 independent samples. They concluded there were significant performance differences across groups, but group membership appeared to explain a rather modest amount, 8 percent, of the performance differences across firms. Overall, there may be a strategic group effect on performance, but it may not be large.

Although much research has addressed performance differences across strategic groups, there has been little attention to performance differences among firms within a strategic group. There are two general performance outcomes that are possible if collusion is limited and intragroup rivalry is significant. The first is that ensuing competition resembles perfect competition that drives economic profits of all firms in the group to zero, resulting in no performance differences. A second outcome is that some firms develop better resources and capabilities for competing within the group, consistent with the resource-based view of the firm. Rumelt (1984) suggested that isolating mechanisms exist which distinguish the performance of one firm from another. Isolating mechanisms are the firm-level equivalent of industry entry barriers and strategic group mobility barriers and consist of 'phenomena that limit the *ex post* equilibration of rents among individual firms' (Rumelt, 1984: 567). Therefore, despite the presence of strategic groups, isolating mechanisms may prevent members of the same group from realizing similar returns (McGee and Thomas, 1986; Cool and Dierickx, 1993). An early application of the resource-based view of the firm to strategic groups by Lawless *et al.* (1989) found evidence that firm capabilities explained differences in performance among firms within groups. This perspective suggests that there are likely to be significant performance differences among firms within a strategic group.

In sum, we conclude from past research that rivalry rather than collusion is more likely within strategic groups. This is likely to reduce the height of mobility barriers and performance differentials across strategic groups. However, the existence of varying resource sets and firm-level isolating mechanisms likely leads to more notable performance differences within groups. Therefore, we expect to find that the degree of variance in performance is greater within than between strategic groups.

Hypothesis 1b: Strategic group effects will explain a smaller proportion of the variance in firm performance than will firm differences within strategic groups.

Intragroup performance differences

Although the possibility of performance differences within groups was demonstrated by Cool and Schendel (1988) and Lawless *et al.* (1989), the theoretical foundations of intragroup performance differences have not been examined in depth. In the only study that we are aware of that has examined firm differences and their effect on intragroup performance differences, Lawless *et al.* (1989) found that firm performance differences within a group were related to firm financial resources. We extend this line of research by examining the role of positioning as a core or secondary firm within a strategic group as a basis for intragroup performance differences.

The performance implications of positioning as core or secondary firms have received little empirical study, and theorists have been equivocal on which set of firms is likely to perform better. Reger and Huff (1993) offered contrary reasons for differences in positioning and resulting performance. Deviation from the core could reflect the inability of a firm to implement the group's strategic recipe. Thus, there may be mobility barriers or resource differences between core and secondary firms, resulting in core firms having higher performance levels. Alternatively, secondary firms may be trying to differentiate themselves from the core to achieve higher performance. Similarly, Peteraf and Shanley (1997) identified both positive and negative effects of strong identification with a group. On the one hand, they proposed that firms which strongly identify with their cognitive strategic group will be more effective than firms which are more loosely tied to a group at exchanging information and acting collectively to their mutual benefit, such as building competitive barriers. On the other hand, they also proposed that firms at the core of groups tend to be more resistant to change and have myopic views of the industry due to their strong identification with their group. We expand upon these insights and draw upon institutional, oligopoly, resource-based view, and contestable markets perspectives to develop competing hypotheses regarding the performance implications of positioning within strategic groups.

Institutional and oligopoly theories suggest core firms outperform secondary firms. Peteraf and Shanley (1997) incorporated social and historical factors in the development of strategic groups and argued that group and firm identities grow over time through firm actions, information exchanges, and resource transfers. Consistent with institutional theory arguments that isomorphism provides legitimacy benefits (DiMaggio and Powell, 1983; Meyer and Rowan, 1977; Deephouse, 1996), they further argued that group membership fosters legitimacy of individual firms: 'Individual firms gain legitimacy by blending in with others' (Peteraf and Shanley, 1997: 177). Thus, firms that identify strongly with the strategic group and are more similar to other group members should have greater legitimacy than the firms that are operating at the fringes of the group.

This greater legitimacy enables the firm to acquire resources at better terms from both suppliers and customers for at least three reasons (Pfeffer and Salancik, 1978; Suchman, 1995). First, potential exchange partners are more willing to interact with firms whose strategies they easily comprehend or perceive as rational. Second, exchange partners may offer more favorable terms to legitimate firms since they also value the perceived legitimacy enhancement that they receive by interacting with these legitimate firms (Galaskiewicz, 1985; Wood, 1991). Finally, exchange partners may require greater risk premiums from less legitimate firms due to their greater likelihood of failure (Baum and Oliver, 1991; Cornell and Shapiro, 1987; Singh, Tucker, and House, 1986). Chen and Hambrick (1995) used institutional theory to explain the negative correlation between firms' deviations from the actions of similarly sized firms and their performance. As discussed above, oligopoly theory applied within a strategic group suggests that core firms which identify strongly with the group will act more effectively and in concert to create competitive barriers (Caves and Porter, 1977; Peteraf and Shanley, 1997; Reger and Huff, 1993). Taken together, these perspectives imply:

Hypothesis 2a: Within a strategic group, core firms will outperform secondary firms.

In contrast, contestable markets and the resource-based view of the firm perspectives suggest that secondary firms outperform core firms. The

application of contestable markets theory (Baumol *et al.*, 1982) to strategic groups (e.g., Cool and Dierickx, 1993; Hatten and Hatten, 1987) implies that firms which are highly similar to each other face high competition and rivalry. In this vein, Gimeno and Woo (1996) found that greater strategic similarity among airlines decreased performance. The resource-based view of the firm is consistent with this perspective. Resources and product-market strategies are two sides of the same coin (Wernerfelt, 1984). Firms that develop unique resources may create local monopolies with their product market strategy (Barney, 1991; Peteraf, 1993). Firms that are positioned at the periphery of the cognitive group are more likely to develop local monopolies than firms at the core of the group. They may also be protected by isolating mechanisms (Rumelt, 1984). In line with this reasoning, Lawless and Anderson (1996), using the related concept of ecological niches, argued and found that greater differentiation within a particular niche was associated with higher performance. These two perspectives imply that secondary firms will outperform core firms.

Hypothesis 2b: Within a strategic group, secondary firms will outperform core firms.

Core, secondary, and solitary firms within the industry

Along with positioning within a firm's strategic group, firm performance may also be related to positioning within the entire industry landscape. As presented in our assumptions section, firms can take one of three positions within an industry comprised of strategic groups. In addition to the core and secondary members of strategic groups mentioned in the prior set of hypotheses, there may be solitary firms that are not a member of a multifirm strategic group.

As discussed earlier, institutional and oligopoly theories suggest the greatest benefits exist for core firms (Caves and Porter, 1977; Suchman, 1995). Core firms may benefit from stronger legitimacy than secondary firms. As noted above, this enhanced legitimacy allows them preferential access to resources from their exchange partners. Core firms are also more able to collude than secondary firms. These core firms are more able to develop high mobility barriers and to exchange

communication that limits the likelihood of rivalrous action (Peteraf and Shanley, 1997). The situation is even worse for solitary firms. They lack the legitimacy that comes from being the member of a strategic group. They are also prone to competitive actions against them by strategic groups acting in concert (Porter, 1979). Thus:

Hypothesis 3a: Within an industry, core firms will outperform secondary and solitary firms.

The resource-based view and contestable markets perspectives both suggest that solitary firms will be the highest performers. As noted above, the resource-based view suggests that firms which stake out unique market positions are able to develop resource sets that best serve a segment of the market (Barney, 1991; Peteraf, 1993). Contestable markets theory (Baumol *et al.*, 1982) offers a complementary perspective. Firms that identify unique market positions isolate themselves from competition and can build a local monopoly. Both lines of reasoning suggest that solitary firms have the highest financial performance potential.

Hypothesis 3b: Within an industry, solitary firms will outperform core and secondary firms.

More recent theorizing suggested that secondary firms may have the highest performance. Porac *et al.* (1989: 414) proposed that successful firms effectively balance pressures to conform and to differentiate. Strong pressures exist to conform to successful industry or strategic group recipes (DiMaggio and Powell, 1983; Porac *et al.*, 1989; Spender, 1989). This conformity provides access to necessary environmental resources. At the same time, these firms effectively differentiate themselves in order to create the 'organizational uniqueness' necessary to generate superior returns. In short, Porac *et al.* (1989) proposed these firms exist on the 'competitive cusp.' Deephouse (1999) expanded on this by describing how firms in their strategic decisions trade off the benefits of increased legitimacy from being more similar to rivals with the benefits of lower competition from being less similar.

We apply this strategic balance reasoning to strategic groups as follows. Solitary firms face little competition but sacrifice the legitimacy of being the member of a multifirm strategic group. In contrast, core firms may sacrifice distinctiveness

to gain legitimacy. Secondary firms may be seen as balancing these two competing demands. They gain preferential access to valuable resources due to the perceived legitimacy that is derived from group membership. At the same time, they limit the degree of direct competition they face by staking out competitive positions that are somewhat distinct from the core firms in their group.

This trade-off can also be derived by integrating the aforementioned strategic groups research. As noted above, firms that differ from strategic group norms may have lower performance because of a loss of legitimacy (Chen and Hambrick, 1995; Peteraf and Shanley, 1997). Solitary firms should be especially harmed by this. But being similar to group norms may increase competition and rivalry and therefore reduce performance (Cool and Dierickx, 1993; Lawless and Anderson, 1996). Applying the principle of diminishing returns to both conformity to obtain legitimacy and differentiation to reduce rivalry implies that secondary firms may be best positioned. Thus:

Hypothesis 3c: Within an industry, secondary firms will outperform core and solitary firms.

RESEARCH METHODS

Research setting

We test our hypotheses in the commercial banking industry in the Minneapolis–St Paul metropolitan area (Twin Cities). We chose this industry and setting for several reasons. First, although the industry was and is still consolidating, it remained an industry with a significant number of participants during the period studied, specifically over 70 banks in 1994. Second, the industry boundaries were fairly clear and well understood by market participants due to regulatory restraints and the geographic setting. The Twin Cities is geographically isolated, so we saw no overlap with firms from adjacent geographic areas. At the time of the study, Minnesota banks were organized legally and operationally to serve metropolitan areas. Moreover, the metropolitan area level is the most common industry boundary used in commercial banking research (e.g., Amel and Rhoades, 1988; Barnett, Greve, and Park, 1994; Berger, 1995; Hannan, 1991), Third, due to regulatory requirements, we could obtain financial data reported to the bank regulators on both publicly and privately held banks and

thus measure profitability and strategic attributes. Fourth, at the time of the study, Minnesota banks had faced a fairly stable regulatory framework for several years. The most recent overhaul of banking regulations had occurred in 1987, 7 years prior to the collection of our perceptual data. Thus, it did not appear that the market was in a state of high ambiguity during the period studied. Fifth, while the banking industry faces significant regulation, firms retain significant strategic discretion and can stake out numerous strategic positions by changing the range of services offered, the pricing of those services, and the target markets served.

Measures

Strategic groups

While the most common method for identifying strategic group structures within industries is through cluster analysis of archival financial information, we use the perceptions of industry managers to identify the structure and positioning of firms. We believe that this more recently developed approach is more appropriate for examining the effect of strategic positioning on firm performance for three reasons. First, Porac and his colleagues (Porac and Thomas, 1994; Porac et al., 1995) have demonstrated that managers assess the degree to which other industry incumbents are rivals through their positioning within the cognitive strategic group structure. We suggest that managers identify specific competitors and determine appropriate strategic action (e.g., rivalrous or collusive) vis-à-vis these competitors. Second, these group structures determine the expected rules of behavior and consequently whether or not strategic actions are deemed normatively acceptable (Porac et al., 1989; Peteraf and Shanley, 1997). These rules and norms become institutional elements of the industry macroculture (Abrahamson and Fombrun, 1994; DiMaggio and Powell, 1983). Third, legitimacy is fundamentally a sociocognitive construct (Scott, 1995). Therefore, cognitive strategic groups are an appropriate lens for indicating the likelihood of collusion, the degree of rivalry a firm faces, and the degree to which a firm's positioning is considered legitimate.

We constructed a set of cognitive strategic groups based on the responses of senior managers of Twin Cities' banks. We first attempted to contact the CEOs of every bank with assets over

$40 million. We eliminated smaller banks from consideration since they were likely to be focused on a very small target market, resulting in their managers having limited awareness of the positioning of other banks outside of their niche. Of the 64 banks in our initial sample, we were able to discuss the nature of the study with the CEOs of 60 banks, of whom 54 agreed to participate. Each CEO was asked to identify the members of the top management team (TMT) of his/her bank. Based on earlier work on TMTs in banking (Bantel and Jackson, 1989), the chief executives were asked to name the managers who were actively involved in decisions regarding products and services, marketing, delivery systems and operations, and/or general management and administration. The 54 CEOs identified a total of 189 individuals, including themselves, who met these criteria. A cover letter and questionnaire were then mailed to each TMT member. Responses were received from 145 top managers, or 77 percent of the identified managers. Based on prior research using TMT surveys (e.g., Stimpert and Duhaime, 1997; Gupta and Govindarajan, 2000), we conclude that this is a very high response rate for TMT samples. Moreover, responses were received from 52 of the 54 banks (96%).

We used a two-step process to develop the cognitive group structure of the Twin Cities banking industry. We first elicited the strategic group structures as perceived by each individual respondent. We then used this information to construct an aggregate cognitive strategic group structure for the Twin Cities banking industry.

In the first step, we wished to elicit information regarding the industry's strategic group structure as unobtrusively as possible. Consequently, we designed the questionnaire to allow as much flexibility as possible in managers' responses. First, we provided managers with a brief definition of the term 'firm strategy' which was taken from a widely used strategic management textbook by Thompson and Strickland (1993). Respondents were then asked to identify a set of 'general strategies' used by banks to compete in the Twin Cities. The survey instructions told them they could list as few or as many strategies as they thought were necessary to cover those used by banks competing in their area.

Managers were then given a list of banks in the Twin Cities and asked to identify which of their self-generated strategies each of the banks followed. This list included only the largest 30 banks, those with over $80 million in assets. This number was selected in consultation with a local banking executive for two reasons. First, it kept the questionnaire to a manageable length to reduce the likelihood of respondent fatigue and improve the response rate (Sudman, 1976). Second, we considered it unlikely that most managers would be familiar enough with the strategies of smaller banks to meaningfully categorize them. Managers were given the option to not categorize any banks with which they were not familiar.[1] Our decision to limit the list to the largest banks was bolstered by the fact that the likelihood that a manager would categorize a bank was highly correlated with the bank's size ($r = 0.51$, $p < 0.01$). From a structural perspective, these 30 banks accounted for 94.4 percent of the overall industry based on market share of deposits, the central measure of market structure used by bank regulatory research (Berger, 1995). Moreover, we examined and found no performance differences between the firms included and excluded in our study ($p > 0.10$).

In order to construct an aggregate cognitive strategic group structure for the industry, we examined each of the 435 possible dyads between the 30 banks to see what percentage of respondents perceived the banks in the dyad to be employing the same general strategy. We considered banks to be in the same strategic group if a majority of respondents who chose to categorize both banks identified them as following the same strategy. This method produced the industry structure reported in Table 1. There were three completely separate groups and two solitary banks that were not linked to any other bank in the industry, implying they had unique strategies and were positioned in their own group. Two of the groups included three banks each. The third group had 21 members. The thirtieth bank was dropped from the analysis because it was bought by another bank, negating our ability to collect subsequent performance data.

While the groups that emerged from our method are uneven in number of members, this is not inconsistent with earlier studies of strategic groups.

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[1] We included the percentage of managers who categorized a given bank as a control variable in our analyses and found that this control variable was not related to firm performance and did not affect the relationship between the main independent variables and firm performance. Therefore, for the sake of parsimony, we excluded this variable from the analyses reported in the results section.

Table 1.   Aggregate strategic group structure

Group 1	Group 2	Group 3	Group 4	Group 5
First Bank Firstar Bank Norwest Banks	American National B&T National City Bank Commercial State Bank	Ameribank Americana Bank Cherokee State Bank Citizens Independent Bank First American Bank FNB of Chaska FNB of Waconia FNB of Wayzata Liberty State Bank Mid-America Bank Northstar Bank Northeast State Bank Signal Bank State Bank of Belle Plaine Vermillion State Bank Western State Bank Eastern Heights State Bank (secondary) Fidelity Bank (secondary) Park National Bank (secondary) Richfield B&T (secondary) Riverside Bank (secondary)	Marquette Bank	Midway National Bank

For example, Fiegenbaum and Thomas (1993) identified a structure with six groups in the insurance industry during 1983–84. The largest group had 19 members, but the next two groups only had six and three members. They also identified three solitary firms that occupied unique strategic positions. Similarly, Mascarenhas (1989) identified a multiple group structure in the oil well drilling industry. One group contained over 80 percent of the firms in the industry, while one firm had a solitary strategic position.

We reviewed the membership of each group to see if there is descriptive validity (Thomas and Venkatraman, 1988). Group 1 includes three super-regional banks that competed in this market. Group 2 includes three small regional banks, which focus on commercial and industrial business and are located in the downtown region. Group 3 includes a set of 21 banks that commonly could be described as community banks. Thus, the groups separate the market by bank size and market focus.

To test the hypotheses regarding position within the group structures, we needed to identify core and secondary firms in the groups. Within the two smaller groups, every bank was linked to the other two group members. Thus, we concluded that all banks within these groups were core firms. Within the larger group, we concluded that 16 of the 21

banks were core firms. Each of these 16 was linked to at least 14 of the remaining 15 core firms in the group. The other five were linked to between two and eight of the 16 core firms. Although they were less closely tied to the other banks in this group than the core firms were, they were not linked to any bank in the other groups. Figure 3 displays the links that we found between the firms in this group. The diagram clearly demonstrates that the 16 core firms are consistently linked with each other. Additionally, although the secondary firms (marked with an 'S' in the upper right) are linked with a number of group members, they are clearly less fully integrated into the group than the core firms. Thus, we concluded these five banks were secondary firms in the group. In summary, within our entire sample, we found 22 core banks, five secondary banks, and two solitary banks.

We also looked at the degree to which banks were linked with each other from an aggregate level to examine whether or not we could find additional support for our categorizing of the firms. We calculated the average frequency with which banks within a group were linked to each other by industry managers and then compared this average to the average frequency with which they were linked to banks we had categorized into other groups. We used the following equation to calculate GI_b,
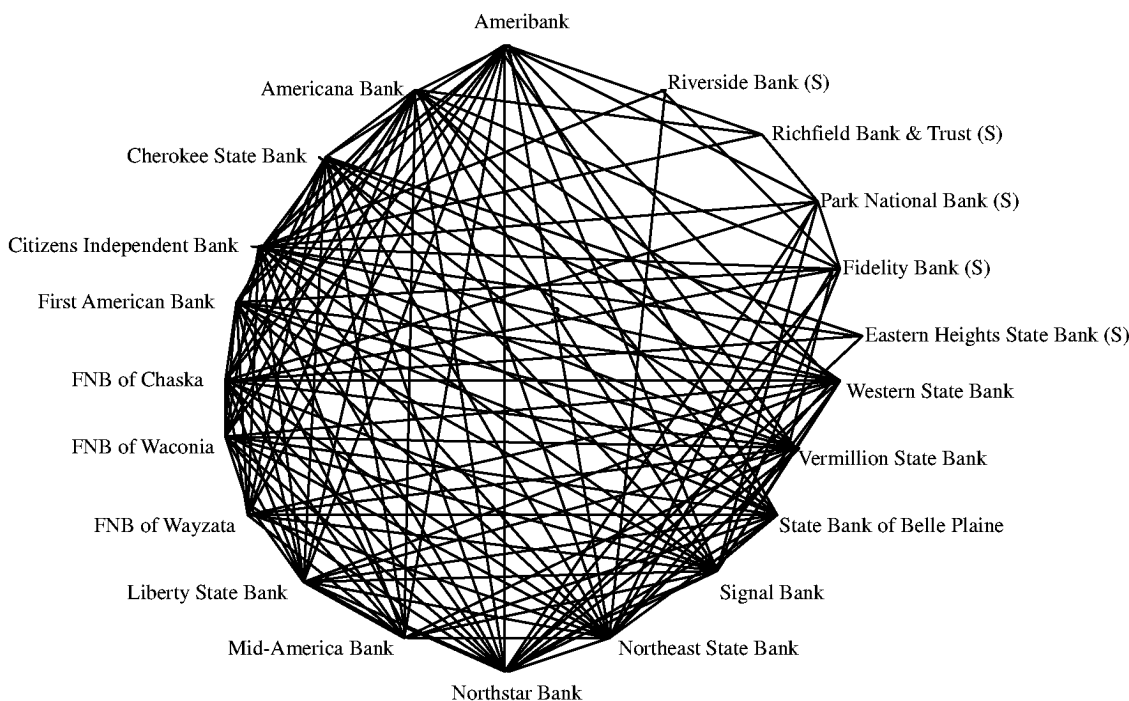
Figure 3. Core and secondary firms in Group 3

the frequency to which bank *b* is identified with its group:

$$GI_b = \left[\sum_{j=1\ldots J} \sum_{r=1\ldots R} X_{bjr} \right] / RJ$$

where X_{bjr} is an indicator variable coded as a 1 if respondent *r* identifies the focal bank *b* and bank *j* as following the same strategy, *R* represents the number of respondents, and *J* is the number of banks in the same group as focal bank *b*. We similarly calculated GI_b* to indicate the frequency to which bank *b* is linked to banks in other groups by changing the set of banks (i.e., *J* to *J**).

Examination of these measures supports the original categorization. The average frequency with which managers linked banks in Group 1 to other Group 1 members was 61 percent. In contrast, the average frequency with which these firms were grouped to firms outside of their strategic group was much lower (12%). Clearly, a strong majority of managers see the banks in Group 1 as following a strategic recipe that is distinct from the other industry incumbents. With the banks in Group 2, the results are less extreme but consistent with the primary coding. Group 2 banks

were linked to other Group 2 banks at a much higher average frequency (55%) than to non-Group 2 banks (27%).

When reviewing the coding of Group 3 firms, we analyzed core and secondary firms separately. We found that the frequency with which core firms were linked to each other was 62 percent, to secondary firms 47 percent, and to members of other groups 18 percent. We conclude that this supports the contention that core firms are consistently grouped together, are linked less consistently with secondary firms, and are believed by most industry managers to be distinct from firms in other groups. In contrast, the frequency of linking secondary firms to each other was about the same as the frequency of linking secondary firms with core firms (45% vs. 47%). Secondary firms were much less frequently linked with members of other groups (24%), however. This suggests that the secondary firms are linked with the group but less strongly than the core firms. In sum, when viewing the responses of managers from an aggregate perspective, the results are consistent with our primary categorizing of the firms.

We also assessed the degree to which we could find support for the structure of the industry measured from perceptual data using discriminant

analysis of archival data. Following past research, we used measures of bank size, an indicator of market power (Berger, 1995; Porter, 1979) and their degree of focus on major deposit and loan categories (Santomero, 1984; Swamy *et al.*, 1996). Following the recommendation of Lachenbruch and Mickey (1968), we used a cross-validation technique for assessing the error rate in coding. First, we assessed the degree to which the basic strategic group structure would be supported by the discriminant analysis. We found that 85.2 percent of the banks in the cross-validation holdout sample were placed into the same groups with the discriminant analysis. Second, we assessed the degree to which the coding of Group 3 banks into the core and secondary categories reflects underlying differences in the financial characteristics of the banks. We found that 90.5 percent of the Group 3 banks were categorized the same with the discriminant analysis as they were with our perceptual measures. Such consistency between archival and cognitive methods in constructing groups is consistent with past research by Nath and Gruca (1997). In sum, we believe that the group and subgroup structures identified by the top manager respondents reflect underlying differences and similarities in the strategic orientations of the firms.[2]

Firm performance

We used three measures of firm performance to test our hypotheses: return on average assets (ROA), return on equity (ROE), and operating profit margin (OPM). All three measures were calculated using an average value for the years 1995–96 (the 2 years after the cognitive strategic group data were collected). While we present the results for all three performance measures, we chose to focus on ROA as our primary performance indicator for several reasons. First, it is consistently used in the banking industry for internal assessment of business unit profitability and for external assessment of the performance of bank holding companies. Second, Sheshunoff Information Services, a widely respected industry analysis firm, describes ROA as the best indicator of earnings efficiency (*Banks*

of *Minnesota*, 1995, 1996). Third, this measure is the most frequently used measure of performance in strategic management studies of the banking industry (Barnett *et al.*, 1994; Deephouse, 1999; Reger, Duhaime, and Stimpert, 1992; Reger and Huff, 1993). Finally, it controls for differences in capital structure.

The profitability figures were collected from Sheshunoff publications, which contain data from financial reports that all banks are required to submit to the Federal Regulators. ROA is calculated as the banks' income before extraordinary items and adjustments divided by average total assets. We used an income figure that is before extraordinary items to limit the degree to which accounting manipulations may have entered the calculation. ROE uses the same income value but divides it by the firm's average total equity. Finally, we divide the firms' operating profit by their average total assets to calculate OPM. Operating profit equals the bank's income less gains or losses on held-to-maturity or available-for-sale securities before taxes, extraordinary items, and adjustments.[3]

Analytic methods

Hypothesis 1 predicted that performance differences would be greater within strategic groups than between strategic groups. Testing this hypothesis requires us to simultaneously assess variance in performance at two levels of analysis: the firm level to determine variance within the strategic group and the group level to determine variance among strategic groups. Therefore, we used hierarchical linear modeling (HLM) to simultaneously model within-group and between-group variance (Bryk and Raudenbush, 1992; Hofmann, 1997).

We used a two-level hierarchical model in order to assess whether or not there are differences in firm performance within and among cognitive strategic groups. This model can be estimated by the following equation:

$$Y_{ij} = \gamma_{00} + \mu_{ij} + r_{ij}$$

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[2] An alternative perspective is that managers would categorize firms according to their prior performance level. Using regression analysis, we tested for differences in performance levels 1 year prior to the survey distribution. There were no significant differences in prior performance across the strategic groups or between core and secondary firms in Group 3 ($p > 0.10$).

[3] While our primary focus is on firm performance, we also tested for risk differences related to the positioning of firms. Using a variance in returns measure of risk (1994–96), consistent with prior strategic groups research (e.g., Cool and Schendel, 1988), we find no evidence that there are systematic differences in firm risk either across group boundaries ($F = 0.44$, $p = 0.78$) or between core and secondary firms in Group 3 ($F = 1.45$, $p = 0.25$).

where Y_{ij} is the performance of the ith firm in the jth strategic group, the term γ_{00} represents the grand mean of performance of all the cognitive strategic groups, the term μ_{ij} represents variation in the mean performance between strategic groups, and the term r_{ij} represents variation in performance of firms within strategic groups. In analysis of variance terms, there are one fixed effect (γ_{00}) and two random effects (μ_{ij} and r_{ij}). The results yield two variance parameter estimates: one for the term representing between-group variance, and one for the term representing within-group variance. If the between-group parameter estimate (μ_{ij}) is greater than the within-group parameter estimate (r_{ij}), Hypothesis 1a will have been supported. However, if the within-group parameter estimate (r_{ij}) is greater than the between-group parameter estimate (μ_{ij}), Hypothesis 1b will have been supported.

We used a one-way analysis of variance and regression analysis to test Hypotheses 2a and 2b. We used regression analysis to test Hypotheses 3a, 3b, and 3c. Three dummy variables indicated core, secondary, and solitary firms. We exclude the indicator variable for secondary firms from the analysis to avoid perfect collinearity. We can assess the performance differences between secondary firms and core and solitary firms by examining the sign and significance of the parameter estimates.

RESULTS

Hypothesis 1a predicts that the majority of the variance in firm performance will be attributable to differences across strategic groups rather than interfirm differences within strategic groups. In contrast, Hypothesis 1b predicts that the bulk of variance in firm performance will be attributable to interfirm differences within strategic groups. The HLM analysis with which we examined these competing hypotheses produced a parameter estimate for the variance in ROA *between* strategic groups of 0.019 ($p = 0.29$), while the parameter estimate for ROA variance of firms *within* strategic groups was 0.090 ($p < 0.01$). Consistent with Hypothesis 1b, the intraclass correlation for the two levels of performance effects indicates that a large majority of the variation in firm ROA is within groups. The intraclass correlation calculation ($\rho = 0.090/(0.019 + 0.090) = 0.826$) indicates that 82.6 percent of the total variance in

firm ROA is *within* groups but only 17.4 percent of the variance is *between* groups. Further, the results indicate that the variation in ROA is significant within groups but not across groups. Similarly, with the ROE and OPM measures, performance varies significantly within groups ($p < 0.01$) but not across groups ($p > 0.10$). We also conducted an analysis of variance to test for performance differences across the five strategic groups. Consistent with the HLM analysis, there were no significant performance differences across the groups ($F = 1.01$, $p = 0.42$ for ROA; $F = 1.66$, $p = 0.19$ for ROE; and $F = 0.96$, $p = 0.44$ for OPM). Overall, we find consistent support for Hypothesis 1b.

Hypotheses 2a and 2b address performance differences due to positioning within strategic groups. Since we found secondary firms in only one of the three multifirm groups (Group 3), we tested for performance differences within this group using a one-way ANOVA. Secondary firms had a mean ROA of 1.59 percent, while the core firms had a mean ROA of 1.27 percent. The test statistic ($F = 5.92$, $p < 0.05$, $R^2 = 0.23$) indicates there is a significant difference in ROA, supporting the uniqueness arguments of Hypothesis 2b. Consistent with this, we also found that secondary firms generated higher levels of ROE and OPM than core firms ($F = 6.15$ and $F = 6.59$, respectively, both $p < 0.05$).

While we created a dichotomous categorization for core and secondary firms, following Reger and Huff (1993) and Ketchen *et al.* (1993), another way to examine this issue is to use a continuous indicator of group identification.[4] This is consistent with Peteraf and Shanley's (1997) perspective on group identification since they imply that firms could vary continuously in the extent to which they identify with a group. We used GI_b, the measure of group identification presented above, in a regression analysis. We found the results are consistent with our primary analysis but slightly stronger. The more frequently a firm was identified as being strategically similar to other firms in the group, the lower its ROA ($F = 8.48$, $p < 0.01$, $R^2 = 0.31$). This suggests that a continuous variable for group identification better measures, in the sense of larger criterion validity, the benefits

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[4] We thank Associate Editor John McGee and an anonymous reviewer for raising this issue.

of strategic differentiation within the confines of a strategic group than a dichotomous measure.

The results in Table 2 relate to Hypotheses 3a, 3b, and 3c. The overall results suggest there were significant differences between core, secondary, and solitary firms in all three dependent variables ($p < 0.05$). Further, the dummy variable for solitary firms was negative and significant for all three performance variables, indicating that secondary firms had higher performance than solitary firms ($p < 0.05$ for ROA, $p < 0.01$ for ROE and OPM). Similarly, the dummy variable for core firms indicates that secondary firms had higher performance than core firms on all three measures ($p < 0.05$). As with our test for Hypothesis 2, we also conducted an analysis using GI_b, the continuous measure of intragroup identification. For this analysis, we used a value of 100 percent for solitary firms since they are uniquely identified with the core of their group. These results also indicate that the stronger a firm's intragroup identification, the lower its ROA ($F = 7.16$, $p < 0.05$, $R^2 = 0.21$). Similar results were found for ROE ($F = 8.72$, $p < 0.01$, $R^2 = 0.24$) and OPM ($F = 7.61$, $p < 0.05$, $R^2 = 0.22$). Thus, we find consistent support for the strategic balance argument of Hypothesis 3c. Firms positioning themselves to balance strategic distinctiveness for competitive purposes and strategic conformity for legitimacy purposes appear to produce the best results.

Although we did not hypothesize any difference in the performance levels of core and solitary firms, we conducted a *post hoc* means comparison test using the least conservative Fisher's *t*-test to see if there was a significant difference in the average performance of core and solitary firms. We

were unable to conclude that there was a significant difference in the performance of these two classes of firms ($p > 0.10$) using the ROA and OPM performance variables. However, when examining the firms' ROE, we find marginal evidence that core firms outperform solitary firms ($p < 0.10$). Thus, there is very limited evidence that firms staking out truly unique market positions underperform firms that stake out what we infer to be highly legitimate market positions.

DISCUSSION AND IMPLICATIONS

The development of the strategic groups construct has generated a significant amount of research over the last three decades. However, the performance implications of strategic groups have remained unclear. We set out to examine the degree of performance variation that is due to positioning in a strategic group versus positioning among firms within a particular strategic group. We also developed hypotheses to examine performance differences found across firms within the same strategic group. We found little evidence of performance homogeneity within strategic groups. This suggests that early theorizing about strategic groups (e.g., Caves and Porter, 1977) may not always be highly informative in understanding firm action and performance. While we do not measure whether or not firms in our sample worked together to create group mobility barriers, our results are not consistent with the notion of strategic groups as sets of firms working together to create favorable environments that foster relatively homogeneous performance within groups and significant performance differences across groups.

In contrast, we find that the great majority of variation in firm performance to be the result of firm differences within strategic groups as opposed to systematic differences across groups. We see these results as consistent with the resource-based view of the firm (Barney, 1991; Rumelt, 1984; Wernerfelt, 1984) and the contestable markets perspective (Baumol *et al.*, 1982; Hatten and Hatten, 1987; Cool and Dierickx, 1993). Some firms within a group develop somewhat unique positions within their group based on certain product-market or resource advantages. While our perceptual method for measuring firm positioning does not allow us to

Table 2. Examining differences in firm performance related to positioning within strategic groups[a]

Variable	ROA	ROE	OPM
Intercept	1.59**	19.22**	2.54**
	(0.12)	(1.69)	(0.21)
Indicator variable for solitary firms	−0.64*	−9.68**	−1.10**
	(0.24)	(3.16)	(0.39)
Indicator variable for core firms	−0.33*	−4.24*	−0.56*
	(0.14)	(1.86)	(0.23)
F-value	4.29*	5.11*	4.61*
R^2	0.24	0.27	0.25
Adjusted R^2	0.19	0.22	0.20

[a] Standard errors in parentheses. $N = 30$; **$p < 0.01$; *$p < 0.05$

directly measure why industry managers see secondary firms as different, the discriminant analysis using asset and liability strategies indicates differences between the strategies of core and secondary firms (cf. Nath and Gruca, 1997).

Further, we found that positioning within the group structure has important performance implications. Secondary firms in a strategic group had better financial performance than the core firms in their own group. Moreover, secondary firms had better performance than core firms in other groups and solitary firms. While our primary analysis dichotomized these firms into core and secondary firms, we also viewed the degree of identification with the group using a continuous variable in our supplemental analyses. Both analyses indicated strong support for the argument that firms benefited from weaker identification with the group. This finding is consistent with the argument that these firms benefit from the legitimacy that accrues from being members of a strategic group (DiMaggio and Powell, 1983; Peteraf and Shanley, 1997) without sacrificing the autonomy needed to generate a somewhat unique market position and resource set (Barney, 1991; Wernerfelt, 1984). Combined, these findings suggest that these banks benefited by staking out unique competitive positions in their market areas while maintaining the benefits from being part of a large strategic group. We suggest these firms are balanced on the competitive cusp (Porac *et al.*, 1989: 414) so as to be different as legitimately possible (Deephouse, 1999: 147). In turn, we did not find support for a hypothesis derived from collusion and institutional perspectives that core firms should have highest performance. Nor did we find support for a hypothesis derived from resource-based and contestable markets perspectives that solitary firms should have highest performance.

To ground our findings in the reality of the Twin Cities banking market, recall that managers perceive these five secondary banks as being part of the community bank group. We infer that these firms are able to benefit from the legitimacy of being a member of this group while also benefiting from a level of strategic differentiation. We use one of these secondary firms to explore this inference. The firm we focus on for this exploration is Riverside Bank. We believe that Riverside has positioned itself somewhat uniquely in at least two ways. First, it is located in a much more urban

setting than most community banks, being headquartered on the edge of downtown Minneapolis, as opposed to the typical suburban setting of community banks. Second, its loan portfolio is focused less on mortgage lending than its peers (13% of its loan portfolio vs. 25% for the group) and more on commercial lending (59% vs. 25%). On the deposit side, Riverside Bank relies more heavily on demand deposits (45% vs. 20%) and less heavily on certificates of deposit (12% vs. 34%). Finally, press reports indicate that Riverside offers commercial banking services with the orientation of a community bank to small businesses, many of which have been turned away from the larger banks in other groups (e.g., Youngblood, 1994). Thus, while industry managers identify Riverside Bank as part of the community bank strategic group, they see it as less central a member than many of the other banks in the group. As Reger and Huff (1993: 116) put it, this secondary firm is aligned with the group in many respects but does make some unique strategic decisions.

While our results question the value of the traditional view of strategic groups as being a primary determinant of firm performance (Caves and Porter, 1977), we still see value in studying strategic groups. The strategic groups construct may help us understand the relative positioning of firms to the prototypical strategies perceived by industry managers. Strategic groups serve as reference points for managers within an industry, guiding the sorts of behaviors that are normatively acceptable and influencing the degree to which firms differentiate themselves from these norms (e.g., Fiegenbaum and Thomas, 1995; Hodgkinson, 1997; Porac *et al.*, 1989, 1995; Reger and Huff, 1993). Consequently, we believe future research could examine how managerial perceptions regarding the basic group structure and firm positioning within that structure are related to the environmental scanning that managers undertake, the institutional pressures that they face, managerial evaluations of potential courses of action, and the resulting action that firms take. That is, we agree with Thomas and Venkatraman (1988: 549), who stated: 'Researchers should recognize the value of the multidisciplinary perspective of strategic management in theorizing about strategic groups.' Such disciplines include not only IO Economics but also Cognitive Psychology, Social Psychology, and Organization Theory.

Additionally, this study builds upon prior strategic groups research by combining the research that found variation in performance within strategic groups (e.g., Cool and Schendel, 1988; Lawless *et al.*, 1989) with research that found variation in the degree to which firms identify with their group (e.g., Porac *et al.*, 1989; Reger and Huff, 1993). Our findings support these research streams and lead us to conclude that the strategic groups construct can provide insight into how managers balance competing needs for institutional legitimacy and strategic differentiation to create strategic advantage. Thus, we believe strategy research could benefit by examining how managers of individual firms see the industry structure and how they position themselves within that group structure to gain the greatest potential performance advantage.

LIMITATIONS AND FUTURE RESEARCH

There are also several limitations to the study. We studied a single industry within a confined geographic area. Also, we did not include all firms competing in this market in our study. Future research should examine the generalizability of these findings by examining these relationships in other industry settings and by including all industry participants. In particular, we found secondary firms in only one of five strategic groups. Support for the performance benefits of being a secondary firm would be enhanced by a study that found secondary firms in multiple groups outperformed core and solitary firms.

Additionally, we studied group structure and firm performance at a single point of time. Although past research in other samples found stability in cognitive groups structures over time (Hodgkinson, 1997; Reger and Palmer, 1996), the stability of positioning and the sustainability of performance advantages in our sample is not assured. Future studies should examine whether secondary firms are able to maintain the benefits of strategic balance over time. It may be that the core firms see the benefits accrued by secondary firms and mimic them in later time periods. This would also indicate a lack of strategic myopia among core firms. Alternatively, the legitimacy of secondary firms may wane over time as industry participants perceive these firms as being further outside of the group as the core firms continue to refine the core group recipe. Thus, future studies could examine the dynamic nature of cognitive group boundaries and firm positioning within them.

We conducted a *post hoc* analysis to undertake an initial examination of this issue. As part of our survey, we asked bank CEOs to assess the degree to which they planned to increase or decrease their reliance on major asset (loan) and liability (deposit) categories over the next 3 years on a 7-point Likert scale. Focusing on the core and secondary firms in group 3, we examined the degree to which the CEOs of secondary firms anticipated differing courses of action than CEOs of core firms. Results from a MANOVA indicate that there are significant differences in the intended actions of these firms (asset categories, $F = 3.01$, $p < 0.05$; liability categories, $F = 3.49$, $p < 0.05$). Further, with the exception of one liability category, the different intentions would have increased or maintained the strategic differences between the core and secondary firms. Thus, it appears that secondary firms plan to maintain their unique positions and that core firms do not plan to imitate these secondary firms.

There also may be contingencies affecting the relationship between positioning within a group structure and firm performance. One environmental characteristic is the strength of the institutional environment, which for banking is strong (Scott, 1995). The benefits of conformity to strategic group recipes may differ in other industries. Moreover, environmental uncertainty may affect the value of conforming (DiMaggio and Powell, 1983). Finally, industry concentration may affect the degree to which firms are able to collude with each other (Stigler, 1964).

The relationship between positioning and firm performance also may be contingent on firm characteristics. For example, the length of time an organization has competed in a market may affect the degree to which it perceives the need to be seen as legitimate (e.g., Hannan and Freeman, 1984; Singh *et al.*, 1986; McNamara and Vaaler, 2000). Additionally, we only included firms larger than a certain size in our study. The benefits of similarity and differentiation may be affected by the size of the organization relative to its competition. Thus, while we find a benefit of balancing the need for similarity and differentiation in this study, future research should use multi-industry samples

and explore the degree to which these relationships are contingent on firm and industry characteristics.

A plausible explanation for our results that we are unable to directly examine is that secondary firms may be more responsive to environmental changes than core firms. Because secondary firms' identification with the group is lower, they likely perceive less isomorphic pressure than core firms (Peteraf and Shanley, 1997). Core firms may become myopic in their strategic scanning by focusing primarily on their core competitors and not consider firms outside of their own group as relevant competitors (Peteraf and Shanley, 1997; Porac *et al.*, 1989, 1995). As a result, they may be slower to see and to respond to changes in the industry that are not initiated by their core competitors or customers. In contrast, secondary firms may undertake wider competitive scanning since they identify less closely with their own group. Future research on the differences in scanning between core and secondary firms could inform this explanation.

Finally, it should be noted this study addresses the performance implications of strategic groups, not of firm performance *per se*. In our regressions, we found that the intercept and core, secondary, and solitary positions in the industry explained about one-fourth of the variance in our three performance measures. These results suggest that positioning in strategic groups may be a useful variable in more complex, multivariate studies of firm performance (cf. Dranove *et al.*, 1998).

CONCLUSION

In sum, this study extends the research on strategic groups by examining the foundations of performance differences within an industry's strategic group structure. While we found no significant differences in performance across groups, we did find that secondary firms in strategic groups outperformed both core firms and solitary firms. These results are informative since they contribute to our evolving understanding of the value of the strategic groups' construct by underscoring the strategic implications of positioning within the industry's strategic group structure. Specifically, we find value associated with balancing on the 'competitive cusp' (Porac *et al.*, 1989) between strategic similarity and distinctiveness.

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