# Strategic Orientation and Equifinality in the U.S. Private Passenger Auto Insurance Sector

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## ABSTRACT

The objective of this study is to examine the strategic orientation of firms in the private passenger auto insurance sector, using the notion of strategic groups. Based on data from the period 2002 to 2007 from a sample of 53 insurers, this study found distinct strategic groups operating in this segment. Each of these groups has unique differences in their modes of operation. Accordingly, these groups are classified as Cost Leaders, Mid Tier Players, Geographic Niche Players, High Cost Niche Players, and Diversified Firms. However, despite the differences in strategic posture, these groups had comparable performance, indicating equifinality in operational modes. Study findings offer several insights to firms planning entry or operating in the private passenger segment of the property-casualty insurance industry.

## *KEYWORDS*

Strategic groups, Strategic Orientation, Insurance, Performance, Equifinality.

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## 1. INTRODUCTION

Private passenger auto insurance is the largest segment within the property-casualty (P-C) insurance industry in the U.S., accounting for more than one-third (37%) of the direct premiums written in 2005 (Insurance Information Institute 2007). It has been argued by Carson et al. (2005) that several characteristics underlying this segment of the industry are intensely competitive. First, they claim that there are numerous companies, many of whom are characterized by a large and underutilized capital base. Second, it is a mature market which makes differentiation difficult. Knowledge of industry practices are widely diffused, making imitation relatively easy. Therefore, understanding the underlying strategic dynamics of this important industry segment would be helpful in determining how to compete effectively. The objective of this study is to examine the strategic orientation and operational differences of insurers in the private passenger auto segment, using the notion of strategic groups.

A strategic group is a group of firms within an industry who follow a similar or identical strategy along important strategic dimensions (Porter 1980; p. 129). Firms in a strategic group are believed to be "highly symmetric" with respect to cost structure, product diversification, organization, control systems, and managerial orientation (Hunt 1972, p. 8). Therefore, in this paper we use the term strategic group and strategic orientation interchangeably. This notion of strategic groups has been applied to property-casualty firms by Fiegenbaum & Thomas (1990). They applied the concept of strategic segments to the period 1970-1984 where P-C insurers were grouped based on the nature and extent of diversification strategy followed. They claimed that strategic groups serve as reference points for firms in an industry and as predictors of firm strategies over a period of time. While their study shows that strategic groups can be successfully applied to the insurance sector, it focuses on the corporate (e.g., diversification) level and not the product segment level of insurance firms. Therefore, this study focuses on the product segment level which will allow for the capture of underlying dynamics of such segments.

In particular, this study seeks to examine the strategic orientation and operational differences of firms in the private passenger auto insurance segment using the concept of strategic groups. *The aim of the study is to empirically examine the following questions: 1) What are the differences in strategic orientation between strategic groups among auto insurance firms? 2) Are there differences in performance across strategic groups?* This study will

contribute to the extant literature by further validating the notion of strategic groups and enhancing our understanding of its linkage with the notion of equifinality. Both of these concepts are core concepts in the field of strategic planning, and study findings will serve as a conceptual map for managers involved in this field. Study results will allow auto insurance firms to gain a better understanding of the strategy-making process and its potential linkage with performance. For instance, study findings could serve as a starting point for competitive analysis or planning entry into the largest segment of the property-casualty insurance sector. This paper consists of five sections, inclusive of this introduction. The following section presents the conceptual underpinning of strategic groups and equifinality and builds the theoretical rationale for this study. Section 3 presents methodology employed by this study to determine strategic groups while Section 4 discusses the results of the study along with its limitations. The final section concludes with the implications of this study's findings for research and practice.

## 2. CONCEPTUAL OVERVIEW

The origins of strategic groups can be traced to Hunt (1972), who noted there were performance differences between groups of firms within the same industry. The initial impetus provided by Hunt prompted a stream of research on this topic which attempted to prove the existence of strategic groups within an industry. Firms within a strategic group have similar resource configurations, resulting in mobility barriers to firms belonging to other strategic groups lacking these resources. This led Porter (1980) to rationalize that the reason for the existence of such groups is due to mobility barriers within an industry. Since firms in a strategic group compete with one another using a comparable combination of scope economies and resource commitments (Cool & Schendal 1987), they tend to have similar performance outcomes.

The conceptual basis of strategic groups can be linked to the Structure-Conduct-Performance paradigm in the industrial organization (IO) literature (Mason 1949; Bain 1959). This notion of strategic groups appealed to strategic management scholars, as it provided a useful analytical tool to aggregate firms into sub-groups, in contrast to the traditional IO focus where firms were grouped on the basis of industry membership. An industry may be made up of several or only one strategic group, and a strategic group can be made up of one or more

members (Hinterhuber & Kirheberg, 1986). Since strategic group analysis segments an industry into groups on the basis of strategies of firms, there is homogeneity within a group, while there is heterogeneity between different strategic groups in an industry (Thomas & Venkatraman 1988). Strategic group literature serves as a middle ground in research, namely between studying firm or industry, and provides an understanding of strategy performance outcomes in a more holistic manner in other contexts.

Additional theoretical validation for the existence of strategic groups using social learning and social identification theories is provided by Peteraf & Shanley (1997), who point out that a manager's perception of a firm's identity with respect to its competitors, customers, and suppliers influences managerial decisions. This collective identity with a set of firms drives managerial choices to be based on the actions of peers (or the lead firm within the peer group) through common industry anchors or benchmarks. Such managerial behavior over a period of time tends to coalesce into homogeneous mental models among peer firms, leading to similarly-placed firms acting in a common manner and resulting in the creation of strategic groups. This notion of strategic groups is not without dissenters, however. Barney & Hoskisson (1990) argued that strategic groups can exist only if there are mobility barriers across groups (i.e., mobility barriers within an industry).

In regard to this question, consistent empirical support for the presence of mobility barriers has been reported in the literature (Mascarenhas & Aaker 1989; Nair & Kotha 2001). However, it should be noted that despite the presence of mobility barriers, strategy researchers do acknowledge that it is possible for firms to move from one strategic group to another under certain circumstances (e.g., market evolution). While mobility across groups is a possibility, empirical findings suggest that movement across strategic groups is difficult and membership across groups is a largely stable phenomenon (Oster 1982). It was explained that these mobility barriers arise due to strategic decisions made by group members through resource deployments and the extent of rivalry with one another. Therefore firms lacking similar resources and competitive capabilities (even if they operate in the same industry) will not be able to enter a strategic group, serving to protect the profitability of firms in a strategic group (Caves & Porter 1977). For instance, Ferguson, Deephouse & Ferguson (2000) report that strategic groups tend to have varying reputations, which serve as mobility barriers to a firm attempting to move from one strategic group to another. While a few studies have reported

contradictory findings, the majority of past studies, as well as meta-analysis on this stream of research, support the notion of strategic groups (Ketchen et al. 1997). The consensus of opinion is that such groups exist and are not mere analytical constructs or statistical artifacts (Fiegenbaum et al. 1990).

Despite the existence of such strategic groups with attendant differences in competitive approaches, the case for equifinality in performance across strategic groups can be made. In this perspective of strategy, which is based on the systems thinking advanced by Ludwig von Bertalanffy (1930), "a system can reach the same final state" by following a "variety of different paths" (von Bertalanffy, 1960; p. 84). Doty, Glick & Huber (1993) and Jennings & Seaman (1994) offer empirical support for this assertion by showing that a variety of strategic approaches can achieve the same outcome. This notion of equifinality is inherent in the theorizing of Porter (1980) and Miles & Snow (1978). Their universal prescription is that firms can achieve high performance through various generic strategy options if implemented effectively. Jennings, Rajaratnam & Lawrence (2003) found that three generic strategic appro-aches (defender, prospector and analyzer) offered by Miles and Snow resulted in comparable performance. Analogous evidence has been reported in other contexts. In the retailing environment, Eisenhardt (1988) reports that different forms of compensation systems can be equally effective in retail stores. Similarly, with respect to organizational design, Gresov & Drazin (1997) demonstrate the notion of equifinality empirically. There-fore, based on the above literature review, the following two statements can be made: *Firms in an industry can be grouped based on differences in their strategic orientation. Despite differences in strategic orientation, firms across these groups will have equifinality in performance outcomes.*

## 3. METHODOLOGY

The process employed by this study to derive strategic groups can be divided into three steps as elaborated below. The first step involved identification of the data sources and study sample. The second step involved identification of variables for testing of the hypothesis. The third step involved the usage of statistical procedures to derive the strategic groups.

This study's focus is on private passenger auto insurance providers, and the primary source of data used was Best's Financial Statement database. Best's database has been deemed to be

highly reliable and has been used widely in academic insurance research. Product line data available through Best's is largely restricted to what is required by the National Association of Insurance Commissioners (NAIC) or publicly available information. Therefore, in the selection of variables, we were limited to variables that were available by product line (e.g., schedule P) or that can be imputed (using direct premium weighted averages) with the data provided by insurers by product lines. The time period this study focuses on is 2002 to 2007, as the database provides only six years of data by product line.

The question of how many insurers to include in the sample was decided by reviewing the size distribution of firms, finding that a majority were small operators with minor market shares. For instance, a good many of the firms held market shares of less than .1%. Therefore, we decided to eliminate the marginal players to make the study more meaningful. We decided that the cut-off for inclusion in our sample would be insurers with a market share of at least .25% in private passenger auto lines with no missing values in the variables of interest for the study period (2002-2007). Using these criteria, we obtained a sample of 56 firms. These firms collectively represented about 82% of the direct premiums underwritten in the private passenger automotive lines. However, on a closer review of the sample, we found three outliers, as the mean for one of the ratios of interest was about ten times greater than the average of the study sample. After detailed investigation of each company's profile, we could not come up with a suitable explanation as to why this was the case. We thus eliminated these firms from the final sample, leaving 53 firms representing about 82% of this market segment.

The next step involved the selection of strategic variables for development of clusters. To do this, we reviewed prior strategic group literature as well as insurance literature as a guide (Panayides 2002). Even though we identified a plethora of variables, we limited our focus to variables which are critical to this segment of the industry and, importantly, represent elements of strategic choice (managerial decisions) in an organization. Examples of strategic variables include degree of specialization, price, emphasis on cost minimization, and type of customers or geographic markets served (Porter, 1980). Once we identified the strategic elements that represented the product market strategy of the insurer, we also captured the outcome of a particular strategy followed by strategic groups through performance measures similar to the approach reported by Claver-Cortes, Oereira-Moliner and Molina-Azorin (2009). A summary of operationalizations of the variables (as well other variables used in this study) discussed in this section are presented in Table 1.

Table 1. Variable Operationalization

| VARIABLE | OPERATIONALIZATION |
|---|---|
| ***Strategic Variables*** ***Used in Cluster Development*** | |
| ECONOMIES OF SCOPE | |
| Percentage of Personal Auto | (Direct Premium from the private passenger auto segment/Direct Premium Written by the firm across all lines) X 100. |
| Geographic Diversification | $1-\Sigma s_i^2$ where $s_i$ represents the percentage of an insurer's Direct Premiums Written in state $i$. |
| ECONOMIES OF SCALE | |
| Commercial Auto | Dummy variable = 1 if it operates in Commercial Auto Lines, 0 otherwise. |
| Market Share | (Direct premium from the private passenger auto segment/Direct Premium Written by the all firms in the private passenger auto segment) ×100. |
| MARKETING | |
| Price | Inverse of Incurred loss ratio |
| Commission & Brokerage Expense Ratio | (Commission and Brokerage Expense/Direct Premium Earned)×100 |
| SERVICE | |
| Claim Delay | (Direct Losses Paid/Direct Losses Incurred)×100 |
| Defense & Cost Containment Ratio | (Defense and Cost Containment cost Incurred/Direct Premium Earned) ×100 |
| INVESTMENT RISK | |
| Investment Income Ratio | [(New Investment Gain-Related Expenses)/Net Premium Earned]×100 |
| ***Performance Measures*** | |
| Combined Ratio | [(Direct Losses+Loss adjustment Expenses+Policy Holders Dividend)/(Direct Premium Earned)×100]+[Underwriting Expenses/Direct Premiums Written] 100 |
| Operating Ratio | [Combined Ratio adjusted (+/-) by Investment Income Ratio] |
| Loss Ratio | (Direct Loss Incurred/Direct Premium Earned)×100 |
| Expense Ratio | (Total Underwriting Expense/Net Premium Written)×100 |
| ***Risk Measures*** | |
| Combined Ratio [Standard Deviation] | Standard Deviation of Combined Ratio during the years 2002-2007 |
| Operating Ratio [Standard Deviation] | Standard Deviation of Operating Ratio during the years 2002-2007 |
| Loss Ratio [Standard Deviation] | Standard Deviation of Loss Ratio during the years 2002-2007 |
| Expense Ratio [Standard Deviation] | Standard Deviation of Expense Ratio during the years 2002-2007 |
| ***Organization Variables*** | |
| Number of States | Count measure of number of states in which direct premiums were written |
| Distribution | Dummy variable = 1 if Direct or Independent Agency Firm, 0 otherwise. |
| Organization Form | Dummy variable = 1 if Stock company, 0 otherwise. |

Author Credit: Operationalizations reported/used in this table are from definitions of A.M. Best Company.

We group an insurer's strategic choices into five categorizations and present them below.

**Economies of Scope**: Economies of scope arise when a common asset can be shared across two or more product lines or regions (Porter 1985). We capture economies of scope through geographic diversification and contribution of auto premium. We measure geographic diversification using previous research (Tombs & Hoyt 1994) as $1 - \Sigma s_i^2$ where $s_i$ represents the percentage of an insurer's net premiums written on state $i$. Similarly, using Carson et al. (2005), contribution of auto premium is measured as the percentage of direct premium derived from the private passenger auto segment divided by the direct premium written by the firm across all lines.

**Economies of Scale**: Economies of scale refer to size-related advantages gained by the firm due to greater volume of business, allowing lower per unit fixed costs. We capture economies of scale held by an insurer through two proxy variables, namely market share and operations in commercial auto. We operationalize market share as the percentage of direct premiums written by the firm divided by the total direct premiums sold in the private passenger auto segment. Commercial auto was dummy coded in this way: insurers who also wrote com-mercial auto policies were coded as 1 and others as 0.

**Marketing Strategy**: Marketing strategy is the game plan employed by an insurer to attract customers. Two primary drivers of such strategies are the price charged for the product and the extent of the promotion employed to move such products. We measure price as the inverse of incurred loss ratio in private passenger auto lines of the insurer (Elango 2003). We measure promotion as the ratio of commission and brokerage expenses divided by the direct premium sold in the private passenger auto segment.

**Service**: Insurers who provide customer-friendly service are likely to gain rewards with greater customer loyalty and fewer complaints. To capture the extent of service offered by the insurer, we use two variables: claim delay, and defense and cost containment costs incurred by the insurer. We capture claim delay as the ratio of the unpaid losses to the losses incurred by the insurer in private passenger auto lines. We measure defense and cost containment costs as the ratio of such costs incurred by the insurer divided by the direct premium written in private passenger auto lines. According to NAIC, "Defense & Cost Containment" expenses include defense, litigation and cost containment expenses, whether incurred internally or

externally.

**Investment Risk**: The extent of investment risk is one of an insurer's important strategy choices and has an impact on underwriting performance as well as the risk from such investments. Returns from such investments offset losses and expenses incurred by the insurer relative to the premium gained. Therefore, we capture risk profile of investment using investment income gained. Typically, firms allocate a greater portion of their investments in stock to gain higher returns, and previous research has used this measure to capture the extent of risk in the investment strategy of the insurer (Elango et al. 2008). However, this information is not available at the product line level and hence we use the income generated by such assets as a measure of a firm's investment risk.

Table 2. Cluster Grouping Results

| CLUSTER | % Increase in Agglomeration Coefficient | RMSSTD | SPRSQ |
|---------|------------------------------------------|--------|-------|
| 6 | 54.23 | .9702 | .1124 |
| 5 | 50.77 | 1.807 | .2188 |
| 4 | 33.32 | 2.357 | .3321 |
| 3 | 33.78 | 5.454 | .3930 |
| 2 | 31.23 | 7.755 | .4532 |
| 1 | 43.23 | 9.427 | .8433 |

The final step was identification of clusters. We used hierarchical cluster analysis with Ward's procedure to derive various strategic groups, given the fact that we did not have any prior expectations on the number of clusters (Punj & Stewart 1983). All variables were standardized prior to the clustering procedure. Cluster analysis classifies sampling units into groups which are similar to one another within the group but different from one another across groups (Hair et al. 1998). The clustering (agglomeration) coefficient indicated the highest increase when going from five to six clusters; it seemed that a six cluster solution would be an optimal choice (see Table 2). Giving us further confidence was the fact that the root mean square standard deviation (RMSSTD) and semi-partial r-square values (SPRSQ) were the lowest relative to other cluster solutions. Another tool to decipher the number of clusters is the dendrogram (see Figure 1). A visual inspection of the dendrogram also indicated a seven cluster solution to be a valid choice. As a final check, we also plotted the

cubic clustering criterion (CCC) against the number of clusters. The peak occurred with the number of clusters at six, further substantiating the choice of six strategic groups.
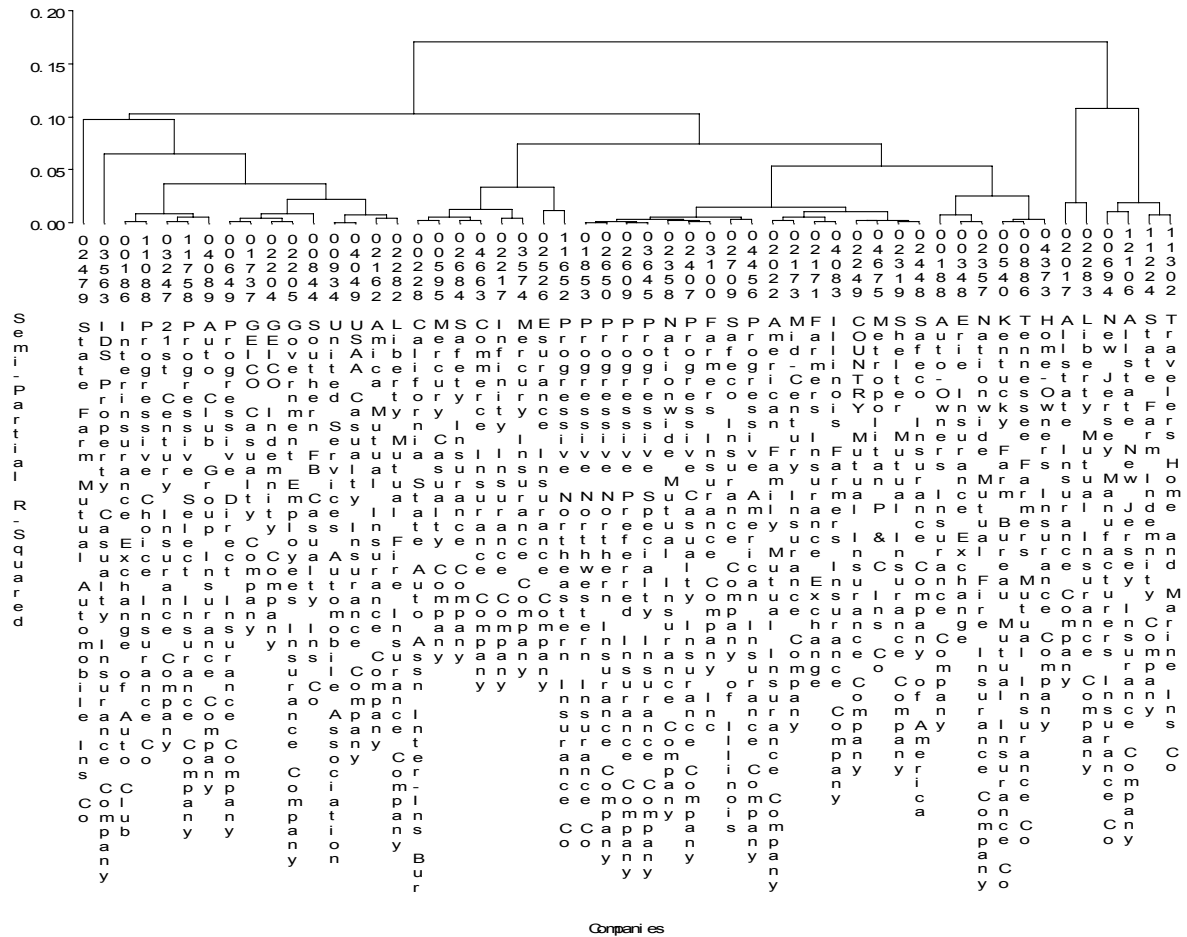


Figure 1. Dendrogram Showing Strategic Grouping

To confirm the robustness of the particular solution presented in this paper, we also successfully cross-checked this finding using the K-means procedure, which is a divisive technique relative to Ward's Method, which is based on agglomerative techniques. The key difference between these procedures is that, in Ward's procedure, clusters are created by building up through addition of sampling units, whereas the K-means procedure breaks clusters using divisive techniques. For each of the strategic groups, we determined the mean values of the variables. These means for each of the strategic groups, as well as the whole sample, are reported along with the ANOVA results in Table 3. All the variables (with the

exception of Commercial Auto, which could not be tested due to statistical reasons) used in the development of the strategic groups through the cluster analysis procedure showed statistically significant differences. This was indicative of the fact that the six strategic groups differed from one another in their strategic characteristics.

The second goal of this study is to understand the performance outcomes for each of the strategic groups. In this study we used common ratios in the insurance industry: combined ratio, operating ratio, loss ratio and expense ratio. The variables were operationalized using commonly prescribed practices in the insurance literature and hence are not specifically elaborated (Myhr & Markhma 2004). For each of these variables, we use the standard deviation to capture risk associated with each of the performance outcomes. To better understand each of the strategic groups, we also compared the several organizational characteristics of the insurers across the strategic groups. Our intent here was to gain greater insight into the type of organizations populating the strategic groups. In particular, we chose to compare three variables, namely, the number of states in which the insurer operated, type of distribution employed, and organization form of the insurers.

## 4. DISCUSSION OF RESULTS

The strategic groups identified had a varied distribution of insurers within them despite the fact that Ward's procedure attempts to have an even distribution of sampling units across clusters. The first strategic group had fifteen firms, while the second strategic group cluster was the largest cluster, with twenty-three firms. Strategic groups 3, 4 and 5 had eight, four and two firms, respectively. Cluster 6 consisted of just one firm (discussed later) and therefore may not fully qualify as a strategic group. Since this paper did not make any a priori hypothesis of the number of clusters or type of strategies followed, we also validated the finding by consulting an industry expert panel of three members. Panel members, on average, had an industry experience of more than twenty-five years and also were familiar with the majority of the firms in the sample. We showed them the findings and asked to them to comment if the firms in each strategic group had higher commonality among themselves and more differences across them. Overall concurrence was received for the notion that each of the strategic groups was quite different based on their competitive niches, validating the make-up of the strategic groups presented. Based on Table 3, in the following paragraphs we highlight the key differentiating factor for each of the strategic groups.

## Table 3. Means for Variables Across the Empirically Derived Strategic Groups

### (2002-2007 Averages)

| VARIABLE | Strategic Group 1 (N = 15) | Strategic Group 2 (N = 23) | Strategic Group 3 (N = 8) | Strategic Group 4 (N = 4) | Strategic Group 5 (N = 2) | Strategic Group 6 (N = 1) | Sample Average (N = 53) |
|---|---|---|---|---|---|---|---|
| ***Strategic Variables Used in Cluster Development*** | | | | | | | |
| Percentage of Personal Auto | 84.206 | 65.154 | 89.576 | 79.371 | _43.755_ | **92.545** | 75.015[***] |
| Geographic Diversification | 0.604 | 0.696 | 0.171 | _0.164_ | 0.719 | **0.955** | 0.556[***] |
| Commercial Auto | No | No | No | No | Yes | No | 0.038[NA] |
| Market Share | 0.897 | 0.654 | 0.507 | _0.361_ | 2.754 | **16.331** | 1.053[***] |
| Price | 1.618 | 1.672 | 1.795 | **1.950** | 1.894 | _1.540_ | 1.702[***] |
| Commission & Brokerage Expense Ratio | _1.194_ | 10.510 | **13.967** | 7.839 | 7.970 | 7.480 | 8.040[***] |
| Claim Delay | _0.641_ | 0.843 | 0.721 | **1.970** | 1.293 | 0.902 | 0.870[***] |
| Defense & Cost Containment Ratio | 2.287 | _2.149_ | 3.303 | **6.315** | 4.134 | 2.520 | 2.759[***] |
| Investment Income Ratio | 3.459 | 3.298 | 5.619 | **5.922** | 4.594 | _3.106_ | 3.937[***] |
| ***Performance Measures*** | | | | | | | |
| Combined Ratio | 97.447 | 97.804 | _93.388_ | 94.854 | **106.544** | 102.091 | 97.224 |
| Operating Ratio | 90.291 | 92.911 | _86.025_ | 89.670 | 91.718 | **99.099** | 90.957 |
| Loss Ratio | **65.870** | 60.706 | 56.576 | _53.055_ | 57.120 | 65.382 | 60.920 |
| Expense Ratio | _18.569_ | 23.216 | 21.343 | 19.691 | **24.620** | 21.661 | 21.376 |
| ***Risk Measures*** | | | | | | | |
| Combined Ratio [Standard Deviation] | 10.485 | 5.581 | _5.205_ | 13.820 | **16.669** | 7.065 | 7.981 |
| Operating Ratio [Standard Deviation] | 5.292 | 5.659 | **12.131** | 10.768 | _4.501_ | 7.365 | 6.906 |
| Loss Ratio [Standard Deviation] | 2.760 | 2.361 | **6.146** | 2.397 | _2.237_ | 0.835 | 3.015 |
| Expense Ratio [Standard Deviation] | 10.185 | _4.747_ | 5.478 | 7.964 | **11.858** | 6.077 | 6.932 |
| ***Organization Variables*** | | | | | | | |
| Number of States | 28.044 | 20.928 | 6.813 | _5.500_ | 36.167 | **50.000** | 20.770[***] |
| Distribution | 1.000 | 0.478 | 0.125 | 0.750 | 1.000 | 1.000 | 0.623[***] |
| Organization Form | 0.800 | 0.565 | 0.875 | 1.000 | 1.000 | 0.000 | 0.71[***] |
| **Group Names** | *Cost Leaders* | *Mid-Tier Auto Players* | *Geographic Niche Players* | *High Cost Niche Players* | *Diversified Auto Players* | *State Farm Mutual* | |

Note: ANOVA Results Across Clusters: [***] = $p < .01$, [**] = $p < .05$, [*] = $p < .1$. Highest means across groups are in bold and lowest values are underlined. NA = Not applicable (statistical testing could not be done with this variable due to lack of variance within groups).

Strategic group 1 was made up of firms who spent the least on commission and brokerage costs and had the lowest expense ratios. These firms also had the least delay when it came to settling claims and had relatively higher loss ratios. We dubbed this group the *Cost Leaders* given their emphasis on operational cost. Examples of firms in this cluster are Progressive Direct Insurance Company, United Services Automobile Association and GEICO Casualty Company. Strategic group 2 was the biggest group of the six studied. Among the strategic variables used in this study, these insurers, on average, had the lowest expenses in defense and cost containment and the lowest variation in expense ratios compared to other strategic groups. Firms in this group, on average, operate in about 21 states and derive about 65% of their business in personal auto. This group had the highest concentration of mutual insurers. Its firms did not stand out in any particular way, with many of the variables falling in the middle, thereby leading us to call this group *Mid Tier Players*. Illustrative examples of insurers in this segment include American Family Mutual Insurance Company, Farmers Insurance Exchange, and Mid-Century Insurance Company.

Strategic groups 3 and 4 represented niche strategies. These firms were the least geographically diversified and had operations, on average, between five to seven states and in both groups, had relatively higher investment incomes. Compared to the other four groups, both had the lowest market shares. However, several factors also distinguished Groups 3 and 4 relatively. Group 3 firms pay the highest commission and brokerage expenses and operated with the lowest combined ratios and operating ratios. On the other hand, Group 4 firms had the highest price, largest claim delay, largest defense and cost containment ratios, and the lowest loss ratio and market share. We also noted several of these insurers operated exclusively in New Jersey. Therefore we named Group 3 *Geographic Niche Players* and Group 4 *High Cost Niche Players*. Examples for Group 3 include Progressive Northeastern Insurance Company and Mercury Insurance Company, and Group 4 examples include New Jersey Manufacturers Insurance Company and Allstate New Jersey Insurance Company.

Strategic group 5 was made up of two firms, Allstate Insurance Company and Liberty Mutual Insurance Company. These two firms had the second highest market share and geographic diversification after Group 6. This group derived the least amount of the businesses in this segment and is the only group to write commercial auto policies. These two firms had

the highest combined ratio and expense ratio averages, coupled with large standard deviation on both these ratios. Given the nature of diversified business conducted by firms in this group, we refer to it as *Diversified Auto Firms*. As mentioned above, Group 6 contained only one firm. One option to deal with this situation would be to delete any single-firm clusters. However, after due deliberation, we decided against it. The presence of just one member in Group 6 is not a total surprise, as such findings have been reported in other industries (Hinterhuber & Kirheberg, 1986). We do concur that many readers might find the usage of the term strategic group for a cluster with one firm grammatically perplexing, even though conceptually it is quite possible to have such a scenario. Additionally, we felt the firm in this cluster (*State Farm Mutual Automobile Insurance Co*) stood out in many ways and did not have an equivalent peer. This company represented the proverbial "600 pound gorilla" of private passenger automobile insurance, with a market share of 16.33% dwarfing any other firm in this market. Rather than come up with a separate name for this group, we called it *State Farm Mutual*.

This study also compared the performance and risk profile of each of the strategic groups. A visual inspection of the performance and risk numbers indicate nominal performance differences across groups, but we did not find any statistical support for the same. Findings support the notion of equifinality, which is one of the core premises of strategic planning. The concept of equifinality asserts that systems can reach the same final state from different initial positions following different paths to development (Katz & Kahn, 1978; p. 30). Stated differently, in the context of this study, even though each of the groups follow different strategies and operate in different strategic niches, similar performance and risk outcomes are achieved. To check if time-based events have an impact on these findings, several additional checks were conducted to increase robustness and confidence in the study's findings. First, the comparisons were repeated year by year to confirm that the study results held across the years. The pattern of results remained consistent in all instances. Second, the various ratios/measures in various combinations across years were plotted, and the final results were reviewed with a panel of industry experts. We asked the industry panel if they saw any discernable patterns to confirm that there were no particular anomalies or events driving the study results. The expert panel concurred that the data and statistical findings was a rea-

sonable representation of underlying industry characteristics for the time period studied. These two checks allow for greater confidence in the results reported. Empirically, this finding is not entirely surprising, given the fact that extant research has provided only weak support for this notion (Thomas & Venkatraman 1988). For instance, in a recent study on Spanish banks, Zuniga-Vicente et al. (2003) report that consistent evidence for performance differences across strategic groups is lacking.

*Limitations*. This study, as any other, has its design limitations. First, it relies on secondary data, limiting study variables to what is publicly available for research. Second, this study uses leading private passenger automobile firms in its sample (i.e., firms with market share of .25% or greater) and therefore the findings may be not relevant to the numerous players in this segment with marginal market shares. Third, since this study's focus is on the private passenger auto segment, the information available could be biased. This is because multi-lines companies assign expenses to the various lines based on their internal processes and procedures. Even though one would assume such allocations are made based on standard accounting practices, one cannot assure these practices are consistent across firms. Therefore, conventional caveats apply to this study and study findings should be interpreted within this context. The next section concludes with the implications of this study for research and practice.

## 5. CONCLUDING COMMENTS

This study's goal was to examine the strategic orientation of firms in the private passenger auto insurance segment, using the notion of strategic groups. Using a sample of 53 insurers from the period 2002 to 2007, this study found six distinct strategic groups operating in this segment. Each of these groups had unique differences in their modes of operation despite having similar performance outcomes, indicating equifinality in paths to performance. For researchers working in this area, the next step would be to focus on firm heterogeneity to tease out performance differentials within a strategic group. For instance, Leask & Parnell (2005) call for using the resource-based theory of the firm and strategic groups in an integrated manner to gain a deeper understanding of the competitive group interpretation. This is because, according to resource-based theory, group members who are strategically

different from their peers would be benefited. Therefore, one can infer that within a strategic group, individual members would strive to create within-group differences in resource allocation and to gain higher performance relative to group members. Therefore a natural extension would be to understand how specific insurers in each group try to outcompete each other, though they follow similar strategies.

The finding of this study has several implications for practice. First, this is the first study to proffer a taxonomy of strategic groups in the private passenger auto insurance segment. This taxonomy should serve scholars and practitioners in understanding how insurers compete in this segment. For each of the strategic groups, we also present conventional measures of insurer performance as well as the attendant risk of these measures. Additionally, we present organizational differences across the various strategic groups to gain a better understanding of the strategies followed by firms each of the strategic groups. This information should provide insights into the patterns in the competitive niches of this segment. Second, study findings will serve as a conceptual map for managers involved in strategic planning. These strategic groups can serve as a starting point for planning entry into this segment of the insurance industry. For instance, managers planning entry into the private passenger auto segment can attempt to see which strategic group is most desirable to compete with, given the strategies of the incumbent firms in the group, as well as their own firm's strengths and weaknesses, and thus target the appropriate firms during entry. Firms failing to do so and planning entry looking solely at industry aggregates could be blindsided by focused competitors they did not anticipate. Finally, incumbent firms in the industry who lack certain resources to enter other strategic groups should also be comfortable knowing that performance differentials do not exist (or at best are very minimal). Contrary to the conventional wisdom of the *Fox and the Grapes* story presented in Aesop's Fables, this situation may really be a case of "sour grapes" anyway.

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