

## **INTERNATIONAL STRATEGY AND ENVIRONMENT: AN ASSESSMENT OF THE PERFORMANCE RELATIONSHIP**

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**Abstract.** This study develops a classification of international business-level strategies built on the dimensions of segment differentiation and geographic scope. In addition, performance outcomes associated with specific international environment and business-level strategy matches are suggested. Using information from firms competing in both global and multidomestic industries, the study finds that geographic scope and segment differentiation can be used to distinguish four international strategies, the effectiveness of which is a function of the environments in which firms compete.

### **INTRODUCTION**

*Segment differentiation* and *geographic scope* are central concepts of international strategy at the business level [Douglas & Wind 1987; Jain 1989; Porter 1986; Quelch & Hoff 1986]. This is because the firm-specific and location-specific advantages of international businesses are largely determined by strategic decisions along these two dimensions. Geographic scope is defined as the extent to which a firm competes in key markets representing profit sanctuaries of market leaders, or includes state-of-the-art customers who provide opportunities for large sales volumes [Prahalad & Doz 1987: 61]. A broad geographic scope indicates that a firm competes in all or most key markets; a narrow geographic scope suggests that a firm competes only in a few selected markets. Segment differentiation is defined as the extent to which different competitive weapons are used in different key international

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markets [Abell 1980; Chrisman, Hofer & Boulton 1988]. Segment differentiation across markets is defined as using different competitive weapons in different international markets. In contrast, a homogeneous approach means that a firm uses the same competitive weapons in each market it serves.

While the international management literature has identified the segment differentiation and geographic scope dimensions of strategy as important, the two dimensions have rarely been used together to classify international strategies. Instead, because of the importance of a firm's international coordination and configuration, researchers have attempted to use these dimensions to classify international strategies [Doz 1986; Porter 1986; Prahalad 1975]. However, coordination and configuration are structural decisions rather than strategic dimensions [Galbraith & Kazanjian 1986]. For example, Prahalad and Doz [1987] suggest a classification of three international strategies: worldwide integration, national responsiveness and multifocal. As useful as this classification is, it is based on aspects such as the centralization of decisionmaking and the coordination of operating units rather than strategic decisions with respect to products to produce, markets to serve, or competitive weapons to employ. Thus, it is useful for relating environments to structure rather than to strategy.

While classifications of international structure are clearly needed, combining strategic and structural elements into one classification makes it difficult to distinguish between the two and eliminates the possibility of alternative alignments. A distinction is necessary for determining if and when matches between certain strategies and certain structures lead to superior economic performance. Such an approach also allows findings of other studies concerning the relationships among environment, strategy and structure to be linked to the present study [Govindarajan 1988; Gupta & Govindarajan 1985; Miller 1988; White 1986]. Indeed, development of separate classifications of these determinants of firm performance has aided empirical investigations in the field of strategic management [Miller 1986; Venkatraman & Camillus 1984; White 1986].

In this study, a classification of international business-level strategies built on the dimensions of segment differentiation and geographic scope is advanced. In addition, performance outcomes associated with specific international environment and business-level strategy matches are evaluated. This study thus contributes to the international business literature by providing a classification of strategy that does not depend on characteristics of structure for its derivation, and by evaluating the ability of this scheme to explain variations in firm performance.

In the following sections we develop a classification of international business strategy, propose hypotheses on the relationships among different strategies, environments and firm performance, and describe the methodology used to test these hypotheses. The remainder of the manuscript is then devoted to a discussion of the results of the empirical analysis and conclusions.

## A CLASSIFICATION OF INTERNATIONAL BUSINESS STRATEGY

Researchers have suggested that international strategy is a function of the competitive advantage of multinational operations and the comparative advantage of the nations in which they are located [Dunning 1988; Kogut 1985a, 1989; Porter 1986, 1990]. The comparative advantage of a nation is the outcome of the quantity and quality of resources it possesses to perform specific value chain activities. Competitive advantage accrues to an international business when it is able to match difficult-to-reproduce activities that can be performed particularly well with the key success factors of the national markets in which it competes [Barney 1991]. A firm may exploit national comparative advantages to reinforce its competitive advantages or offset its competitive weaknesses. Because each nation's comparative advantages are necessarily different, a firm that competes in many national markets has greater latitude both for proactive action and competitive response than a firm that competes in only a few [Hamel & Prahalad 1985; Karnani & Wernerfelt 1985]. Thus, the interactive nature of comparative and competitive advantage suggests that geographic scope must be a key element in international business strategy.

Central questions in the international strategy literature are the extent to which customer needs are homogeneous worldwide, and whether those needs can be met through a standardized strategic approach [Cvar 1986; Walters & Toyne 1990; Yip 1989]. The answers to these questions are vital because of the impact of standardization across national markets on value chain activities [Takeuchi & Porter 1986; Walters & Toyne 1990]. For example, homogeneous customer needs may allow economies from a centralized R&D department and a common marketing approach. Heterogeneous needs, by contrast, may require a firm to adopt radically different product designs, brand names and packaging for each national market, in effect prompting it to use different competitive strategies. For this reason, segment differentiation plays a crucial role in the international context.

The above discussion implies that segment differentiation and geographic scope take on greater importance in international industries than in those confined to domestic boundaries. Other dimensions, such as whether a firm chooses to compete via low costs, product differentiation, or both, remain important [Porter 1980, 1990]. However, because a decision to compete across national boundaries imposes a unique set of requirements on a firm, the relative importance of segment differentiation and geographic scope increases. Furthermore, in the interests of parsimony, it is useful in both a conceptual and empirical sense to limit any classification of strategy to the dimensions that are most relevant to the competitive circumstances. For these reasons, as depicted in Figure 1, a classification—drawn from the work of Chrisman, Hofer and Boulton [1988]—is proposed that consists of the following four strategic possibilities: *mass-market strategy*, *segmented strategy*, *segmented-focus strategy*, and *focus strategy*.

Based on the proposed framework, a firm follows a mass-market strategy when it uses the same set of competitive weapons across a broad geographic scope. A firm with a segmented strategy also targets a broad geographic scope but uses different competitive weapons in different national markets. Firms that compete in a narrower geographic domain follow either a focus or segmented-focus strategy respectively, depending on whether they compete in their limited markets in the same way, or use different competitive approaches (see Figure 1).

This classification is similar both in nature and terminology to the classification proposed by Chrisman, Hofer and Boulton [1988] except that it does not include specific types of competitive weapons for the reasons noted above. This similarity is of value because it incorporates many of the best features of the schemes of Porter [1980] and Abell [1980] and retains important attributes of a sound classification: mutually exclusive, internally homogeneous and collectively exhaustive groups.

### ENVIRONMENT, STRATEGY AND PERFORMANCE

In the preceding section, four viable strategies for firms competing in international industries were developed conceptually. However, while each of these strategies may be viable, the performance of firms following a particular strategy likely varies depending on the competitive situation they face. In other words, it is expected that certain strategies will lead to significantly higher performance than other strategies in certain environments. This assumption conforms to the premises of the well-known contingency theory of business strategy first proposed by Hofer [1975]. In the following pages, we elaborate on the environmental conditions necessary for the effective implementation of the four international strategies discussed in this manuscript.

#### *International Environments*

Within the international management literature the concepts of global and multidomestic industries are used to describe international industries [Porter 1980; Prahalad & Doz 1987]. A global industry is characterized by the presence of customers with homogeneous needs and few barriers to trade or foreign ownership of assets. A multidomestic industry exists when customer needs are heterogeneous, or significant restrictions on trade or foreign ownership are imposed by governments. In other words, the bases of competition in global industries are essentially the same in each national market, while in multidomestic industries they are more variable.

While few industries will possess characteristics that correspond to either of these pure types, it is apparent that an industry's location on the continuum between these two extremes will have important ramifications for the nature of competition within it [Douglas & Wind 1987; Hill & Still 1984; Quelch & Hoff 1986; Takeuchi & Porter 1986; Walters & Toyne 1989]. According

**FIGURE 1**  
**A Classification of International Business Strategies**

Breadth of Geographic Scope	Approach to Segment Differentiation	
	Segmented by market	Homogeneous across markets
Broad	Segmented Strategy	Mass-market Strategy
Narrow	Segmented-focus Strategy	Focus Strategy

to the discussion provided above, differences in the characteristics of international industries will have a critical impact on the efficacy of decisions regarding a firm's geographic scope and segment differentiation. With this in mind, we turn to a discussion of the contingent relationships between environment, strategy and performance.

#### *Environment and Segment Differentiation*

The purpose of segment differentiation is to tailor products and services to better fit the needs of different groups of customers [Abell 1980]. Segment differentiation is, however, costly [Porter 1980] because differences in product designs, advertising programs, distribution channels, and so forth work against the development of economies in research and development, production and marketing. In contrast, if a firm fails to segment its market, it risks sacrificing effectiveness for efficiency; few customers will be attracted by a product that fails to meet their needs, no matter how economical the purchase may be. In a multidomestic industry, the needs of customers are considered heterogeneous. A firm that fails to respond to the diversity of customer needs and buying motives may find itself at a competitive disadvantage vis-à-vis firms that do [Doz 1980; Porter 1980, 1986; Prahalad & Doz 1987]. On the other hand, customer needs in a global industry are predominantly homogeneous. In this instance, a firm that attempts to differentiate its offerings to different national markets may see its attempt go unrewarded. It has, in other words, sacrificed efficiency with no corresponding gain in effectiveness [Takeuchi & Porter 1986; Walters & Toyne 1989].

#### *Environment and Geographic Scope*

As the advantages of segment differentiation are determined largely by whether an industry is global or multidomestic, the performance implications of geographic scope—taken alone—are also influenced by the environment. In global industries, firms with broad geographic scopes should enjoy several advantages that are largely unavailable to firms with narrow scopes, the most important of which may be economies of scale.



Economies of scale occur when the unit cost of a product declines as volume increases [Porter 1980]. Scale economies enable a firm to supply a product at a lower cost than several smaller firms producing and selling the same cumulative volume [Carroll 1984]. Geographic scope and potential scale economies should be positively correlated because a larger base of customers should allow higher volumes, more efficient capital-intensive production techniques, marketing economies, and lower research and development expenditures per unit. Since it has been shown that performance is affected positively by both economies of scale [Capon, Farley & Hoeing 1990] and market share [Buzzell, Gale & Sultan 1975], it is expected that geographic scope and profitability should have a similar relationship. Furthermore, greater geographic breadth may better position a firm to exploit differences in factor costs [Porter 1990]. Finally, a broad geographic scope should create opportunities for new product introductions and economies of scope that may be unavailable for a firm of more restricted scope [Roth, Schweiger & Morrison 1991]. Regardless of whether an environment is global or multidomestic, a broad geographic scope should permit a firm greater access to financial markets and information about product innovations occurring in different places across the globe compared to the more narrowly focused firm [Bartlett & Ghoshal 1987; Porter 1980].

### *Hypotheses*

While we have speculated on the performance implications of decisions concerning geographic scope and segment differentiation in the context of the international environment, firms necessarily make decisions on both dimensions and it is these decisions, taken together, that determine performance. The hypotheses presented below reflect this perspective. Based on the above discussion, it should be clear that an appropriate combination of geographic scope and segment differentiation, given environmental conditions, leads to performance superior to other strategic options. In a multidomestic setting, given that customer needs are heterogenous across markets, a segmented differentiation approach should lead to superior performance. Therefore, the following hypothesis is proposed:

H1: In multidomestic industries, firms with segmented or segmented focus strategies will outperform firms with mass-market strategies.

The arguments presented earlier suggest that in global industries a broad geographic scope allows firms to take advantage of both economies of scale and scope. Furthermore, a broad geographic scope should allow firms to counter or respond to the competitive actions of their major international competitors. Arguments have been presented suggesting that, in global industries, benefits accrue to those companies using the same or similar competitive weapons in the national markets in which they compete. Since a mass-market strategy is defined by a broad geographic scope and the use of the same or similar competitive weapons, it should lead to superior performance relative

to those strategies where only one or neither of the two critical strategic dimensions are emphasized. Therefore, it is hypothesized:

H2: In global industries, firms with mass-market strategies will outperform firms with segmented, segmented-focus, or focus strategies.

The final hypothesis reflects arguments suggesting that both the firm's geographic scope and segment differentiation influence performance. Because of the importance of both the segmentation and geographic scope dimensions within a global industry, it is argued that a strategy that is both narrow in geographic scope and segmented (segmented-focus strategy) will be a mismatch in this context. Because firms following a focus strategy or a segmented strategy emphasize at least one of the desired strategic dimensions for global industries (homogeneous approach to markets on one hand and broad geographic scope on the other), they should outperform firms pursuing a segmented focus strategy.

H3: In global industries, firms with focus or segmented strategies will outperform firms with segmented-focus strategies.

It is not clear, however, whether the advantages conferred by a broad geographic scope will offset an inappropriate approach to segment differentiation. For example, theory does not suggest whether a segmented strategy will outperform a focus strategy in a global industry, or vice versa. Likewise, there are no strong theoretical grounds for hypothesizing whether a segmented strategy or a segmented focus will be preferable in multidomestic industry. In addition, the viability of a focus strategy in multidomestic industries is uncertain, since it depends on the existence of clusters of countries with similar needs. For this reason, we refrain from hypothesizing on the relative effectiveness of these strategy-environment combinations. As a result, the resolution of these questions remains for future studies.

## METHODOLOGY

### *Sample and Data Collection*

*Selection of Industries and Businesses.* International industries were identified at the four-digit SIC code level to ensure a focus on the environment that is most likely to influence a firm's business-level strategy [Dess & Davis 1984; Galbraith & Schendel 1983; Hambrick 1983]. An industry qualified for inclusion in the study based on two criteria, (1) level of U.S. exports plus imports greater than 50% of U.S. consumption [Morrison 1990], and (2) a minimum of two firms with sales in excess of \$1.4 billion a year or with more than 8000 employees that operated in at least two of the triad markets (U.S., Europe and Japan) identified by Ohmae [1985].

The first criterion, international trade level, is consistent with the view that international industries are characterized by a high level of product flow

across national borders [Cvar 1984; Morrison 1990; Ohmae 1985; Porter 1980; Prahalad & Doz 1987; Prescott 1983]. In order not to exclude those industries that are international but may have a low level of international trade, the level of FDI was also measured using the proxy described in our second criterion. The second criterion is used to verify that firms exist in the industry that are likely able to change the rules of the game; in fact, it indicates that there are at least two MNCs that would qualify for inclusion in the *Fortune's* 500 largest non-U.S. industrial corporations. A firm of this size would rank about 270th in the list of *Fortune's* 500 largest U.S. companies. The presence of large multinational corporations suggest that there are industry participants potentially having the human and financial resources to influence the competitive dynamics of the international markets in which they compete. Highly competitive markets, such as the U.S. market, require that successful firms possess strong distinctive competencies and largely proprietary intangible assets.

The selection process resulted in the identification of thirty-three industries. These industries are listed in the Appendix. U.S.-owned businesses competing within these industries were then identified through the Dun and Bradstreet's *Directory of Corporate Affiliations* [1991], and the *International Directory of Corporate Affiliation* [1991].

The data were collected using a mail questionnaire. The instrument was examined for content validity by a panel of ten experts. The questionnaire was then pretested with eleven practitioners from firms competing in international industries. The revised instrument was sent to the top manager, typically the CEO or president, of the 383 businesses identified as competing in the selected industries. Given that many firms compete in multiple industries, the cover letter instructed the manager to focus on the specific industry [SIC code] activities for which their firm's selection to participate in the study was based. Twenty-three letters could not be delivered. Out of the 360 businesses contacted, 41 were removed because further investigation indicated that they did not fit the selection criteria discussed above. The actual number of businesses surveyed was thus reduced to 319. The initial mailout and the following mailout yielded a total of 75 usable questionnaires (23.5%). A *chi-square* test of independence indicated that the respondents were representative of the population surveyed in this study. The key characteristics of the businesses that participated in the study are reported in Table 1.

### **Measures**

**International Strategy.** The variables used to measure the extent to which a firm's competitive weapons vary across countries were drawn from those used in previous research on generic strategies [Galbraith & Schendel 1983; Dess & Davis 1984; Miller 1988; Robinson & Pearce 1988] and took into account Quelch and Hoff's [1986] discussion of strategy variables of companies competing internationally. As suggested in Churchill's [1979] measure



**TABLE 1**  
**Characteristics of Respondent Companies**

Characteristics	Average
Number of employees	14800
Number of subsidiaries	11.5
U.S. sales (in U.S. dollars)	1836 Million
Foreign sales (in U.S. dollars)	552 Million
Years of international experience	27

development procedure, the measure was then purified through principal component analysis (available from the first author). This step insures that a "common core" is present in the measurement items. Four variables were retained to measure the segmentation strategy construct (product manufacturing technology, product design, brand name, and packaging). For each variable, respondents were asked to indicate the degree of similarity between their U.S. operations and the five largest foreign subsidiaries, using a five-point scale. The Cronbach's *alpha* for the retained variables was .67, suggesting an acceptable degree of internal reliability [Peter 1979]. Whether a firm's geographic scope is broad or narrow should be judged in the context of its industry. Therefore, the measurement of geographic scope took into account the specific characteristics of the firms' industries. Building on Prahalad and Doz's [1987] concept of key market, the geographic scope of each firm was measured by the extent to which it competed in (1) countries that are major sources of sales for major competitors in the U.S. market, (2) countries that are major sources of profit for major competitors in the U.S. market, and (3) countries that contain the most sophisticated customers. The greater the number of key international markets in which a firm competes, the broader its geographic scope. The Cronbach's *alpha* value of .85 suggested an acceptable degree of reliability.

*Environment.* Since trade and FDI data do not allow us to distinguish international environments at the firm-level, nine variables suggested by previous studies as discriminating global and multidomestic industries were used (e.g., Cvar [1984]; Doz [1987]; Ghoshal [1987]; Hamel & Prahalad [1985]; Kogut [1985b]; McGee & Thomas [1988]; Ohmae [1985]; Porter [1986]; Roth & Morrison [1990]). Respondents were asked to indicate the manner in which each variable characterizes the industry sector in which their firm competes. Principal component analysis was again used to purify the measure, resulting in six items being retained: standardization of buyer needs within the industry, standardization of technology within the industry, industry-wide standardization of purchasing practices, industry-wide standardization of products, availability of product information worldwide, and presence of multinational and domestic companies within the industry. The Cronbach's *alpha* for the environment measure was .70.

*Performance.* Performance was measured using two items, return on investment and sales growth. The use of both return on investment and sales growth take into account different, and often conflicting, dimensions of performance. Because of the difficulty in comparing absolute performance across industries [Dess, Ireland & Hitt 1990], respondents were asked to rate their foreign subsidiaries' return on investment and sales growth against the performance of their competitors. The performance of foreign subsidiaries indicates how successful a firm's international strategy is, given the specific requirements of the environment in which the subsidiaries compete.

### *Data Analysis*

*Confounding Effects and Variation in the Data.* Given that firms differed along the following variables: age, size, technology, and industrial/consumer products, *t*-tests were performed to determine if there were any differences in the key constructs across groups. Generally, the tests indicated that pooling the data was appropriate. Only geographic scope was found to be statistically different at the  $p < .05$  level of significance when tested for the industrial/consumer products contingency. However, a test of the hypotheses conducted on the two subgroups indicated that pooling the two groups was still appropriate.

Contingency research has been criticized for lack of diversity in the data, mainly in the contingency variables [Pfeffer 1982]. The extent of the variation of the key constructs was investigated by performing a median split on all variables. The resultant mean differences were compared using *t*-tests [Drazin & Van de Ven 1985]. All differences were found to be statistically significant beyond the  $p < .05$  level.

*Identification of International Strategies and Environments.* Cluster analysis was performed to differentiate among companies pursuing alternate international strategies. The analysis was performed using standardized measures of the geographic scope and segmentation strategic dimensions. Using Ward's hierarchical method, four clusters were identified. These four clusters were then compared to results using the SAS FASTCLUS nonhierarchical method. The use of both the hierarchical and nonhierarchical methods has been suggested by several authors (e.g., Hartigan [1975]; Punj & Steward [1983]). As advocated by Sarle [1983], the four clusters were identified looking at the change in  $R^2$ , which suggests a change in cluster tightness. From a four-cluster to a three-cluster solution, the  $R^2$  decreased from .713 to .587, suggesting a four-cluster solution as appropriate. To evaluate whether the four-cluster solution supported the classification of international strategies, the strategic dimensions of the clusters were examined to determine if they coincided with those expected based on the preceding theoretical discussion. As Table 2 indicates, each cluster's mean value on the strategic dimensions reflects one of the feasible international strategies. Companies in Cluster1 did not use a segment differentiation approach and had a narrow geographic scope; therefore, this cluster contains companies implementing *focus*

**TABLE 2**  
**Four-Cluster Solution: Means of Strategy Dimensions**

Classification Dimension	Focus Cluster1 (n=12)	Segmented Focus Cluster2 (n=16)	Segmented Cluster3 (n=10)	Mass-Market Cluster4 (n=37)
Segmentation <sup>1</sup>	.862	-1.036	-1.244	.528
Geographic Scope	-1.450	-.782	1.122	.505

<sup>1</sup>A high score on this dimension indicates that the firm treats all served markets in a similar fashion, i.e., it uses a homogeneous approach. A low score indicates that the firm competes differently in each market served, i.e., a segment differentiation approach.

strategies. Companies in Cluster2 used a segment differentiation approach with a narrow geographic scope; therefore companies in this cluster implement *segmented-focus* strategies. Companies in Cluster3 followed a segment differentiation approach and had a broad geographic scope; therefore, companies in this cluster implement *segmented* strategies. Finally, Cluster4 contains companies implementing *mass-market* strategies (no segment differentiation and a broad geographic scope).

After the clusters were obtained, those companies for which measures of performance were available were retained. Seventy-two companies reported their sales growth and sixty-nine their return on investment. *T*-tests were then used to compare the performance of the firms, as specified in the hypotheses. In order to perform the tests, companies were divided into two groups based on their competitive environment. One group was composed of companies who had scored more than 24 on the environment scale (firms competing in global industries); the other was composed of companies who had scored 24 or less on the same scale (firms competing in multidomestic industries). A score of 24 was considered appropriate to discriminate between multidomestic and global industries since this score is at about the midpoint on the scale measuring the environment. This scale was obtained by adding together each observation's scores on the six environmental variables. The possible scores on the scale ranged from 7 to 42.

## RESULTS

Table 3 provides the summary statistics and correlation coefficients for the variables. The first hypothesis was partially supported by the data. A one-tail *t*-test indicated that the return on investment of firms pursuing a mass-market strategy was lower than the return on investment of firms pursuing segmented or segmented-focus strategies (Table 4). The difference was statistically significant beyond the .10 level. The hypothesis was not supported when sales growth was used to measure performance; even though mass-market strategies performed worse (Table 4), the difference in sales growth between the two groups was not statistically significant.

**TABLE 3**  
Correlation Analysis and Simple Statistics

Variables	Means	Standard Deviation	1	2	3	4
Environment	24.6	96.30				
Segmentation	15.61	3.30	.33**			
Geographic scope	16.48	3.49	.28*	-.07		
Foreign sub. sales growth	3.63	1.12	-.02	.12	-.004	
Foreign sub. ROI	3.33	1.15	-.09	-.12	-.06	.47***

\* $p < .05$ \*\* $p < .01$ \*\*\* $p < .001$ 

**TABLE 4**  
T-Test to Compare Mean Scores for Performance Indices

Strategies	Mean	Standard Deviation	T-value
<b>Dependent Variable: Sales Growth</b>			
H1 Segmented & Segmented-focus	3.750	1.064	.634
Mass-market	3.461	1.330	
H2 Focus, Segmented-focus & Segmented	3.143	1.027	-1.738**
Mass-market	3.772	1.109	
H3 Focus & Segmented	3.500	.849	2.276**
Segmented-focus	2.250	.957	
<b>Dependent Variable: Return on Investment</b>			
H1 Segmented & Segmented focus	3.600	1.183	1.452*
Mass-market	2.916	1.240	
H2 Focus, Segmented-focus & Segmented	3.214	.975	.065
Mass-market	3.190	1.167	
H3 Focus & Segmented	3.500	.707	1.463**
Segmented-focus	2.500	1.290	

\* $p < .10$ \*\* $p < .05$ \*\*\* $p < .01$ 

Hypothesis 2 was supported by the data when sales growth was the dependent variable. The average performance of firms pursuing mass-market strategies was better than the average performance of those companies pursuing segmented, segmented-focus, or focus strategies, and the difference was statistically significant beyond the .05 level (Table 4). The hypothesis was not supported when return on investment was used. In fact, the two groups of firms exhibited almost identical levels of performance (Table 4).

Hypothesis 3 was supported by the data. Firms pursuing focus or segmented strategies outperformed firms pursuing segmented-focus strategies on both

return on investment and sales growth. The differences were statistically significant beyond the .05 level (Table 4).

### DISCUSSION AND IMPLICATIONS

The study generally supports the argument that geographic scope and segment differentiation can be used to distinguish four international strategies, the effectiveness of which is a function of the environments in which firms compete. The data suggest that the effectiveness of mass-market strategies is strongly influenced by industry characteristics, and that in global industries segmented and focus strategies are more effective than segmented-focus strategies. Our statistical analysis suggests that in multidomestic industries companies implementing mass-market strategies exhibit low financial performance and sales growth that was barely average. On the other hand, in global industries, mass-market strategies led to a high level of sales growth and to an average level of financial performance.

The partial support for Hypotheses 1 and 2 is an indication that the relationship between financial performance and mass-market strategies is not as simple as theory assumes. A careful analysis of the data provides further explication of this issue. Our results show that in multidomestic industries the return on investment of companies pursuing segmented or segmented-focus strategies was higher than the return on investment of companies pursuing mass-market strategies. Such an outcome may be the result of aims at satisfying existing differentiated market needs, which are likely to command higher prices. In contrast, since segmented strategies focus on existing needs, the potential for sales growth may be limited. In global industries, mass-market strategies exhibited a higher level of sales growth because they can effectively capture growing segments of the market. The extent to which this strategy is effective from a financial standpoint, though, has to be evaluated over time. It may be that only when the highest attainable market share is reached that the full benefit of economies of scale and scope are obtained. Furthermore, it may be that a key role in determining the financial implication of mass-market strategies is played by the competitive weapons used. The implications of competitive weapons could not be addressed in this research and should be investigated in future studies. These results are relevant because they provide empirical evidence that segmentation and geographic scope matter in the international context. Up to now most of the arguments in favor of the standardization of international strategies were theoretical [Buzzell 1968; Jain 1989], while the scant empirical evidence seemed to contradict these arguments [Samiee and Roth 1992]. The conflicting results of Samiee and Roth's study and the present one can possibly be explained by the fact that their sample included, but did not distinguish between, global and multidomestic industry segments. Had we also not made this distinction, and instead classified all the companies as competing in global industries, our second hypothesis would not have been supported by the data (analysis available from the first author).



Our findings suggest that the classification of international strategies that we have offered is useful in differentiating among strategic alternatives, the effectiveness of which is contingent upon the environments in which firms compete. Therefore, this classification may facilitate an integrated approach to strategy formulation and implementation in multinational corporations. Such a taxonomic approach may be useful because it allows us to concentrate on selected aspects of a firm's strategic posture; as a result, it may facilitate the study of the strategy-structure relationship [Venkatraman & Camillus 1984; White 1986; Miller 1988]. As Miller [1986: 235] has noted,

[E]lements of structure cohere within common configurations, as do those of strategy. Furthermore, these configurations are themselves interlinked in that there are natural congruences between particular strategies, structural and indeed environmental configurations.

It can be argued that segmented strategies, since they require adaptation to local environmental conditions, should be associated with the structural configuration that Prahalad and Doz [1987] have labeled national responsiveness. In addition, a segmented strategy may be compatible with the differentiated links across subsidiaries hypothesized by Ghoshal and Nohria [1989] and Gupta and Govindarajan [1991a, 1991b]. In contrast, mass-market strategies, which require the use of the same competitive weapons worldwide in order for firms to exploit internationally similar world markets, should be associated with the structural configuration that Prahalad and Doz [1987] have labeled global.

Unfortunately, until now most of the studies on the relationship between strategy and structure in multinational corporations have focused on corporate-level strategy and formal structures (e.g., Egelhoff [1988]; Franko [1976]; Stopford & Wells [1972]). Since managers of multinational corporations face the challenge of having to integrate activities that are spatially and culturally distant from one another [Dunning 1988; Jain 1989; Kogut 1985b; Porter 1986; Prahalad & Doz 1987; Teece 1986; Walters & Toyne 1989], studies that investigate the relationship between international strategy and structure at the business level are needed.

### *Limitations*

The interpretation of our findings should take into account the limitations of the study. This research surveyed U.S.-owned multinational corporations, which restricts the generalizability of the findings. In addition, only perceptual data were gathered. The results of the study may also be limited by the use of a single respondent and assuming corporate-level knowledge of subsidiary-level information. Even though concerns cannot be totally eliminated, the care used in developing the instrument and the results of previous studies suggest that the data of this study should be reliable. Indeed, there is support for the position that managers at headquarters are knowledgeable about subsidiaries' internal affairs [Ghoshal & Nohria 1989], that top managers

perceptions of firms' performance strongly correlate with objective measures of performance [Dess & Robinson 1984], and that perceived and objective environments coincide [Dess & Beard 1984]. However, additional studies are needed to continue developing our understanding of the effectiveness of each strategic alternative.

#### APPENDIX Industries Included in the Study

SIC No.	Industry	SIC No.	Industry
2033	Canned Fruits & Vegetables	3631	Household Cooking Equipment
2043	Cereals Breakfast Food	3632	Household Refrigerators and Freezers
2064	Candy and Other Confectionery Products	3634	Electric Housewares & Fans.
2321	Men/Boy's Shirts	3635	Household Vacuum Cleaners
2841	Soap & Other Detergents	3639	Household Appliances Nec.
2842	Polishes & Sanitation Goods	3641	Electric Lamps
2844	Toilet Preparation	3651	Household Audio & Video Equipment
2879	Agricultural Chems. Nec.	3661	Telephone & Telegraph Apparatus
3161	Luggage	3663	Radio & TV Communication Equipment
3532	Mining Machinery	3669	Communications Equip. Nec.
3552	Textile Machinery	3711	Motor Vehicle & Car Bodies
3554	Paper Industries Machinery	3714	Motor Vehicle Parts & Accessories
3555	Printing Trades Machinery	3721	Aircraft
3572	Computer Storage Devices	3728	Aircraft Parts Equip. Nec.
3575	Computer Terminals	3944	Games, Toys & Children's Vehicles
3577	Computer Peripheral Equip. Nec.		
3629	Electrical Industrial Apparatus Nec.		

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