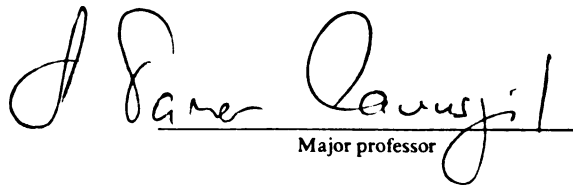This is to certify that the

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GLOBAL STRATEGY: AN INTEGRATED THEORETICAL MODEL

By

Shaoming Zou

A DISSERTATION

Submitted to
Michigan State University
in partial fulfillment of the requirements
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ABSTRACT

GLOBAL STRATEGY: AN INTEGRATED THEORETICAL MODEL

By

Shaoming Zou

Diverse perspectives, lack of a sound theory, and ambiguity are the characteristics of the current literature on global strategy. This research attempts to address issues related to what a global strategy really is, whether a global strategy has positive performance implications, what internal organizational factors influence a business unit's global performance, and how a global strategy is affected by external globalization drivers and internal organizational factors. Specifically, a multidimensional construct of global strategy is proposed to integrate the diverse perspectives of global strategy; the industrial organization (IO) theory and the resource-based theory are linked to develop an integrated theoretical model of global strategy; and a cross-industry empirical study is conducted to test the theoretical model. The empirical study involves a mail survey of business units competing in 23 global manufacturing industries. Two mailings are included in the survey which yield responses from a sample of 112 business units.

Results of the study indicate that (1) a global strategy involves at least five major dimensions (that is, global market participation, product standardization, uniform marketing, integrated competitive moves, and coordination of value-adding activities); (2) global business performance of a business unit is positively and significantly related to the five dimensions of global strategy and to the business unit's international experience, market orientation, and the strength and global orientation of organization

culture; (3) a global strategy is positively and significantly related to external industry globalization drivers and internal organizational factors; (4) the IO-based and resource-based theories are complementary to each other and should be linked through parallel integration to provide a more complete explanation of the relationship between global strategy and performance.

The research findings are compared and contrasted with those of previous studies. Managerial implications concerning how to enhance a business unit's performance in global competition are discussed. Directions for future research also are discussed.

To my parents and my family

ACKNOWLEDGEMENTS

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CHAPTER 1

MOTIVATION FOR THE STUDY

INTRODUCTION

In the last two decades, profound changes have been taking place in the economic, political, social, and technological environments within which businesses operate. These changes are the product of two extremely powerful forces: the tendency toward the globalization of the major industrial and consumer markets, and the increasing importance of technology in business activities (Hax 1989; Levitt 1983). The world has become richer and more interdependent because of the rapid advances in transportation and communication technologies, the convertibility of major currencies, the liberalization of trade, the reduction of tariffs under the General Agreement on Tariffs and Trade (GATT), and the integration of international capital markets. Today, it is clear that no national market is immune to the economies of other nations and that the success or failure of a business occurs in a global setting.

Another change has been the decline in U.S. industrial competitiveness. The U.S. share has been shrinking in most major international markets, including agriculture and high-technology products, where the United States once dominated (Hax 1989). In the meantime, Japanese and German companies have become increasingly competitive in the global market. Indeed, "triadic thinking" has become essential for businesses operating in world markets, and the triad has become the critical framework for analyzing global competition (Ohmae 1985). This situation poses an enormous challenge to U.S. companies in their struggle to regain and maintain dominance in international markets.

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Business managers as well as consultants and academicians have recognized that the study of industries, strategies, and organizations in a global context needs to be regarded as the norm. Indeed, the word "global" has become one of the most overused adjectives in the business lexicon, and "manage globally" appears to be the latest battle-cry in international business (Ghoshal 1987). It has been argued that success or failure of a business in the 21st century will depend on whether it can compete effectively in world markets (for example, Hax 1989; Ohmae 1989). Global strategy, the way a business competes in the global market, thus plays a vital role in determining the success or failure of a business.

PERSPECTIVES OF GLOBAL STRATEGY

In academia, interest in global strategy and organization has been strong in the last two decades. Numerous perspectives from which to examine the issue have been proposed, and numerous prescriptions have been offered for businesses facing global competition. On the one hand, these perspectives have enriched our understanding of the complexity of competing globally. On the other hand, the diversity of perspectives creates a great deal of ambiguity and confusion about how to compete worldwide, about the definition of a global strategy, about why a business chooses a global strategy, and about the implications of that choice.

In an influential article, Theodore Levitt (1983) argues forcefully that advances in communication and transportation technologies and increased worldwide travel have homogenized world markets. Increasingly, consumers in different parts of the world tend to demand the same products and have the same preferences. In this new era, the

strategic imperative for businesses competing globally is to achieve the economies of scale that the global market affords. Thus, multinational corporations that treat individual country markets separately are likely to disappear and be replaced by global corporations that sell standardized products the same way everywhere in the world. A major source of competitive advantage has become the ability to produce high-quality products at lowest cost, since global consumers will sacrifice their idiosyncratic preferences for the high-quality but low-priced products. According to Levitt (1983), the optimum global strategy is to produce a single standardized product and sell it through standardized marketing program.

Hout et al. (1982) disagree, however, arguing that an effective global strategy requires not a single approach such as product standardization but a bag of many tricks. These include exploiting economies of scale through global volume, taking a preemptive position through quick and large capital investments, and managing interdependencies to achieve synergy across different activities. According to them, the global strategic imperative is to leverage a competitive edge across the interdependent country markets to change the scale and scope of competition.

In contrast to Levitt's single standardized product, a broad product portfolio is recommended by Hamel and Prahalad (1985). They believe a global strategy requires several product varieties, so that investments in technologies, brand names, and distribution channels can be shared. The global strategic imperative is to seek cross-subsidization across product lines and markets, world brand domination, and strong worldwide distribution systems. The strategic logic behind Hamel and Prahalad's (1983, 1985) prescription is that firms can attack rivals and defend their market shares by

leveraging proprietary technology through proprietary distribution channels and by managing cash flows.

Kogut (1985) emphasizes strategic flexibility in his perspective of global strategy, that is, it must create options to turn the uncertainties of an increasingly volatile world economy to the business's advantage. The strategic imperative is to exploit multiple sourcing, production shifting to profit from changing factor costs and exchange rates, and arbitrage to take advantage of imperfections in financial and information markets and economic disequilibria. Kogut believes that a business should surrender strategic fit for strategic flexibility in order to gain comparative advantage.

Porter (1986) recognizes the interdependency among various country markets and contends that a global strategy has two basic dimensions: configuration of value-adding activities and coordination of the activities across markets. He maintains that the strategic imperative in global markets is to configure value-added activities to exploit factor cost differentials and to extend competitive advantages by coordinating interdependencies among markets. Hence, success demands achieving integration of the firm's competitive position across markets.

In contrast, Quelch and Hoff (1986) emphasize the importance of being responsive to local market conditions. They view the strategic imperative as the efficient global use of good marketing ideas rather than standardization and an organization structure that encourages transfer of information. They believe global operations should be tailored to maximize efficiency in concept development and effectiveness in local market delivery. That is, a business must "think global" but "act local."

Ghoshal (1987) developed an organizing framework for global strategy that maps

means and ends. He maintains that the key to a successful global strategy is to manage the interaction among different goals and means. He classifies the goals of a business organization into three categories: achieving efficiency in its current activities, managing the risks that it assumes in carrying out those activities, and developing internal learning capabilities to boster innovation and adaptation to future changes. He also classifies the strategic tools for reaching these goals into three categories: exploiting the differences in input and output markets, achieving scale economies in different activities, and exploiting synergies or economies of scope. The strategic task of managing globally is to use these strategic tools simultaneously to achieve the strategic goals.

Bartlett and Ghoshal (1988) contend that globalizing and localizing forces work together to transform many industries, and success depends on whether a business can achieve global coordination and national flexibility simultaneously. They use the term "transnational capability" to describe the ability to manage across national boundaries, retaining local flexibility while achieving global integration. They claim this is the critical requirement of competing globally. Thus, the optimum global strategy is to develop national competence but at the same time maintain a world perspective.

Ohmae (1989) argues that the key to global success is the deliberate "insideration" of functional strengths. He considers "equidistance" the critical requirement of a global strategy: seeing globally, thinking globally, and acting globally. He also suggests that the proper structure for a multinational corporation is the United Nations Model, that is, different country subsidiaries participate equally in global strategic decisions.

Hamel and Prahalad (1989) contend that the essence of winning in global competition is a strategic intent that is stable over time and receives full commitment.

Prahalad and Hamel (1990) further argue that true sustainable competitive advantage depends on the core competencies of a corporation, the intangible resources that enable effective pursuit of its goals in its product markets. According to them, a global strategy must include strategic intent and development of core competencies with which the business can pursue its strategic goals.

Yip (1989) developed a normative contingency framework of global strategy, arguing that external industry/market forces are driving globalization. To survive and prosper in the global marketplace, businesses must respond to the industry imperatives. Yip defines a global strategy as having five dimensions: global market participation, product standardization, concentration of value-adding activities, uniform marketing, and integrative competitive moves. He contends that a global strategy must match the globalization potential of the industry as defined by the cost, market, government, and competitive environments. To the extent a business achieves a close match, positive performance will result.

Many other researchers have written on topics related to global strategy, but the same general theme emerges: each has a different perspective regarding global strategy. An evaluation of the current literature reveals that a full consensus is yet to be reached.

AN EVALUATION OF THE LITERATURE

The large volume of writings on global strategy has yielded only a limited number of conclusions. Some degree of consensus has been captured in four postulates summarized by Collis (1991). First, as opposed to a multidomestic strategy or a set of national strategies, a global strategy is required whenever there are important

interdependencies among a business's competitive position in different countries. The acid test is whether a business is better off in one country by virtue of its position in another. Second, the sources of these interdependencies can be identified. These include scale economies beyond the size of plant or R&D program that can be supported in any single national market (Levitt 1983); accumulated international experience (Douglas and Craig 1989); possession of global brand name (Levitt 1983; Ohmae 1985); a learning curve effect (Porter 1985); and the option value or cross-subsidization (Hamel and Prahalad 1985) that a multimarket presence confers. Third, the critical issues that a global strategy must address include the configuration and coordination of the business's worldwide activities (Porter 1986). Whether a business can realize the benefits of global operation will depend on how well these issues are addressed. Fourth, the organization structure should be aligned with and derived from the global strategy (Chandler 1962). The balance between localization and integration must be consistent with the chosen global strategy.

Nevertheless, there is still a great deal of ambiguity in the literature as to what a global strategy really means and when it should be used (Bartlett and Ghoshal 1991; Ghoshal 1987; Porter 1991). The field of global strategy also lacks a sound theory to guide business practices in global competition. A review of the relevant literature suggests that four factors contribute to the current confusion and lack of theory.

First, the majority of work on global strategy has been done at the conceptual level, with anecdotal supporting evidence. Very few empirical studies have been conducted on the topic of global strategy and these generally have focused on a specific aspect. For example, Morrison and Roth (1992) deal with the taxonomies of global

strategies; Kim and Hwang (1992) are concerned with the choice of entry mode into international markets; Roth et al. (1991) investigate the implementation of global strategy; and Samiee and Roth (1992) look at marketing standardization in global industries. One exception is the work of Yip (1991), who examined 18 cases and made a limited empirical assessment of the normative contingency framework of global strategy proposed earlier by Yip (1989). The lack of empirical studies is a serious problem because conceptual work only serves to develop theory, which must be tested or confirmed by empirical research (Hunt 1991). Without such efforts it is difficult to determine the relative usefulness of the different perspectives and impossible to establish a sound theory of global strategy.

Second, researchers usually examine global strategy within the context of a specific industry. Consequently, their perspectives are as diverse as the various industries. In addition, key constructs tend to be conceptualized in a way that is idiosyncratic to the industry studied. Not surprisingly, the prescriptions derived are hardly generalizable across industries. Thus, industry-specific studies have added to the ambiguity in the literature, although they have enhanced our knowledge of global competition in a particuler industry. There is an urgent need for a cross-sectional study that identifies common concepts and prescriptions across industries in order to highlight the strategic requirements of global competition that is not limited by idiosyncratic industry characteristics.

Third, the literature on global strategy has been dominated by the industrial organization (IO) perspective (Bartlett and Ghoshal 1991; Collis 1991). The IO viewpoint places primary emphasis on the external analysis of global competition, as best

exemplified by Porter's (1980) "five-force" framework of industry analysis. In other words, because external global market forces impose selective pressures on a business, global strategy is dictated by market imperatives, and competitive advantage is derived from implementing a strategy that corresponds to those market imperatives (Collis 1991). While the IO approach has enriched our understanding of the external market/industry forces that drive globalization, it generally has neglected a business's idiosyncratic internal characteristics (Bartlett and Ghoshal 1991). This oversight is not trivial as it has been demonstrated repeatedly that businesses competing with a similar strategy in the same global industry (thus facing identical external forces) can have different performance outcomes, whereas firms competing with different strategies in the same global industry can survive and prosper (for example, Bartlett and Ghoshal 1988; Collis 1991; Hamel and Prahalad 1985). It appears that business performance is not solely determined by global strategy and that internal organizational characteristics also plays an important role. To tackle this issue, some researchers have embraced a newly emerging theoretical perspective, the resource-based view of strategy (for example, Bartlett and Ghoshal 1991; Collis 1991; Prahalad and Hamel 1990; Tallman 1991). In contrast to the IO-based theory, the resource-based theory views internal organizational factors as the determinants of strategy and performance. Unfortunately, no research has attempted to bridge the two theoretical perspectives. To provide a complete explanation of the forces driving global strategy and performance, both theoretical perspectives must guide the effort.

Fourth, there has been no attempt to integrate the diverse perspectives and the independently developed theoretical views of global strategy. This lack of integration is

probably the main reason for the ambiguity in the literature because each view of global strategy is likely to be concerned with only one aspect of the issue. A conceptualization that seems reasonable in a particular industry context may be inadequate when applied to others. Furthermore, the IO-based view and the resource-based view of strategy focus, respectively, on the external and the internal environments. Without integration, the two perspectives are competing and even contradictory, which only generates more confusion. Since there is limited support for both viewpoints (for example, Collis 1991; Venkatraman and Prescott 1990), it is critical that they be integrated to provide a complete explanation of global strategy and performance.

PURPOSE OF THE STUDY

Considerable room exists to advance the theory of global strategy. The present study attempts to address such issues as why a business adopts a global strategy and what performance implications flow from that choice. *The primary purpose of the study is to develop and test an integrated theoretical model of global strategy.* Specifically, the intent is to make two unique contributions to the literature: (1) develop a theoretical model of global strategy that integrates the rather diverse perspectives and links the IO-based and resource-based theories, and (2) provide a systematic empirical assessment of the proposed model using cross-industry mail survey data.

A major premise is that the IO-based and resource-based theories should be integrated to provide a complete explanation for why business units adopt a global strategy and whether its implementation leads to improved performance. This is consistent with the argument in the most recent literature that the resource-based theory

can be complementary to the IO-based theory. For example, after comparing the resource-based theory with five schools of thought within industrial organization economics, Conner (1991) concluded that the resource-based theory both incorporates and rejects at least one major element from each of the five schools. Mahoney and Pandian (1992) and Porter (1991) concluded that resource-based theory is complementary to the IO theory of strategy and competitive advantage.

The dissertation is organized into five major sections. First, the foundations for the integrated theoretical model are discussed. Second, the integrated model of global strategy and the corresponding research hypotheses are presented. Third, the research design and the methodological issues are discussed. Fourth, findings of the study are presented. Finally, the contributions of the study are discussed.

CHAPTER 2

THEORETICAL FOUNDATION

THE INDUSTRIAL ORGANIZATION-BASED THEORY

Similar to writings in mainstream economics regarding strategy, the literature on global strategy in the last decade has been dominated by the industrial organization perspective (Bartlett and Ghoshal 1991). In particular, the "structure-conduct-performance" (SCP) paradigm of Bain (1951, 1956) has been the most popular theoretical framework. According to this paradigm, external industry structure (such as barriers to entry, industry concentration, market growth, product differentiation, capital requirements, and buyer switching costs) determines firms' strategy (conduct), which in turn determines their economic performance (Scherer and Ross 1990). Indeed, most conceptual work done on the topic essentially follows the IO-logic and largely ignore internal organizational characteristics (Collis 1991).

The IO-based theory of strategy is best captured in the *Principle of Coalignment* (or contingency or consistency), which states that the "fit" between a business's strategy and its environment --whether external (Anderson and Zeithaml 1984) or internal (Gupta and Govindarajan 1984)-- has significant implications for performance (Venkatraman and Prescott 1990). The general requirement of coalignment between environment and strategy is understood implicitly rather than explicitly in the literature, however, because it is a direct corollary of the dominant SCP paradigm (Scherer and Ross 1990; Venkatraman and Prescott 1990).

Barney (1991) identified two underlying assumptions in the IO-based theory of

strategy. First, firms within an industry or a strategic group are identical in terms of the strategic resources they control (Porter 1981; Rumelt 1984). Second, if resource heterogeneity should develop in an industry or a strategic group, perhaps through new entry, this heterogeneity would be very short lived because the resources that firms use to implement their strategies are highly mobile (Barney 1986, 1991). These two assumptions in effect treat the firm as an abstract economic entity and often as a black box, not as a social institution with an economic purpose. Even the population ecology theorists have joined the IO school in using external environmental factors to explain performance differences (Bartlett and Ghoshal 1991). Thus, the external environment imposes requirements to which a business must adapt (Hannan and Freeman 1978), and the role of internal organizational factors in making strategic choices becomes far less relevant.

In the IO-based model, competitive advantage is viewed as a position of superior performance that a business attains through offering undifferentiated products at low prices or offering differentiated products for which customers are willing to pay a price premium (see Porter 1980, 1985). Strategy is conceived as a firm's deliberate response to the industry/market imperatives, while competitive advantage can be sustained by business strategy, such as erecting barriers to entry; seeking the benefits of economies of scale, experience or learning curve effects, product differentiation, and capital investments; and raising buyer switching costs (Porter 1980). The premise is that the external market or industry imposes selective pressures to which a business must respond. Businesses that adapt successfully to these pressures through formulating and implementing a strategy will survive and prosper, whereas those that fail to adapt are

doomed to failure (Collis 1991).

Within the IO economics literature, the five most influential theories are: neoclassical perfect competition, Bain-type IO, the Schumpeterian view, the Chicago tradition, and transaction cost economics (Conner 1991). All assume that the ultimate goal of firms is to maximize profits, but they differ as to the primary means through which this objective is realized. According to the neoclassical perfect competition theory, the firm exists to combine resources (especially labor and capital) to produce an end product. It is assumes that the ideal combination of labor and capital is readily ascertainable, the marginal contribution of each input can be calculated, all parties have perfect information, and resources are completely mobile and divisible (Nicholson 1985). Thus, external market conditions essentially determine the price that the firm takes, and there is no difference in resource endowment among firms. Because businesses are assumed to have perfect information and equal access to resources, inputs, and technology, they are treated as being identical. No one firm has advantage over any other, and no one firm can control market price.

In Bain-type IO theory, the firm exists to restrain productive output through the exercise of monopoly power or by colluding with other major competitors (Scherer and Ross 1990). Firms do this to maximize profit, which is the difference between an "artificially" high market price and firms' costs. Bain's (1951, 1956) SCP framework posits that features of industry/market structure, such as concentration and vertical integration, determine the firm's conduct (for example, pricing, advertising, and distribution strategies), which in turn determines the firm's economic performance (such as market share and profitability). While the theory adds the significantly richer concept

of interfirm heterogeneity by including monopoly power as a variable in business performance, external industry factors still are considered the principal determinants of firm strategy and performance.

In Schumpeter's (1950) view, the firm seizes competitive opportunity by creating or adopting innovations that make its rivals' market positions obsolete. Schumpeter relates firms seeking radical innovation to the possession of monopoly power in a way that is different from Bain's approach. Bain (1951, 1956) contends that firms with monopoly power are likely to avoid any radical innovation that might change the existing market dynamics. In contrast, Schumpeter (1950) argues that a firm with monopoly power usually has a stronger incentive to develop revolutionary innovations, because great rewards are reaped by a firm that invests in inherently risky research and development. Despite this difference, both believe that external industry structure determines whether a firm has monopoly power, which is the primary determinant of a firm's innovative behavior and performance.

The Chicago tradition maintains that the firm seeks to enhance efficiency in production and distribution. While it accepts the hypothesis that oligopolists wish to collude to maximize joint profits, the Chicago school contends that effective collusion requires often prohibitively expensive monitoring and enforcement (Stigler 1968). Thus, effective collusion is not likely to persist, and above-normal returns to oligopolists are the result of efficient operations in production and distribution. Although the heterogeneity of inputs among firms is recognized, the Chicago view contends that external market forces, especially the entry of new competitors, impose an efficiency imperative on incumbents and on long-term profit potential. Hence, firms' conduct is

still determined by external industry structure.

Transaction cost theory assumes that the firm seeks to avoid the costs of market exchange by creating an alternative hierarchical exchange mechanism (Williamson 1975, 1985). The firm as opposed to the market is thought to be a more efficient exchange mechanism because of asset specificity, the small number of potential buyers or sellers, and imperfect information (Williamson 1975). Within the transaction cost framework, savings or increases in cost can result from housing the transaction within the firm rather than the market, and the size and scope of the firm are affected by the decision to use either the market or hierarchies for the transaction. The firm's choice is determined primarily by external market characteristics, such as the number of buyers, efficiency of the market, and frequency of transactions.

These five IO-theories differ with regard to the means by which firms attain their profit goals but are similar in their place primary emphasis on external industry factors as the drivers of business strategy and performance. By stressing the importance of external factors, the IO approach has significantly enriched the environmental dimensions of Andrews' (1971) influential model of corporate strategy. It suggests that firms obtain sustained competitive advantages by implementing strategies which exploit their internal strengths through responding to environmental opportunities, while neutralizing external threats and avoiding internal weaknesses (Andrews 1971; Hofer and Schendel 1978). A number of criticisms have been raised over the years to the Andrews' model, but it remains the most comprehensive, inclusive, and influential framework in the strategy literature (Bartlett and Ghoshal 1991). Nevertheless, most researchers consider industry structure the main determinant of a firm's competitive strategy, as best exemplified by

Porter's (1980) "five-force" model, and little attention has been given to idiosyncratic internal organizational characteristics (Bartlett and Ghoshal 1991; Porter 1991).

In the context of global strategy, a normative contingency framework developed by Yip (1989) links industry globalization drivers to a firm's global strategy and performance. Yip defines global strategy as a multidimensional construct incorporating five elements and postulates that the degree to which a firm will pursue a global strategy depends on the industry's globalization potential as defined by market, cost, governmental, and competitive factors. To the extent that the firm's global strategy fits the industry's globalization potential, positive performance will result. Thus, it is evident that Yip's normative contingency framework is derived directly from the principle of coalignment (the IO-based view) in that positive performance is expected when (global) strategy fits the external environment (that is, industry globalization drivers).

THE RESOURCE-BASED THEORY

The IO-based theories are under increasing challenge from both market reality and the emerging resource-based view of strategy and competitive advantage. Empirical evidence repeatedly suggests that industry structure is not the sole determinant of competitive strategy and performance. The search for other factors led a group identified as the "resource-based theorists" to conclude that differential endowment of strategic resources among firms is the ultimate determinant of strategy and performance.

The notion of differentiated internal resource portfolios is gaining rapid acceptance in the academia (for example, Barney 1989, 1991; Collis 1991; Conner 1991; Grant 1991; Mahoney and Pandian 1992; Prahalad and Hamel 1990; Wernerfelt 1984,

1989). This view promises to be the richest theory of competitive advantage and strategy (Barney 1991; Conner 1991), especially in the context of global strategy (Bartlett and Ghoshal 1991; Collis 1991; Prahalad and Hamel 1990).

The term "resource" is used in a very broad sense by the theorists. Following Daft (1983), Barney (1991) defined internal organizational resources as *all* assets, capabilities, organizational processes, business attributes, information, knowledge, and so forth, controlled by a firm and enabling it to conceive of and implement strategies that improve its efficiency and effectiveness. He further classifies the numerous possible internal organizational resources into three categories: physical capital, human capital, and organizational capital. Not all of these are strategically relevant, however. As Barney (1986) points out, some may prevent a business from conceiving of and implementing valuable strategies, others may lead to strategies that reduce its performance, and yet others may have no effect on a firm's strategic choice. The most critical resources are those that are superior in use, hard to imitate, difficult to substitute for, and more valuable within the business than outside (Porter 1991). According to Porter (1991), such resources can arise either from performing activities over time that create internal skills and routines or from acquiring them outside the firm for less than their intrinsic value due to factor market imperfection, or a combination of the two. The most appropriate types of resources to examine in strategy research are the skills and organizational routines that drive business activities. As Porter (1991) argues, *underlying the firm's ability to link activities or share them across units are organizational skills and routines.*

Theoretically, the resource-based view conceives a firm not through its activities

in the product market but as a unique bundle of tangible and intangible resources (Wernerfelt 1984). What is unique about a firm is this bundle, including the nature of the resources and the organizational routines that link them together. Thus, factor market impediments rather than product market circumstances define business success (Porter 1991). Central to the resource-based theory is an understanding of the differentials among businesses in terms of strategy, competitive advantage, and performance (Conner 1991). The originality of the theory comes from the attention it pays to the internal resources of business as sources of competitive differential (Barney 1991; Collis 1991).

According to Barney (1991), the resource-based theory is grounded on two fundamental assumptions in analyzing sources of competitive advantage and business strategy. First, firms within an industry or a strategic group may be heterogeneous with respect to the strategic resources they control. Second, since these resources may not be perfectly mobile across firms, heterogeneity can be long lasting. In the resource-based models, competitive advantage is said to reside in the inherent heterogeneity of the immobile strategic resources that business controls. Strategy is viewed as a firm's conscious move to capitalize on its idiosyncratic endowment of strategic resources (Barney 1991; Lado et al. 1992; Wernerfelt 1984). Following this logic, the principal drivers of competitive strategy and performance are internal to the business, a view in sharp contrast to the IO-based theory. While the resource-based theory recognizes firm's physical resources as the important drivers of strategy and performance, it places particular emphasis on the intangible skills and resources of the business as the main driver of competitive choice (Barney 1986; Collis 1991).

Like the IO-based theories, the resource-based theory sees above-normal returns as the firm's ultimate goal (Wernerfelt 1984). Obtaining such returns requires either that the firm's product be distinctive in the eyes of buyers in comparison to competing products or that the firm sell a product identical to that of competitors at a lower cost (Porter 1985). Thus, the critical problem is how to maintain product distinctiveness or low cost without making excessive investments. Unlike the IO-based theory, which argues that competitive advantage can be sustained by the firm's conduct in response to industry structure, the resource-based theory contends that product distinctiveness or low cost are tied directly to distinctiveness in the inputs (resources) used to make the product (Conner 1991). In fact, it is hard-to-copy resources rather than monopoly power or market position that brings persistent above-normal earnings to the firm. Moreover, the distinctiveness of those resources results from the firm's acumen or luck in acquiring, combining, and deploying them, not from the forces related to industry structure, such as the number of sellers, barriers to entry, product differentiation, or market growth.

Because the firm is viewed as a seeker of unique or hard-to-copy resources, the resource-based theory pays primary attention to how management discerns which inputs are likely to generate rents and to the characteristics of the resources from which long-lived rents accrue (Conner 1991). Of particular significance is the resource endowment of the firm and its idiosyncratic characteristics and resource conversion activities (Rumelt 1974). Not surprisingly, intangible resources such as past history, managerial characteristics, and organizational process, knowledge, and capabilities, are at the heart of the resource-based theory.

Indeed, Lado et al. (1992) explicitly link a firm's distinctive competencies to its

sustainable competitive advantage. In their theoretical model, Lado et al. (1992) classify a firm's distinctive competencies into four categories: managerial competencies and strategic focus, resource-based competencies, transformation-based competencies, and output-based competencies. They contend that managerial competencies and strategic focus assume a central position in creating others and that the synergistic interactions among the four types ultimately determine a firm's competitive advantage. Specifically, they define resource-based competencies as the core human and nonhuman assets, both tangible and intangible, that allow a firm to outperform rival firms over a sustained period. Transformation-based competencies are the organizational capabilities necessary for advantageous conversion of inputs into outputs. Output-based competencies include such qualitative factors as reputation, brand name, and dealer networks that deliver value to customers.

Applying the resource-based theory, Collis (1991) identifies two hypotheses about global competition that are distinct from any IO economic explanation. (1) The historical evolution of a firm constrains its strategic choice and so will affect market outcomes. (2) Complex social phenomena, or "invisible" assets, can be a source of sustained competitive advantage and will affect organization structure independently of strategic choice.

Other researchers also have embraced the resource-based theory. Bartlett and Ghoshal (1991) call for more attention to understanding how managers assemble unique portfolios of resources and develop distinctive competencies and capabilities that provide sustainable competitive advantage in global markets. Hamel and Prahalad (1989) and Prahalad and Hamel (1990) contend that the strategic intent of management and the core

competencies of corporations are the keys to success in global competition. Tallman (1991) compares the resource-based perspective with both the IO-based theory and the transaction cost perspective to explore the strategy, structure, and performance linkages in multinational corporations. Kim and Mauborgne (1991) show that the quality (fairness) of the strategy generation process affects the level of commitment, trust, and social harmony among subsidiary managers in MNCs and, thereby, the effectiveness of strategy implementation. Porter (1991) sees the resource-based theory of strategy as one of the most promising ways to address the longitudinal nature of competitive strategy and performance.

In summary, it appears that the resource-based view is likely to become very significant in future research, and any purported theory of global strategy must incorporate internal organizational characteristics.

TOWARD AN INTEGRATION OF THEORIES

The general framework developed by Andrews (1971) posits that corporate strategy is the response to both the external and the internal environment and that performance is the result of strategy implementation. Since the IO-based and the resource-based theories focus, respectively, on the external and internal environments, they should be viewed as complementary (Mahoney and Pandian 1992) and must be integrated to provide a complete explanation of global strategy.

To specify the way in which the two theoretical perspectives can be integrated, it is necessary to examine the basic logic behind them. According to the IO-based models, the external environment directly determines an organization's strategy, which

in turn determines performance. In contrast, the resource-based model argues that internal organizational resources, especially the intangible organizational characteristics, are the ultimate determinants of performance. Furthermore, these intangibles constrain the strategic choice of the organization and its effectiveness in implementing the strategy.

When the two theoretical views are linked, it follows that performance is determined by both internal organizational factors and competitive strategy and that strategy is determined by both external industry/market forces and internal organizational factors. Furthermore, because internal organizational factors constrain an organization's strategic choice and its ability to implement the strategy, these internal organizational factors will moderate the relationship between external environment and strategy as well as the relationship between strategy and performance. In other words, internal organizational factors, competitive strategy, and their *interaction* determine business performance. Similarly, external industry/market forces, internal organizational factors, and their *interaction* determine the firm's competitive strategy.

It is the contention of this dissertation that the IO-based and the resource-based theories of strategy can and should be integrated into a complete model. This can be done by incorporating the internal organizational factors into the traditional "structure-conduct-performance" paradigm of strategy and by recognizing the moderating effects of the internal factors. Building on this proposition, an integrated theoretical model of global strategy is developed and tested.

CHAPTER 3

THE THEORETICAL MODEL AND HYPOTHESES

AN INTEGRATED MODEL OF GLOBAL STRATEGY

This study extends the normative contingency framework of global strategy proposed by Yip (1989), which is illustrated in Figure 1. Yip (1989) posits that (1) global strategy is a multidimensional construct incorporating five dimensions (major market participation, product standardization, activity concentration, uniform marketing, and integrated competitive moves) (2) global strategy is determined by the external industry globalization drivers related to market, cost, government, and competitive factors (3) performance is a direct result of global strategy implementation (4) a firm's position and resources as well as its ability to implement the global strategy also affect global strategy and performance. While Yip acknowledges that a firm's resources and ability to implement a global strategy are potential drivers of strategy choice and performance, he focuses exclusively on the external industry globalization drivers and pays little attention to internal organizational factors. In fact, Yip essentially assumes that the firm is completely autonomous in making its strategic choice and has the necessary resources and capabilities to conceive and implement its global strategy.

Empirically, Yip (1991) provided limited support for his framework using a bivariate rank order correlation analysis on data collected from 18 business units of multinational corporations. His findings confirmed the multidimensional nature of global strategy; suggested that different industries may have different levels of globalization potential and that there are differences in the extent to which businesses use global

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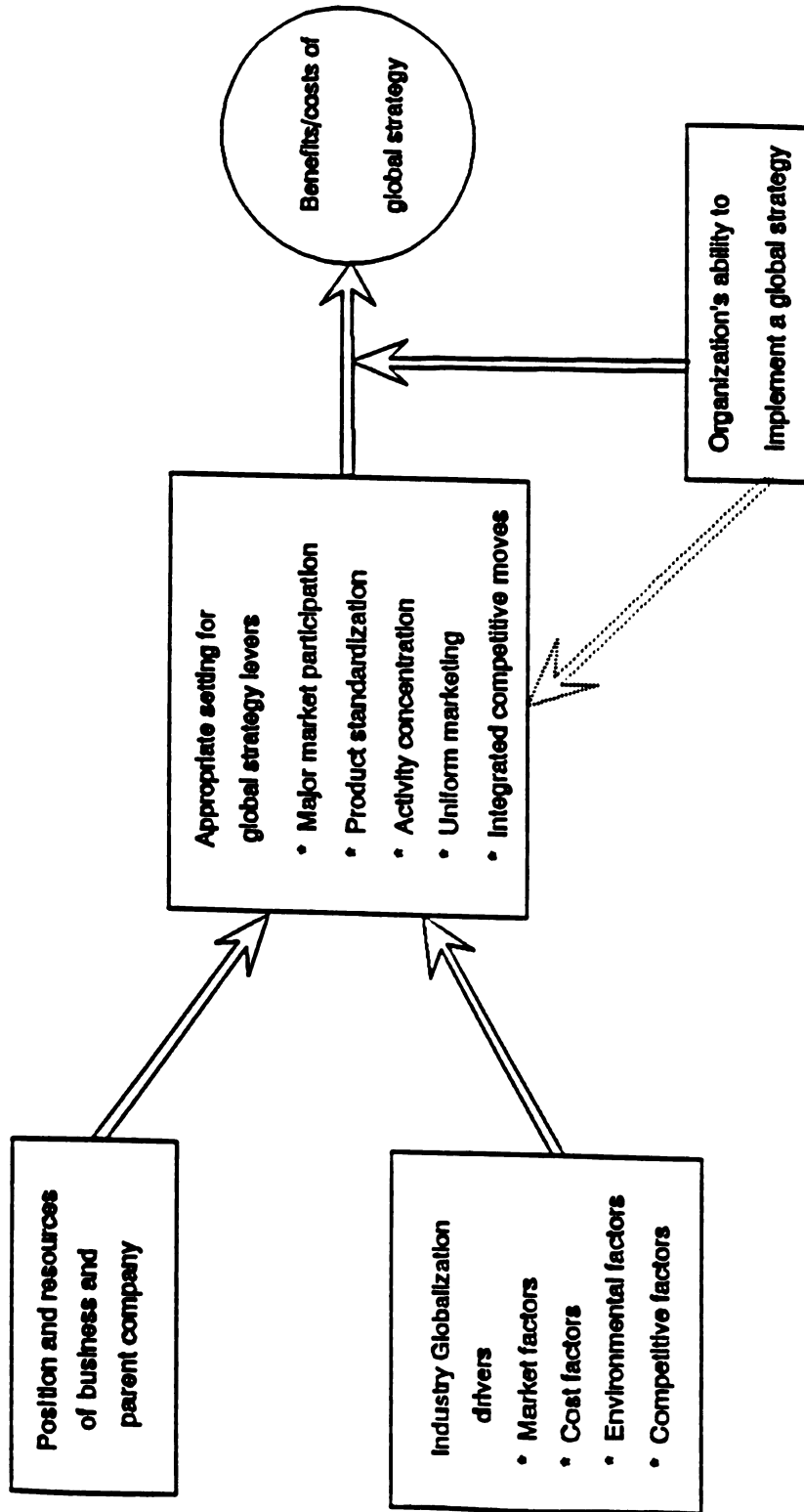
Figure 1.   Yip's (1989) Framework of Global Strategy Forces

strategy; revealed that businesses make much less use of global strategy than is indicated by the industry globalization drivers; and supported the notion that global strategy has positive performance implications. In sum, Yip (1991) reaffirmed the facts that there are diverse perspectives of global strategy and that industry globalization drivers are not the sole determinants of global strategy and performance.

Yip and Johansson (1993) extended the work by incorporating 18 Japanese business units into Yip's (1991) original sample and by adding a few organization structure variables and management process variables. They found that industry globalization drivers have the strongest influence on global strategy and performance; that U.S. and Japanese businesses differ in their perceptions of industry globalization drivers and the extent of using global strategy; and that differences in management processes largely account for the differences in how U.S. and Japanese businesses use global strategy.

Yip's (1989) framework is fairly comprehensive in scope and useful for practitioners in making global strategy decisions. Indeed, by viewing global strategy as a multidimensional construct, Yip implicitly integrated some rather diverse perspectives of global strategy. Specifically, his major market participation dimension captures Ohmae's (1985) triadic view of global competition. His product standardization dimension is identical to Levitt's (1983) global standardization thesis, and his concentration of value-adding activities dimension reflects Porter's (1986) configuration and Kogut's (1985) multimarket sourcing and production shifting. Similarly, Yip's uniform marketing dimension is consistent with the marketing standardization framework of Jain (1989) and Samiee and Roth (1992), and his integrative competitive moves

dimension is in line with the synergistic decision making of Hout et al. (1982) and the cross-subsidization of Hamel and Prahalad's (1985). Yet, Yip's (1989) five dimensions of global strategy do not appear to capture Porter's (1986) coordination of value-adding activities, which is a fundamental requirement for global strategy (Collis 1991). Therefore, by adopting Yip's five dimensions and adding Porter's (1986) coordination dimension, the diverse perspectives of global strategy can be successfully integrated.

Nevertheless, there are several weaknesses associated with the work of Yip (1989, 1991) and Yip and Johansson (1993). Theoretically, this work is in line with the IO economic theory by positing that industry globalization drivers determine global strategy, and it fails to incorporate internal organizational factors into the framework. Although Yip and Johansson (1993) did measure a few organizational structure and process variables. They did not elaborate, however, on the relevance of these variables to global strategy and did not attempt to specify the exact relationships between the internal and external variables and global strategy. In fact, their structure and process variables seem to have been selected without an *a priori* view as to how they fit into the normative contingency framework of Yip (1989). Not surprisingly, none of the models they explore fit the data adequately.

Another weakness of Yip (1989) is its lack of specificity in identifying the global strategy model. Except for the global strategy construct, all other constructs are broadly discussed. For example, industry globalization drivers are generally defined as related to cost, market, government, and competition, while business performance is broadly construed as the costs/benefits of global strategy. Exact relationships also are not specified, leaving little guidance for researchers who might attempt to test the validity

of the model. This problem with specificity can be seen in Yip (1991) and Yip and Johansson (1993) when they attempt to fit a number of possible operational models. Clearly, in both works the authors struggle to conclude which model is the most valid for global strategy, since their empirical results did not favor any particular one.

Methodologically, Yip (1991) and Yip and Johansson (1993) adopted a relatively weak research design. The samples used in both instances were rather heterogeneous, as manufacturing and service industries were included. Indeed, no systematic procedure was used to determine whether the industries are global. Since a global strategy is relevant only in global industries (Douglas and Wind 1987; Quelch and Hoff 1986; Samiee and Roth 1992), the inclusion of nonglobal industries in a sample inevitably would "inflate" variances in measures of global strategy and globalization drivers, and the conclusions drawn from the data might not be valid. Moreover, it has been demonstrated in the literature that there are fundamental differences between the strategies used by service firms and manufacturing firms (Bharadwaj et al. 1993; Erramilli and Rao 1993). Thus, grouping service and manufacturing firms in the same sample may be inappropriate for strategy research.

The small sample size in both studies (18 business units in the U.S. and Japan, respectively) does not allow for rigorous statistical analysis. Thus, Yip (1991) had to depend on a univariate t-test to assess the model. Similarly, the small sample may have affected the validity of Yip and Johansson's (1993) structural equation models, none of which fitted data adequately because in all models the chi-squares were significant and the fit indices (that is, Bentler-Bonnet fit index) were below .50. Hence, the small sample and lack of specificity may have significantly undermined the Yip and Johansson

(1993) study.

The work of Yip (1991) and Yip and Johansson (1993) is exploratory, an attempt to assess the usefulness of the IO-prescribed industry globalization drivers and the differences between U.S. and Japanese businesses' adoption of global strategy. The research was not guided by a sound theoretical framework and was not intended for theory development or testing. Thus, these studies can only be considered a preliminary assessment of Yip's (1989) global strategy framework. Further studies are required to test the framework.

Given the strengths and weaknesses, it is essential that Yip's (1989) promising framework be substantially extended. The integrated theoretical model of global strategy presented in Figure 2 builds on work in the areas of global strategy (for example, Bartlett and Ghoshal 1989; Hamel and Prahalad 1985; Hout et al. 1982; Levitt 1983; Porter 1986, 1991; Samiee and Roth 1992; Yip 1989, 1991; Yip and Johansson 1993), resource-based theory (for example, Barney 1989, 1991; Bartlett and Ghoshal 1991; Collis 1991; Conner 1991; Grant 1991; Lado et al. 1992; Prahalad and Hamel 1990; Wernerfelt 1984), marketing (for example, Jaworski and Kohli 1993; Kohli and Jaworski 1990), and corporate culture (for example, Barney 1986; Kotter and Heskett 1992). Essentially, this model postulates that such internal organizational factors as market orientation, organization culture, and international experience (resource-based view) not only affect global strategy and performance but also *moderate* the effects of industry globalization drivers (IO-based view) on global strategy and its effects on performance. *The link between the IO-based view and the resource-based view is the proposition that internal organizational factors (1) are relevant predictors of global strategy and performance and*

Internal Organizational Factors

* Market orientation
* Organization culture
* International experience

Global Strategy

* Global market participation
* Product standardization
* Uniform marketing program
* Integrated competitive moves
* Coordination of value-adding activities
* Concentration of value-adding activities

Global Business Performance

External Industry Globalization Drivers

* Emergence of global customers
* Potential economies of scale
* Similarity of government interventions
* Globalized competitors
* Technology intensity of industry

Figure 2.   The Proposed Integrated Theoretical Model of Global Strategy

(2) constrain an organization's ability to conceive global strategy (Barney 1991; Porter 1991; Wernerfelt 1984) *and to implement the chosen strategy* (Barney 1989, 1991).

Several features of the proposed model should be noted. First, the underlying unit of analysis for the proposed model is the individual business unit (BU) of multinational corporations (MNCs). While the model also can be used at the corporate level, it is argued that the business unit is a more appropriate focus for investigating global strategy, since many large MNCs are well-diversified businesses and individual BUs may face a diverse set of strategic challenges (Samiee and Roth 1992; Yip 1991). Second, the model is specified in operational form, with individual constructs properly identified. This specificity is advantageous compared to Yip's (1989) framework, which uses only broad categories of variables. Third, the model is grounded in both IO-based and resource-based theories and integrates the two perspectives. This is a much richer theoretical foundation than found in previous studies, based mainly on the IO theory. Fourth, consistent with Yip (1989), global strategy is conceptualized as a multidimensional construct, but one more dimension --coordination of value-adding activities-- is added to Yip's (1989) five dimensions. Thus, all influential perspectives of global strategy are integrated into the proposed model.

MODEL COMPONENTS

Global Strategy

Expanding on Yip (1989), global strategy is construed as a multidimensional construct with six major dimensions. For each dimension, a multidomestic strategy would seek to enhance worldwide performance by maximizing local competitive

advantage and profits, whereas a global strategy would seek to enhance worldwide performance through sharing and integration (Yip 1989).

The first dimension of global strategy is global market participation, the extent to which a business unit has operations in all major markets, such as in the Triad (the United States, Japan, and Europe). In a global strategy, country markets are selected for their strategic potential in the BU's market portfolio. This may mean entering a country market that is unattractive in its own right but that solidifies the BU's competitive positions in other country markets. To be globally competitive, a BU must have a presence in all major product markets in the world to increase sales volume for economies of scale (Levitt 1983), create global recognition of the product (Ohmae 1985), and provide multiple sites for attack and counterattack against major rivals (Porter 1986).

The second dimension of global strategy is product standardization, defined as the extent to which a product with virtually the same core design, major components, and other peripheral features, such as packaging and labeling, is sold by the BU across different country markets. In a multidomestic strategy, the product is customized to satisfy local customers' needs and preferences. In a global strategy, the high degree of product standardization exploits the significant economies of scale afforded by global operations (Levitt 1983) and facilitates global brand recognition and domination (Hamel and Prahalad 1985).

The third dimension of global strategy, uniform marketing, is defined as the extent to which a BU uses a standardized marketing approach across different country markets. The elements include market segmentation, product positioning, and all marketing mix variables, although not all elements of the marketing mix need to have the

same degree of standardization. This is in contrast with a multidomestic strategy whereby the BU fully tailors its marketing for each country market. The rationale for uniform marketing is that it reduces the costs of designing and implementing marketing programs; exploits talent, resources, and good ideas on a global scale; and reinforces marketing messages by exposing customers to the same stimuli in different countries (Jain 1989; Samiee and Roth 1992; Yip 1989).

The fourth dimension of global strategy is integrated competitive moves, that is the degree to which a BU has a concerted campaign against rivals across the country markets. The campaign includes making the same type of move in different countries at the same time or in a sequence, attacking a competitor in one country market in order to drain its resources from another country market, or countering a competitive attack in one country market with a corresponding attack in another. The benefits of integrated competitive moves are that more options are created by which the BU can leverage its competitive advantages across the markets and defend its competitive positions more effectively (Hout et al. 1982).

The fifth dimension of global strategy, coordination of value-adding activities, is the degree to which a BU systematically coordinates its worldwide activities in the area of sourcing, R&D, manufacturing, marketing, distribution, and service. Porter (1986) argues that the configuration and coordination of value chain activities are the essence of a global strategy. Hamel and Prahalad (1985) also contend that cross-subsidization (drawing resources from one country to compete in another) is a key requirement for success in global competition. To be able to cross-subsidize, the value-adding activities across the country markets must be systematically coordinated in a global strategy.

Coordination also allows optimal use of key resources and skills on a global scale so that suboptimal results can be avoided.

The last dimension of global strategy, concentration of value-adding activities, refers to the degree to which a BU's value-adding activities, including sourcing, R&D, manufacturing, marketing, distribution, and service, are concentrated in a few strategic locations. Porter (1986) discusses the importance of configuring these activities in such a way that strategic advantage can be gained. Thus, sourcing may be concentrated close to the supply of materials or key components, while manufacturing may be concentrated in countries with abundant low-cost skilled workers. A key in global strategy is to concentrate each value-adding activity in the most advantageous location so that duplication can be avoided, scale economies can be attained, differences in factor costs across countries can be exploited, more consistent quality control is possible, and cost advantage can be maintained independent of local conditions (Ohmae 1985; Porter 1986).

External Industry Globalization Drivers

Five constructs are used for the key external forces that drive globalization. These are consistent with Yip's (1989) cost, market, government, and competition categories as well as Levitt's (1983) technology axis that shapes world markets, but unlike Yip (1989), they are specified in operational form. While it is certainly true that many external forces may drive globalization, these five are selected because the literature repeatedly cites them as significant drivers and because some parsimony is necessary for proper empirical testing of the model. Nevertheless, the theory underlying the model is broad, and other factors can be incorporated into the model in future research.

The first construct, emergence of global customers, refers to the extent to which customers' needs and preferences for a BU's product are homogenized across the major world markets. This factor is considered by some to be the basic reason for pursuing a global strategy (for example, Douglas and Wind 1987; Levitt 1983). Indeed, Levitt (1983) believes that advances in communication and transportation have led to considerable homogenization, and global customers have emerged who are willing to abandon their cultural preferences for high-quality products at the lowest price. Thus, to succeed in global competition, businesses must achieve economies of scale by standardizing their products and marketing programs. Other researchers (for example, Hamel and Prahalad 1983; Jain 1989; Ohmae 1985; Yip 1989) regard global customers as fundamental if a global strategy is to succeed, since homogeneous customer needs make it easier to participate in major markets without having to modify the product, but they do not see the phenomenon as universal. Douglas and Wind (1987) warn that a global strategy can be pursued only when a business faces homogeneous demand in world markets.

Potential economies of scale refer to the cost reductions that can be attained by increasing business operations. Levitt (1983) forcefully argues that, with globalization of markets, the most important factor in success is the ability to achieve economies of scale through standardized product offerings and marketing activities. If potential economies of scale are high, participation in multiple markets will be desirable, and so will product standardization, concentrating value-adding activities in a few key locations, and adopting a uniform marketing approach across the world (Yip 1989). In addition, costs of integrated competitive moves and coordinated value-adding activities are more

likely to be offset by the savings from large-scale operations. Not surprisingly, a number of researchers (for example, Ghoshal 1987; Ohmae 1989; Porter 1986) consider economies of scale one of the major benefits of a global strategy.

Similarity of government interventions is defined as the comparability of host country regulations on foreign businesses, including tariff and nontariff barriers. While low barriers certainly are desirable, it is the comparability of barriers across country markets that affects businesses' global strategy (Bartlett and Ghoshal 1983; Yip 1989). The more similar these interventions, the easier and more desirable it is for a BU to participate in many markets, seek product standardization, use uniform marketing, and coordinate its worldwide value-adding activities. In the face of dissimilar interventions, a BU must customize its approach and use a multidomestic strategy.

Globalized competitors are those that compete on a global scale. They often participate in all major markets, configure and coordinate their worldwide value-adding activities in a way to gain overall competitive edge in the global market, and cross-subsidize their operations in different country markets. When faced with global competitors, a BU may have to match rivals' advantages in global operation or preempt their positions by participating in many country markets, standardizing its product and marketing activities to exploit economies of scale, concentrating and coordinating its value-adding activities to benefit from factor cost differentials and location advantages, and integrating its competitive moves to neutralize rivals' strength. Indeed, preempting major competition is considered a key benefit of a global strategy (Hamel and Prahalad 1983; Porter 1986; Yip 1989).

The technology intensity of an industry refers to the degree to which its products

and processes incorporate modern technology. As Levitt (1983) and Hax (1989) argue, technological advance is a major reason the world has become more homogeneous and global operation more feasible. Jain (1989) also claims that demand for high-tech products is homogeneous across the world, making standardization of marketing programs desirable. This argument was empirically verified by Cavusgil and Zou (1994) in a study of medium-sized exporting firms. They found that the technology intensiveness of an industry significantly affects a firm's decision to adapt its product in export markets. Furthermore, investment in technology has become very expensive (Harrigan 1987), and businesses have to recover the capital by operating in many major markets and concentrating development activities to cut costs (Hamel and Prahalad 1983; Yip 1989).

Internal Organizational Factors

While numerous internal factors may influence a BU's global strategy and performance, the key characteristics are those that are hard to imitate, difficult to substitute for, and more valuable within the BU than outside (Barney 1991; Porter 1991). To preserve the parsimony of the model for empirical testing, this research focuses on three factors cited as significant in previous strategy research (see Amit and Schoemaker 1993; Andrews 1971; Bharadwaj et al. 1993; Collis 1991; Douglas and Craig 1989; Kotter and Heskett 1992): market orientation, attributes of organization culture, and international experience.

Market orientation refers to the organization-wide generation of, dissemination of, and response to market intelligence (Kohli and Jaworski 1990; Jaworski and Kohli 1993). A market orientation is often thought to lead to improved performance the firm

that tracks customer needs and preferences and reacts to competitors' strategic moves can better satisfy customers and neutralize the attacks of rivals. Hence, market-oriented organizations can perform at higher levels. Jaworski and Kohli (1993), Lusch and Laczniak (1987), Narver and Slater (1990) all provide some support for the positive relationship between market orientation and business performance.

In the global context, a market orientation is particularly important if BUs are to succeed. This is so because they often confront seemingly diverse needs and preferences of customers from different countries. They also face competitors that are supported by governments, allied with financial institutions, focused on long-term global dominance, and spread across many country markets. The challenge for the BU is how to attain the benefits of global operation and simultaneously satisfy local customers' needs and preferences, while responding on a timely basis to the formidable strategic moves of global competitors. Market-oriented BUs in global industries are better positioned to track idiosyncratic customers and identify the commonality in diverse needs and preferences. Thus, they can balance the need to achieve global efficiency with the need to be locally sensitive. Market-oriented BUs also are capable of monitoring rivals continuously and of responding to attacks promptly. Therefore, a market orientation should relate positively to a BU's global market performance.

Culture generally is defined as the "totality of socially transmitted behavior patterns, arts, beliefs, institutions, and all other products of human work and thought characteristic of a community or population" (American Heritage Dictionary). Following Arogyaswamy and Byles (1987), Barney (1986), and Kotter and Heskett (1992), **organization culture** is defined as the values and ideologies that influence an

organization's beliefs and behaviors. Kotter and Heskett (1992) identify two levels of organization culture. At the less visible level are the values shared by the group that tend to persist over time even when group membership changes. At the more visible level are the behavior patterns or style of an organization that new employees are automatically encouraged to follow by their fellow employees. In other words, the values and ideologies at the core of organizational culture are manifested through beliefs, behavioral patterns, and style of management.

Organization culture has been found to influence a BU's performance significantly (Kotter and Heskett 1992; Peters and Waterman 1982). Indeed, under certain conditions, it can reach what Arogyaswamy and Byles (1987) term "internal and external fits" and become a source of sustainable competitive advantage (Barney 1986). Culture is a very broad construct and difficult to measure. Drawing on the work by Kotter and Heskett (1992), this research focuses on three key attributes of organization culture: strength, global orientation, and adaptiveness.

According to Kotter and Heskett (1992), there are at least three theories that explain why culture significantly affects performance. The most widely accepted is the *strong culture theory*. In a strong culture, most of the organization's managers share a set of consistent values and methods of doing business, which may be explicitly stated in the mission statement of the organization, and the roots go very deep. A strong culture leads to positive business performance because of: (1) close goal alignment (that is, employees march to the same goals); (2) high motivation (that is, employees are committed, loyal, and work hard); and (3) needed structure and control (but not a stifling formal bureaucracy that can dampen motivation and innovation) (Kotter and Heskett

1992). Support for the strong culture theory comes from the Peters and Waterman (1982) study of America's best-run corporations.

The *culture content theory* asserts that the particular kind of values and behaviors embraced by the organization culture is equally important as, if not more so, its strength. Furthermore, a culture enhances performance only if it fits well into its internal and external contexts (Arogyaswamy and Byles 1987) and is compatible with business strategy. In the context of a global strategy, compatibility is achieved if the organization culture promotes a global orientation, rewards information sharing among country subsidiaries, and encourages concerted efforts from different subsidiaries.

The *adaptive culture theory* maintains that only cultures which can help businesses anticipate and respond to environmental changes are likely to lead to sustained superior performance (Kotter and Heskett 1992). Research (for example, Fitzgerald 1988; Kotter and Heskett 1992) has shown that organizations with nonadaptive cultures are usually very bureaucratic; people are risk averse, reactive, and not creative; information does not flow quickly or freely; and employees lack motivation and drive. These attributes will lead to poor long-term performance. In contrast, an adaptive organization culture can result in superior performance because (1) the business strategy is always "coaligned" (see Venkatraman and Prescott 1990) with both external and internal environments, so that opportunities can be exploited and threats and weaknesses can be avoided, and (2) employees are highly motivated to achieve organization's goals and thus will take initiative, assume necessary risk, and share information with others in the organization.

The effect of a BU's **international experience** is addressed in Douglas and Craig's (1989) "three-stage evolution framework" of international marketing strategy.

Essentially, they posit that as a BU accumulates experience abroad, its strategy will evolve through three major stages: initial foreign market entry, expansion of national markets, and global rationalization. Since the most experienced BUs are likely to have a "geocentric" orientation, regarding the whole world as a single marketplace (Douglas and Craig 1989), they are better positioned than others to pursue a global strategy. The relationships between international experience and marketing strategy and between international experience and performance have been empirically verified by Cavusgil and Zou (1994), and Cavusgil et al. (1993).

Global Business Performance

Traditional measures of business performance focus on economic or financial measures, such as sales, sales growth, and profits (see Szymanski et al. 1993). In today's international environment, however, it has been argued that many BUs have a set of strategic goals in addition to the traditional financial goals (for example, Cavusgil and Zou 1994; Porter 1980, 1986; Bharadwaj et al. 1993). Achievement of strategic goals, such as improving overall competitive position, keeping a presence in a key market to enhance competitiveness, increasing global market share, or securing access to factor inputs, is an important performance criterion. Therefore, in this research, business performance is conceived as having both a financial and a strategic aspect. Implementation of a global strategy is believed to affect both of these performance dimensions.

RESEARCH HYPOTHESES

Based on the above discussion and the integrated theoretical model of global strategy, two groups of research hypotheses have developed. In the first group are main-effect hypotheses that link criteria variables to predictor variables. In the second group are interaction-effect hypotheses that explicitly state the moderating effects of internal organizational factors.

Main Effects:

H1.   In global industries, the global business performance of a BU is positively related to each dimension of its global strategy (that is, global market participation, product standardization, uniform marketing, integrated competitive moves, coordination of value-adding activities, and concentration of value-adding activities).

H2.   In global industries, the global business performance of a BU is positively related to its internal organizational factors, including intelligence generation activities, intelligence dissemination activities, responsiveness to market, strength of organization culture, global orientation of organization culture, adaptiveness of organization culture, and international experience.

H3.   In global industries, each dimension of global strategy (that is, global market participation, product standardization, uniform marketing, integrated competitive moves, coordination of value-adding activities, and concentration of value-adding activities) is positively related to external industry globalization drivers, including emergence of global customers, potential economies of scale, similarity of

government interventions, globalized competitors, and technology intensity of industry.

H4.   In global industries, each dimension of global strategy (that is, global market participation, product standardization, uniform marketing, integrated competitive moves, coordination of value-adding activities, and concentration of value-adding activities) is positively related to internal organizational factors, including intelligence generation activities, intelligence dissemination activities, responsiveness to market, strength of organization culture, global orientation of organization culture, and international experience, but each dimension is negatively related to the adaptiveness of organization culture.

Interaction Effects:

H5.   In global industries, the relationship between global business performance and each dimension of global strategy is moderated by internal organizational factors, including intelligence generation activities, intelligence dissemination activities, responsiveness to market, strength of organization culture, global orientation of organization culture, adaptiveness of organization culture, and international experience.

H6.   In global industries, the relationship between global strategy and external industry globalization drivers is moderated by internal organizational factors, including intelligence generation activities, intelligence dissemination activities, responsiveness to market, strength of organization culture, global orientation of organization culture, adaptiveness of organization culture, and international experience.

CHAPTER 4

RESEARCH DESIGN

OVERALL DESIGN

The proposed theoretical model integrates the rather diverse perspectives of global strategy and links IO-based and resource-based theories. To test the model empirically, a cross-industry field survey of business units (BUs) competing in global industries was conducted to collect the primary data. As noted earlier, BUs rather than the multinational corporations (MNCs) were selected because most modern MNCs are so well diversified that different BUs within the same MNC face a diverse set of globalization drivers, have varied internal organizational characteristics, and pursue different worldwide strategies. A focus on the MNCs' global strategy and performance inevitably would introduce measurement errors, and possibly would invalidate the research findings. Global industries were selected because, as suggested by Samiee and Roth (1992), BUs competing in those industries are in the best position to pursue a global strategy. Within global industries, external industry forces transcend national boundaries and drive markets toward globalization. To be competitive, BUs in global industries may seek to attain the benefits that a global strategy offers.

Globalization potential may vary, however, due to the idiosyncratic characteristics of industries (Yip 1989, 1991), creating variances in external industry globalization drivers. In addition, BUs often are endowed with different levels of managerial competence, different types of organization culture, and different amounts of international experience. They also may pursue different strategies and attain different levels of

performance. Thus, a cross-industry field survey is a valid research design for testing the proposed model because the design systematically generates variances in all the model constructs.

SAMPLING FRAME

Global industries were identified by adapting the three-stage process suggested by Samiee and Roth (1992). First, a thorough review of the globalization literature (for example, Bartlett and Ghoshal 1987; Collis 1991; Hamel and Prahalad 1985; Hout et al. 1982; Porter 1980, 1986; Roth et al. 1991; Samiee and Roth 1992; Yip 1989, 1991; Yip and Johansson 1993) revealed that more than 40 industries have been mentioned as global industries. Second, a decision was made to focus only on manufacturing industries since the literature revealed a fundamental difference between the strategy of service firm and manufacturing firm (for example, Erramilli and Rao 1993). Agriculture, mining, construction, and service industries were excluded to keep the sampling frame. This reduced the list of global industries to 28. Third, as in Samiee and Roth (1992), the trade ratio of each industry was examined, since a high level of intraindustry trade is necessary for an industry to be global (Porter 1986). In contrast to Samiee and Roth (1992) who used a 50:50 trade ratio (that is, 50 percent intraindustry and 50 percent interindustry) as the minimum limit to control for the global nature of industries, this study relaxed the restriction to 30:70. This was done because it was felt that the 50:50 ratio was an arbitrary figure and was too high. Adoption of this restriction would have excluded some global industries (for example, certain chemical industries, automotive components, and computers) from the list. The application of the 30:70 trade ratio

resulted in 23 global industries. Fourth, following Samiee and Roth (1992), the remaining global industries were examined to ascertain whether a key competitor exists in each. The rationale is that at least one BU must be competing globally in order for the industry to be global (Hamel and Prahalad 1985; Porter 1986). It was found that all 23 industries have at least one global competitor, and presumably this was the reason previous researchers labelled these industries as global.

The 23 global industries that resulted from this process were: Typesetting machinery (2791), Pharmaceutical preparations (2834), Soap & other detergents (2841), Perfumes, cosmetics & other toilet preparations (2844), Pesticides & agricultural chemicals (2879), Oil & gas field machinery & equipment (3533), Textile machinery (3552), Ball & roller bearings (3562), Electronic computers (3571), Computer peripheral equipment (3577), Scale & balances (3596), Household refrigerators & freezers (3632), Household appliances (3639), Household audio & video equipment (3651), Semiconductors & related devices (3674), Passenger automobiles (3711), Automotive parts (3714), Civilian aircraft (3721), Aircraft parts & auxiliary equipment (3728), Electromedical apparatus (3845), X-ray apparatus (3844), Photographic equipment & supplies (3861), and Watches, clocks & parts (3873).

Within these industries, 434 BUs were identified through Dun and Bradstreet's America's Corporate Families and The Directory of Corporate Affiliations. These sources list two (2) contacts (including name, title, address, and phone number) for each BU, usually the CEO or president and either the vice president for international operations or the vice president for strategic planning, or a person holding a similar post. Annual sales and number of employees of the BUs are also available from Dun and

Bradstreet's database.

Four criteria were used to identify the 434 BUs. First, the BU (that is, division and subsidiary) had to be based in the United States, although the parent company could be based in elsewhere. Second, the BU had to have operations in Japan or Europe, in addition to the United States. Third, the BU had to have at least 200 employees. Finally, total annual sales of the BU had to total at least $20 million. These criteria were considered necessary to enhance the relative homogeneity of the sample and were consistent with the focus of this research, namely, the large BUs of MNCs.

QUESTIONNAIRE AND MEASURES

A structured survey questionnaire was developed in several stages. First, the relevant literature on globalization, strategy, marketing, and management was searched for the verified scale items that measure the constructs in the model. While a few have been developed, such as Jaworski and Kohli's (1993) market orientation scales, most are simply unavailable. Empirical studies in the areas of global strategy and resource-based theory are very limited, and much of the existing work relies on case studies. Thus, it was decided both to adapt existing scales and to develop new ones.

Second, a bank of items potentially useful for measuring the proposed constructs was gathered from the conceptual and empirical literature on global competition, strategy, and organizations. These items were then expanded into Likert-type statements answered on a seven-point scale ranging from "strongly disagree" (1) to "strongly agree" (7).

Third, personal interviews were conducted with three MNC executives responsible

for international operations and with four academicians familiar with global strategy, organization, and marketing research. Alll were asked to evaluate whether the statements were (1) meaningful, understandable, "loaded", or offensive and (2) valid measures of the proposed constructs in the model. Based on the interview feedback, some statements were dropped; others were substantially modified; and a few new items were added to the list.

Fourth, the revised list were sent back to the same executives and academicians to see whether they were satisfied with the modifications. Except for a few minor suggestions, the modified list was acceptable. The minor changes were made, and the Likert-type statements were put into a questionnaire format.

Fifth, as a further pretest, 12 BUs were randomly chosen from the 434 in the sampling frame. The preliminary questionnaire was sent to the CEO/president of each for an evaluation of the questionnaire length, the time needed to complete it, and the content of individual items. The questionnaire also was sent to three "expert researchers" in the global strategy area for an evaluation. Three questionnaires were returned by the CEOs, two completely filled out and commented upon, one with partial comments. Suggestions were received from all three of the researchers. Finally, the questionnaire was finalized based on the pretest feedback and the experts' comments.

Therefore, some scales used to measure the proposed constructs were adapted from previous research, while others were newly developed for this research. With the exception of the classification questions and the scale items measuring activity concentration and coordination, all items used the seven-point Likert-type scale to register responses. The rationale was that, compared to other kinds of scales, a Likert type

minimizes the response cost (in time and effort) to executives (Dillman 1978). This is an important factor in view of the difficulty in obtaining responses from CEOs and top managers in modern business research. Coordination of value-adding activities was measured by a seven-point bipolar scale ranging from "not coordinated at all" (1) to highly coordinated" (7) with respect to ten value-chain activities. A similar scale, ranging from "dispersed" (1) to "concentrated" (7), was used to measure concentration with respect to the ten value-chain activities.

Following Dillman's (1978) suggestion, the finalized questionnaire was printed as a booklet. The cover page indicated the focus of research as international business strategy and the sponsoring party as the Center for International Business Education and Research at Michigan State University (MSU-CIBER). The second page provided instructions. Respondents were asked to refer to **the most important product (or product line) of their business unit** when completing the questionnaire. Key terms and scales were also defined and explained. The main text of the questionnaire started on the following page.

The questionnaire contained five major sections of variables. In the first section, respondents were instructed to indicate their degree of agreement or disagreement with statements concerning the external environment of their business unit at the time of their last strategic planning (or three years ago if they did not conduct strategic planning). These items sought to measure the external industry globalization drivers. In the second section, respondents we aksed to indicate how their business unit had conducted international business operations since their last strategic planning (or in the past three years if they did not conduct strategic planning), using seven-point scales. In the third

section, respondents were instructed to assess the business unit's performance in the global market since the last strategic planning (or in the past three years if they did not conduct strategic planning), using ten seven-point Likert scales. In the fourth section, respondents were requested to indicate their degree of agreement or disagreement with statements regarding the internal organizational characteristics of the business unit at the time of the last strategic planning (or three years ago if they did not conduct strategic planning). In the last section, respondents were asked to complete eight classification questions.

DATA COLLECTION

Data collection involved two phases. In the initial phase, a personalized cover letter, a questionnaire, and a postage-paid business reply envelop were sent to the CEO/president and vice-president (VP) for international operations or for strategic planning of each of the 422 BUs remaining in the sampling frame (12 had been used for the pretest). The cover letter explained the purpose of the research and its significance to international business management, stated the importance of participation in the study, described the time and effort needed to complete the questionnaire, assured confidentiality, promised a summary report if the completed questionnaire was returned with a business card, and thanked the executive in advance for his/her participation.

Three weeks after the initial mailing, seventy-eight (78) completed questionnaires had been returned. Among these, 25 were completed by the CEO/president, 30 by the VP for international operations, 14 by the VP for strategic planning, and 9 by other VPs. (These nine originally were sent to the CEO/president, who presumably passed the

questionnaire to the VPs; most of them had the title of VP for human resource development or VP for public relations). Among the 78 responses, there were six overlapping cases, that is, both the CEO/president and the VP of the same BU returned a completed questionnaire. Another 15 questionnaires were returned as undeliverable due to the wrong mailing address, because the addressee had retired, or because the addressee was with the BU. A number of phone calls and letters were also received saying that participation was not possible due to company policy, time constraint, or lack of interest.

The second phase started three weeks after the initial mailing. A personalized cover letter, a replacement copy of the questionnaire, and a postage-paid business reply envelop were sent to those who had not responded. The cover letter restated importance of participation and urged the executive to take some time to complete and return the enclosed questionnaire. The questionnaire and the business-reply envelop were identical to that sent in the initial mailing. Four weeks later, another 48 completed questionnaires had been returned. Among these, 17 were completed by the CEO/president, 19 by the VP for international operations, 11 by the VP for strategic planning, and 1 by the VP for human resource management.

Overall, 126 completed questionnaires were received, 42 from CEOs/presidents and 84 from VPs. In total, there were 14 overlapping cases.

CHAPTER 5

ANALYSES AND FINDINGS

ANALYTICAL APPROACH

A multistep approach to data analysis is adopted in this research. First, potential nonresponse bias is assessed by comparing responding BUs with nonresponding BUs, and responding BUs to the first mailing with those to the second mailing, in terms of sales and number of employees. Second, potential informant bias is assessed by comparing the pattern of responses of the CEO/president to that of the VP for each of the 14 overlapping cases. A decision then is to be made in terms of whether the CEO/president sample can be pooled with the VP sample for analysis. Third, the descriptive statistics for all scale items are calculated, and potential nonnormality problems are assessed. Fourth, the reliability of the constructs pertaining to the external industry globalization drivers, internal organizational characteristics, global strategy, and performance is evaluated and the measurement model is purified. Fifth, a test of the research hypotheses is conducted through regression analysis.

RESPONSE RATE AND NONRESPONSE BIAS

Among the 422 BUs contacted, there were 15 undeliverable and 23 BUs that indicated inability or unwillingness to participate. Out of the 126 completed questionnaires returned, 28 were completed by the CEO/president and VP of the same BU. Thus, 112 separate BUs participated, an overall effective response rate of 29.1 percent (112/384) (or 27.5 percent if the 23 BUs that indicated inability or unwillingness

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to participate were counted as nonresponse). In terms of the CEO/president group, 42 responses yielded a response rate of 10.9 percent, but if the 10 VPs who responded on behalf of the chief executive are included, the response rate is 13.5 percent. In terms of the VP group, 74 responses yielded a response rate of 19.2 percent.

As a preliminary step, potential nonresponse bias was assessed by comparing the responding with nonresponding BUs, as well as BUs responding to the first mailing with BUs responding to the second, in terms of annual sales and number of full-time employees. While it is true that BUs can differ in many other ways, these were the only comparative data available for the responding and nonresponding groups. Moreover, it is a common practice in business research to compare such groups with respect to sales and number of employees.

Table 1 reports the results of the t-test comparisons. Based on average annual sales, BUs responding to the first mailing were larger than those responding to the second, but the difference was not statistically significant ($t = 1.10$, $p > .27$). Similarly, based on average number of employees, BUs responding to the first mailing were larger than those responding to the second, but the difference also was not statistically significant ($t = 1.49$, $p > .13$). In the other category of comparison, responding BUs were larger than nonresponding BUs, and the difference was statistically significant for annual sales ($t = -2.37$, $p < .02$) but not for number of employees ($t = -1.88$, $p > .05$). It can be concluded that there is no strong evidence of nonresponse bias, and the sample is fairly representative of the BUs in the sampling frame.

Table 1. Assessment of Nonresponse Biases

Characteristics	Category	Mean	t-Value	Sig. Level
Annual Sales	BUs from 1st Mailing	496.5m	1.10	.273
	BUs from 2nd Mailing	132.9m		
Number of Employees	BUs from 1st Mailing	1.64k	1.49	.139
	BUs from 2nd Mailing	0.889k		
Annual Sales	Responding BUs	389.4m	-2.37	.018
	Nonresponding BUs	153.7m		
Number of Employees	Responding BUs	1.42k	-1.88	.060
	Nonresponding BUs	0.966k		

INFORMANT BIAS AND THE ANALYSIS SAMPLE

For the 14 overlapping cases, analysis was performed to compare the pattern of response of the CEO/president and the VP in each of the BUs to determine whether the pattern is consistent and what proportion of responses are opposed. First, for each of the 14 BUs, a correlation coefficient was computed between the CEO/president's response to 130 questions measured by seven-point Likert scales and the VP's response to the same 130 questions. The higher the correlation coefficient, the more consistent is the pattern of response of the CEO/president with that of the VP. As Table 2 shows, the 14 correlation coefficients are all positive, and 10 are statistically significant at the .05 level. It can be concluded that the response pattern of CEOs/presidents is fairly consistent with that of the VPs.

Second, the percentage of questions to which the two informants gave opposing answers (that is, one informant agreed but the other disagreed) also was calculated for each of the 14 BUs. As Table 2 indicates, except for three BUs, all percentages are below 30 percent, suggesting no strong evidence of opposition between the CEO/president's responses and the VP's responses. Because the respondents were instructed to complete the questionnaire with reference to the most important product or product line of the BU, it is possible that the two informants focused on different products when completing the questionnaire. Thus, the consistency levels between the CEO/president and VP are fairly high.

It is concluded that since no significant informant bias exists in the 14 overlapping cases, the CEO/president subsample and VP subsample can be pooled for further analysis and hypothesis testing. Specifically, for the 14 BUs with two informants, the

Table 2. Agreement Between The Two Key Informants

The Business Unit	Correlation between CEO/President and VP Across 130 Questions	Percentage of Opposing Responses by CEO/President and VP
Business Unit #1	.2222ᵃ	18.5%
Business Unit #2	.1425	33.0%
Business Unit #3	.5662ᵃ	12.3%
Business Unit #4	.5297ᵃ	19.3%
Business Unit #5	.4464ᵃ	22.3%
Business Unit #6	.1236	20.7%
Business Unit #7	.1995ᵃ	27.0%
Business Unit #8	.0929	33.8%
Business Unit #9	.5996ᵃ	16.9%
Business Unit #10	.3294ᵃ	26.2%
Business Unit #11	.5320ᵃ	13.8%
Business Unit #12	.0051	38.5%
Business Unit #13	.3439ᵃ	25.4%
Business Unit #14	.3044ᵃ	18.4%

ᵃ --- significant at .05

CEO/president responses were retained and the VP responses were excluded from further analysis. The rationale was that because response patterns are fairly consistent, and because the CEO/president supposedly is most knowledgeable about all aspects of a BU's operations, the CEO/president is the most qualified informant.

Table 3 summarizes the major characteristics of the final sample of 112 separate BUs. They are all based in the United States, and their parent company is based in the Triad: 72 (64.3 percent) in North America, 19 (17.0 percent) in Europe, and 21 (18.8 percent) in Japan. In addition, 59 of the BUs (52.7 percent) have a separate international business department to handle international operations, whereas 53 (47.3 percent) do not. In terms of product category, 17.9 percent of the sample can be classified as consumer products, 45.5 percent as industrial products, and 34.8 percent as both consumer and industrial products. Annual sales of the sample average $389.4 million, and the number of full-time employees averages 1,420.

DATA QUALITY AND RELIABILITY OF CONSTRUCTS

Appendix 1 lists the items in the mail questionnaire used for data collection. To assess data quality, the means, standard deviations, kurtosis, and skewness of each item were computed; the information is reported in Appendix 2. In the first column of Appendix 2, the item number listed is identical to that listed in Appendix 1. The second column contains the item means, which fall between 2.50 and 6.00 on a seven-point scale. With a score of 4 indicates neutral (neither agree nor disagree), the means indicate that respondents agree with some items but disagree with others.

A close examination of the fourth column in Appendix 2 reveals that kurtosis for

Table 3. Summary Characteristics Of The Analysis Sample

Characteristics		Cases	Percent
Responses From	First Mailing	72	64.3
	Second Mailing	40	35.7
Region of Parent Company	US / Canada	72	64.3
	Europe	19	17.0
	Japan	21	18.8
	Other	0	0.0
Business Units That Have	A Separate IB Department	59	52.7
	No Separate IB Department	53	47.3
Product Category	Consumer Products	20	17.9
	Industrial Products	51	45.5
	Both Consumer & Industrial	34	34.8
	Other	2	1.8
Title of Respondents	CEO/President	42	37.5
	VP International	39	34.8
	VP Strategy/Planning	22	19.7
	Other VPs	9	8.0

the overwhelming majority of is below 1.00. Of the 24 items for which kurtosis is greater than 1.00, only V46 and V50 have kurtosis approaching 2.00, a level beyond which nonnormality of distribution becomes a concern. Similarly, the fifth column in Appendix 2 reveals that the skewness of all items is smaller than 2.00, far smaller than the lower bound of concern of 5.00. Therefore, the kurtosis and skewness of the items provide no indication that the variables used in this research are distributed nonnormally.

Each construct in the proposed model was measured by multiple items in the mail questionnaire. To assess the reliability of the constructs, a coefficient alpha was computed for each construct. Although most of the coefficients are high, three are between .500 and .600, that is, below the minimum acceptable level of .600 (Nunnally 1967). Hence, it was decided to purify the measurement model by dropping items with low item-factor correlation and thus improve the internal consistency of the scales. After purification, the coefficient alpha was computed again for each construct, and after correction for attenuation, item-factor correlations also were computed, as shown in Table 4. The first column of Table 4 lists the constructs and their notations. The second column lists the items which measure the corresponding constructs in the first column. These items are identical to those listed in Appendix 1. The third column reports the item-factor correlation after correction for attenuation. The last column reports the coefficient alpha for the constructs.

For the five external industry globalization drivers, the coefficient alphas for globalized competitors and technology intensity of industry are greater than .700, while those for emergence of global customers, potential economies of scale, and similarity of government interventions are above .600. Thus, reliability is adequate for the five

Table 4. Construct Reliability Estimates

Construct Label	Items	Item-Total Correl.	Coeff. Alpha
Globalized Competitors (GLOBCOMP)	V1	.3695	.7400
	V2	.6186	
	V3	.6077	
	V4	.5522	
Similarity of Government Interventions (SIMILREG)	V6	.4509	.6215
	V7	.4509	
Emergence of Global Customers (GLOBCUST)	V11	.3360	.6121
	V13	.2859	
	V14	.4837	
	V15	.4730	
Potential Economies of Scale (ECONSCAL)	V16	.4441	.6133
	V17	.4676	
	V18	.3797	
Technology Intensity of Industry (TECHINTY)	V19	.6055	.8014
	V20	.6181	
	V21	.5632	
	V22	.7192	
Global Market Participation (MKTPART)	V25	.8482	.8788
	V26	.6761	
	V27	.7858	
Product Standardization (PRODSTAN)	V28	.5449	.7877
	V29	.7343	
	V30	.6770	
	V31	.4559	
Uniform Marketing (UNIFMKTG)	V32	.2721	.6357
	V33	.3402	
	V34	.3457	
	V35	.5404	
	V36	.5561	
	V37	.2458	
	V38	.2872	
	V39	.0683	
	V40	.2759	

Table 4 (cont'd)

Integrated Competitive Moves (INTGCOMP)	V41	.4562	.6479
	V42	.4342	
	V43	.3211	
	V44	.5191	
Coordination of Value Activities (COORDINA)	V45	.5444	.8496
	V46	.3447	
	V47	.6987	
	V48	.6863	
	V49	.6316	
	V50	.5219	
	V51	.4990	
	V52	.4988	
	V53	.5536	
	V54	.5287	
Concentration of Value-Activities (CONCENTR)	V55	.6306	.8741
	V56	.4043	
	V57	.7197	
	V58	.7380	
	V59	.6982	
	V60	.5440	
	V61	.5878	
	V62	.4879	
	V63	.6097	
	V64	.5173	
Performance (PERFORM)	V65	.7202	.9170
	V66	.7976	
	V67	.7123	
	V68	.8016	
	V69	.7416	
	V70	.4893	
	V71	.6589	
	V72	.7318	
	V73	.6239	
	V74	.6507	
Market Orientation-Intelligence Generation	V75	.4491	.6874
	V76	.4849	
(INTELGEN)	V77	.5812	

Table 4 (cont'd)

Market Orientation-Intelligence Dissemination	V78	.5673	.7802
	V79	.5736	
(INTELDIS)	V80	.3611	
	V81	.6158	
	V82	.5882	
	V83	.4564	
Market Responsiveness (RESPONSI)	V113	.7104	.7785
	V114	.7440	
	V115	.5097	
	V116	.5110	
	V117	.4736	
	V118	.2673	
Strength of Organization Culture (CSTRENGT)	V84	.4920	.7102
	V85	.4677	
	V86	.5942	
	V87	.4365	
	V88	.3713	
Global Orientation of Organization Culture	V89	.3425	.6823
	V90	.4738	
(CORIENTA)	V91	.5363	
	V92	.4082	
	V93	.4343	
	V94	.2956	
Adaptiveness of Organization Culture	V95	.5374	.6631
	V96	.5892	
(CADAPTIV)	V97	.3184	
International Experience (INTEREXP)	V128	.6996	.7683
	V129	.6118	
	V130	.5073	

external industry globalization drivers. Four of the six dimensions of global strategy (that is, global market participation, product standardization, coordination of value-adding activities, and concentration of value-adding activities) have high coefficient alpha, suggesting the high reliability of these constructs. The coefficient alphas for the other two (that is, uniform marketing and integrated competitive moves) are above .600 and thus are acceptable for further analysis.

The ten-item performance scale is very reliable, as indicated by its high coefficient alpha of .917 and high item-factor correlations. The three dimensions of Jaworski and Kohli's (1993) market orientation scales --intelligence generation activities, intelligence dissemination activities, and responsiveness to market-- have coefficient alphas of .687, .780, and .778, respectively. Thus, these dimensions are adequately reliable. Moreover, with a coefficient alpha of .768, the international experience construct is also reliable. The scales developed in this research to measure the three characteristics of organization culture (that is, strength, global orientation, and adaptiveness) are adequately reliable, with respective coefficient alphas of .710, .682, and .663, all surpassing the minimum acceptable level of .600. Therefore, all seven internal organizational factors are adequately reliable.

GLOBAL BUSINESS PERFORMANCE: Main Effects

Based on hypothesis H1, it is predicted that the global business performance of a BU is positively related to each dimension of global strategy. Regression analysis was used to test this hypothesis, that is, global business performance was regressed on each of the six dimensions of global strategy. The regression beta weight and its significance

level are reported in Table 5 for all six dimensions.

As can be seen from Table 5, global market participation, integrated competitive moves, and coordination of value-adding activities all have a positive influence on performance. These effects are statistically significant at the .05 level. In addition, product standardization and uniform marketing also influence global business performance, but they are significant only at the .10 level. The effect of concentration of value-adding activities on performance is positive but not statistically significant. Using the "vote-counting" criterion whereby the number of significant effects as a percentage of the total number of effects is computed to determine the amount of support for the hypothesis, hypothesis H1 is strongly supported; in other words, global strategy has a positive and significant effect on a BU's performance. When listed in descending order, the most significant dimensions for performance are global market participation, integrated competitive moves, coordination of value-adding activities, product standardization, and uniform marketing.

To test the main effect hypothesis H2, which predicts that a BU's performance will be positively related to its internal organizational factors, regression analysis also was performed and is reported in Table 5 as well. Except for adaptiveness of organization culture, which has no significant effect on performance, all other internal organizational factors are positively and significantly related to performance. Based on the size of regression beta weight, the most significant factors in descending order of importance are intelligence generation, a global orientation, intelligence dissemination, international experience, responsiveness to market, and strength of organization culture. Again using the "vote-counting" criterion, hypothesis H2 is strongly supported; in other

Table 5. **Key Determinants of Global Business Performance**

Factor	Regression Beta Weight	Significance Level (p <)
Global Market Participation	.4839	.001
Integrated Competitive Moves	.2063	.029
Coordination of Value-Adding Activities	.2004	.034
Product Standardization	.1749	.065
Uniform Marketing	.1655	.082
Concentration of Value-Adding Activities	.0895	.348
Intelligence Generation Activities	.4410	.001
Global Orientation of Organization Culture	.3996	.001
Intelligence Dissemination Activities	.3782	.001
International Experience	.3323	.001
Responsiveness to Market Demands	.3254	.001
Strength of Organization Culture	.2765	.004
Adaptiveness of Organization Culture	.0957	.316

words, performance is influenced significantly by a BU's market orientation, organization culture, and international experience.

GLOBAL STRATEGY: Main Effects

According to hypothesis H3, it is predicted that each dimension of global strategy is positively related to external industry globalization drivers. To test this hypothesis, the six dimensions of global strategy were regressed on the five external industry globalization drivers. The regression beta weights and their significance are reported in Table 6.

As revealed by Table 6, global market participation (MKTPART) is positively related to all five external industry globalization drivers, but only its relationship to emergence of global customers (GLOBCUST) and to potential economies of scale (ECONSCAL) is statistically significant. The relationship between global market participation and similarity of government interventions (SIMILREG), globalized competitors (GLOBCOMP), and technology intensity of industry (TECHINTY) is not statistically significant.

Product standardization (PRODSTAN) is positively and significantly related to emergence of global customers, potential economies of scale, and technology intensity of industry. Its relationship to similarity of government interventions and to globalized competitors is positive but not statistically significant.

Uniform marketing (UNIFMKTG) is positively and significantly related to four of the globalization drivers: emergence of global customers, potential economies of scale, similarity of government interventions, and globalized competitors. The relationship

Table 6.   Determinants of Global Strategy: Regression Beta Weight

Dependent Variable --> Indep. Var.	MKTPART	PRODSTAN	UNIFMKTG	INTGCOMP	COORDINA	CONCENTR
GLOBCUST	.2190ᵃ	.2629ᵃ	.3451ᵃ	.0682	.1689ᵇ	-.0365
ECONSCAL	.2485ᵃ	.2885ᵃ	.1609ᵇ	.2319ᵃ	.2154ᵃ	-.0717
SIMILREG	.0437	.0206	.1810ᵇ	.0892	.0450	.0442
GLOBCOMP	.0949	.1143	.1729ᵇ	.2837ᵃ	.1722ᵇ	.1376
TECHINTY	.1402	.2349ᵃ	-.0582	.1241	.2844ᵃ	.0048
INTELGEN	.2689ᵃ	.0213	.0765	.1865ᵃ	.2915ᵃ	.0095
INTELDIS	.2909ᵃ	.0648	.0476	.3560ᵃ	.2863ᵃ	-.0883
RESPONSI	.0692	.0112	-.0540	.0811	.1943ᵃ	.0914
CSTRENGT	.0719	.0981	.2311ᵃ	.1718ᵇ	.4122ᵃ	.0807
CORIENTA	.3312ᵃ	.3581ᵃ	.2558ᵃ	.3354ᵃ	.3722ᵃ	.0919
CADAPTIV	-.1388	.0088	-.1279	-.0946	-.0264	.1439
INTEREXP	.3689ᵇ	.1557	.0067	.1469	.1750ᵇ	-.1771ᵇ

ᵃ -- significant at .05   ᵇ -- significant at .10

between uniform marketing and technology intensity of industry is negative but not statistically significant.

Integrated competitive moves (INTGCOMP) is positively and significantly related to two external industry globalization drivers: potential economies of scale and globalized competitors. There is a positive but not statistically significant relationship to emergence of global customers, similarity of government interventions, and technology intensity of industry.

Coordination of value-adding activities (COORDINA) is positively related to all five external industry globalization drivers, but the relationship to similarity of government interventions is not statistically significant. Thus, emergence of global customers, potential economies of scale, globalized competitors, and technology intensity of industry are positively and significantly related to coordination of value-adding activities.

Finally, the relationship between concentration of value-adding activities (CONCENTR) and similarity of government interventions, globalized competitors, and technology intensity of industry is positive but not statistically significant. The relationship between concentration of value-adding activities and emergence of global customers and potential economies of scale is negative but not statistically significant.

Except for concentration of value-adding activities, which is not significantly related to any of the five external industry globalization drivers, all the other dimensions of global strategy are positively and significantly related to at least two external industry globalization drivers. Based on the vote-counting criterion, hypothesis H3 is supported.

To test hypothesis H4, which predicts that each dimension of global strategy is

positively related to six internal organizational factors and negatively to adaptiveness of organization culture, each dimension of global strategy was regressed on each of the seven internal organizational factors. The resulting regression beta weights also are reported in Table 6.

The first dimension of global strategy, global market participation, is positively and significantly related to intelligence generation (INTELGEN), intelligence dissemination (INTELDIS), global orientation of organization culture (CORIENTA), and international experience (INTEREXP). Its relationship to the other three internal organizational factors --responsiveness to market (RESPONSI), strength of organization culture (CSTRENGT), and adaptiveness of organization culture (CADAPTIV)-- is statistically nonsignificant.

The second dimension of global strategy, product standardization, is related positively and significantly only to global orientation of organization culture. While the regression beta weights for intelligence generation, intelligence dissemination, responsiveness to market, strength of organization culture, adaptiveness of organization culture, and international experience are positive, they are not statistically significant.

The third dimension of global strategy, uniform marketing, is related positively and significantly to both the strength and the global orientation of organization culture. The regression beta weights for intelligence generation, intelligence dissemination, and international experience are positive, whereas those for responsiveness to market and adaptiveness of organization culture are negative, but none are statistically significant, and this suggests no relationship between uniform marketing and these internal organizational factors.

The fourth dimension of global strategy, integrated competitive moves, has a positive and significant relationship to intelligence generation, intelligence dissemination, strength of organization culture, and global orientation of organization culture. Its relationship to responsiveness to market and to international experience is positive but not statistically significant. The relationship between integrated competitive moves and adaptiveness of organization culture is negative but also not statistically significant.

The fifth dimension of global strategy, coordination of value-adding activities, is related positively and significantly to six internal organizational factors: intelligence generation, intelligence dissemination, responsiveness to market, strength of organization culture, global orientation of organization culture, and international experience. The relationship between coordination of value-adding activities and adaptiveness of organization culture is negative but not statistically significant.

The last dimension of global strategy, concentration of value-adding activities, is significantly and negatively related to international experience. The relationship of this dimension to the other six internal organizational factors is statistically nonsignificant.

To summarize, except for concentration of value-adding activities, all other dimensions of global strategy are significantly and positively related to at least one internal organizational factor. Concentration of value-adding activities is related significantly but negatively only to international experience. Viewed from the perspective of the internal organizational factors, almost all are related positively and significantly to at least one dimension of global strategy; the exception is adaptiveness of organization culture, which is not related significantly to any dimension of global strategy. Based on the vote-counting criterion, it can be concluded that each dimension

of global strategy relates to one or more internal organizational factor. Therefore, there is moderate support for hypothesis H4.

GLOBAL BUSINESS PERFORMANCE: Interaction Effects

Based on hypothesis H5, it is predicted that a BU's global business performance is influenced not only by global strategy and by internal organizational factors but also by the interaction between the two. To test this hypothesis, performance was regressed first on each combination of global strategy dimensions and internal organizational factors. The regression results (without interaction) are reported in Table 7. Then performance was regressed on the same combinations plus the interaction term, as reported in Table 8.

The regression equation underlying the results in Table 7 is:

(1) $PERFORM = \alpha + \beta_1 STRATEGY + \beta_2 FACTOR$,

where PERFORM denotes global business performance, STRATEGY denotes a dimension of global strategy, and FACTOR denotes an internal organizational factor.

The regression equation underlying the results in Table 8 is:

(2) $PERFORM = \alpha + \beta_1 STRATEGY + \beta_2 FACTOR + \beta_3 STRATEGY*FACTOR$,

where the notations are identical to those in equation (1).

After these two models were fitted, they were compared by F-test to see whether the incorporation of the interaction term in the full model given in equation (2) significantly improved the reduced model given in equation (1) in terms of the model fit

Table 7. Results of Multiple Regression Analysis on Performance (without interaction)

Dependent Variable: PERFORM	MKTPART	PRODSTAN	UNIFMKTG	INTGCOMP	COORDINA	CONCENTR
INTELGEN	β_1 = .3938[a] β_2 = .3351[a] F=27.87 (p<.001) R^2=.338 a.R^2=.326	β_1 = .1660[b] β_2 = .4375[a] F=15.54 (p<.001) R^2=.222 a.R^2=.208	β_1 = .1325 β_2 = .4309[a] F=14.66 (p<.001) R^2=.212 a.R^2=.198	β_1 = .1265 β_2 = .4170[a] F=14.52 (p<.001) R^2=.210 a.R^2=.196	β_1 = .0785 β_2 = .4181[a] F=13.64 (p<.001) R^2=.200 a.R^2=.186	β_1 = .0853 β_2 = .402[a] F=11.78 (p<.001) R^2=.202 a.R^2=.187
INTELDIS	β_1 = .4085[a] β_3 = .2503[a] F=22.89 (p<.001) R^2=.296 a.R^2=.283	β_1 = .1510[b] β_3 = .3684[a] F=10.83 (p<.001) R^2=.166 a.R^2=.151	β_1 = .1478[b] β_3 = .3711[a] F=10.76 (p<.001) R^2=.165 a.R^2=.150	β_1 = .0821 β_3 = .3490[a] F=9.534 (p<.001) R^2=.149 a.R^2=.133	β_1 = .1004 β_3 = .3404[a] F=9.789 (p<.001) R^2=.152 a.R^2=.137	β_1 = .1239 β_3 = .3891[a] F=10.25 (p<.001) R^2=.158 a.R^2=.143
RESPONSI	β_1 = .4637[a] β_2 = .2934[a] F=25.63 (p<.001) R^2=.320 a.R^2=.307	β_1 = .1713[b] β_2 = .3235[a] F=8.523 (p<.001) R^2=.135 a.R^2=.119	β_1 = .1836[b] β_2 = .3353[a] F=8.836 (p<.001) R^2=.140 a.R^2=.124	β_1 = .181[b] β_2 = .3107[a] F=8.760 (p<.001) R^2=.139 a.R^2=.123	β_1 = .1425 β_2 = .2977[a] F=7.817 (p<.001) R^2=.126 a.R^2=.109	β_1 = .0603 β_2 = .3199[a] F=6.702 (p<.002) R^2=.110 a.R^2=.093
CSTRENGT	β_1 = .4655[a] β_2 = .2430[a] F=22.58 (p<.001) R^2=.293 a.R^2=.280	β_1 = .1492 β_2 = .2619[b] F=5.957 (p<.004) R^2=.099 a.R^2=.082	β_1 = .1073 β_2 = .2518[b] F=5.219 (p<.007) R^2=.087 a.R^2=.071	β_1 = .1636[b] β_2 = .2485[b] F=6.222 (p<.003) R^2=.103 a.R^2=.086	β_1 = .1041 β_2 = .2337[b] F=5.094 (p<.008) R^2=.086 a.R^2=.069	β_1 = .0676 β_2 = .2711[a] F=4.806 (p<.010) R^2=.081 a.R^2=.064
CORIENTA	β_1 = .3949[a] β_2 = .2688[a] F=23.20 (p<.001) R^2=.297 a.R^2=.286	β_1 = .0365 β_2 = .3866[a] F=10.45 (p<.001) R^2=.161 a.R^2=.146	β_1 = .0677 β_2 = .3823[a] F=10.69 (p<.001) R^2=.164 a.R^2=.150	β_1 = .0814 β_2 = .3773[a] F=10.82 (p<.001) R^2=.166 a.R^2=.150	β_1 = .0600 β_2 = .3773[a] F=10.60 (p<.001) R^2=.163 a.R^2=.148	β_1 = .0532 β_2 = .3947[a] F=10.58 (p<.001) R^2=.163 a.R^2=.147
CADAPTIV	β_1 = .5070[a] β_2 = .1660[a] F=19.27 (p<.001) R^2=.261 a.R^2=.248	β_1 = .1741[b] β_2 = .0942 F=2.239 (p>.111) R^2=.040 a.R^2=.022	β_1 = .1807[b] β_2 = .1188 F=2.346 (p>.100) R^2=.041 a.R^2=.024	β_1 = .2173[b] β_2 = .1163 F=3.230 (p<.050) R^2=.056 a.R^2=.039	β_1 = .2031[a] β_2 = .1010 F=2.890 (p<.100) R^2=.050 a.R^2=.033	β_1 = .0774 β_2 = .0846 F=0.831 (p>.400) R^2=.015 a.R^2=-.003
INTEREXP	β_1 = .4183[a] β_2 = .1779[a] F=19.30 (p<.001) R^2=.262 a.R^2=.248	β_1 = .1262 β_2 = .3126[a] F=7.853 (p<.001) R^2=.126 a.R^2=.110	β_1 = .1633[b] β_2 = .3312[a] F=8.656 (p<.001) R^2=.137 a.R^2=.121	β_1 = .1610[b] β_2 = .3086[a] F=8.560 (p<.001) R^2=.136 a.R^2=.120	β_1 = .1467 β_2 = .3066[a] F=8.236 (p<.001) R^2=.131 a.R^2=.115	β_1 = .1532[b] β_2 = .3594[a] F=8.370 (p<.001) R^2=.131 a.R^2=.117

a = p<.05   b = p<.10   a.R^2 = adjusted R^2

Table 8. Results of Multiple Regression on Performance (with interaction)

Dependent Var. PERFORM	MKTPART	PRODSTAN	UNIFMKTG	INTGCOMP	COORDINA	CONCENTR
INTELGEN	$\beta_1 = .1520$ $\beta_2 = .1843$ $\beta_3 = .3241$ F = 18.76 (p<.001) R^2 = .343 a.R^2 = .324	$\beta_1 = -.0059$ $\beta_2 = -.2958$ $\beta_3 = .2290$ F = 10.38 (p<.001) R^2 = .224 a.R^2 = .202	$\beta_1 = -.2805$ $\beta_2 = -.0867$ $\beta_3 = .6925$ F = 10.18 (p<.001) R^2 = .220 a.R^2 = .199	$\beta_1 = -.0439$ $\beta_2 = .2768$ $\beta_3 = .2462$ F = 9.723 (p<.001) R^2 = .213 a.R^2 = .191	$\beta_1 = -.3760$ $\beta_2 = -.0485$ $\beta_3 = .7505$ F = 9.881 (p<.001) R^2 = .215 a.R^2 = .194	$\beta_1 = -.3284$ $\beta_2 = -.0867$ $\beta_3 = .5572$ F = 9.761 (p<.001) R^2 = .213 a.R^2 = .191
INTELDIS	$\beta_1 = .3107$ $\beta_2 = .1988$ $\beta_3 = .1311$ F = 15.16 (p<.001) R^2 = .296 a.R^2 = .277	$\beta_1 = -.0224$ $\beta_2 = .2320$ $\beta_3 = .2303$ F = 7.220 (p<.001) R^2 = .167 a.R^2 = .144	$\beta_1 = .2346$ $\beta_2 = .4756$ $\beta_3 = -.1398$ F = 7.115 (p<.001) R^2 = .165 a.R^2 = .142	$\beta_1 = -.0726$ $\beta_2 = .2314$ $\beta_3 = .2282$ F = 6.366 (p<.001) R^2 = .150 a.R^2 = .127	$\beta_1 = .2259$ $\beta_2 = .4800$ $\beta_3 = -.2076$ F = 6.510 (p<.001) R^2 = .153 a.R^2 = .130	$\beta_1 = .2311$ $\beta_2 = .4510$ $\beta_3 = -.1310$ F = 6.793 (p<.001) R^2 = .159 a.R^2 = .135
RESPONSI	$\beta_1 = -.3122$ $\beta_2 = -.0773$ $\beta_3 = .9952$ F = 18.72 (p<.001) R^2 = .342 a.R^2 = .324	$\beta_1 = 1.015^*$ $\beta_2 = -.4322$ $\beta_3 = -1.4133^*$ F = 8.534 (p<.001) R^2 = .192 a.R^2 = .169	$\beta_1 = -.4109$ $\beta_2 = .3025$ $\beta_3 = .8584$ F = 6.709 (p<.001) R^2 = .157 a.R^2 = .134	$\beta_1 = -.3991$ $\beta_2 = -.0437$ $\beta_3 = .7113$ F = 6.296 (p<.001) R^2 = .149 a.R^2 = .125	$\beta_1 = -.2721$ $\beta_2 = -.0330$ $\beta_3 = .5834$ F = 5.410 (p<.002) R^2 = .131 a.R^2 = .107	$\beta_1 = -1.101^*$ $\beta_2 = .4118$ $\beta_3 = .4265$ F = 6.467 (p<.001) R^2 = .152 a.R^2 = .129
CSTRENGT	$\beta_1 = .1471$ $\beta_2 = .0600$ $\beta_3 = .3852$ F = 15.24 (p<.001) R^2 = .297 a.R^2 = .278	$\beta_1 = .1325$ $\beta_2 = .1840$ $\beta_3 = -.0000$ F = 4.409 (p<.006) R^2 = .099 a.R^2 = .074	$\beta_1 = .1855$ $\beta_2 = .3536$ $\beta_3 = .1434$ F = 3.465 (p<.020) R^2 = .088 a.R^2 = .062	$\beta_1 = .1821$ $\beta_2 = .0176$ $\beta_3 = .4549$ F = 4.409 (p<.006) R^2 = .109 a.R^2 = .084	$\beta_1 = -.0891$ $\beta_2 = .0510$ $\beta_3 = .3192$ F = 3.456 (p<.020) R^2 = .088 a.R^2 = .061	$\beta_1 = .2604$ $\beta_2 = .0336$ $\beta_3 = .4265$ F = 3.398 (p<.021) R^2 = .086 a.R^2 = .061
CORIENTA	$\beta_1 = .2347$ $\beta_2 = .1651$ $\beta_3 = .2214$ F = 15.44 (p<.001) R^2 = .300 a.R^2 = .281	$\beta_1 = .1724$ $\beta_2 = .5017$ $\beta_3 = -.2101$ F = 6.964 (p<.001) R^2 = .162 a.R^2 = .139	$\beta_1 = .1897$ $\beta_2 = .5732$ $\beta_3 = -.2541$ F = 7.132 (p<.001) R^2 = .165 a.R^2 = .142	$\beta_1 = .0109$ $\beta_2 = .3161$ $\beta_3 = .1053$ F = 7.160 (p<.001) R^2 = .166 a.R^2 = .143	$\beta_1 = .2309$ $\beta_2 = .5774$ $\beta_3 = .3115$ F = 7.121 (p<.001) R^2 = .165 a.R^2 = .142	$\beta_1 = .2624$ $\beta_2 = .5734$ $\beta_3 = .2291$ F = 7.150 (p<.001) R^2 = .166 a.R^2 = .143
CADAPTIV	$\beta_1 = 1.0489^*$ $\beta_2 = .4993^*$ $\beta_3 = -.6098$ F = 13.89 (p<.001) R^2 = .279 a.R^2 = .258	$\beta_1 = .8414^*$ $\beta_2 = .6406^*$ $\beta_3 = -.8808^*$ F = 2.897 (p<.064) R^2 = .064 a.R^2 = .039	$\beta_1 = 1.0766^*$ $\beta_2 = 1.3189^*$ $\beta_3 = -.1465$ F = 2.941 (p<.037) R^2 = .076 a.R^2 = .050	$\beta_1 = .2722$ $\beta_2 = .1574$ $\beta_3 = .0666$ F = 2.139 (p<.100) R^2 = .056 a.R^2 = .030	$\beta_1 = .6948$ $\beta_2 = .5787$ $\beta_3 = -.6848$ F = 2.373 (p<.075) R^2 = .062 a.R^2 = .030	$\beta_1 = .1012$ $\beta_2 = .1039$ $\beta_3 = -.0331$ F = 0.549 (p>.600) R^2 = .015 a.R^2 = -.01
INTEREXP	$\beta_1 = .7676^*$ $\beta_2 = .4515^*$ $\beta_3 = -.5308$ F = 13.71 (p<.001) R^2 = .276 a.R^2 = .256	$\beta_1 = .1044$ $\beta_2 = .6980$ $\beta_3 = .3772$ F = 5.468 (p<.002) R^2 = .132 a.R^2 = .108	$\beta_1 = .2091$ $\beta_2 = .2733$ $\beta_3 = .7196$ F = 6.247 (p<.001) R^2 = .148 a.R^2 = .124	$\beta_1 = .2295$ $\beta_2 = .3796$ $\beta_3 = -.1088$ F = 5.687 (p<.002) R^2 = .136 a.R^2 = .112	$\beta_1 = -.3340$ $\beta_2 = -.3658$ $\beta_3 = .9053^*$ F = 6.583 (p<.001) R^2 = .155 a.R^2 = .131	$\beta_1 = .1322$ $\beta_2 = .3363$ $\beta_3 = .0291$ F = 5.511 (p<.002) R^2 = .133 a.R^2 = .109

a = p < .05   b = p < .10   a.R^2 = adjusted R^2

statistic (R-square). If (2) fits significantly better than (1), then it can be concluded that performance is significantly affected by the interaction between the dimension of global strategy and the internal factor. If (2) does not fit significantly better than (1), it can be concluded that performance is not significantly affected by the interaction between the dimension of global strategy and the internal factor.

The correlation coefficients between the dimensions of global strategy and the internal organizational factors are generally low to moderate. In fact, the largest correlation is under .420, and most range between .100 and .300. Hence, it can be concluded that multicollinearity is not a serious problem in the regression analysis which enters a combination of two independent variables.

Equation (1) was fitted for each combination of a dimension of global strategy and an internal organizational factor. The regression beta weights for the two independent variables, the F-statistics and their significance level, the R-squares, and the adjusted R-squares are reported in Table 7. Except for three models associated with adaptiveness of organization culture, all fitted models we revealed to be statistically significant, suggesting that performance is significantly influenced by global strategy dimensions and internal organizational factors. The signs of the beta weights are generally consistent with those in Table 5, where the main effects of global strategy and internal factors on performance were reported. Thus, a BU's global business performance is indeed positively influenced by the dimensions of global strategy and internal organizational factors. Based on the R-square of the regression model, a fairly large amount of variation in performance is explained by the two independent variables, with R-squares as high as .338 and mostly above .100. Given that only two independent variables were

included in the regression model and that many factors can affect performance, these R-squares are high, further supporting the contention that global strategy and internal organization factors are relevant predictors of performance.

The full model (2) was fitted for each combination of global strategy dimensions and internal organizational factors. The regression beta weights for the independent variables and their interaction term, the F-statistics of the models and their significance level, R-squares, and adjusted R-squares are reported in Table 8. Based on the F-statistics, except for one model associated with concentration of value-adding activities and adaptiveness of organization culture, all fitted models were revealed to be statistically significant. In addition, the R-squares are generally higher than those found for the reduced model (1), the highest one being .343. Thus, the variations in performance explained by the regression models are high, considering that only two independent variables and their interaction terms were included. The signs and the magnitudes of some regression beta weights of the two independent variables change, however, as a result of adding the interaction terms. Nevertheless, to test hypothesis H5, the focus is on the relative improvement of model (2) over model (1). The exact changes in the regression beta weights are not the major theoretical concern.

Model (2) and model (1) were compared by F-test in order to test hypothesis H5. Specifically, for each combination of global strategy dimension and internal organizational factor, the R-square of the fitted model (2), that is, the full model with interaction term, was compared by F-test to the R-square of the fitted model (1), that is, the reduced model without interaction term. If the interaction of the global strategy dimension with the internal organizational factor has a significant influence on

performance, then the R-square of the full model (2) should be significantly higher than the R-square of the reduced model (1). If the R-square of the full model (2) is not significantly higher, it can be concluded that performance is not significantly influenced by the interaction between the global strategy dimension and the internal organizational factor.

The results of the model comparison F-tests are reported in Table 9. The first two columns list the combination of global strategy dimension and internal organizational factor. The third and fourth columns report the R-squares for the reduced and the full model. In the last column, which reports the F-statistics of the model comparison test, an asterisk suggests that the corresponding full model fits significantly better than the reduced model and that interaction between the corresponding combination of independent variables significantly affects performance. F-statistics without an asterisk indicate that the corresponding full model is not significantly better than the reduced model and that interaction between the two independent variables is not a significant predictor of performance.

An examination of Table 9 reveals that only three full models fit significantly better than the corresponding reduced models. Since the overwhelming majority of the full models do not fit significantly better than the corresponding reduced models, the vote-counting criterion leads to the conclusion that the reduced models fit just as well as the corresponding full models. In other words, the interaction effects on performance between global strategy and internal organizational factors are not statistically significant. Therefore, hypothesis H5 is not supported by the research findings.

Table 9. Comparison Of Models With And Without Interaction

Dependent Variable: PERFORM

Independent Factors	Reduced Model R-square	Full Model R-square	F-statistic
INTELGEN MKTPART	0.33837	0.34259	0.69969
INTELGEN PRODSTAN	0.22190	0.22383	0.27104
INTELGEN UNIFMKTG	0.21196	0.22042	1.18287
INTELGEN INTGCOMP	0.21043	0.21265	0.30733
INTELGEN COORDINA	0.20013	0.21539	2.11996
INTELGEN CONCENTR	0.20177	0.21334	1.60314
INTELDIS MKTPART	0.29576	0.29628	0.08054
INTELDIS PRODSTAN	0.16573	0.16705	0.17274
INTELDIS UNIFMKTG	0.16481	0.16503	0.02872
INTELDIS INTGCOMP	0.14889	0.15026	0.17574
INTELDIS COORDINA	0.15226	0.15314	0.11327
INTELDIS CONCENTR	0.15824	0.15875	0.06608
RESPONSI MKTPART	0.31985	0.34209	3.68464
RESPONSI PRODSTAN	0.13523	0.19163	7.60493 *
RESPONSI UNIFMKTG	0.13952	0.15709	2.27205
RESPONSI INTGCOMP	0.13847	0.14886	1.33058
RESPONSI COORDINA	0.12545	0.13127	0.73024
RESPONSI CONCENTR	0.10950	0.15228	5.50066 *
CSTRENGT MKTPART	0.29295	0.29747	0.70129
CSTRENGT PRODSTAN	0.09854	0.09910	0.06775
CSTRENGT UNIFMKTG	0.08739	0.08781	0.05019
CSTRENGT INTGCOMP	0.10246	0.10912	0.81486
CSTRENGT COORDINA	0.08548	0.08759	0.25207
CSTRENGT CONCENTR	0.08103	0.08625	0.62269
CORIENTA MKTPART	0.29855	0.30014	0.24764
CORIENTA PRODSTAN	0.16087	0.16209	0.15870
CORIENTA UNIFMKTG	0.16400	0.16536	0.17761
CORIENTA INTGCOMP	0.16560	0.16590	0.03920
CORIENTA COORDINA	0.16281	0.16516	0.30683
CORIENTA CONCENTR	0.16253	0.16570	0.41416
CADAPTIV MKTPART	0.26125	0.27850	2.60603
CADAPTIV PRODSTAN	0.03945	0.06484	2.95940
CADAPTIV UNIFMKTG	0.04128	0.07566	4.05416 *
CADAPTIV INTGCOMP	0.05595	0.05608	0.01501
CADAPTIV COORDINA	0.05036	0.06183	1.33263
CADAPTIV CONCENTR	0.01502	0.01504	0.00221
INTEREXP MKTPART	0.26155	0.27585	2.15245
INTEREXP PRODSTAN	0.12595	0.13187	0.74330
INTEREXP UNIFMKTG	0.13706	0.14787	1.38276
INTEREXP INTGCOMP	0.13575	0.13642	0.08457
INTEREXP COORDINA	0.13128	0.15459	3.00539
INTEREXP CONCENTR	0.13314	0.13318	0.00503

* = significant at .05.

GLOBAL STRATEGY: Interaction Effects

Based on hypothesis H6, it is predicted that the relationship between global strategy dimensions and external industry globalization drivers is moderated by internal organizational factors. In other words, each dimension of global strategy is significantly influenced by the interaction between external industry globalization drivers and internal organizational factors. To test this hypothesis, for each dimension of global strategy, the following model was first fitted onto each combination of external industry globalization drivers and internal organizational factors:

(3) $$\text{STRATEGY} = \alpha + \beta_1 \text{ DRIVER} + \beta_2 \text{ FACTOR} ,$$

where STRATEGY denotes a dimension of global strategy, DRIVER denotes an external industry globalization driver, and FACTOR denotes an internal organizational factor. Next, for the same dimension of global strategy, the following interactive model was fitted onto the same combination of external industry globalization drivers and internal organizational factors plus their interaction term:

(4) $$\text{STRATEGY} = \alpha + \beta_1 \text{ DRIVER} + \beta_2 \text{ FACTOR} + \beta_3 \text{ DRIVER*FACTOR} ,$$

where the notations are the same as in model (3). The two fitted models were then compared by F-test to determine whether the full model (4) fits significantly better than the reduced model (3). The presence or absence of the interaction between external industry globalization drivers and internal organizational factors were tested by the same logic used to assess the interaction effects on performance.

Specifically, for the first dimension of global strategy, global market participation,

the reduced model (3) was fitted for each combination of external industry globalization drivers and internal organizational factors. Regression beta weights for the independent variables, F-statistics and their significance level, R-squares, and adjusted R-squares of the fitted models are reported in Table 10. As can be seen, 27 of the 35 fitted models are statistically significant; the remainder are not. The amount of variation in global market participation explained by the fitted models, as indicated by R-squares, ranges from low to moderate. Considering the fact that global strategy can be influenced by many variables and that the fitted models include only two independent variables, the fit of these models is judged to be adequate.

For the same combinations of external driver and internal factor, the full model (4) was also fitted for global market participation. The resulting regression beta weights of the independent variables, F-statistics and their significance level, R-squares, and adjusted R-squares of the fitted models are reported in Table 11. Compared to the reduced models, the addition of the interaction term results in higher R-squares. As in Table 10, 27 of the 35 fitted full models are statistically significant, and the variation in global market participation explained by the full models ranges from low to moderate. In light of the fact that only two independent variables are included in the equations, most of these models fit the data fairly well.

For the second dimension of global strategy, product standardization, the reduced model (3) was first fitted onto each combination of external drivers and internal factors. The regression beta weights, F-statistics and their significance level, R-squares, and adjusted R-squares are reported in Table 12. As indicated by the F-statistics and their significance levels, 23 of the 35 fitted models are statistically significant, and the

Table 10. Results of Multiple Regression Analysis on Global Strategy (without interaction)

Dependent Var. MKTPART	GLOBCOMP	SIMILREG	GLOBCUST	ECONSCAL	TECHINTY
INTELGEN	$\beta_1 = .1088$ $\beta_2 = .2745^a$ F=5.007 (p<.009) $R^2=.084$ a.$R^2=.067$	$\beta_1 = .0489$ $\beta_2 = .2699^a$ F=4.401 (p<.020) $R^2=.075$ a.$R^2=.058$	$\beta_1 = .1700^b$ $\beta_2 = .2332^a$ F=6.053 (p<.004) $R^2=.100$ a.$R^2=.083$	$\beta_1 = .1855^b$ $\beta_2 = .2145^a$ F=6.311 (p<.003) $R^2=.104$ a.$R^2=.087$	$\beta_1 = .0435$ $\beta_2 = .2523^a$ F=4.351 (p<.016) $R^2=.074$ a.$R^2=.057$
INTELDIS	$\beta_1 = .0793$ $\beta_2 = .2866^a$ F=5.450 (p<.006) $R^2=.091$ a.$R^2=.074$	$\beta_1 = .0351$ $\beta_2 = .2899^a$ F=5.119 (p<.008) $R^2=.086$ a.$R^2=.069$	$\beta_1 = .1749^b$ $\beta_2 = .2614^a$ F=7.036 (p<.002) $R^2=.114$ a.$R^2=.098$	$\beta_1 = .2047^a$ $\beta_2 = .2559^a$ F=7.807 (p<.001) $R^2=.125$ a.$R^2=.109$	$\beta_1 = .0569$ $\beta_2 = .2736^a$ F=5.231 (p<.007) $R^2=.088$ a.$R^2=.071$
RESPONSI	$\beta_1 = .1000$ $\beta_2 = .0759$ F=.815 (p>.445) $R^2=.015$ a.$R^2=-.003$	$\beta_1 = .0649$ $\beta_2 = .0853$ F=.480 (p>.610) $R^2=.009$ a.$R^2=-.009$	$\beta_1 = .2145^a$ $\beta_2 = .0494$ F=2.892 (p<.060) $R^2=.050$ a.$R^2=.033$	$\beta_1 = .2483^a$ $\beta_2 = .0687$ F=3.879 (p<.025) $R^2=.066$ a.$R^2=.049$	$\beta_1 = .1324$ $\beta_2 = .0475$ F=1.218 (p>.299) $R^2=.022$ a.$R^2=.004$
CSTRENGT	$\beta_1 = .0903$ $\beta_2 = .0656$ F=.734 (p>.482) $R^2=.013$ a.$R^2=-.005$	$\beta_1 = .0418$ $\beta_2 = .0708$ F=.380 (p>.684) $R^2=.007$ a.$R^2=-.011$	$\beta_1 = .2133^a$ $\beta_2 = .0271$ F=2.788 (p<.066) $R^2=.049$ a.$R^2=.031$	$\beta_1 = .2479^a$ $\beta_2 = .0700$ F=3.891 (p<.024) $R^2=.067$ a.$R^2=.050$	$\beta_1 = .1352$ $\beta_2 = .0607$ F=1.302 (p>.276) $R^2=.023$ a.$R^2=.005$
CORIENTA	$\beta_1 = .0795$ $\beta_2 = .3275^a$ F=7.154 (p<.002) $R^2=.116$ a.$R^2=.100$	$\beta_1 = .0605$ $\beta_2 = .3343^a$ F=6.969 (p<.002) $R^2=.113$ a.$R^2=.097$	$\beta_1 = .1550^b$ $\beta_2 = .2979^a$ F=8.334 (p<.001) $R^2=.133$ a.$R^2=.117$	$\beta_1 = .1586^b$ $\beta_2 = .2804^a$ F=8.309 (p<.001) $R^2=.132$ a.$R^2=.116$	$\beta_1 = .0888$ $\beta_2 = .3168^a$ F=7.249 (p<.002) $R^2=.117$ a.$R^2=.101$
CADAPTIV	$\beta_1 = .0987$ $\beta_2 =-.1414$ F=1.628 (p>.201) $R^2=.029$ a.$R^2=.011$	$\beta_1 = .0324$ $\beta_2 =-.1361$ F=1.130 (p>.326) $R^2=.020$ a.$R^2=.002$	$\beta_1 = .2191^a$ $\beta_2 =-.1390$ F=3.931 (p<.023) $R^2=.067$ a.$R^2=.050$	$\beta_1 = .2603^a$ $\beta_2 =-.1583^b$ F=5.170 (p<.008) $R^2=.087$ a.$R^2=.070$	$\beta_1 = .1682^b$ $\beta_2 =-.1669^b$ F=2.673 (p<.074) $R^2=.047$ a.$R^2=.029$
INTEREXP	$\beta_1 = .0736$ $\beta_2 = .3647^a$ F=8.985 (p<.001) $R^2=.142$ a.$R^2=.126$	$\beta_1 = .0487$ $\beta_2 = .3696^a$ F=8.762 (p<.001) $R^2=.139$ a.$R^2=.123$	$\beta_1 = .2071^a$ $\beta_2 = .3622^a$ F=11.10 (p<.001) $R^2=.179$ a.$R^2=.164$	$\beta_1 = .1952^a$ $\beta_2 = .3382^a$ F=11.43 (p<.001) $R^2=.173$ a.$R^2=.158$	$\beta_1 =-.0012$ $\beta_2 = .3694^a$ F=8.588 (p<.001) $R^2=.136$ a.$R^2=.120$

a = p<.05   b = p<.10   a.R^2 = adjusted R^2

Table 11.   Results of Multiple Regression on Global Strategy   (with interaction)

Dependent Var. MKTPART	GLOBCOMP	SIMILREG	GLOBCUST	ECONSCAL	TECHINTY
INTELGEN	β_1 =-.2008 β_2 =-.0033 β_3 =.4153 F =3.661 (p<.015) R^2=.092 a.R^2=.067	β_1 =.0715 β_2 =.2809 β_3 =-.0256 F =2.908 (p<.038) R^2=.075 a.R^2=.049	β_1 =-.9109[a] β_2 =-.7907[a] β_3 =1.6570[a] F =6.987 (p<.001) R^2=.163 a.R^2=.139	β_1 =.2916 β_2 =.3769 β_3 =-.2201 F =4.201 (p<.008) R^2=.104 a.R^2=.080	β_1 =.4502 β_2 =.7195[b] β_3 =-.7351 F =3.332 (p<.023) R^2=.085 a.R^2=.059
INTELDIS	β_1 =-.0233 β_2 =.1950 β_3 =.1440 F =3.635 (p<.016) R^2=.092 a.R^2=.066	β_1 =.2975 β_2 =.4094[b] β_3 =-.2968 F =3.512 (p<.018) R^2=.089 a.R^2=.064	β_1 =.1348 β_2 =.2256 β_3 =.0586 F =4.651 (p<.005) R^2=.114 a.R^2=.090	β_1 =.4437 β_2 =.5946 β_3 =-.4499 F =5.294 (p<.002) R^2=.128 a.R^2=.104	β_1 =.8013[b] β_2 =1.0807[a] β_3 =-1.264[b] F =4.588 (p<.005) R^2=.113 a.R^2=.088
RESPONSI	β_1 =-.6193 β_2 =-.4355 β_3 =.8641 F =1.184 (p>.319) R^2=.032 a.R^2=.005	β_1 =.8459 β_2 =.4288[b] β_3 =-.7842 F =1.070 (p>.365) R^2=.029 a.R^2=.002	β_1 =-.6185 β_2 =-.5804[b] β_3 =1.1046[b] F =3.279 (p<.024) R^2=.083 a.R^2=.058	β_1 =-.6267 β_2 =-.9272[b] β_3 =1.3385[b] F =3.890 (p<.012) R^2=.098 a.R^2=.072	β_1 =.3062 β_2 =.2082 β_3 =-.2568 F =.834 (p>.477) R^2=.023 a.R^2=-.005
CSTRENGT	β_1 =-.1358 β_2 =-.1374 β_3 =.3186 F =.588 (p>.624) R^2=.016 a.R^2=-.011	β_1 =.0132 β_2 =.0586 β_3 =.0320 F =.252 (p>.859) R^2=.007 a.R^2=-.021	β_1 =-.5150 β_2 =-.6273 β_3 =1.0873 F =2.799 (p<.044) R^2=.072 a.R^2=.046	β_1 =-.4130 β_2 =-.7623 β_3 =1.0763 F =3.438 (p<.020) R^2=.087 a.R^2=.062	β_1 =.0326 β_2 =-.0487 β_3 =.1578 F =.881 (p>.453) R^2=.024 a.R^2=-.003
CORIENTA	β_1 =.1836 β_2 =.4336 β_3 =-.1548 F =4.764 (p<.004) R^2=.117 a.R^2=.092	β_1 =.5615 β_2 =.6102[a] β_3 =-.5747 F =5.401 (p<.002) R^2=.130 a.R^2=.106	β_1 =-.2708 β_2 =-.1151 β_3 =.6627 F =6.069 (p<.001) R^2=.144 a.R^2=.121	β_1 =.3987 β_2 =.6426 β_3 =-.4986 F =5.681 (p<.002) R^2=.136 a.R^2=.112	β_1 =.3237 β_2 =.5795 β_3 =-.3830 F =4.898 (p<.004) R^2=.120 a.R^2=.095
CADAPTIV	β_1 =-.2128 β_2 =-.4389 β_3 =.4429 F =1.290 (p>.281) R^2=.035 a.R^2=.008	β_1 =.2989 β_2 =.0074 β_3 =-.2980 F =.879 (p>.454) R^2=.024 a.R^2=-.003	β_1 =-.8531[a] β_2 =-1.159[a] β_3 =1.5049[a] F =5.831 (p<.002) R^2=.139 a.R^2=.115	β_1 =-.2922 β_2 =-.9103 β_3 =.9735 F =4.063 (p<.009) R^2=.101 a.R^2=.076	β_1 =.9091[a] β_2 =.7039 β_3 =-1.247[b] F =3.071 (p<.031) R^2=.079 a.R^2=.053
INTEREXP	β_1 =-.0863 β_2 =.1774 β_3 =.2593 F =6.087 (p<.001) R^2=.145 a.R^2=.121	β_1 =.1815 β_2 =.4559[a] β_3 =-.1628 F =5.873 (p<.001) R^2=.140 a.R^2=.116	β_1 =.2578 β_2 =.4209 β_3 =-.0801 F =7.860 (p<.001) R^2=.179 a.R^2=.156	β_1 =.6294[a] β_2 =1.1193[a] β_3 =-.9612 F =8.554 (p<.001) R^2=.192 a.R^2=.170	β_1 =.2757 β_2 =.7799[b] β_3 =-.5835 F =6.076 (p<.001) R^2=.144 a.R^2=.121

a = p < .05   b = p < .10   a.R^2 = adjusted R^2

Table 12. Results of Multiple Regression Analysis on Global Strategy (without interaction)

Dependent Var. PRODSTAN	GLOBCOMP	SIMILREG	GLOBCUST	ECONSCAL	TECHINTY
INTELGEN	β_1 = .1157 β_2 = .0271 F=.763 (p>.468) R^2=.014 a.R^2=-.004	β_1 = .0210 β_2 = .0217 F=.049 (p>.952) R^2=.001 a.R^2=-.017	β_1 = .2704[a] β_2 =-.0355 F=4.123 (p<.019) R^2=.070 a.R^2=.053	β_1 = .3089[a] β_2 =-.0694 F=5.236 (p<.007) R^2=.088 a.R^2=.071	β_1 = .2659[a] β_2 =-.0807 F=3.524 (p<.033) R^2=.061 a.R^2=.044
INTELDIS	β_1 = .1111 β_2 = .0587 F=.915 (p>.403) R^2=.017 a.R^2=-.002	β_1 = .0187 β_2 = .0642 F=.249 (p>.780) R^2=.005 a.R^2=-.014	β_1 = .2594[a] β_2 = .0210 F=4.074 (p<.020) R^2=.070 a.R^2=.052	β_1 = .2858[a] β_2 = .0159 F=4.965 (p<.009) R^2=.084 a.R^2=.067	β_1 = .2372[a] β_2 =-.0075 F=3.186 (p<.046) R^2=.055 a.R^2=.038
RESPONSI	β_1 = .1156 β_2 = .0190 F=.742 (p>.478) R^2=.013 a.R^2=-.005	β_1 = .0249 β_2 = .0174 F=.039 (p>.962) R^2=.001 a.R^2=-.018	β_1 = .2641[a] β_2 =-.0132 F=4.058 (p<.021) R^2=.069 a.R^2=.052	β_1 = .2885[a] β_2 = .0107 F=4.957 (p<.009) R^2=.083 a.R^2=.067	β_1 = .2395[a] β_2 =-.0279 F=3.229 (p<.044) R^2=.056 a.R^2=.039
CSTRENGT	β_1 = .1081 β_2 = .0906 F=1.183 (p>.310) R^2=.021 a.R^2=.003	β_1 = .0180 β_2 = .0976 F=.548 (p>.580) R^2=.010 a.R^2=-.001	β_1 = .2535[a] β_2 = .0449 F=4.168 (p<.019) R^2=.071 a.R^2=.054	β_1 = .2878[a] β_2 = .0959 F=5.552 (p<.006) R^2=.092 a.R^2=.076	β_1 = .2283[a] β_2 = .0791 F=3.565 (p<.032) R^2=.061 a.R^2=.044
CORIENTA	β_1 = .0978 β_2 = .3535[a] F=8.707 (p<.001) R^2=.138 a.R^2=.122	β_1 = .0387 β_2 = .3600[a] F=8.122 (p<.001) R^2=.130 a.R^2=.114	β_1 = .1950[a] β_2 = .3162[a] F=10.73 (p<.001) R^2=.164 a.R^2=.149	β_1 = .1937[a] β_2 = .2960[a] F=10.53 (p<.001) R^2=.162 a.R^2=.146	β_1 = .1815[a] β_2 = .3285[a] F=10.40 (p<.001) R^2=.160 a.R^2=.145
CADAPTIV	β_1 = .1142 β_2 =-.0058 F=.724 (p>.487) R^2=.013 a.R^2=-.005	β_1 = .0215 β_2 = .0106 F=.029 (p>.971) R^2=.001 a.R^2=-.018	β_1 = .2629[a] β_2 = .0086 F=4.052 (p<.021) R^2=.069 a.R^2=.052	β_1 = .2895[a] β_2 =-.0128 F=4.960 (p<.009) R^2=.083 a.R^2=.067	β_1 = .2401[a] β_2 =-.0313 F=3.241 (p<.043) R^2=.056 a.R^2=.039
INTEREXP	β_1 = .1056 β_2 = .1496 F=1.999 (p>.140) R^2=.035 a.R^2=.018	β_1 = .0227 β_2 = .1561 F=1.385 (p>.254) R^2=.025 a.R^2=.007	β_1 = .2581[a] β_2 = .1473 F=5.442 (p<.006) R^2=.091 a.R^2=.074	β_1 = .2707[a] β_2 = .1132 F=5.770 (p<.005) R^2=.096 a.R^2=.079	β_1 = .2054[a] β_2 = .0771 F=3.494 (p<.034) R^2=.060 a.R^2=.043

a = p<.05   b = p<.10   a.R^2 = adjusted R^2

remainder are not. The signs and the magnitudes of the regression beta weights are fairly consistent with those found when assessing the main effects on product standardization. The variation in product standardization that is explained by the reduced models ranges from low to moderate, with the largest being .164. Since only two variables are included in the regression equations, the variation explained by the two variables is judged to be fairly acceptable.

Next, for the same combinations of external drivers and internal factors, the full model (4) was fitted for product standardization. The resulting regression beta weights of the two independent variables and their interaction term, F-statistics and their significance level, R-squares, and adjusted R-squares are presented in Table 13. As can be seen, the R-squares of the full models are generally larger than those for the reduced models; 26 of the 35 fitted full models are statistically significant, and the remainder are not. The variation in product standardization explained by the fitted full models ranges from low to moderate. These R-squares are considered acceptable due to the fact that only two independent variables are included in the regression equation.

For the third dimension of global strategy, uniform marketing, the reduced model (3) was fitted for each combination of external drivers and internal factors. Table 14 presents the regression beta weights, F-statistics and their significance levels, R-squares, and adjusted R-squares of the models. Of the 35 fitted models, 18 are statistically significant and 17 are not. The variation in uniform marketing explained by the reduced models ranges from low to moderate. The signs and the sizes of the beta weights are generally consistent with those found when assessing the main effects on uniform marketing.

Table 13. Results of Multiple Regression on Global Strategy (with interaction)

Dependent Var. PRODSTAN	GLOBCOMP	SIMILREG	GLOBCUST	ECONSCAL	TECHINTY
INTELGEN	β_1 = .0368 β_2 = -.0437 β_3 = .1059 F = .524 (p>.666) a.R²=-.013	β_1 = -1.389ª β_2 = -.6690ª β_3 = -1.5985ª F =5.304 (p<.002) a.R²=.104	β_1 = .0230 β_2 = -.2699 β_3 = .3791 F =2.860 (p<.041) a.R²=.048	β_1 = 1.0837ª β_2 = -1.1167ª β_3 = -1.608ª F =5.173 (p<.003) a.R²=.101	β_1 = .8699ª β_2 = .6132 β_3 = -1.092ᵇ F =3.324 (p<.023) a.R²=.059
INTELDIS	β_1 = .0297 β_2 = -.0139 β_3 = .1142 F = .623 (p>.601) a.R²=-.010	β_1 = -.5713 β_2 = -.2045 β_3 = .6671 F = .728 (p>.537) a.R²=-.007	β_1 = .3307 β_2 = .0848 β_3 = -.1045 F =2.700 (p<.050) a.R²=.044	β_1 = .6764 β_2 = .5693 β_3 = -.7352 F =3.614 (p<.016) a.R²=.066	β_1 = .6547 β_2 = .4452 β_3 = -.7088 F =2.430 (p<.070) a.R²=.037
RESPONSI	β_1 = -.1096 β_2 = -.1411 β_3 = .2705 F = .552 (p>.647) a.R²=-.012	β_1 = -.3342 β_2 = -.1406 β_3 = .3606 F = .180 (p>.910) a.R²=-.023	β_1 = .1533 β_2 = -.0969 β_3 = .1469 F =2.705 (p<.050) a.R²=.044	β_1 = .7802ᵇ β_2 = .5702 β_3 = -.7521 F =3.699 (p<.015) a.R²=.068	β_1 = .7027 β_2 = .4006 β_3 = -.6846 F =2.360 (p<.076) a.R²=.035
CSTRENGT	β_1 = .9993ª β_2 = .8909ª β_3 = -1.256ᵇ F =2.479 (p<.066) a.R²=.038	β_1 = -.5312 β_2 = -.1353 β_3 = .6129 F = .841 (p>.474) a.R²=-.004	β_1 = 1.0675ª β_2 = .7764ᵇ β_3 = -1.215ª F =4.016 (p<.010) a.R²=.075	β_1 = .6473 β_2 = .5486 β_3 = -.5855 F =3.935 (p<.011) a.R²=.073	β_1 = .2121 β_2 = .0618 β_3 = .0250 F =2.355 (p<.077) a.R²=.035
CORIENTA	β_1 = .6629ª β_2 = .9296ª β_3 = -.8405ᵇ F =6.984 (p<.001) a.R²=.139	β_1 = -.5747 β_2 = .1241 β_3 = .4914 F =5.967 (p<.001) a.R²=.118	β_1 = .1819 β_2 = .3035 β_3 = .0204 F =7.087 (p<.001) a.R²=.141	β_1 = .4590 β_2 = .6961 β_3 = -.5509 F =7.204 (p<.001) a.R²=.144	β_1 = .4779 β_2 = .6599 β_3 = -.4830 F =7.065 (p<.001) a.R²=.141
CADAPTIV	β_1 = .0556 β_2 = -.0501 β_3 = .0832 F = .485 (p>.693) a.R²=-.014	β_1 = -.3486 β_2 = -.1889 β_3 = .4139 F = .266 (p>.849) a.R²=-.020	β_1 = .4252 β_2 = .1631 β_3 = -.2278 F =2.745 (p<.047) a.R²=.045	β_1 = .2219 β_2 = -.1048 β_3 = .1191 F =3.286 (p<.024) a.R²=.058	β_1 = .6295 β_2 = .4264 β_3 = -.6554 F =2.500 (p<.064) a.R²=.039
INTEREXP	β_1 = -.0461 β_2 = -.0281 β_3 = .2460 F =1.428 (p>.238) a.R²=.011	β_1 = -.6010ᵇ β_2 = -.2491 β_3 = .7648ª F =2.438 (p<.069) a.R²=.037	β_1 = -.5403ᵇ β_2 = -.7785ª β_3 = 1.2628ª F =5.980 (p<.001) a.R²=.119	β_1 = .5907ᵇ β_2 = .6888 β_3 = -.7084 F =4.263 (p<.007) a.R²=.081	β_1 = .0340 β_2 = -.1768 β_3 = .3610 F =2.438 (p<.069) a.R²=.037

a = p < .05   b = p < .10   a.R² = adjusted R²

Table 14. Results of Multiple Regression Analysis on Global Strategy (without interaction)

Dependent Var. UNIFMKTG	GLOBCOMP	SIMILREG	GLOBCUST	ECONSCAL	TECHINTY
INTELGEN	$\beta_1 = .1773^b$ $\beta_2 = .0855$ F=2.105 (p>.126) R^2=.037 a.R^2=.020	$\beta_1 = .1825^b$ $\beta_2 = .0800$ F=2.221 (p>.113) R^2=.039 a.R^2=.022	$\beta_1 = .3442^a$ $\beta_2 = .0042$ F=7.369 (p<.002) R^2=.119 a.R^2=.103	$\beta_1 = .1515$ $\beta_2 = .0320$ F=1.503 (p>.227) R^2=.027 a.R^2=.009	$\beta_1 = -.1026$ $\beta_2 = .1158$ F= .820 (p>.443) R^2=.015 a.R^2=-.003
INTELDIS	$\beta_1 = .1708^b$ $\beta_2 = .0384$ F=1.765 (p>.176) R^2=.031 a.R^2=.014	$\beta_1 = .1797^b$ $\beta_2 = .0423$ F=1.950 (p>.147) R^2=.035 a.R^2=.017	$\beta_1 = .3469^a$ $\beta_2 =-.0109$ F=7.376 (p<.001) R^2=.119 a.R^2=.103	$\beta_1 = .1574$ $\beta_2 = .0207$ F=1.473 (p>.233) R^2=.026 a.R^2=.008	$\beta_1 =-.0801$ $\beta_2 = .0721$ F= .445 (p>.642) R^2=.008 a.R^2=-.010
RESPONSI	$\beta_1 = .1701^b$ $\beta_2 =-.0426$ F=1.785 (p>.172) R^2=.032 a.R^2=.014	$\beta_1 = .1786^b$ $\beta_2 =-.0097$ F=1.851 (p>.162) R^2=.033 a.R^2=.015	$\beta_1 = .3531^a$ $\beta_2 =-.0866$ F=7.894 (p<.001) R^2=.127 a.R^2=.111	$\beta_1 = .1610^b$ $\beta_2 =-.0543$ F=1.619 (p>.202) R^2=.029 a.R^2=.011	$\beta_1 =-.0507$ $\beta_2 =-.0458$ F= .297 (p>.743) R^2=.005 a.R^2=-.013
CSTRENGT	$\beta_1 = .1577^b$ $\beta_2 = .2202^a$ F=4.620 (p<.012) R^2=.078 a.R^2=.061	$\beta_1 = .1749^b$ $\beta_2 = .2264^a$ F=4.996 (p<.009) R^2=.084 a.R^2=.067	$\beta_1 = .3102^a$ $\beta_2 = .1659^b$ F=9.273 (p<.001) R^2=.145 a.R^2=.130	$\beta_1 = .1592^b$ $\beta_2 = .2299^a$ F=4.658 (p<.012) R^2=.079 a.R^2=.062	$\beta_1 =-.0779$ $\beta_2 = .2376^a$ F=3.444 (p<.036) R^2=.059 a.R^2=.042
CORIENTA	$\beta_1 = .1613^b$ $\beta_2 = .2482^a$ F=5.481 (p<.006) R^2=.091 a.R^2=.075	$\beta_1 = .1943^a$ $\beta_2 = .2655^a$ F=6.264 (p<.003) R^2=.103 a.R^2=.087	$\beta_1 = .3042^a$ $\beta_2 = .1904^a$ F=9.897 (p<.001) R^2=.154 a.R^2=.138	$\beta_1 = .0880$ $\beta_2 = .2276^a$ F=4.252 (p<.017) R^2=.072 a.R^2=.055	$\beta_1 =-.1025$ $\beta_2 = .2724^a$ F=4.460 (p<.014) R^2=.076 a.R^2=.059
CADAPTIV	$\beta_1 = .1765^b$ $\beta_2 =-.1327$ F=2.718 (p<.071) R^2=.048 a.R^2=.030	$\beta_1 = .1716^b$ $\beta_2 =-.1138$ F=2.605 (p<.079) R^2=.046 a.R^2=.028	$\beta_1 = .3452^a$ $\beta_2 =-.1282$ F=8.544 (p<.001) R^2=.136 a.R^2=.120	$\beta_1 = .1715^a$ $\beta_2 =-.1408$ F=2.604 (p<.079) R^2=.046 a.R^2=.028	$\beta_1 =-.0378$ $\beta_2 =-.1216$ F= .985 (p>.376) R^2=.018 a.R^2=-.000
INTEREXP	$\beta_1 = .1731^b$ $\beta_2 =-.0034$ F=1.680 (p>.191) R^2=.030 a.R^2=.012	$\beta_1 = .1811^b$ $\beta_2 = .0091$ F=1.851 (p>.162) R^2=.033 a.R^2=.015	$\beta_1 = .3452^a$ $\beta_2 =-.0046$ F=7.369 (p<.001) R^2=.119 a.R^2=.103	$\beta_1 = .1639^b$ $\beta_2 =-.0191$ F=1.469 (p>.234) R^2=.026 a.R^2=.008	$\beta_1 =-.0712$ $\beta_2 =-.0339$ F= .239 (p>.787) R^2=.004 a.R^2=-.014

a = p<.05   b = p<.10   a.R^2 = adjusted R^2

Next, the full model (4) was fitted to each of the same combinations of external drivers and internal factors and their interaction terms. The resulting regression beta weights, F-statistics and their significance levels, R-squares, and adjusted R-squares are presented in Table 15. Only 17 of the 35 fitted models are statistically significant, and the other 18 are not. While the R-squares are generally higher than those of the corresponding reduced models, the differences are mostly small. Since only two independent variables are included in the equations, it can be concluded that about half of the reduced models and full models fit the data adequately.

For the fourth dimension of global strategy, integrated competitive moves, the reduced model (3) was fitted to each combination of external drivers and internal factors. The results of major model parameter estimates are presented in Table 16. With the largest R-square equal to .197, the variation in integrated competitive moves explained by the reduced models ranges from low to moderate. Of the 35 fitted models, 22 are statistically significant and 13 are not. The signs and sizes of the regression beta weights are generally consistent with those found when assessing the main effects on integrated competitive moves.

The full model (4) was also fitted to the same combinations of external drivers and internal factors for integrated competitive moves. The estimates of major model parameters are reported in Table 17. As indicated by the F-statistics, 21 of the 35 fitted models are statistically significant, whereas 14 are not. As for the reduced models, the variation of integrated competitive moves accounted for by the full models ranges from low to moderate. Given that only two independent variables are included in the regression equations, the fit of most of these reduced models and full models is judged

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Table 15. Results of Multiple Regression on Global Strategy (with interaction)

Dependent Var. UNIFMKTG	GLOBCOMP	SIMILREG	GLOBCUST	ECONSCAL	TECHINTY
INTELGEN	$\beta_1 = -.0613$ $\beta_2 = -.1285$ $\beta_3 = .3199$ $F = 1.580\ (p>.198)$ $R^2 = .042$ a.$R^2 = .015$	$\beta_1 = -.1160$ $\beta_2 = -.0662$ $\beta_3 = .3384$ $F = 1.691\ (p>.173)$ $R^2 = .045$ a.$R^2 = .018$	$\beta_1 = -.4756$ $\beta_2 = -.7724^a$ $\beta_3 = 1.2563^a$ $F = 6.608\ (p<.001)$ $R^2 = .155$ a.$R^2 = .132$	$\beta_1 = .3320$ $\beta_2 = .3082$ $\beta_3 = -.3744$ $F = 1.071\ (p>.364)$ $R^2 = .029$ a.$R^2 = .002$	$\beta_1 = .5451$ $\beta_2 = .8599^b$ $\beta_3 = -1.171^b$ $F = 1.586\ (p>.197)$ $R^2 = .042$ a.$R^2 = .016$
INTELDIS	$\beta_1 = .0994$ $\beta_2 = -.0254$ $\beta_3 = .1002$ $F = 1.181\ (p>.320)$ $R^2 = .032$ a.$R^2 = .005$	$\beta_1 = -.2449$ $\beta_2 = -.1511$ $\beta_3 = .4802$ $F = 1.596\ (p>.194)$ $R^2 = .042$ a.$R^2 = .016$	$\beta_1 = .2019$ $\beta_2 = -.1407$ $\beta_3 = .2124$ $F = 4.915\ (p<.004)$ $R^2 = .120$ a.$R^2 = .096$	$\beta_1 = .3251$ $\beta_2 = .2583$ $\beta_3 = -.3156$ $F = 1.027\ (p>.383)$ $R^2 = .028$ a.$R^2 = .001$	$\beta_1 = .5020$ $\beta_2 = .7033$ $\beta_3 = -.9884$ $F = .873\ (p>.457)$ $R^2 = .024$ a.$R^2 = -.003$
RESPONSI	$\beta_1 = -.2037$ $\beta_2 = -.3084$ $\beta_3 = .4490$ $F = 1.357\ (p>.259)$ $R^2 = .036$ a.$R^2 = .010$	$\beta_1 = 1.0240^b$ $\beta_2 = .3621$ $\beta_3 = -.8488$ $F = 2.153\ (p<.098)$ $R^2 = .056$ a.$R^2 = .030$	$\beta_1 = .4104$ $\beta_2 = -.0433$ $\beta_3 = -.0760$ $F = 5.222\ (p<.003)$ $R^2 = .127$ a.$R^2 = .102$	$\beta_1 = -.1494$ $\beta_2 = -.4076$ $\beta_3 = .4748$ $F = 1.219\ (p>.306)$ $R^2 = .033$ a.$R^2 = .006$	$\beta_1 = .4326$ $\beta_2 = .4014$ $\beta_3 = -.7144$ $F = .419\ (p>.739)$ $R^2 = .012$ a.$R^2 = -.016$
CSTRENGT	$\beta_1 = .9940^a$ $\beta_2 = .9713^a$ $\beta_3 = -1.178^a$ $F = 4.732\ (p<.004)$ $R^2 = .116$ a.$R^2 = .092$	$\beta_1 = -.3726$ $\beta_2 = -.0058$ $\beta_3 = .6110$ $F = 3.858\ (p<.012)$ $R^2 = .097$ a.$R^2 = .072$	$\beta_1 = -.3403$ $\beta_2 = -.4186$ $\beta_3 = .9712$ $F = 7.069\ (p<.001)$ $R^2 = .164$ a.$R^2 = .141$	$\beta_1 = -.5163$ $\beta_2 = -.6208$ $\beta_3 = 1.1001$ $F = 4.009\ (p<.010)$ $R^2 = .100$ a.$R^2 = .075$	$\beta_1 = -.6067$ $\beta_2 = -.3265$ $\beta_3 = .8137$ $F = 2.886\ (p<.040)$ $R^2 = .074$ a.$R^2 = .049$
CORIENTA	$\beta_1 = 1.1100^a$ $\beta_2 = 1.2155^a$ $\beta_3 = -1.411^b$ $F = 6.912\ (p<.001)$ $R^2 = .161$ a.$R^2 = .138$	$\beta_1 = .6308^a$ $\beta_2 = .5060^a$ $\beta_3 = -.5008$ $F = 4.727\ (p<.004)$ $R^2 = .116$ a.$R^2 = .092$	$\beta_1 = .5716$ $\beta_2 = .4499$ $\beta_3 = -.4162$ $F = 6.769\ (p<.001)$ $R^2 = .158$ a.$R^2 = .135$	$\beta_1 = -.1222$ $\beta_2 = -.0894$ $\beta_3 = .4364$ $F = 2.937\ (p<.037)$ $R^2 = .075$ a.$R^2 = .050$	$\beta_1 = -1.104^a$ $\beta_2 = -.8477^b$ $\beta_3 = 1.6330^a$ $F = 4.857\ (p<.004)$ $R^2 = .119$ a.$R^2 = .094$
CADAPTIV	$\beta_1 = -.1699$ $\beta_2 = -.4635$ $\beta_3 = .4925$ $F = 2.072\ (p>.108)$ $R^2 = .054$ a.$R^2 = .028$	$\beta_1 = -.1668$ $\beta_2 = -.2960$ $\beta_3 = .3784$ $F = 1.946\ (p>.126)$ $R^2 = .051$ a.$R^2 = .025$	$\beta_1 = .1036$ $\beta_2 = -.3581$ $\beta_3 = .3391$ $F = 5.821\ (p<.002)$ $R^2 = .139$ a.$R^2 = .115$	$\beta_1 = -.3197$ $\beta_2 = -.8093$ $\beta_3 = .8655$ $F = 2.187\ (p<.094)$ $R^2 = .057$ a.$R^2 = .031$	$\beta_1 = .4222$ $\beta_2 = .4192$ $\beta_3 = -.7744$ $F = 1.114\ (p>.346)$ $R^2 = .030$ a.$R^2 = .003$
INTEREXP	$\beta_1 = .0448$ $\beta_2 = -.1536$ $\beta_3 = .2080$ $F = 1.186\ (p>.318)$ $R^2 = .032$ a.$R^2 = .005$	$\beta_1 = .2035$ $\beta_2 = .0237$ $\beta_3 = -.0276$ $F = 1.224\ (p>.304)$ $R^2 = .033$ a.$R^2 = .006$	$\beta_1 = -.2530$ $\beta_2 = -.6983^b$ $\beta_3 = .9462^b$ $F = 6.258\ (p<.001)$ $R^2 = .148$ a.$R^2 = .124$	$\beta_1 = .3409$ $\beta_2 = .2993$ $\beta_3 = -.3919$ $F = 1.089\ (p>.357)$ $R^2 = .029$ a.$R^2 = .002$	$\beta_1 = .1653$ $\beta_2 = .3845$ $\beta_3 = -.4983$ $F = .378\ (p>.768)$ $R^2 = .010$ a.$R^2 = -.017$

a = $p < .05$ b = $p < .10$ a.R^2 = adjusted R^2

Table 16. Results of Multiple Regression Analysis on Global Strategy (without interaction)

Dependent Var. INTGCOMP	GLOBCOMP	SIMILREG	GLOBCUST	ECONSCAL	TECHINTY
INTELGEN	β_1 = .2940[a] β_2 = .2015[a] F=7.504 (p<.001) R^2=.121 a.R^2=.105	β_1 = .0928 β_2 = .1883[a] F=2.473 (p<.090) R^2=.043 a.R^2=.026	β_1 = .0304 β_2 = .1801[b] F=2.016 (p>.138) R^2=.036 a.R^2=.018	β_1 = .1939[a] β_2 = .1296 F=4.048 (p<.021) R^2=.069 a.R^2=.052	β_1 = .0616 β_2 = .1629 F=2.154 (p>.120) R^2=.038 a.R^2=.020
INTELDIS	β_1 = .2652[a] β_2 = .3416[a] F=13.36 (p<.001) R^2=.197 a.R^2=.182	β_1 = .0786 β_2 = .3537[a] F=8.356 (p<.001) R^2=.133 a.R^2=.117	β_1 = .0083 β_2 = .3546[a] F=7.916 (p<.001) R^2=.127 a.R^2=.111	β_1 = .1761[b] β_2 = .3259[a] F=10.14 (p<.001) R^2=.157 a.R^2=.141	β_1 = .0172 β_2 = .3508[a] F=7.931 (p<.001) R^2=.127 a.R^2=.111
RESPONSI	β_1 = .2905[a] β_2 = .1006 F=5.431 (p<.006) R^2=.091 a.R^2=.074	β_1 = .1165 β_2 = .1101 F=1.074 (p>.345) R^2=.019 a.R^2=.001	β_1 = .0613 β_2 = .0755 F=.568 (p>.568) R^2=.010 a.R^2=-.008	β_1 = .2318[a] β_2 = .0807 F=3.497 (p<.034) R^2=.060 a.R^2=.043	β_1 = .1139 β_2 = .0625 F=1.067 (p>.347) R^2=.019 a.R^2=.001
CSTRENGT	β_1 = .2732[a] β_2 = .1529[b] F=6.313 (p<.003) R^2=.104 a.R^2=.087	β_1 = .0846 β_2 = .1696[b] F=2.075 (p>.130) R^2=.037 a.R^2=.019	β_1 = .0336 β_2 = .1648[b] F=1.721 (p>.183) R^2=.031 a.R^2=.013	β_1 = .2306[a] β_2 = .1701[b] F=4.913 (p<.010) R^2=.083 a.R^2=.066	β_1 = .1106 β_2 = .1626[b] F=2.370 (p<.100) R^2=.042 a.R^2=.024
CORIENTA	β_1 = .2687[a] β_2 = .3228[a] F=12.33 (p<.001) R^2=.185 a.R^2=.170	β_1 = .1063 β_2 = .3407[a] F=7.697 (p<.001) R^2=.124 a.R^2=.108	β_1 = -.0040 β_2 = .3362[a] F=6.909 (p<.001) R^2=.113 a.R^2=.096	β_1 = .1387 β_2 = .2910[a] F=8.125 (p<.001) R^2=.130 a.R^2=.114	β_1 = .0715 β_2 = .3238[a] F=7.254 (p<.002) R^2=.117 a.R^2=.101
CADAPTIV	β_1 = .2866[a] β_2 = -.1024 F=5.458 (p<.006) R^2=.091 a.R^2=.074	β_1 = .0819 β_2 = -.0879 F=.865 (p>.423) R^2=.016 a.R^2=-.002	β_1 = .0683 β_2 = -.0947 F=.753 (p>.473) R^2=.014 a.R^2=-.004	β_1 = .2403[a] β_2 =-.1126 F=3.876 (p<.024) R^2=.066 a.R^2=.049	β_1 = .1440 β_2 =-.1187 F=1.634 (p>.199) R^2=.029 a.R^2=.011
INTEREXP	β_1 = .2762[a] β_2 = .1309 F=5.895 (p<.004) R^2=.098 a.R^2=.081	β_1 = .0912 β_2 = .1482 F=1.680 (p>.191) R^2=.030 a.R^2=.012	β_1 = .0635 β_2 = .1449 F=1.433 (p>.243) R^2=.026 a.R^2=.008	β_1 = .2141[a] β_2 = .1133 F=3.869 (p<.024) R^2=.066 a.R^2=.049	β_1 = .0795 β_2 = .1165 F=1.512 (p>.225) R^2=.027 a.R^2=.009

a = p<.05   b = p<.10   a.R^2 = adjusted R^2

Table 17. Results of Multiple Regression on Global Strategy (with interaction)

Dependent Var. INTGCOMP	GLOBCOMP	SIMILREG	GLOBCUST	ECONSCAL	TECHINTY
INTELGEN	β_1 = .5491[b] β_2 = -.4303 β_3 = -.3420 F =5.217 (p<.003) R^2=.127 a.R^2=.102	β_1 = -.0478 β_2 = .1663 β_3 = .0511 F =1.639 (p>.184) R^2=.044 a.R^2=.017	β_1 =-.7074[b] β_2 =-.5188 β_3 =1.1308[b] F =2.496 (p<.064) R^2=.065 a.R^2=.039	β_1 = .1664 β_2 = .0876 β_3 = -.0570 F =2.676 (p<.051) R^2=.069 a.R^2=.043	β_1 =-.1413 β_2 =-.0703 β_3 = .3668 F =1.528 (p>.211) R^2=.041 a.R^2=.014
INTELDIS	β_1 = .4524 β_2 = .5086[b] β_3 = -.2626 F =8.975 (p<.001) R^2=.200 a.R^2=.177	β_1 = .6935 β_2 = .6337[a] β_3 = -.6953 F =6.330 (p<.001) R^2=.150 a.R^2=.126	β_1 = .1883 β_2 = .5157 β_3 = -.2637 F =5.296 (p<.002) R^2=.128 a.R^2=.104	β_1 = .1728 β_2 = .3213 β_3 = .0061 F =6.698 (p<.001) R^2=.157 a.R^2=.133	β_1 = -.0081 β_2 = .3234 β_3 = .0429 F =5.240 (p<.003) R^2=.127 a.R^2=.103
RESPONSI	β_1 = .4127 β_2 = .1875 β_3 = -.1467 F =3.609 (p<.016) R^2=.091 a.R^2=.066	β_1 = .3943 β_2 = .2323 β_3 = -.2789 F =.805 (p>.493) R^2=.022 a.R^2=-.005	β_1 = .2271 β_2 = .2009 β_3 = -.2199 F =.423 (p>.736) R^2=.012 a.R^2=-.016	β_1 = -.5406 β_2 = -.7982 β_3 = 1.1814[b] F =3.323 (p<.023) R^2=.085 a.R^2=.059	β_1 = .6118 β_2 = .5232 β_3 = -.7359 F =.949 (p>.919) R^2=.026 a.R^2=-.001
CSTRENGT	β_1 =-.0893 β_2 =-.1726 β_3 = .5107 F =4.493 (p<.006) R^2=.111 a.R^2=.086	β_1 =-.1155 β_2 = .0847 β_3 = .2233 F =1.437 (p>.236) R^2=.038 a.R^2=.012	β_1 =-.6177 β_2 =-.4206 β_3 = .9726 F =1.870 (p>.139) R^2=.049 a.R^2=.023	β_1 = -.5180 β_2 = -.7728 β_3 = 1.2193[b] F =4.406 (p<.006) R^2=.109 a.R^2=.084	β_1 = .0621 β_2 = .1109 β_3 = .0747 F =1.570 (p>.200) R^2=.042 a.R^2=.015
CORIENTA	β_1 = .0984 β_2 = .1492 β_3 = .2533 F =8.268 (p<.001) R^2=.187 a.R^2=.164	β_1 = .5377 β_2 = .5784[a] β_3 = -.4949 F =5.687 (p<.002) R^2=.136 a.R^2=.112	β_1 = .0346 β_2 = .3737 β_3 = -.0601 F =4.568 (p<.005) R^2=.113 a.R^2=.088	β_1 = -.1027 β_2 = -.0731 β_3 = .5012 F =5.560 (p<.002) R^2=.134 a.R^2=.110	β_1 = -.5945 β_2 = -.4209 β_3 = 1.0856 F =5.694 (p<.002) R^2=.137 a.R^2=.113
CADAPTIV	β_1 =-.1380 β_2 =-.2443 β_3 = .2113 F =3.661 (p<.015) R^2=.092 a.R^2=.067	β_1 = .3843 β_2 = .0750 β_3 = -.3382 F =.741 (p>.530) R^2=.020 a.R^2=-.007	β_1 = -.4513 β_2 = -.5891 β_3 = .7293 F =1.135 (p>.338) R^2=.031 a.R^2=.004	β_1 = -.2221 β_2 = -.7421 β_3 = .8149 F =2.992 (p<.035) R^2=.077 a.R^2=.051	β_1 = .2123 β_2 = -.0384 β_3 = -.1151 F =1.090 (p>.356) R^2=.029 a.R^2=.002
INTEREXP	β_1 = .4593 β_2 = .3453 β_3 =-.2503 F =4.074 (p<.009) R^2=.102 a.R^2=.077	β_1 = .5503[b] β_2 = .4464[b] β_3 = -.5631 F =1.929 (p>.129) R^2=.051 a.R^2=.024	β_1 =-.2136 β_2 =-.1764 β_3 = .4382 F =1.184 (p>.319) R^2=.032 a.R^2=.005	β_1 = .1663 β_2 = .0273 β_3 = .1057 F =2.565 (p<.059) R^2=.067 a.R^2=.041	β_1 =-.1227 β_2 =-.1832 β_3 = .4261 F =1.167 (p>.325) R^2=.031 a.R^2=.004

a = p < .05   b = p < .10   a.R^2 = adjusted R^2

to be adequate.

The fifth dimension of global strategy is coordination of value-adding activities. For this dimension, the reduced model (3) was fitted to each combination of external drivers and internal factors. The results are reported in Table 18, which reveals that 31 of the 35 fitted models are statistically significant, while the remainder are not. The signs and sizes of the beta weights are consistent with those found when assessing the main effects on coordination of value-adding activities. In addition, the variation in coordination of value-adding activities explained by the reduced models ranges from low to moderate.

For each of the same 35 combinations, the full model (4) was fitted for coordination of value-adding activities. The resulting regression beta weights, F-statistics and their significance, R-squares, and adjusted R-squares are presented in Table 19. Most fitted models (31 out of 35) are statistically significant, and the rest are not. The variation in coordination of value-adding activities are accounted for by the full models range from low to moderate. Given the fact that only two independent variables are used to predict the dependent variable, most of the reduced models in Table 18 and most of the full models in Table 19 fit the data adequately.

For the last dimension of global strategy, concentration of value-adding activities, the reduced model (3) was fitted to each combination of external drivers and internal factors. The regression beta weights of independent variables, F-statistics and their significance levels, R-squares, and adjusted R-squares of the fitted models are presented in Table 20. It can be seen that only one fitted model is statistically significant, and the majority of the rest are not. These findings are congruent with those obtained for the

Table 18. Results of Multiple Regression Analysis on Global Strategy (without interaction)

Dependent Var. COORDINA	GLOBCOMP	SIMILREG	GLOBCUST	ECONSCAL	TECHINTY
INTELGEN	β_1 = .1875[a] β_2 = .3010[a] F=7.432 (p<.001) R^2=.120 a.R^2=.104	β_1 = .0507 β_2 = .2924[a] F=5.227 (p<.007) R^2=.088 a.R^2=.071	β_1 = .1127 β_2 = .2678[a] F=5.860 (p<.004) R^2=.097 a.R^2=.081	β_1 = .1421 β_2 = .2498[a] F=6.286 (p<.003) R^2=.103 a.R^2=.087	β_1 = .2024[a] β_2 = .2138[a] F=7.424 (p<.001) R^2=.120 a.R^2=.104
INTELDIS	β_1 = .1571[b] β_2 = .2777[a] F=6.499 (p<.003) R^2=.107 a.R^2=.090	β_1 = .0365 β_2 = .2852[a] F=4.951 (p<.009) R^2=.083 a.R^2=.066	β_1 = .1241 β_2 = .2653[a] F=5.848 (p<.004) R^2=.097 a.R^2=.080	β_1 = .1714[b] β_2 = .2569[a] F=6.769 (p<.002) R^2=.110 a.R^2=.094	β_1 = .2174[a] β_2 = .2200[a] F=7.772 (p<.001) R^2=.125 a.R^2=.109
RESPONSI	β_1 = .1860[a] β_2 = .2068[a] F=4.243 (p<.017) R^2=.072 a.R^2=.055	β_1 = .0994 β_2 = .2190[a] F=2.691 (p<.073) R^2=.047 a.R^2=.030	β_1 = .1523 β_2 = .1803[b] F=3.525 (p<.033) R^2=.061 a.R^2=.044	β_1 = .2151[a] β_2 = .1940[a] F=5.000 (p<.009) R^2=.084 a.R^2=.067	β_1 = .2596[a] β_2 = .1519 F=6.284 (p<.003) R^2=.103 a.R^2=.087
CSTRENGT	β_1 = .1443[b] β_2 = .4022[a] F=12.84 (p<.001) R^2=.191 a.R^2=.176	β_1 = .0340 β_2 = .4113[a] F=11.25 (p<.001) R^2=.171 a.R^2=.156	β_1 = .0861 β_2 = .3941[a] F=11.72 (p<.001) R^2=.177 a.R^2=.162	β_1 = .2123[a] β_2 = .4106[a] F=14.93 (p<.001) R^2=.215 a.R^2=.201	β_1 = .2520[a] β_2 = .3913[a] F=16.55 (p<.001) R^2=.233 a.R^2=.219
CORIENTA	β_1 = .1551[b] β_2 = .3649[a] F=10.57 (p<.001) R^2=.163 a.R^2=.147	β_1 = .0639 β_2 = .3869[a] F=9.062 (p<.001) R^2=.143 a.R^2=.127	β_1 = .0933 β_2 = .3521[a] F=9.377 (p<.001) R^2=.147 a.R^2=.131	β_1 = .1072 β_2 = .3378[a] F=9.528 (p<.001) R^2=.149 a.R^2=.133	β_1 = .2300[a] β_2 = .3348[a] F=12.79 (p<.001) R^2=.190 a.R^2=.175
CADAPTIV	β_1 = .1730[b] β_2 = -.0311 F=1.721 (p>.183) R^2=.031 a.R^2=.013	β_1 = .0432 β_2 = -.0228 F=.139 (p>.870) R^2=.002 a.R^2=-.016	β_1 = .1689[a] β_2 = -.0265 F=1.641 (p>.198) R^2=.029 a.R^2=.011	β_1 = .2186[a] β_2 = -.0428 F=2.761 (p<.068) R^2=.048 a.R^2=.031	β_1 = .2972[a] β_2 = -.0761 F=5.164 (p<.008) R^2=.087 a.R^2=.070
INTEREXP	β_1 = .1625[b] β_2 = .1655[b] F=3.291 (p<.041) R^2=.057 a.R^2=.040	β_1 = .0474 β_2 = .1756[b] F=1.853 (p>.161) R^2=.033 a.R^2=.015	β_1 = .1633[b] β_2 = .1697[b] F=3.311 (p<.041) R^2=.057 a.R^2=.040	β_1 = .1927[a] β_2 = .1447 F=3.903 (p<.024) R^2=.067 a.R^2=.050	β_1 = .2548[a] β_2 = .0775 F=5.130 (p<.007) R^2=.086 a.R^2=.069

a = p<.05   b = p<.10   a.R^2 = adjusted R^2

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Table 19. Results of Multiple Regression on Global Strategy (with interaction)

Dependent Var. COORDINA	GLOBCOMP	SIMILREG	GLOBCUST	ECONSCAL	TECHINTY
INTELGEN	β_1 =-.0001 β_2 = .1322 β_3 = .2523 F =5.050 (p<.003) R^2=.123 a.R^2=.099	β_1 = .2955 β_2 = .4123ª β_3 =-.2775 F =3.620 (p<.016) R^2=.091 a.R^2=.066	β_1 = .0562 β_2 = .2143 β_3 = .0866 F =3.878 (p<.012) R^2=.097 a.R^2=.072	β_1 = .1808 β_2 = .3090 β_3 = -.0803 F =4.156 (p<.008) R^2=.104 a.R^2=.079	β_1 = .5224 β_2 = .5814 β_3 = -.5783 F =5.217 (p<.003) R^2=.127 a.R^2=.102
INTELDIS	β_1 =-.0198 β_2 = .1199 β_3 = .2482 F =4.400 (p<.006) R^2=.109 a.R^2=.084	β_1 = .8271ᵇ β_2 = .6452ª β_3 =-.8939ᵇ F =4.482 (p<.006) R^2=.111 a.R^2=.086	β_1 = .8054ᵇ β_2 = .8750ª β_3 =-.9983 F =4.784 (p<.004) R^2=.117 a.R^2=.093	β_1 =-.1679 β_2 = -.2239 β_3 = .6388 F =4.739 (p<.004) R^2=.116 a.R^2=.092	β_1 = .3212 β_2 = .3325 β_3 = -.1762 F =5.157 (p<.003) R^2=.125 a.R^2=.101
RESPONSI	β_1 =-.7264 β_2 =-.4419 β_3 = 1.0962ᵇ F =3.989 (p<.010) R^2=.100 a.R^2=.075	β_1 = .8378 β_2 = .5438ª β_3 = -.7414 F =2.504 (p<.064) R^2=.065 a.R^2=.039	β_1 = .0900 β_2 = .1332 β_3 = .0826 F =2.336 (p<.078) R^2=.061 a.R^2=.035	β_1 =-.2412 β_2 = -.3253 β_3 = .6980 F =3.668 (p<.015) R^2=.093 a.R^2=.067	β_1 = .6657 β_2 = .5276 β_3 =-.6001 F =4.344 (p<.007) R^2=.108 a.R^2=.083
CSTRENGT	β_1 =-.1638 β_2 =-.1255 β_3 = .4341 F =8.766 (p<.001) R^2=.196 a.R^2=.173	β_1 = .1285 β_2 = .4514ª β_3 = -.1055 F =7.450 (p<.001) R^2=.171 a.R^2=.148	β_1 = .5028 β_2 = .7686ª β_3 = -.6221 F =8.156 (p<.001) R^2=.185 a.R^2=.162	β_1 =-.0451 β_2 = .0865 β_3 = .4192 F =10.04 (p<.001) R^2=.218 a.R^2=.196	β_1 =-.3483 β_2 =-.2488 β_3 = .9235 F =12.13 (p<.001) R^2=.252 a.R^2=.231
CORIENTA	β_1 = .6420ᵇ β_2 = .8613ª β_3 = -.7242 F =7.948 (p<.001) R^2=.181 a.R^2=.158	β_1 = .7301ª β_2 = .7423ª β_3 = -.7643ª F =7.520 (p<.001) R^2=.173 a.R^2=.150	β_1 = .5556 β_2 = .8007ª β_3 = -.7196 F =6.883 (p<.001) R^2=.161 a.R^2=.137	β_1 =-.6149ᵇ β_2 = -.7513 β_3 = 1.4992ª F =8.168 (p<.001) R^2=.185 a.R^2=.162	β_1 =-.4601 β_2 =-.4369 β_3 = 1.1248ᵇ F =9.600 (p<.001) R^2=.211 a.R^2=.189
CADAPTIV	β_1 =-.0945 β_2 =-.2865 β_3 = .3803 F =1.295 (p>.279) R^2=.035 a.R^2=.008	β_1 = .1389 β_2 = .0287 β_3 = -.1071 F = .108 (p>.955) R^2=.003 a.R^2=-.025	β_1 = .1112 β_2 =-.0815 β_3 = .0811 F =1.092 (p>.356) R^2=.029 a.R^2=.002	β_1 = .0206 β_2 =-.3123 β_3 = .3489 F =1.899 (p>.134) R^2=.050 a.R^2=.024	β_1 = .0932 β_2 =-.3159 β_3 = .3434 F =3.515 (p<.018) R^2=.089 a.R^2=.064
INTEREXP	β_1 =-.2658 β_2 =-.3361 β_3 = .6945 F =3.093 (p<.031) R^2=.079 a.R^2=.054	β_1 = .7022ª β_2 = .6010ª β_3 =-.8030ª F =2.940 (p<.037) R^2=.075 a.R^2=.050	β_1 =-.1240 β_2 =-.1635 β_3 = .4544 F =2.460 (p<.067) R^2=.064 a.R^2=.038	β_1 =-.0647 β_2 =-.3182 β_3 = .5697 F =2.851 (p<.041) R^2=.073 a.R^2=.048	β_1 = .0985 β_2 =-.1542 β_3 = .3293 F =3.503 (p<.019) R^2=.089 a.R^2=.063

a = p < .05   b = p < .10   a.R^2 = adjusted R^2

Table 20. Results of Multiple Regression Analysis on Global strategy (without interaction)

Dependent Var. CONCENTR	GLOBCOMP	SIMILREG	GLOBCUST	ECONSCAL	TECHINTY
INTELGEN	$\beta_1 = .1384$ $\beta_2 = -.0166$ F=1.067 (p>.347) R^2=.019 a.R^2=.001	$\beta_1 = .0445$ $\beta_2 = .0104$ F=.113 (p>.893) R^2=.002 a.R^2=-.016	$\beta_1 = -.0403$ $\beta_2 = .0180$ F=.090 (p>.914) R^2=.002 a.R^2=-.017	$\beta_1 = -.0815$ $\beta_2 = .0334$ F=.338 (p>.714) R^2=.006 a.R^2=-.012	$\beta_1 = -.0049$ $\beta_2 = .0114$ F=.006 (p>.994) R^2=.001 a.R^2=-.018
INTELDIS	$\beta_1 = .1428$ $\beta_2 = -.0960$ F=1.577 (p>.211) R^2=.028 a.R^2=.010	$\beta_1 = .0469$ $\beta_2 = -.0897$ F=.550 (p>.578) R^2=.010 a.R^2=-.008	$\beta_1 = -.0222$ $\beta_2 = -.0845$ F=.455 (p>.635) R^2=.008 a.R^2=-.010	$\beta_1 = -.0583$ $\beta_2 = -.0783$ F=.611 (p>.544) R^2=.011 a.R^2=-.007	$\beta_1 = .0291$ $\beta_2 = -.0971$ F=.471 (p>.625) R^2=.009 a.R^2=-.010
RESPONSI	$\beta_1 = .1444$ $\beta_2 = .1011$ F=1.634 (p>.199) R^2=.029 a.R^2=.011	$\beta_1 = .0714$ $\beta_2 = .1092$ F=.726 (p>.486) R^2=.013 a.R^2=-.005	$\beta_1 = -.0453$ $\beta_2 = .0956$ F=.573 (p>.565) R^2=.010 a.R^2=-.007	$\beta_1 = -.0718$ $\beta_2 = .0916$ F=.747 (p>.476) R^2=.014 a.R^2=-.005	$\beta_1 = -.0158$ $\beta_2 = .0940$ F=.473 (p>.624) R^2=.009 a.R^2=-.010
CSTRENGT	$\beta_1 = .1326$ $\beta_2 = .0716$ F=1.342 (p>.265) R^2=.024 a.R^2=.006	$\beta_1 = .0421$ $\beta_2 = .0796$ F=.456 (p>.635) R^2=.008 a.R^2=-.010	$\beta_1 = -.0559$ $\beta_2 = .0925$ F=.523 (p>.593) R^2=.010 a.R^2=-.009	$\beta_1 = -.0723$ $\beta_2 = .0813$ F=.648 (p>.525) R^2=.012 a.R^2=-.006	$\beta_1 = -.0072$ $\beta_2 = .0814$ F=.361 (p>.698) R^2=.007 a.R^2=-.012
CORIENTA	$\beta_1 = .1336$ $\beta_2 = .0857$ F=1.469 (p>.234) R^2=.026 a.R^2=.008	$\beta_1 = .0490$ $\beta_2 = .0944$ F=.598 (p>.551) R^2=.011 a.R^2=-.007	$\beta_1 = -.0590$ $\beta_2 = .1046$ F=.649 (p>.524) R^2=.012 a.R^2=-.006	$\beta_1 = -.1127$ $\beta_2 = .1281$ F=1.104 (p>.335) R^2=.020 a.R^2=.002	$\beta_1 = -.0158$ $\beta_2 = .0945$ F=.478 (p>.621) R^2=.009 a.R^2=-.009
CADAPTIV	$\beta_1 = .1338$ $\beta_2 = .1403$ F=2.188 (p>.117) R^2=.039 a.R^2=.021	$\beta_1 = .0565$ $\beta_2 = .1486$ F=1.334 (p>.267) R^2=.024 a.R^2=.006	$\beta_1 = -.0366$ $\beta_2 = .1440$ F=1.230 (p>.296) R^2=.022 a.R^2=.004	$\beta_1 = -.0829$ $\beta_2 = .1502$ F=1.545 (p>.218) R^2=.028 a.R^2=.010	$\beta_1 = -.0253$ $\beta_2 = .1482$ F=1.189 (p>.308) R^2=.021 a.R^2=.003
INTEREXP	$\beta_1 = .1484$ $\beta_2 = -.1857$[b] F=3.069 (p<.051) R^2=.053 a.R^2=.036	$\beta_1 = .0419$ $\beta_2 = -.1765$[b] F=1.867 (p>.159) R^2=.033 a.R^2=.015	$\beta_1 = -.0307$ $\beta_2 = -.1761$[b] F=1.820 (p>.167) R^2=.032 a.R^2=.015	$\beta_1 = -.0449$ $\beta_2 = -.1700$[b] F=1.879 (p>.157) R^2=.033 a.R^2=.016	$\beta_1 = .0789$ $\beta_2 = -.2073$[a] F=2.075 (p>.130) R^2=.037 a.R^2=.019

a = p<.05   b = p<.10   a.R^2 = adjusted R^2

main effects on concentration of value-adding activities and shed further light on why these activities are not influenced by external industry globalization drivers or internal organizational factors. The R-squares of the fitted models are all low, suggesting little variation in concentration of value-adding activities is accounted for by the regression models.

The full model (4) was also fitted to each combination of external drivers and internal factors. The resulting regression beta weights, F-statistics and their significance, R-squares, and adjusted R-squares are presented in Table 21. An examination of the F-statistics reveals that none of the fitted full models is statistically significant. Moreover, as for the reduced models, the R-squares are generally low, suggesting that incorporation of the interaction terms contributes little to the fit of the models. Based on the vote-counting criterion, it can be concluded that variation in concentration of value-adding activities is not accounted for by external drivers, by internal factors, or by interaction between the two.

In summary, except for concentration of value-adding activities, with regard to the dimensions of global strategy, the majority of the reduced models as well as the full models fit the data adequately. These findings are congruent with those obtained in assessing the main effects of external drivers and internal factors on global strategy. To test hypothesis H6, however, for each dimension of global strategy, the fitted full models had to be compared with the corresponding reduced models by an F-test. Table 22 presents the results of that comparison. The first column of Table 22 lists the dependent variables (that is, dimensions of global strategy) of the models. The next two columns list the combinations of external industry globalization drivers and internal organizational

Table 21. Results of Multiple Regression on Global Strategy   (with interaction)

Dependent Var. CONCENTR	GLOBCOMP	SIMILREG	GLOBCUST	ECONSCAL	TECHINTY
INTELGEN	β_1 = .2575 β_2 = .1234 β_3 = -.1597 F = .750 (p>.524) R^2=.020 a.R^2=-.007	β_1 = .1904 β_2 = .0819 β_3 = -.1654 F = .124 (p>.945) R^2=.003 a.R^2=-.024	β_1 = -.7055 β_2 = -.6121 β_3 = 1.0195[b] F = .936 (p>.426) R^2=.025 a.R^2=-.001	β_1 = .5089 β_2 = .9370 β_3 = -1.224 F =1.045 (p>.375) R^2=.028 a.R^2=.001	β_1 = -.0695 β_2 = -.0629 β_3 = .1169 F = .013 (p>.997) R^2=.001 a.R^2=-.027
INTELDIS	β_1 = .5063 β_2 = .2283 β_3 = -.5100 F =1.427 (p>.239) R^2=.038 a.R^2=.011	β_1 = .4612 β_2 = .0990 β_3 = -.4684 F = .642 (p>.589) R^2=.018 a.R^2=-.009	β_1 = .3550 β_2 = .2531 β_3 = -.5528 F = .531 (p>.662) R^2=.015 a.R^2=-.013	β_1 = .2082 β_2 = .2993 β_3 = -.5017 F = .537 (p>.658) R^2=.015 a.R^2=-.013	β_1 = .0109 β_2 = -.1169 β_3 = -.0309 F = .311 (p>.817) R^2=.008 a.R^2=-.019
RESPONSI	β_1 = -.4711 β_2 = -.3364 β_3 = .7393 F =1.564 (p>.202) R^2=.042 a.R^2=.015	β_1 = .3091 β_2 = -.2137 β_3 = -.2387 F = .548 (p>.650) R^2=.015 a.R^2=-.012	β_1 = -.1625 β_2 = .0071 β_3 = .1554 F = .402 (p>.751) R^2=.011 a.R^2=-.016	β_1 = -.2960 β_2 = -.1636 β_3 = .3429 F = .569 (p>.636) R^2=.016 a.R^2=-.012	β_1 = .0991 β_2 = .2003 β_3 = -.1698 F = .325 (p>.807) R^2=.009 a.R^2=-.018
CSTRENGT	β_1 = .6771 β_2 = .5605 β_3 = -.7671 F =1.506 (p>.217) R^2=.040 a.R^2=.013	β_1 = .5967 β_2 = .3149 β_3 = -.6189 F = .789 (p>.502) R^2=.021 a.R^2=-.006	β_1 = .6094 β_2 = .6904 β_3 = -.9933 F =1.079 (p>.361) R^2=.029 a.R^2=.002	β_1 = -.1093 β_2 = .0347 β_3 = .0603 F = .430 (p>.731) R^2=.012 a.R^2=-.016	β_1 = -.5495 β_2 = -.4969 β_3 = .8343 F = .814 (p>.488) R^2=.022 a.R^2=-.005
CORIENTA	β_1 = .7124[a] β_2 = .6758[b] β_3 = -.8609[b] F =1.982 (p>.120) R^2=.052 a.R^2=.026	β_1 = .1387 β_2 = -.1438 β_3 = -.1029 F = .415 (p>.742) R^2=.011 a.R^2=-.016	β_1 = .4019 β_2 = .5517 β_3 = -.7172 F = .938 (p>.425) R^2=.025 a.R^2=-.002	β_1 = -.1200 β_2 = -.1171 β_3 = .0151 F = .729 (p>.536) R^2=.020 a.R^2=-.007	β_1 = -.6784 β_2 = -.6463 β_3 = 1.0799 F =1.022 (p>.385) R^2=.028 a.R^2=.001
CADAPTIV	β_1 = -.3848 β_2 = -.3548 β_3 = .7372 F =2.059 (p>.110) R^2=.054 a.R^2=.028	β_1 = .5760 β_2 = -.4284[b] β_3 = -.5810 F =1.394 (p>.248) R^2=.037 a.R^2=.011	β_1 = -.0444 β_2 = .1366 β_3 = .0109 F = .812 (p>.489) R^2=.022 a.R^2=-.005	β_1 = .1628 β_2 = .4846 β_3 = -.4329 F =1.132 (p>.339) R^2=.030 a.R^2=.004	β_1 = -.2850 β_2 = -.1571 β_3 = .4372 F = .933 (p>.427) R^2=.025 a.R^2=-.002
INTEREXP	β_1 = .2590 β_2 = -.0562 β_3 = -.1793 F =2.087 (p>.106) R^2=.055 a.R^2=.029	β_1 = .4595 β_2 = .0947 β_3 = -.5121 F =1.913 (p>.131) R^2=.050 a.R^2=.024	β_1 = -.3394 β_2 = -.5341 β_3 = .4883 F =1.501 (p>.218) R^2=.040 a.R^2=.013	β_1 = .3619 β_2 = .5619 β_3 = -.9008 F =1.884 (p>.136) R^2=.050 a.R^2=.023	β_1 = .4077 β_2 = .2802 β_3 = -.6930 F =1.829 (p>.146) R^2=.048 a.R^2=.022

a = p < .05   b = p < .10   a.R^2 = adjusted R^2

Table 22. Comparison Of Models With and Without Interaction

Dependent Variable	Independent Factors		Reduced Model R-square	Full Model R-square	F-statistic	
MKTPART	INTELGEN	GLOBCOMP	0.08414	0.09231	0.98109	
PRODSTAN	INTELGEN	GLOBCOMP	0.01381	0.01434	0.05861	
UNIFMKTG	INTELGEN	GLOBCOMP	0.03719	0.04204	0.55185	
INTGCOMP	INTELGEN	GLOBCOMP	0.12103	0.12657	0.69137	
COORDINA	INTELGEN	GLOBCOMP	0.12001	0.12302	0.37411	
CONCENTR	INTELGEN	GLOBCOMP	0.01920	0.02041	0.13464	
MKTPART	INTELGEN	SIMILREG	0.07472	0.07475	0.00353	
PRODSTAN	INTELGEN	SIMILREG	0.00089	0.12842	15.9489	*
UNIFMKTG	INTELGEN	SIMILREG	0.03916	0.04487	0.65163	
INTGCOMP	INTELGEN	SIMILREG	0.04340	0.04353	0.01481	
COORDINA	INTELGEN	SIMILREG	0.08752	0.09136	0.46064	
CONCENTR	INTELGEN	SIMILREG	0.00207	0.00343	0.14875	
MKTPART	INTELGEN	GLOBCUST	0.09996	0.16254	8.14513	*
PRODSTAN	INTELGEN	GLOBCUST	0.07033	0.07360	0.38475	
UNIFMKTG	INTELGEN	GLOBCUST	0.11910	0.15509	4.64299	*
INTGCOMP	INTELGEN	GLOBCUST	0.03567	0.06483	3.39878	
COORDINA	INTELGEN	GLOBCUST	0.09708	0.09725	0.02053	
CONCENTR	INTELGEN	GLOBCUST	0.00164	0.02534	2.65046	
MKTPART	INTELGEN	ECONSCAL	0.10378	0.10449	0.08642	
PRODSTAN	INTELGEN	ECONSCAL	0.08765	0.12564	4.73593	*
UNIFMKTG	INTELGEN	ECONSCAL	0.02683	0.02889	0.23122	
INTGCOMP	INTELGEN	ECONSCAL	0.06914	0.06918	0.00468	
COORDINA	INTELGEN	ECONSCAL	0.10341	0.10350	0.01094	
CONCENTR	INTELGEN	ECONSCAL	0.00616	0.02821	2.47322	
MKTPART	INTELGEN	TECHINTY	0.07393	0.08472	1.28497	
PRODSTAN	INTELGEN	TECHINTY	0.06074	0.08454	2.83377	
UNIFMKTG	INTELGEN	TECHINTY	0.01483	0.04219	3.11360	
INTGCOMP	INTELGEN	TECHINTY	0.03803	0.04071	0.30452	
COORDINA	INTELGEN	TECHINTY	0.11989	0.12657	0.83363	
CONCENTR	INTELGEN	TECHINTY	0.00011	0.00038	0.02944	
MKTPART	INTELDIS	GLOBCOMP	0.09091	0.09171	0.09600	
PRODSTAN	INTELDIS	GLOBCOMP	0.01651	0.01701	0.05544	
UNIFMKTG	INTELDIS	GLOBCOMP	0.03137	0.03175	0.04278	
INTGCOMP	INTELDIS	GLOBCOMP	0.19691	0.19956	0.36086	
COORDINA	INTELDIS	GLOBCOMP	0.10654	0.10891	0.28990	
CONCENTR	INTELDIS	GLOBCOMP	0.02812	0.03812	1.13320	
MKTPART	INTELDIS	SIMILREG	0.08586	0.08889	0.36249	
PRODSTAN	INTELDIS	SIMILREG	0.00454	0.01983	1.70033	
UNIFMKTG	INTELDIS	SIMILREG	0.03454	0.04246	0.90156	
INTGCOMP	INTELDIS	SIMILREG	0.13294	0.14954	2.12755	
COORDINA	INTELDIS	SIMILREG	0.08327	0.11072	3.36458	
CONCENTR	INTELDIS	SIMILREG	0.00999	0.01753	0.83652	
MKTPART	INTELDIS	GLOBCUST	0.11434	0.11441	0.00862	
PRODSTAN	INTELDIS	GLOBCUST	0.06955	0.06977	0.02578	
UNIFMKTG	INTELDIS	GLOBCUST	0.11920	0.12013	0.11521	
INTGCOMP	INTELDIS	GLOBCUST	0.12683	0.12825	0.17755	
COORDINA	INTELDIS	GLOBCUST	0.09690	0.11730	2.51909	
CONCENTR	INTELDIS	GLOBCUST	0.00827	0.01453	0.69240	
MKTPART	INTELDIS	ECONSCAL	0.12530	0.12820	0.36258	
PRODSTAN	INTELDIS	ECONSCAL	0.08350	0.09124	0.92836	
UNIFMKTG	INTELDIS	ECONSCAL	0.02631	0.02774	0.16032	
INTGCOMP	INTELDIS	ECONSCAL	0.15688	0.15688	0.00000	
COORDINA	INTELDIS	ECONSCAL	0.11048	0.11632	0.72035	
CONCENTR	INTELDIS	ECONSCAL	0.01109	0.01469	0.39825	
MKTPART	INTELDIS	TECHINTY	0.08757	0.11304	3.13005	
PRODSTAN	INTELDIS	TECHINTY	0.05523	0.06324	0.93203	

Table 22 (cont'd)

Dependent Variable	Independent Factors		Reduced Model R-square	Full Model R-square	F-statistic	
UNIFMKTG	INTELDIS	TECHINTY	0.00810	0.02367	1.73827	
INTGCOMP	INTELDIS	TECHINTY	0.12703	0.12706	0.00375	
COORDINA	INTELDIS	TECHINTY	0.12481	0.12531	0.06231	
CONCENTR	INTELDIS	TECHINTY	0.00856	0.00858	0.00220	
MKTPART	RESPONSI	GLOBCOMP	0.01473	0.03184	1.92632	
PRODSTAN	RESPONSI	GLOBCOMP	0.01343	0.01511	0.18593	
UNIFMKTG	RESPONSI	GLOBCOMP	0.03171	0.03663	0.55667	
INTGCOMP	RESPONSI	GLOBCOMP	0.09062	0.09111	0.05876	
COORDINA	RESPONSI	GLOBCOMP	0.07222	0.09975	3.33326	
CONCENTR	RESPONSI	GLOBCOMP	0.02911	0.04163	1.42396	
MKTPART	RESPONSI	SIMILREG	0.00873	0.02886	2.25938	
PRODSTAN	RESPONSI	SIMILREG	0.00071	0.00496	0.46556	
UNIFMKTG	RESPONSI	SIMILREG	0.03285	0.05643	2.72393	
INTGCOMP	RESPONSI	SIMILREG	0.01932	0.02187	0.28416	
COORDINA	RESPONSI	SIMILREG	0.04704	0.06504	2.09849	
CONCENTR	RESPONSI	SIMILREG	0.01314	0.01500	0.20583	
MKTPART	RESPONSI	GLOBCUST	0.05038	0.08349	3.93775	*
PRODSTAN	RESPONSI	GLOBCUST	0.06929	0.06988	0.06914	
UNIFMKTG	RESPONSI	GLOBCUST	0.12653	0.12668	0.01872	
INTGCOMP	RESPONSI	GLOBCUST	0.01031	0.01162	0.14447	
COORDINA	RESPONSI	GLOBCUST	0.06076	0.06094	0.02089	
CONCENTR	RESPONSI	GLOBCUST	0.01040	0.01105	0.07164	
MKTPART	RESPONSI	ECONSCAL	0.06645	0.09752	3.75258	
PRODSTAN	RESPONSI	ECONSCAL	0.08337	0.09317	1.17795	
UNIFMKTG	RESPONSI	ECONSCAL	0.02885	0.03276	0.44062	
INTGCOMP	RESPONSI	ECONSCAL	0.06030	0.08450	2.88127	
COORDINA	RESPONSI	ECONSCAL	0.08403	0.09248	1.01491	
CONCENTR	RESPONSI	ECONSCAL	0.01352	0.01556	0.22587	
MKTPART	RESPONSI	TECHINTY	0.02186	0.02265	0.08811	
PRODSTAN	RESPONSI	TECHINTY	0.05594	0.06153	0.64926	
UNIFMKTG	RESPONSI	TECHINTY	0.00542	0.01151	0.67154	
INTGCOMP	RESPONSI	TECHINTY	0.01921	0.02567	0.72269	
COORDINA	RESPONSI	TECHINTY	0.10338	0.10767	0.52403	
CONCENTR	RESPONSI	TECHINTY	0.00861	0.00895	0.03739	
MKTPART	CSTRENGT	GLOBCOMP	0.01329	0.01607	0.30797	
PRODSTAN	CSTRENGT	GLOBCOMP	0.02124	0.06442	5.03070	*
UNIFMKTG	CSTRENGT	GLOBCOMP	0.07814	0.11617	4.69012	*
INTGCOMP	CSTRENGT	GLOBCOMP	0.10380	0.11095	0.87661	
COORDINA	CSTRENGT	GLOBCOMP	0.19065	0.19581	0.69939	
CONCENTR	CSTRENGT	GLOBCOMP	0.02403	0.04014	1.82942	
MKTPART	CSTRENGT	SIMILREG	0.00692	0.00695	0.00329	
PRODSTAN	CSTRENGT	SIMILREG	0.00995	0.02284	1.43785	
UNIFMKTG	CSTRENGT	SIMILREG	0.08398	0.09679	1.54592	
INTGCOMP	CSTRENGT	SIMILREG	0.03668	0.03839	0.19383	
COORDINA	CSTRENGT	SIMILREG	0.17109	0.17147	0.04999	
CONCENTR	CSTRENGT	SIMILREG	0.00830	0.02144	1.46364	
MKTPART	CSTRENGT	GLOBCUST	0.04867	0.07213	2.75592	
PRODSTAN	CSTRENGT	GLOBCUST	0.07105	0.10036	3.55119	
UNIFMKTG	CSTRENGT	GLOBCUST	0.14541	0.16413	2.44115	
INTGCOMP	CSTRENGT	GLOBCUST	0.03060	0.04938	2.15335	
COORDINA	CSTRENGT	GLOBCUST	0.17702	0.18470	1.02676	
CONCENTR	CSTRENGT	GLOBCUST	0.00951	0.02910	2.19931	
MKTPART	CSTRENGT	ECONSCAL	0.06663	0.08717	2.45266	
PRODSTAN	CSTRENGT	ECONSCAL	0.09245	0.09854	0.73637	
UNIFMKTG	CSTRENGT	ECONSCAL	0.07874	0.10019	2.59838	
INTGCOMP	CSTRENGT	ECONSCAL	0.08269	0.10905	3.22492	

Table 22 (cont'd)

Dependent Variable	Independent Factors	Reduced Model R-square	Full Model R-square	F-statistic
COORDINA	CSTRENGT ECONSCAL	0.21499	0.21810	0.43355
CONCENTR	CSTRENGT ECONSCAL	0.01175	0.01181	0.00662
MKTPART	CSTRENGT TECHINTY	0.02333	0.02388	0.06142
PRODSTAN	CSTRENGT TECHINTY	0.06140	0.06141	0.00116
UNIFMKTG	CSTRENGT TECHINTY	0.05943	0.07422	1.74135
INTGCOMP	CSTRENGT TECHINTY	0.04167	0.04180	0.01479
COORDINA	CSTRENGT TECHINTY	0.23298	0.25202	2.77462
CONCENTR	CSTRENGT TECHINTY	0.00658	0.02212	1.73218
MKTPART	CORIENTA GLOBCOMP	0.11603	0.11687	0.10368
PRODSTAN	CORIENTA GLOBCOMP	0.13775	0.16247	3.21717
UNIFMKTG	CORIENTA GLOBCOMP	0.09138	0.16107	9.05464 *
INTGCOMP	CORIENTA GLOBCOMP	0.18452	0.18676	0.30023
COORDINA	CORIENTA GLOBCOMP	0.16250	0.18086	2.44310
CONCENTR	CORIENTA GLOBCOMP	0.02626	0.05219	2.98200
MKTPART	CORIENTA SIMILREG	0.11337	0.13046	2.14229
PRODSTAN	CORIENTA SIMILREG	0.12970	0.14219	1.58708
UNIFMKTG	CORIENTA SIMILREG	0.10309	0.11606	1.59935
INTGCOMP	CORIENTA SIMILREG	0.12376	0.13642	1.59793
COORDINA	CORIENTA SIMILREG	0.14257	0.17279	3.98204 *
CONCENTR	CORIENTA SIMILREG	0.01085	0.01140	0.06064
MKTPART	CORIENTA GLOBCUST	0.13264	0.14427	1.48139
PRODSTAN	CORIENTA GLOBCUST	0.16448	0.16449	0.00130
UNIFMKTG	CORIENTA GLOBCUST	0.15368	0.15827	0.59438
INTGCOMP	CORIENTA GLOBCUST	0.11250	0.11260	0.01228
COORDINA	CORIENTA GLOBCUST	0.14680	0.16051	1.78012
CONCENTR	CORIENTA GLOBCUST	0.01177	0.02539	1.52326
MKTPART	CORIENTA ECONSCAL	0.13229	0.13629	0.50480
PRODSTAN	CORIENTA ECONSCAL	0.16187	0.16675	0.63837
UNIFMKTG	CORIENTA ECONSCAL	0.07237	0.07543	0.36075
INTGCOMP	CORIENTA ECONSCAL	0.12974	0.13378	0.50837
COORDINA	CORIENTA ECONSCAL	0.14881	0.18493	4.83036 *
CONCENTR	CORIENTA ECONSCAL	0.01985	0.01985	0.00000
MKTPART	CORIENTA TECHINTY	0.11739	0.11977	0.29472
PRODSTAN	CORIENTA TECHINTY	0.16028	0.16406	0.49288
UNIFMKTG	CORIENTA TECHINTY	0.07564	0.11888	5.34906 *
INTGCOMP	CORIENTA TECHINTY	0.11746	0.13657	2.41246
COORDINA	CORIENTA TECHINTY	0.19002	0.21053	2.83176
CONCENTR	CORIENTA TECHINTY	0.00870	0.02761	2.11972
MKTPART	CADAPTIV GLOBCOMP	0.02900	0.03459	0.63114
PRODSTAN	CADAPTIV GLOBCOMP	0.01311	0.01330	0.02099
UNIFMKTG	CADAPTIV GLOBCOMP	0.04750	0.05442	0.79769
INTGCOMP	CADAPTIV GLOBCOMP	0.09103	0.09230	0.15251
COORDINA	CADAPTIV GLOBCOMP	0.03061	0.03473	0.46524
CONCENTR	CADAPTIV GLOBCOMP	0.03860	0.05409	1.78496
MKTPART	CADAPTIV SIMILREG	0.02031	0.02383	0.39305
PRODSTAN	CADAPTIV SIMILREG	0.00054	0.00733	0.74558
UNIFMKTG	CADAPTIV SIMILREG	0.04561	0.05129	0.65259
INTGCOMP	CADAPTIV SIMILREG	0.01562	0.02016	0.50504
COORDINA	CADAPTIV SIMILREG	0.00255	0.00300	0.04920
CONCENTR	CADAPTIV SIMILREG	0.02390	0.03728	1.51490
MKTPART	CADAPTIV GLOBCUST	0.06728	0.13939	9.13305 *
PRODSTAN	CADAPTIV GLOBCUST	0.06920	0.07085	0.19356
UNIFMKTG	CADAPTIV GLOBCUST	0.13553	0.13919	0.46345
INTGCOMP	CADAPTIV GLOBCUST	0.01362	0.03056	1.90467
COORDINA	CADAPTIV GLOBCUST	0.02923	0.02944	0.02358
CONCENTR	CADAPTIV GLOBCUST	0.02207	0.02207	0.00000

Table 22 (cont'd)

Dependent Variable	Independent Factors		Reduced Model R-square	Full Model R-square	F-statistic	
MKTPART	CADAPTIV	ECONSCAL	0.08664	0.10141	1.79162	
PRODSTAN	CADAPTIV	ECONSCAL	0.08341	0.08364	0.02736	
UNIFMKTG	CADAPTIV	ECONSCAL	0.04560	0.05727	1.34930	
INTGCOMP	CADAPTIV	ECONSCAL	0.06639	0.07674	1.22192	
COORDINA	CADAPTIV	ECONSCAL	0.04822	0.05012	0.21803	
CONCENTR	CADAPTIV	ECONSCAL	0.02756	0.03048	0.32829	
MKTPART	CADAPTIV	TECHINTY	0.04676	0.07859	3.76539	
PRODSTAN	CADAPTIV	TECHINTY	0.05613	0.06492	1.02463	
UNIFMKTG	CADAPTIV	TECHINTY	0.01775	0.03003	1.37996	
INTGCOMP	CADAPTIV	TECHINTY	0.02911	0.02938	0.03032	
COORDINA	CADAPTIV	TECHINTY	0.08654	0.08896	0.28954	
CONCENTR	CADAPTIV	TECHINTY	0.02135	0.02526	0.43723	
MKTPART	INTEREXP	GLOBCOMP	0.14153	0.14462	0.39375	
PRODSTAN	INTEREXP	GLOBCOMP	0.03538	0.03816	0.31504	
UNIFMKTG	INTEREXP	GLOBCOMP	0.02991	0.03190	0.22406	
INTGCOMP	INTEREXP	GLOBCOMP	0.09760	0.10165	0.49140	
COORDINA	INTEREXP	GLOBCOMP	0.05695	0.07911	2.62294	
CONCENTR	INTEREXP	GLOBCOMP	0.05331	0.05479	0.17067	
MKTPART	INTEREXP	SIMILREG	0.13850	0.14026	0.22314	
PRODSTAN	INTEREXP	SIMILREG	0.02478	0.06343	4.49817	*
UNIFMKTG	INTEREXP	SIMILREG	0.03284	0.03289	0.00564	
INTGCOMP	INTEREXP	SIMILREG	0.02990	0.05086	2.40706	
COORDINA	INTEREXP	SIMILREG	0.03288	0.07549	5.02373	*
CONCENTR	INTEREXP	SIMILREG	0.03312	0.05045	1.98933	
MKTPART	INTEREXP	GLOBCUST	0.17900	0.17920	0.02656	
PRODSTAN	INTEREXP	GLOBCUST	0.09080	0.14244	6.56369	*
UNIFMKTG	INTEREXP	GLOBCUST	0.11911	0.14810	3.70925	
INTGCOMP	INTEREXP	GLOBCUST	0.02562	0.03184	0.70028	
COORDINA	INTEREXP	GLOBCUST	0.05728	0.06396	0.77787	
CONCENTR	INTEREXP	GLOBCUST	0.03231	0.04003	0.87657	
MKTPART	INTEREXP	ECONSCAL	0.17331	0.19199	2.51992	
PRODSTAN	INTEREXP	ECONSCAL	0.09574	0.10589	1.23738	
UNIFMKTG	INTEREXP	ECONSCAL	0.02625	0.02936	0.34924	
INTGCOMP	INTEREXP	ECONSCAL	0.06629	0.06652	0.02686	
COORDINA	INTEREXP	ECONSCAL	0.06682	0.07339	0.77285	
CONCENTR	INTEREXP	ECONSCAL	0.03333	0.04974	1.88232	
MKTPART	INTEREXP	TECHINTY	0.13613	0.14441	1.05485	
PRODSTAN	INTEREXP	TECHINTY	0.06026	0.06342	0.36776	
UNIFMKTG	INTEREXP	TECHINTY	0.00437	0.01040	0.66418	
INTGCOMP	INTEREXP	TECHINTY	0.02699	0.03140	0.49627	
COORDINA	INTEREXP	TECHINTY	0.08603	0.08867	0.31576	
CONCENTR	INTEREXP	TECHINTY	0.03667	0.04835	1.33780	

*   significant at .05

factors that enter the models as independent variables. The fourth column presents the R-squares for the reduced models, which exclude the interaction term between the drivers and the factors. The fifth column of Table 22 presents the R-squares for the full models, which include the interaction term between the drivers and the factors. The last column presents the F-statistics of the model comparison test.

An F-statistic followed by an asterisk indicates that the full model fits significantly better than the corresponding reduced model. In other words, the inclusion of the interaction term into regression model (3) significantly improves the fit of the model. Hence, the interaction has a significant effect on the dependent variable, that is, on a dimension of global strategy. In contrast, an F-statistic not followed by an asterisk indicates that the full model with interaction term fits no better than the corresponding reduced model without interaction term. Hence, the interaction between the driver and the factor has little effect on the dimension of global strategy.

An examination of the last column of Table 22 reveals that for the global market participation dimension, there are only three cases in which the full model fits significantly better than the corresponding reduced model. Thus, global market participation is significantly affected by only three interaction terms. For product standardization, five full models fit significantly better than the corresponding reduced models, suggesting that interaction between drivers and factors is significant in only five cases. Uniform marketing is significantly affected by four interactions between external drivers and internal factors. Similarly, coordination of value-adding activities is significantly affected by interaction between drivers and factors in three cases. Finally, integrated competitive moves and concentration of value-adding activities are not affected

at all by the interaction between external drivers and internal factors. Based on the vote-counting criterion, it can be concluded that the interaction between external globalization drivers and internal organizational factors exerts little influence on the dimensions of global strategy. Thus, hypothesis H6 is not supported by the findings.

Table 23 summarizes the results of the hypothesis testing. The implications of these findings are discussed in the following chapter.

Table 23. Summary of the Major Research Findings

Hypothesis	Description of Relationship	Number of Expected Effects	Number of Supported Effects	Conclusion
H1	Main effects of global strategy on performance	6	5	Strongly supported
H2	Main effects of internal organizational factors on performance	7	6	Strongly supported
H3	Main effects of external industry globalization drivers on global strategy	30	15	Supported
H4	Main effects of internal organizational factors on global strategy	42	17	Supported
H5	Interaction effects on performance between global strategy and internal factors	42	3	Not supported
H6	Interaction effects on global strategy between external drivers and internal factors	210	15	Not supported

CHAPTER 6

CONCLUSIONS AND DISCUSSION

The findings of this research offer a number of insights into issues that are of significant managerial as well as theoretical interest. They help define global strategy for both the academic community and practitioners of international business. They also provide empirical support for the view that the global strategy has a positive influence on business performance. The research successfully links the IO-based and resource-based theories to provide a more complete explanation of global strategy and performance. Given the independent directions in which these two theoretical streams are headed, their successful integration is of particular significance to the literature. In addition, the rigorous empirical work involved in this study helps fill a significant gap in the global strategy literature. Some of the arguments made by previous writers based on case studies are supported by the empirical work reported here. Furthermore, regarding the key issue of the performance implications of global strategy, these findings help refute the view expressed in some of the literature that global (marketing) strategy has no performance implications. In the following sections, the specific findings of this research are compared and contrasted with previous work to highlight the contributions of the present study. The managerial and theoretical implications as well as the limitations of the study also are discussed.

WHAT IS GLOBAL STRATEGY?

The literature is filled with many different perspectives on what constitutes a global strategy. The most influential are Levitt's (1983) global standardization of product and marketing programs, Hout's et al.'s (1982) synergistic leverage of competitive

advantage, Kogut's (1985) multimarket sourcing and production shifting, Hamel and Prahalad's (1985) cross-subsidization, Porter's (1986) configuration and coordination of value-chain activities, and Ohmae's (1985) "triadic" view. On the one hand, these varied perspectives enrich our thinking about global strategy and offer many insights as to how international business practitioners can compete effectively in global industries. On the other hand, these diverse views also contribute to much of the ambiguity and confusion in the literature. Readers are often perplexed as to which view(s) is correct and which to follow.

For this reason the present study sought to integrate the diverse perspectives of global strategy into a multidimensional view. Building on Yip's (1989) work, this research proposes that a global strategy involves six major dimensions. Using this multidimensional construct, the most influential perspectives in the global strategy literature have been integrated.

The empirical findings of this research provide support for this multidimensional view of global strategy. First, each of the six dimensions exhibits adequate internal consistency, as indicated by the moderate to high coefficient alpha of between .638 and .878. Second, except for concentration of value-adding activities, the correlations among five dimensions of global strategy are fairly high but not excessively so, ranging between .255 and .500, and they are statistically significant. Thus, these five dimensions are closely linked yet separate aspects of the same construct, namely, global strategy. As for the concentration dimension, it correlates positively and significantly with two other dimensions but not significantly with the remaining three. This suggests that it may or may not be a closely related dimension of global strategy, perhaps depending upon the specific industry or product involved. Finally, it has been demonstrated that the effects on performance of global strategy vary across the dimensions and that the effects of

external drivers and internal factors on global strategy also vary across the dimensions. These findings further support the multidimensional nature of global strategy.

Compared to Yip (1989), this study provides an empirical basis for his concept of global strategy as multidimensional yet calls into question his view that concentration of value-chain activities is a key dimension of global strategy. Indeed, this research finds that coordination of value-chain activities is an important dimension of global strategy and should be added to Yip's original conceptualization.

It is concluded that global strategy has at least five dimensions: global market participation, product standardization, uniform marketing, integrated competitive moves, and coordination of value-adding activities. Depending on the industry or product, a sixth dimension may be concentration of value-adding activities, but future research is needed to identify the exact industries or products. Nevertheless, the multidimensional concept is empirically validated here, which will eliminate or reduce some of the ambiguity and confusion in the literature and serve as a bench mark for future research.

DOES GLOBAL STRATEGY AFFECT GLOBAL BUSINESS PERFORMANCE?

The relationship between business strategy and performance has been documented in many previous studies (for example, Buzzell and Gale 1987; Phillips et al. 1983; Robinson and Fornell 1986; Shoeffler 1977). Indeed, a fundamental proposition and building block of the strategy literature is that the relationship exists and is positive. Most studies follow the "structure-conduct-performance" paradigm of the IO-base theory, which sees business performance as a result of the deliberate conception and implementation of a business strategy (Scherer and Ross 1990). In the global context, the relationship between a firm's international strategy and performance also has been established by empirical works (for example, Cavusgil and Zou 1994; Cooper and

Kleinschmidt 1985).

Yet, a recent study by Samiee and Roth (1992) on global marketing strategy reports no relationship between global marketing strategy and business performance, which contradicts much of the strategy literature (for example, Hamel and Prahalad 1985; Levitt 1983; Ohmae 1985; Porter 1986). It also challenges the fundamental building block of the strategy literature that business performance is a direct result of a firm's conduct (that is, strategy) (see Porter 1980; Scherer and Ross 1990). If global (marketing) strategy is indeed an irrelevant predictor of business performance, as Samiee and Roth (1992) maintain, then the validity of many previously published case studies and theoretical works would have to be seriously questioned. Thus, clarification of the relationship between global strategy and performance is a particularly significant endeavor in global strategy research.

This study responds to that need by empirically establishing the positive relationship between global strategy and performance. Indeed, five of the six global strategy dimensions are found to be positively and significantly related to business performance. Even if the focus is restricted to the product and marketing aspects of global strategy, business performance is still positively influenced by those dimensions. In order to draw a convincing conclusion about the relationship, however, this research must be compared in some detail to Samiee and Roth (1992) so that the validity of the current findings can be better understood.

The context of investigation for both Samiee and Roth (1992) is similar to that of the present study. Both examine global industries, focus on business units of multinational corporations, and are limited to manufacturing industries. In addition, both used mail surveys to collect primary data and employed Likert-type statements for measuring strategy variables. Nevertheless, there are some differences in research

design. First, in identifying global industries, the present study used a 30:70 intraindustry trade ratio, whereas Samiee and Roth (1992) used 50:50. This difference is not fundamental because the exact cut-off point is judgmental and arbitrary. Furthermore, by lowering the cut-off point, the present study could include industries such as automotive parts/components and machine tools, which are widely labelled in the literature as global industries. Second, the Likert scales used in this research had seven points, while those used by Samiee and Roth (1992) had only five. Because the data are standardized in the analysis by both studies, this difference is also insignificant. Finally, the response rates differ somewhat between the two studies, as Samiee and Roth (1992) achieved a response rate of more than 40 percent. Since nonresponse bias was tested and found nonsignificant in both studies, the difference in response rate is inconsequential. Hence, the sample of the present study is comparable to the Samiee and Roth (1992) sample.

The major differences between the two studies lie in two areas: (1) the conception and measurement of global marketing strategy and performance and (2) the way by which data analysis was conducted. Samiee and Roth (1992) never directly measured global marketing strategy. Instead, they indirectly inferred a BU's global marketing standardization based on executives' perceptions regarding five external environmental variables, measured by five-point Likert scales. The variables were: (1) our major competitors market standardized products worldwide; (2) customer needs are standardized worldwide; (3) product awareness and information exist worldwide; (4) standardized product technology exists worldwide; and (5) standardized purchasing practices exist worldwide. To infer a BU's global marketing standardization, Samiee and Roth (1992) summed the five external environmental variables into a scale, and used mean-split to classify BUs into two groups. Those scoring above the mean were assumed to have a

high degree of global marketing standardization and were placed into the high group; those scoring below the mean were placed into the low group. As for business performance, Samiee and Roth used return on assets (ROA), return on investment (ROI), and sales growth as the main indicators. Other aspects, such as improvement in the BUs' competitive position were not tapped. To assess the relationship between global marketing strategy and business performance, Samiee and Roth compared the performance indicators of the high group with that of the low group. Upon failing to find a statistically significant difference in performance between the two groups, Samiee and Roth concluded that global marketing strategy has no influence on business performance.

One of the very few empirical studies on global strategy published in a major journal, Samiee and Roth's (1992) work has been influential, yet their measurement of global marketing strategy and data analysis have several serious flaws which significantly compromise the validity of their findings. First, by classifying BUs into high/low groups based on the summed scale of five external environmental variables, they essentially assume that BUs in an environment conducive to pursuing global marketing standardization will in fact do so to a high degree, whereas BUs in a less conducive environment will not do so or only to a low degree. In other words, there exists no constraint on the BUs to conceive and implement strategy, and there is a perfect correspondence between external environmental demand and BUs' strategy response. Given the fact that organizations usually have a heterogeneous endowment of strategic resources that facilitate or constrain their ability to conceive and implement strategy (Barney 1991; Conner 1991), the validity of Samiee and Roth's assumptions is questionable.

In fact, the present study empirically demonstrates the validity of Samiee and

Roth's (1992) assumptions is modest at best. Specifically, following Yip (1989) and the conventional strategy research, this research explicitly conceptualizes global strategy as a BU's conduct in global competition. Six dimensions of that conduct (global market participation, product standardization, uniform marketing, integrated competitive moves, coordination of value-adding activities, and concentration of value-adding activities) were directly and explicitly measured in the mail questionnaire by multiple seven-point Likert scales. In addition, this study included in the questionnaire five external variables identical to those used by Samiee and Roth. When the correlation coefficients were computed between Samiee and Roth's five external variables and the six dimensions of global strategy used here, the correlations between the five variables and the product and marketing dimensions of global strategy ranged from .190 to .447, whereas those between the five variables and the four remaining dimensions were mostly insignificant. These low to modest correlations suggest that BUs are not perfectly responsive to external environmental forces, although a moderate degree of responsiveness does exist. Because the degree of correspondence between Samiee and Roth's five variables and BUs' global product and marketing standardization is moderate, the validity of Samiee and Roth's assumptions and subsequent findings is moderate.

The data analysis technique applied by Samiee and Roth (1992) also is relatively weak. By using mean-split to categorize the BUs into high/low groups, valuable information contained in their five-point Likert scales with respect to the degree of marketing standardization within the same group was lost. Hence, the subsequent statistical comparison of performance between the two groups is much less powerful than would have been possible if the scale information had been retained for analysis. Moreover, the use of ROA, ROI and sales growth as performance indicators is appropriate but incomplete. Such aspects as competitive position, market share, and cost

positions were not tapped by Samiee and Roth. Thus, the conclusion that global marketing standardization has no effect on performance is equally incomplete. In contrast, the present study used a 10-item performance scale in data analysis to tap not only the strategic dimension of performance but also the financial dimension. As a consequence, the results obtained in this research are relatively more complete than those of Samiee and Roth.

In light of the above discussion, caution should be taken when interpreting Samiee and Roth's (1992) finding. Instead, the positive relationship between global strategy and business performance empirically established by this study appears to be relatively more valid and complete. Indeed, this research makes a significant contribution by empirically establishing the positive relationship between global strategy and business performance. Therefore, the present study reestablishes a fundamental proposition and building block of the global strategy literature.

DO INTERNAL ORGANIZATIONAL FACTORS AFFECT PERFORMANCE?

The conventional IO theories contend that business performance is a direct result of the deliberate conception and implementation of strategy in response to external industry/market forces (see Scherer and Ross 1990). The relevance of internal organizational characteristics to business performance has been either ignored or deemphasized. A typical work is Yip (1989), an article that focuses solely on how external industry forces drive global strategy and performance but ignores the effects of internal organizational characteristics. Indeed, the relationship between internal organizational factors and performance has not been established in the global strategy literature.

The emerging school of the resource-based theory has redirected attention to such

internal aspects as managerial competence, organizational capability, and organization culture. By linking the IO-based and resource-based theories, the present study contends that the global business performance of an organization is affected not only by its global strategy but also by internal factors, such as market orientation, organization culture, and international experience. The empirical findings of this research strongly support the potency of internal organizational factors in predicting global performance and help establish the legitimacy of the resource-based theory in the context of global competition.

Specifically, this study has extended the work of Jaworski and Kohli (1993) to the global context. Jaworski and Kohli (1993) offered some empirical support for the positive relationship between market orientation and performance in domestic markets. By adapting their market orientation scales, the present study found that the three dimensions of market orientation (intelligence generation activities, intelligence dissemination activities, and responsiveness to market) are positively and significantly related to a BU's global performance. Presumably, market-oriented organizations are better positioned to track customers' needs and preferences and respond to them with an effective strategy. In addition, such organizations are able to monitor and respond to competitors' moves in a timely fashion. Given the complexity of customer demands in the global market and the ever-changing competitive scramble for market positions, market orientation is vital to the survival and success of BUs in global industries.

Building on the works of Kotter and Heskett (1992) and Peters and Waterman (1982), the present study also hypothesized that three attributes of organization culture (strength, global orientation, and adaptiveness) are relevant predictors of a BU's global performance. The empirical findings of this research strongly support the potency of organization culture's strength and global orientation in predicting global business performance, although the relationship between adaptiveness of organization culture and

performance was found to be nonsignificant. The findings support the widely accepted strong culture theory of Peters and Waterman (1982). Presumably, a strong organization culture helps align the goals of the various subunits of a BU, particularly those of the country subsidiaries, so that the whole BU can march toward the same goals with highly motivated management and employees. A strong organization culture also may facilitate coordination and control among various subunits without having to rely on a stifling formal bureaucracy. Aligned goals, motivated employees, and effective coordination and control translate into enhanced global performance for the BU.

The finding that a global orientation has a positive and significant effect on performance is congruent with the culture content theory, which contends that the values and behaviors embraced by an organization culture explain performance. As Arogyaswamy and Byles (1987) argue, a culture enhances performance only if it fits its external and internal contexts. A globally oriented culture emphasizes increasing global market share, rewards sacrifices for the sake of the BU as a whole, and promotes caring and sharing among the country subsidiaries, all of which can be considered to fit the context of global competition. Therefore, an organization culture that promotes the global orientation can lead to enhanced global business performance.

A surprising finding of the present study is that performance is not affected by adaptiveness of organization culture. Presumably, an adaptive culture may lead subsidiaries to overemphasize the satisfaction of local idiosyncratic demands to the neglect of synergy generated through rationalization of activities across country subsidiaries. Nevertheless, adaptiveness does not appear to have an adverse effect on global performance and its relevance under certain conditions may be a fruitful avenue for future research.

The empirical evidence found in the present study has a much broader implication

than the mere support it gives to the relevance of organization culture to global performance. In fact, this is the first research to empirically measure the attributes of organization culture, a multifaceted and elusive construct that is extremely difficult to operationalize. The innovative approach used here focused on the attributes of organization culture rather than the culture itself. The fact that the strength and global orientation of organization culture were shown to have positive effects on performance points to the value of the approach. The relatively high reliability estimates for these two aspects of organization culture also demonstrate the feasibility of decomposing the construct into individual attributes. Hence, the literature is enriched by this innovative approach, and future research can certainly benefit from taking a similar tack.

Consistent with Cavusgil and Zou (1994) and Douglas and Craig (1989), this study found that a BU's international experience has a positive effect on global business performance. Experienced BUs presumably are more knowledgeable about what it takes to succeed in the global market. They are also involved more extensively in cross-subsidization that may help shield them from competitive attacks. In a sense, it can be argued that an internationally experienced business unit is simply a more competent global competitor. This finding suggests that accumulation of international experience can lead to rich payoffs in the long run.

WHAT DETERMINES GLOBAL STRATEGY?

The dominant IO theoretical perspective attributes a business unit's strategy to its response to external industry/market forces. Thus, the external environment determines the BU's strategy. On the contrary, the resource-based perspective focuses on internal organizational characteristics to identify the determinants of strategy and performance. Such factors as managerial competence, organization culture, and organizational

capability are believed to constrain a BU's strategic choice and ability to implement it. As a result, internal factors are considered the primary determinants of strategy. By linking the two perspectives, the present study contends that both external industry globalization drivers and internal organizational factors are determinants of global strategy.

The empirical findings provide some support for this contention. Indeed, except for concentration of value-adding activities, it was found that each dimension of global strategy is affected by at least one external driver and one internal factor. Furthermore, each external driver was found to be related to at least one dimension of global strategy. Similarly, except for adaptiveness of organization culture, each internal organizational factor was found to be related to at least one dimension of global strategy. Thus, both external industry globalization drivers and internal organizational factors influence global strategy. This finding is much richer than either the IO-based or the resource-based perspective. It also suggests that these perspectives are complementary and should be joined to provide a more complete explanation of BU's global strategy and performance.

The findings also indicate, however, a multifaceted relationship between external drivers and global strategy and between internal factors and global strategy. The various dimensions of global strategy are not determined by the same set of external drivers and internal factors, and the relative effects vary significantly. In other words, global strategy must be considered a multidimensional construct. It is important for management to understand that when faced with different external trends or internal constraints, different dimensions of global strategy must be considered and adopted in order to achieve success.

HOW SHOULD THE IO-BASED AND RESOURCE-BASED THEORIES BE INTEGRATED?

In the current literature, the IO and the resource-based theories have developed along independent lines. No attempt has been made to integrate the two until the present study. Because the exact way to do this is still unknown, the present research hypothesized that integration should be achieved by: (1) recognizing the effects of internal organizational factors on performance, in addition to the effects of global strategy; (2) recognizing the effects of internal factors on global strategy, in addition to the effects of external drivers; and (3) predicting the presence of moderating effects (interaction) of internal factors on the relationships between global strategy and performance, and between external drivers and global strategy.

The empirical findings suggest that there is no interaction between internal factors and global strategy or between internal factors and external drivers. Indeed, the overwhelming majority of the evidence indicates that performance is influenced by both global strategy and internal factors, but not by their interaction. Similarly, global strategy is influenced by both external drivers and internal factors, but not by their interaction. Because the main effects are significant and the interaction effects are not, it can be concluded that the IO-based and resource-based perspectives should be integrated by viewing them as parallel. In other words, global strategy and internal organizational factors have an independent influence on performance, and external industry globalization drivers and internal organizational factors have an independent influence on global strategy.

The parallel integration suggested here, while preliminary, sets the stage for further conceptual and empirical work. Rather than theorizing that strategy is a firm's

direct response to the external environment, future research must conceive of strategy as a firm's response to both the external and internal environment. Similarly, rather than theorizing that a firm's performance is the direct result of its strategy, future research must link the firm's performance to both its strategy and its internal organizational factors. As for the IO and resource-based theorists, they must broaden their view and be able to see through each other's glasses. The debate between the two should be resolved by parallel integration.

MANAGERIAL IMPLICATIONS

The present study offers several insights into how international business managers can improve their BU's global performance. At the philosophical level, BUs competing in global industries must evaluate both external environmental forces and internal organizational characteristics before subscribing to a global strategy. Performance can be maximized only if the BU systematically develops and nurtures several key internal organizational capabilities. Furthermore, managers must realize that global strategy is not a single formula of standardization but a multidimensional and coherent set of actions, including the scope of market coverage, product and marketing standardization, integrated competitive moves across country markets, and coordination of value-chain activities. Each dimension of global strategy must be carefully implemented so that the whole set can lead to maximum global business performance.

At the operational level, managers in global industries can enhance BU performance through several means. First, they can seek more complete coverage of major world markets. Participation in all the major markets puts a BU in a favorable competitive position since factor market differentials can be leveraged, competitive attacks can be better withstood, and synergies can be attained. Second, they should make

integrated competitive moves to improve global business performance. When attacked in a country market, a BU should counterattack not just in that market but elsewhere. These competitive campaigns must be integrated so that the optimal effect on competitors can be realized. Third, managers must coordinate the worldwide value-chain activities of their BU. A higher degree of coordination can rationalize a BU's global operations and accrue scale economies throughout the chain. Fourth, they should pursue a higher degree of product and marketing program standardization if such strategies are feasible. Cost benefits, consistent worldwide images, improved quality control, easier coordination, and simplified services can usually be attained through standardized product and marketing programs.

To enhance performance, international business managers also must realize that their BU needs to invest in developing appropriate internal organizational capabilities. First, they must promote an organization-wide market orientation. Specifically, they must place high value on the systematic generation of market intelligence. Formal organizational system needs to be installed to track customer needs and preferences and monitor competitors' moves. In addition, they must reward prompt and accurate dissemination of market intelligence throughout the organization. Open communication channels should be developed to ensure the rapid and accurate flow of market intelligence. They must also be responsive to market intelligence. Once changes in customer needs and preferences or in competitors' moves are detected, decisive steps must be taken to respond.

Second, managers in global industries should strive to promote and nurture certain attributes of organization culture. They must ensure that the core ideas and beliefs of their BUs are well understood and embraced by all subunits and employees. In particular, they must emphasize the vital importance of being globally oriented. Sharing

across country subsidiaries and sacrificing local performance for the sake of better global performance must be rewarded and strongly promoted. Likewise, selfishness of individual country subsidiaries should be discouraged and punished.

Finally, global business managers must invest in accumulation of international experience. Decision makers should have first-hand knowledge of different country subsidiaries and different market environments. The "geocentric" perspective that is fundamental to a global strategy can be attained only if executives have developed the necessary appreciation of the complexity of operating in different country markets.

LIMITATIONS OF THE STUDY AND DIRECTIONS FOR FUTURE RESEARCH

Several limitations of the present study must be kept in mind when interpreting the findings. These limitations suggest a number of avenues for future research. First, while five of the six dimensions of the global strategy construct proposed here are closely related yet distinctive, the relevance of the activity concentration dimension proposed by Yip (1989) has not been confirmed. This may be due to the particular products or industries studied or to the scales used to measure the concentration dimension. Future work could investigate other products or industries, use finer industry classification, and adopt alternative measurement scales to explore the relevance of activity concentration as a dimension of global strategy. Moreover, future research should attempt to identify other dimensions of global strategy and the conditions under which they are relevant.

Second, while the five external industry globalization drivers used here are a succinct operational representation of Yip's (1989) market, cost, government, and competitive factors and have solid support in the literature, they are certainly not a complete list of potential globalization drivers. Thus, a rich direction for future research is to identify and incorporate additional external forces into the model. Such efforts

would enhance our understanding of when a global strategy should be used.

Third, similar to the previous point, the seven internal organizational factors, while relevant, are not an exhaustive list of the internal organizational characteristics that affect global strategy and performance. Thus, another research direction is to investigate such factors as organization structure, flexibility of strategic resources, and organizational capabilities.

Fourth, the sample size of this study is moderate, and there were only 14 cases which have two informants. As a result, in-depth multiple-informant analysis could not be performed. Future research may direct more resources to data collection (for example, design more than two mailings, telephone calls to increase responses of the second informant, or personal interviews rather than mail survey) so as to increase response rate, sample size, and multiinformant cases. With a larger sample and more multi-informant cases, future research could perform more rigorous statistical analysis to enhance the validity of the findings.

Fifth, while the present study requested that respondents answer the questions with reference to certain time frames (such as last strategic planning, three years ago, or current time), the research design is not longitudinal, and there is no valid check on whether the respondents indeed took into account the specified time frames when they responded to the questions. Future research should consider adopting a longitudinal research design if resources permit.

Finally, the present study surveyed only BUs based in the United States. As a result, the findings have limited applicability. Future work should replicate the main theme in other countries to define how the research findings can be generalized. If the current research cannot be generalized across national boundaries, then factors that limit generalizability (cultural, sociopolitical, economic) should be investigated.

CONCLUSION

This research integrates the rather diverse perspectives of global strategy in the literature by proposing and verifying a multidimensional construct. This construct helps to eliminate or reduce the confusion and ambiguity that have prevailed in the literature. The study also establishes empirically the positive relationship between global strategy and global business performance. As a result, some controversies in the literature surrounding the effect of global strategy on performance have been dispelled. On the theoretical front, the study links the IO-based theory and the resource-based theory in parallel to form an integrated model of global strategy. When combined, the two independent streams provide a more complete explanation of global strategy and performance. Empirically, the findings not only support the basic premise of the study but also set the stage for additional work.

Appendices

Appendix 1. Items That Are Included In The Questionnaire

Variable	Statement
V1	Our competitive position in one country market greatly affects our positions in other country markets.
V2	Most of our major competitors coordinate their business operations across the major markets in the world.
V3	We face intense competition from our major competitors in *all* major markets in the world.
V4	Our competitors mobilize resources from one country market to another in order to win in competition.
V5	Our major competitors market standardized products worldwide.
V6	Tariff barriers for our product are similar across the major markets in the world.
V7	Non-tariff barriers for our product are similar across the major markets in the world.
V8	Technical standards for our product vary greatly from one country market to another.
V9	Marketing regulations (e.g., advertising, ownership of channels, pricing) are similar across the major markets in the world.
V10	Local content requirements (percent of product's components that are legally required to be made by local producers) vary greatly from one country to another.
V11	Customer preferences for our product have become more homogeneous across all major markets in the world.
V12	Our customers across the world respond favorably to the advertising of foreign products.
V13	Our customers in all major markets would trade-off their cultural product preferences to obtain high-quality and low-price products.
V14	Customer needs are standardized worldwide.
V15	Product awareness and information exist worldwide.
V16	Operating on a global scale is essential to achieve efficiency in our business.
V17	Great cost benefits can be realized by coordinating our worldwide operations.
V18	Achieving economies of scale is vital to the survival of our business unit in the global market.
V19	R&D intensity in our industry is very high relative to other industries.
V20	Constant technological innovation is essential for success in the global market.
V21	Technology intensity in manufacturing is very low in our industry relative to other industries.

Appendix 1 (cont'd)

V22   Heavy investment in technology is necessary to be globally competitive in our industry.

V23   Standardized product technology exists worldwide.

V24   Standardized purchasing practices exist worldwide.

V25   We have business operations in all major markets in the world.

V26   The revenues from our product line are well spread across different country markets.

V27   Our business unit competes in all major markets in the world.

V28   Globally standardized components make up a significant percentage of the total cost of our product.

V29   We adopt a standardized core product across all major markets in the world.

V30   Main features of our product are standardized across major markets in the world.

V31   The peripheral elements (e.g., packaging/labeling) of our product are globally standardized.

V32   We use similar characteristics to segment individual country markets.

V33   The brand names we adopt for our product in different country markets are unrelated to each other.

V34   Our product is positioned in a similar way in all major markets in the world.

V35   The product designs we use in different country markets are very similar.

V36   We utilize similar advertising themes for our advertising campaign in all major markets in the world.

V37   Execution of our advertising (e.g. media choice/budgeting) varies greatly from one country market to another.

V38   We use very different techniques for sales promotion in different country markets.

V39   There is a high degree of coordination for our pricing decisions in different country markets.

V40   We develop similar channel structures for distributing our product in different country markets.

V41   Before making a competitive move in a particular country market, we assess its likely impact on our competitive positions in all other country markets.

V42   We often respond to an attack in one country with a counter-attack in another country.

V43   We often subsidize our competitive campaign in a country with resources generated in other countries.

V44   Our competitive moves across all major markets in the world are highly coordinated.

Appendix 1 (cont'd)

Value-adding activities in different country locations can be performed in concert, or they can be performed independently. With respect to our operations in all major markets in the world, the following value-adding activities are:

V45		a.	Sourcing/purchasing
V46		b.	Research & Development
V47		c.	Material processing
V48		d.	Sub-assembly
V49		e.	Final assembly
V50		f.	Product development
V51		g.	Development of promotion campaigns
V52		h.	Pricing decisions
V53		i.	Distribution facilities
V54		j.	After-sale services

A particular value-adding activity can be dispersed across many country locations, or concentrated in only one or two country locations. In terms of number of locations, the following value-adding activities of our business unit are:

V55		a.	Sourcing/purchasing
V56		b.	Research & Development
V57		c.	Material processing
V58		d.	Sub-assembly
V59		e.	Final-assembly
V60		f.	Product development
V61		g.	Development of promotion campaigns
V62		h.	Pricing decisions
V63		i.	Distribution facilities
V64		j.	After-sale service

V65   The strategic position of our business unit in the global market is very strong.

Appendix 1 (cont'd)

V66   Relative to our major competitors, our business unit is very competitive in the global market.

V67   Our global market share is very high relative to our major competitors.

V68   We have been able to build a global leadership position in our industry.

V69   We are very satisfied with the pace at which this unit is moving toward its goals.

V70   We have a very favorable cost position relative to our major competitors.

V71   Compared to major competitors, global sales of our business unit have been increasing rapidly.

V72   The global operations of our business unit are very profitable relative to our major competitors.

V73   Our return on investment (ROI) is higher than that of our major competition.

V74.   The performance of our business unit in the global market is unsatisfactory.

V75   We often meet with customers worldwide to find out what products and services they will need in the future.

V76   We do a lot of in-house market research.

V77   We frequently poll worldwide end users to assess the quality of our products and services.

V78   Departments get together periodically to discuss global market trend and development.

V79   We frequently circulate reports and newsletters that provide information about our customers across the world.

V80   A lot of informal "Hall Talk" in this business unit concerns our competitors' tactics and strategies in global market.

V81   Data on our customers are regularly disseminated to all country subsidiaries.

V82   Information about our competitors is regularly disseminated to all country subsidiaries.

V83   When one department or subsidiary finds out something important about our competitors, it will promptly alert other departments or subsidiaries.

V84   A widespread consensus exists among our managers as to what should be valued.

V85   Our mission statement clearly states the norms, values, and ideologies of our unit.

V86   There is no variance across individual country subsidiaries' values and ideologies.

V87   Management's values and ideologies are very different from those of the country subsidiaries.

V88   In the past, our values and ideologies did not change with a change in key managerial position.

V89   Increasing global market share is the top priority of our business goals.

Appendix 1 (cont'd)

V90   Our country subsidiaries care very deeply about what happens to sister country subsidiaries.

V91   Every market in the world is important to our business unit.

V92   Individual subsidiaries are willing to sacrifice their profitability in order to achieve better performance for our business unit as a whole.

V93   We place a higher priority on our domestic business than on our foreign businesses.

V94   We always strive to treat all customers equally regardless of their country of residence.

V95   We welcome innovation even if its potential is not clear yet.

V96   Individuals' creativity is rewarded in our business unit even if its value is not clear yet.

V97   We feel we must keep a tight control over our subsidiaries to be successful.

V98   When there is a problem, a person should discuss it only with his/her supervisor, not openly with everyone in our business unit.

V99   We all place the interest of customers, employees, and stockholders ahead of our own career interest.

V100   We are unwilling to take a risky course of action that may fail.

V101   We like to implement plans only if we are very sure that they will work.

V102   We seldom change the course of action that has been successful in the past.

V103   We like to take chances on good ideas.

V104   Employees in our business unit make their own rules on the job.

V105   Employees in our business unit have clear rules to follow when they encounter problems.

V106   In this business unit, anyone who violates the rules will be disciplined.

V107   We spend a lot of time writing and distributing memos within our business unit.

V108   In this business unit, a person can take a course of action without checking with anybody else.

V109   There can be little action here until top management approves a decision.

V110   Even small matters have to be referred to top management for an answer.

V111   Any course of action a country subsidiary takes has to have top management's approval.

V112   We have little control over resource allocation decisions of our country subsidiaries.

V113   It takes us a long time to decide how to respond to our major competitors' new campaign.

Appendix 1 (cont'd)

V114   Even if we came up with a great marketing plan, we probably would not be able to implement it in a timely fashion.

V115   When we find that a competitor has a new campaign, we will not respond until we feel its impact on our global competitive position.

V116   For one reason or another, we tend to ignore changes in our customers' product or service needs.

V117   The product lines we sell depend more on internal politics than on real market needs.

V118   Customer complaints are immediately addressed in our business units.

V119   Our plant facilities around the globe can be easily relocated.

V120   It would be very difficult to retool our plant facilities for alternative use.

V121   Our excess capacities are very difficult to be redeployed.

V122   We have extensively adopted the flexible manufacturing technology in our plants.

V123   Our product technology can be easily modified to meet various demand sophistications.

V124   It would be easy for us to transfer technology from one country location to another.

V125   Our personnel are willing to work in any country market where they are needed most.

V126   Our personnel can be easily transferred from one country subsidiary to another.

V127   We have sufficient talent in our personnel to pursue any strategy that is necessary.

V128   Our management possesses a great deal of international business experience.

V129   We have had a long history of international business involvement.

V130   Managers in our business unit have worked in at least one foreign market before.

Appendix 2. Descriptive Statistics Of Measured Variables

Variable #	Mean	Std. Err.	Kurtosis	Skewness	Cases
1	4.41	0.15	-0.30	-0.57	112
2	5.17	0.14	0.56	-1.04	112
3	5.29	0.17	0.09	-1.06	112
4	4.37	0.15	-0.73	-0.18	112
5	4.46	0.16	-0.66	-0.34	112
6	3.25	0.16	-0.68	0.45	112
7	3.40	0.16	-1.12	0.20	112
8	4.39	0.19	-1.12	-0.43	112
9	3.44	0.14	-0.59	0.35	112
10	3.27	0.16	-0.44	0.60	112
11	4.45	0.13	-0.48	-0.55	112
12	3.90	0.12	-0.28	0.00	112
13	4.61	0.14	-0.93	-0.32	112
14	3.28	0.14	-1.15	0.09	112
15	3.82	0.16	-1.43	0.14	112
16	5.41	0.14	-0.04	-0.88	112
17	5.54	0.11	0.99	-0.95	112
18	5.71	0.11	0.85	-0.98	112
19	5.14	0.15	-0.29	-0.75	112
20	5.82	0.11	1.00	-0.98	112
21	5.22	0.15	-0.64	-0.69	112
22	5.45	0.13	0.37	-0.80	112
23	3.99	0.15	-1.06	0.13	112
24	2.90	0.14	-0.53	0.52	112
25	5.04	0.20	-0.70	-0.86	112
26	3.97	0.17	-1.16	-0.04	112
27	4.92	0.19	-0.74	-0.78	112
28	4.18	0.16	-0.96	-0.22	112
29	4.55	0.16	-0.66	-0.45	112
30	5.07	0.14	0.70	-0.94	112
31	3.85	0.16	-1.10	0.11	112
32	4.39	0.13	-0.03	-0.42	112
33	5.47	0.15	0.69	-1.20	112
34	4.63	0.15	-0.67	-0.56	112
35	5.40	0.11	1.42	-1.13	112
36	4.40	0.14	-0.23	-0.62	112
37	3.37	0.15	-0.23	0.59	112
38	3.35	0.15	-0.41	0.65	112
39	4.58	0.15	-0.82	-0.52	112
40	4.53	0.14	-0.58	-0.39	112
41	4.33	0.16	-0.96	-0.43	112
42	2.92	0.13	-0.22	0.56	112
43	3.62	0.16	-1.14	-0.04	112
44	4.11	0.15	-0.90	-0.18	112
45	4.79	0.14	0.08	-0.75	112
46	5.77	0.12	1.67	-1.26	112
47	4.79	0.14	-0.21	-0.56	112
48	4.51	0.16	-0.56	-0.34	112
49	4.57	0.17	-0.79	-0.40	112
50	5.65	0.12	1.90	-1.23	112
51	3.94	0.14	-0.69	0.03	112
52	4.48	0.16	-0.98	-0.36	112
53	4.07	0.17	-0.90	-0.11	112
54	3.96	0.16	-0.82	-0.05	112
55	4.60	0.19	-1.14	-0.44	112
56	5.81	0.13	1.42	-1.38	112
57	4.52	0.18	-0.77	-0.49	112

Appendix 2 (cont'd)

58	4.24	0.19	-1.19	-0.11	112
59	4.32	0.20	-1.31	-0.23	112
60	5.63	0.14	0.55	-1.14	112
61	4.03	0.16	-0.91	0.12	112
62	4.57	0.18	-1.14	-0.33	112
63	3.98	0.18	-1.14	0.03	112
64	3.46	0.17	-0.96	0.33	112
65	4.77	0.14	-0.37	-0.55	112
66	4.94	0.14	0.27	-0.88	112
67	4.26	0.17	-0.99	-0.17	112
68	4.45	0.17	-0.84	-0.42	112
69	3.85	0.15	-1.13	-0.10	112
70	4.05	0.14	-0.82	-0.09	112
71	4.29	0.14	-0.52	-0.47	112
72	4.11	0.13	-0.43	-0.08	112
73	4.18	0.14	-0.51	-0.16	112
74	4.80	0.16	-0.73	-0.50	112
75	5.17	0.13	-0.33	-0.56	112
76	4.71	0.14	-0.75	-0.36	112
77	4.41	0.16	-0.93	-0.13	112
78	4.72	0.14	-0.20	-0.63	112
79	4.80	0.15	-0.37	-0.61	112
80	4.54	0.12	-0.31	-0.30	112
81	4.21	0.15	-0.68	-0.26	112
82	4.32	0.15	-0.83	-0.48	112
83	4.65	0.13	-0.41	-0.46	112
84	4.62	0.12	-0.72	-0.42	112
85	5.50	0.13	1.51	-1.22	112
86	4.10	0.15	-0.76	-0.21	112
87	4.65	0.14	-0.88	-0.19	112
88	4.06	0.15	-0.95	-0.12	112
89	4.73	0.16	-0.62	-0.65	112
90	4.06	0.13	-0.25	-0.38	112
91	4.20	0.16	-0.99	-0.10	112
92	3.41	0.14	-0.30	0.45	112
93	3.61	0.18	-1.08	0.26	112
94	5.20	0.13	-0.03	-0.71	112
95	5.02	0.13	-0.53	-0.36	112
96	4.50	0.13	-0.16	-0.30	112
97	3.86	0.12	-0.65	0.06	112
98	4.71	0.15	-0.46	-0.61	112
99	4.23	0.13	-0.53	-0.18	112
100	4.37	0.15	-1.03	-0.33	112
101	4.19	0.14	-1.12	0.19	112
102	4.28	0.12	-0.54	-0.06	112
103	4.85	0.13	-0.23	-0.57	112
104	4.59	0.13	-0.33	-0.55	112
105	4.47	0.11	-0.27	-0.52	112
106	3.79	0.13	-0.45	0.13	112
107	3.78	0.14	-0.76	0.12	112
108	4.25	0.13	-0.72	-0.29	112
109	3.70	0.15	-0.82	0.13	112
110	2.59	0.14	-0.07	0.86	112
111	3.24	0.14	-0.35	0.37	112
112	4.62	0.12	-0.04	-0.39	112
113	4.56	0.13	-0.46	-0.23	112
114	4.96	0.14	0.23	-0.86	112
115	4.72	0.13	-0.85	-0.22	112
116	5.34	0.12	0.10	-0.74	112
117	5.60	0.13	-0.14	-0.86	112
118	5.19	0.15	0.35	-1.07	112

Appendix 2 (cont'd)

119	2.62	0.15	-0.06	0.94	112
120	3.53	0.17	-0.93	0.44	112
121	3.40	0.16	-0.62	0.52	112
122	4.28	0.13	-0.39	-0.41	112
123	4.05	0.14	-0.84	-0.15	112
124	4.86	0.14	-0.70	-0.49	112
125	3.98	0.14	-0.55	-0.11	112
126	3.56	0.14	-0.58	0.27	112
127	3.82	0.15	-1.09	0.04	112
128	4.52	0.17	-0.86	-0.29	112
129	5.13	0.15	0.20	-0.87	112
130	3.99	0.17	-0.88	0.05	112

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