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## Marketing Innovation And Firm Performance Research Model, Research Hypotheses, And Managerial Implications

Robert P. Cascio  
*University of Central Florida*

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MARKETING INNOVATION AND FIRM PERFORMANCE:  
RESEARCH MODEL, RESEARCH HYPOTHESES,  
AND MANAGERIAL IMPLICATIONS

by

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A dissertation submitted in partial fulfillment of the requirements  
for the degree of Doctor of Philosophy  
in the Department of Marketing  
in the College of Business Administration  
at the University of Central Florida  
Orlando, Florida

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## ABSTRACT

This research conceptualizes and develops a scale for the marketing innovation construct for the purpose of furthering research in marketing strategy. This marketing innovation construct and its associated strategic activities are clearly distinguished from product and process innovation, better enabling researchers and practitioners to identify new and updated paths from innovation to firm performance. Marketing innovation is defined as the degree of novelty in the implementation of three core business processes: (1) product development management, (2) supply chain management, and (3) customer relationship management, as identified in the Srivastava, Shervani & Fahey (1999) framework. Results from qualitative interviews indicate marketing innovation is developed and fostered by marketing insight and marketing imagination, and these relationships appear to be moderated by the market orientation of the firm. As conceptualized, marketing innovation is suggested to enhance firm performance via (1) the marketing-product space, (2) the marketing-process space, and (3) the marketing-relationship space. This enhancement process, however, is conjectured to be moderated by the degree of radical product innovation the firm is currently undergoing as well as the degree of process innovation the firm practices. A complete discussion of marketing innovation's antecedents, manifestations, and consequences is presented. A comprehensive research model, method, and results from an empirical study of qualified business executives, testing key relationships in the marketing innovation framework, are discussed. Empirical study results confirm marketing innovation's powerful ability to predict firm performance, even in the presence of a multiple of control variables. Further, these quantitative findings lend statistically and practically significant support for (1) the antecedent roles of marketing insight and marketing imagination, (2) the negative (as predicted) moderating role of product innovation radicalness, and (3) several

specific inter-workings among the marketing-innovation spaces that offer substantial research contributions to the marketing strategy literature for researchers and managers.

While there are numerous individuals that I acknowledge for encouragement in completing this dissertation, I am dedicating this work to my mother and father for several reasons.

First, they instilled in me the value of education despite being unable to attend college themselves. I was always provided with a home atmosphere and resources that prioritized learning. They motivated me to learn more than what was required in school and established a family understanding that education matters.

Second, they taught me persistence. My father demonstrated this in his own life as a youth working through the night for several years selling newspapers to financially assist his parents and siblings. He continued this sacrificial lifestyle with his wife and children, serving in the US Air Force and working graveyard shifts for the US Post Office for over 4 decades. My mother was one of 10 children and consistently encouraged her brothers to develop to their full potential, despite the death of their mother and father at very early ages. She, too, continued this persistence in raising her own family, pushing my sister and me to reach for the stars and telling us there was nothing we could not accomplish.

Finally, and most importantly, my parents introduced me to the Lord Jesus Christ, the Savior of the World. It is only through His power that I had the privilege of completing this research.

*The fear of the Lord is the beginning of knowledge: but fools despise wisdom and instruction*  
(Proverbs 1:7, King James Version).

## ACKNOWLEDGMENTS

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## LIST OF ABBREVIATIONS, NOMENCLATURE, AND ACRONYMS

- CFI – Comparative Fit Index
- CMIN – Minimum Chi-Square
- CRM – Customer Relationship Management
- DF – Degrees of Freedom
- MI – Marketing Innovation
- MIm – Marketing Imagination
- MIn – Marketing Insight
- MO – Market Orientation
- NAICS – North American Industrial Classification System
- NFI – Normed Fit Index
- PDM – Product Development Management
- RFI – Relative Fit Index
- RMR – Root Mean Square Residual
- RMSEA – Root Mean Square Error of the Approximation
- ROMI – Return on Marketing Investment
- RPI – Radicalness of Product Innovation
- SCM – Supply Chain Management
- SEM – Structural Equation Modeling
- VIF – Variable Inflation Factor

## SECTION 1: INNOVATION AND ITS IMPORTANCE IN MARKETING

*There is only one valid definition of business purpose: to create a customer.... It is the customer who determines what the business is.... Because its purpose is to create a customer, any business enterprise has two -- and only these two -- basic functions: marketing and innovation.*

*-Peter F. Drucker*

### *Introduction*

The central research question is: Does marketing innovation make a substantial impact in explaining firm performance, and, if so, when and why? After a thorough review of the relevant literature, marketing innovation is defined and operationalized as the degree of novelty in the implementation of the three core business processes of (1) product development management, (2) supply chain management, and (3) customer relationship management. Through this research, marketing innovation is conceptually demonstrated to have a direct impact on firm performance because it effectively captures the ability of an organization to innovatively implement marketing activities that are embedded in core business processes. This is an important extension to research findings in innovation, market orientation, creativity, and market sensing. This research goes beyond the mere detection of a market-focused or innovative firm environment and concentrates on the implementation of strategic marketing activities and their specific effect on explaining firm performance.

This newly defined marketing innovation construct has several important features that are worthy of attention as they help move the literature on innovation and marketing strategy forward.

First, this new definition of marketing innovation includes *existing* and *new* products and services. The intention here is to separate the construct from product innovation, which focuses on new or improved market offerings. While the author recognizes that new product development, and thus product innovation, is a critical component of marketing, it is only one of the many activities associated with the marketing innovation construct; these activities are later defined in the marketing-product space of marketing innovation. Next, a marketing-process space of marketing innovation is defined in order to capture as well as separately identify the organizational and customer value associated with improved efficiency in the order-fulfillment process. Finally, and most importantly, in order to give adequate attention to innovative elements that are in the most direct control of marketing, a marketing-relationship space of marketing innovation is defined; this space is aimed specifically at attracting and retaining customers with existing products and services through innovative methods in pricing and promotion.

There are two key antecedents which enable an organization to effectively create, foster, and implement marketing innovation: marketing insight (Bowen 1990, Linoff 2004, Roberts and Eisenhardt 2003) and marketing imagination (Andrews and Smith 1996, Levitt 1960, 1983).

These internal antecedents are considered more enduring than circumstantial because they are difficult for firms to change as they are highly embedded in the organization, requiring substantial effort and time to alter. Their modification often needs to include changes to corporate structure, top management, or substantial modification to the mix of corporate capital. One particularly interesting contribution of this research is the propositions of how the impact of

these antecedents on marketing innovation change substantially at various levels of marketing orientation. Further, based on theoretical and practitioner guidance, the moderating forces of type of product innovation and level of process innovation are hypothesized to significantly alter the conversion of marketing innovation to firm performance.

At the end of the day, marketing researchers and practitioners will benefit from the multi-dimensional construct development of marketing innovation as well as its future empirical grounding. Through this understanding, practitioners will be able to implement a specific set of activities as defined in the marketing innovation construct that can lead to a statistically and practically significant improvement in their ability to reach superior firm performance. A complete summary and discussion of marketing innovation's antecedents, manifestations, and consequences are included to ground future research in this area. A comprehensive research model and proposed methods are introduced.

### *Business Perspective on Innovation*

According to the literature, there are multiple definitions for innovation and multiple subcategories of innovation. Innovation takes place via a process whereby a new "thought, behavior, or thing," which is "qualitatively different from existing forms," is conceived of and brought into reality (Barnett 1953, Robertson 1967). Said another way, an innovation is an idea, practice, or object perceived as new by an individual or other unit of adoption (Rogers 1986). Innovations are distinguished from inventions in that an invention need not be implemented, and innovations are distinguished from improvements in that the innovation must be perceived to be substantial and meaningful by one or more stakeholders. The academic business literature often references three types of innovation: (1) organizational innovation, (2) process innovation, and

(3) product innovation; each of these will be discussed in the following sections. Another common distinction for innovation in the business literature is the degree of innovation achieved; the two most commonly referenced descriptions in the literature being incremental innovation and radical innovation, another of area of importance in the research model presented.

### *Innovation Impacts Performance*

A search for innovation in business article database ABI/INFORM yields over 43,000 results for just the last two years; practitioners and researchers are eager to learn all they can about this topic. The level of business interest in innovation is logical to understand; there are strong connections between innovation and firm performance documented in the literature (e.g., (Damanpour and Evan 1984, Damanpour, Szabat and Evan 1989, Han, Kim and Srivastava 1998, Hauser, Tellis and Griffin 2005, Khan and Manopichetwattana 1989, Zahra, DiBelardino and Boxx 1988). More specifically, much of this business literature supports a positive and direct relationship between innovation and firm performance, and returns on innovation have been documented to account for over half of the revenue for some corporations (Kotler 1991). A single radical (breakthrough) innovation has been empirically demonstrated to be valued at over \$4.2 million to the sponsoring organization, and incremental innovation has been demonstrated to have statistically and practically significant impacts on firm profits (Sorescu and Spanjol 2008). New, insightful research on innovation is thus an endeavor that is continued to be most welcomed by scholars, managers, and business research organizations, including the Marketing Science Institute.



### *Research Questions*

Two key strategic questions are answered in this research through the effective conceptualization and measurement of the marketing innovation construct include: (1) How can firms reach beyond traditional product and process innovation in order to increase customer and other stakeholder value?; and (2) Does marketing innovation make a substantial impact in explaining firm performance, and, if so, when and why?. First, the development of high levels of marketing innovation and its effective implementation can provide direct benefits to firm performance. Second, marketing innovation is conceptually argued to have a direct impact on firm performance because it effectively captures the ability of an organization to innovatively implement marketing activities that are embedded in core business processes. This is an important extension to research findings in innovation, market orientation, creativity, and market sensing. Marketing innovation goes beyond the mere detection of a market-focused or innovative firm environment and concentrates on the implementation of strategic marketing activities and their specific effects on firm survival, good performance, and great performance. Finally, a focus on marketing innovation drives organizations to find new and better methods of convincing existing and prospective customers of the value of the organization's products and services. The strategic implementation of marketing innovation can lengthen the stream of revenue from new and existing products by extending their marketplace life span. By identifying latent and emerging needs that these products may fulfill and earnestly searching for new markets for these offerings, an organization can experience higher levels of customer development, customer retention, and cash flow.

At the end of the day, marketing researchers and practitioners will benefit from the multi-dimensional construct development of marketing innovation as well as its future empirical

grounding. Through this understanding, practitioners will be able to implement a specific set of activities as defined in the marketing innovation construct that can lead to a statistically and practically significant improvement in their ability to reach superior, upper-deciles firm performance.<sup>1</sup>

### *Types of Innovation*

For the purpose of isolating the specific innovative activities that an organization can implement, I clearly define the previously mentioned types of innovation -- organizational, product, and process -- and then conceptualize a fourth type of innovation -- marketing innovation. I define marketing innovation as unique from product and process innovation and as a specific form of organizational innovation. For the purpose of this research, I define organizational innovation, product innovation, process innovation, and marketing innovation in the following three sections:

### *Organizational Innovation*

Organizational innovation has been consistently defined as the adoption of an idea or behavior that is new to the organization (e.g., (F. Damanpour 1991, Daft and Becker 1978, J. Hage 1980, Hage and Aiken 1970, Zaltman, Duncan and Holbek 1973, Zammuto and O'Connor 1992). This will be the definition used in this research. Organizational innovation refers to new ways work can be organized and accomplished within an organization to encourage and promote competitive advantage; it can either be a new product, a new service, a new technology, or a new administrative practice (J. T. Hage 1999). Further, innovation can be understood as a process by

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<sup>1</sup> Upper-deciles firm performance references the organizations that operate in the top 20% of their industry for at least 4 of the last five years in the market share, revenue growth, and pre-tax profitability (Kotabe 1990). This is discussed further later in this research.

which the firm creates and defines problems and then actively develops new knowledge to solve them (Nonaka 1994). Organizational innovation encompasses product innovation, process innovation, and the newly defined marketing innovation. Further, each form of organizational innovation has a both unique and shared variance when viewed among the other forms of innovation. Business practitioners indicate that organizational innovation encompasses how organizational members manage the work processes in such areas as customer relationships, employee performance and retention, and knowledge management. A theme that runs through both the academic and managerial literature is that at the core of organizational innovation, there is the need to improve or change a product or process. Innovation revolves around change, yet not all change is innovative; the change must be substantial and meaningful to a stakeholder. In summary, organizational innovation encourages employees or organizational agents to think creatively about organizational challenges and strive for solutions that can be deemed as new to the organization and even new to the industry or business community at large. I next detail the three forms of organizational innovation introduced in this research: product innovation, process innovation, and marketing innovation.

### *Product Innovation*

The process of developing and bringing new or substantially better products or services to market has been consistently used in the literature to define product innovation (Hauser, Tellis and Griffin 2005). For further clarification and distinction, product innovation can be divided into three basic types: (1) product line extensions (familiar to the organization but new to the market), (2) me-too products (familiar to the market but new to the organization), and (3) new-to-the-world products (new to both the organization and the market) (Booz, Allen and Hamilton 1982, Olson, Walker and Ruekert 1995). The intention of product innovation is to modify the

functionality of the product in some manner to enhance value to the consumer or the organization (Oslo Manual: Guidelines for Collecting and Interpreting Innovation Data 2007). Product innovation has been cited by researchers on multiple occasions as a necessary element for long-term firm survival (e.g., (Chandy and Tellis 1988, Hauser, Tellis and Griffin 2005). To summarize, most researchers and practitioners indicate that product innovation is market focused and involves substantial change to some tangible feature of the product or service, often referenced as formulation or functionality modifications.

### *Process Innovation*

While product innovation focuses more on the market, process innovation is more internally concentrated (Damanpour and Gopalakrishnan 2001). Fagerberg, Mowery, and Nelson (2004) in The Oxford Handbook for Innovation summarize process innovation as “new or significantly improved methods in the production or manufacturing process.” In a similar fashion, Baer and Frese (2003) define process innovation as deliberate and new organizational attempts to change production and service processes (Baer and Frese 2003). According to the internationally recognized Organization for Economic Cooperation and Development (OECD), process innovation is the implementation of new or significantly improved methods for production or delivery, to include significant changes in techniques, equipment, and/or software. For purposes of this research, including effective operationalization of process innovation, I combine these definitions and more carefully and clearly define the “service processes” mentioned in the Baer and Frese definition as well as further delineate the “delivery” referenced in the OECD definition. As guided by Damanpour and Gopalakrishnan (2001) as well as other researchers, I understand, and therefore define, the “service processes” and “delivery” to mean internal methods associated with manufacturing or production in keeping with the original intention of

this business practice. Thus my working definition for process innovation removes the service reference, which can be too vaguely interpreted. Process innovation is “the implementation of substantially new, significantly improved, or more efficient methods of producing, manufacturing, and distributing the organization’s market offerings.” With working definitions for product and process innovation, marketing innovation is next defined and operationalized and followed with a discussion of the antecedents and consequences for marketing innovation.

## SECTION 2: MARKETING INNOVATION DEFINED

With the exception of Theodore Levitt's work (discussed in the next section), the term marketing innovation<sup>2</sup> has been meaningfully defined or researched in the literature on relatively few occasions. They are listed below in chronological order.

Marketing innovation is referred to as "innovation in marketing" or "new marketing techniques" in the context of strategic organizational behavior and patterns (Robinson and Pearce 1988). In this research, the authors grouped firms by strategic orientation and found that firms focusing on either (a) product innovation, which in their model includes marketing innovation, or (b) brand identification outperformed those firms focusing on either (a) efficiency or (b) top quality service-high price strategies.

Marketing innovation is the capacity to re-conceive the existing industry model in ways that create new value for customers, undermine competitors, and produce new wealth for all stakeholders, according to the organizational knowledge literature (Hanvanach, Droge and Calatone 2003)<sup>3</sup>. Further, the authors find that marketing knowledge is a powerful strategic asset and a prerequisite for marketing innovation.

Marketing innovation is "the generation and implementation of new ideas for creating, communicating, and delivering value to customers and managing customer relationships"

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<sup>2</sup> I use the term "marketing" innovation instead of "market" innovation to emphasize new and innovative activities related to marketing functions of the organization. This follows the established pattern in the marketing strategy literature (e.g., (Kohli and Jaworski 1990).

<sup>3</sup> Note this definition is based on Nonaka's (1994) discussion of marketing knowledge and Hamel's (1998) discussion of strategic value innovation.

(Tinoco 2005). This research argues that marketing innovation should be developed concurrently with product innovation.

Marketing innovation is defined as “the development of new marketing tools and methods.” Specifically, two forms of marketing innovation are referenced: (a) the ability to acquire consumer information effectively, and (b) the ability to reduce consumer transaction costs are discussed (Chen 2006). The author focuses on how the incentives and effects of marketing innovation are distinct from that of product and process innovation.

Marketing innovation is “the implementation of a new marketing method involving significant changes in product design or packaging, product placement, product promotion, or pricing,” according to OECD (Oslo Manual: Guidelines for Collecting and Interpreting Innovation Data 2007).

Other business-related academic literature may include marketing innovation or similar phrases, but do not provide sufficient descriptive information or research findings regarding its use as a key business term or research construct to warrant formal reference (Arrighetti and Vivarelli 1999, Bartow 2000, Johannessen, Olsen and Lumpkin 2001). To continue the literature review process for defining marketing innovation, the work of Theodore Levitt is referenced; Levitt is the academic researcher that has historically had the greatest amount of published work and influence regarding marketing innovation.

### *Marketing Innovation and Theodore Levitt*

The most important literary contribution to the marketing innovation construct to date is the work of the late Theodore Levitt. Levitt, using terms such as marketing myopia and marketing imagination, introduced researchers and business professionals to the essence of marketing innovation, formally coining the phrase marketing innovation in 1960 with his seminal work “Growth and Profits through Planned Marketing Innovation” (Levitt 1960). The new methods that organizations implement in order to fulfill specific customer expectations as identified by management or third-party market research are indirectly referenced as marketing innovation (Levitt 1983). Levitt focused his work on radical innovations and did not include incremental innovations as part of the concept: “Marketing innovations require *radical* experimentation and speculative activity in order to be most impactful and to lead to miraculous results” (Levitt 1960). Since breakthrough or radical innovations are rare by definition, this is one of the reasons that the marketing innovation term failed to receive adequate attention in the marketing strategy literature. In addition, Levitt described marketing innovation as persistently abstract and unable to be tried or proven without substantial organizational cost and risk (Levitt 1960). This again stresses the radical requirement in his definition of marketing innovation, but more significantly creates measurement difficulty for empirical research. Nonetheless, he did lay the basic premise for describing an important set of organizational activities that I will argue substantially impact firm performance.

Levitt used marketing imagination, constructing unique mental pictures for better customer understanding, as an antecedent to marketing innovation. He indicated that marketing imagination results in marketing innovation when the organization experiences substantial, meaningful improvements in (1) current customer penetration, (2) potential customer



identification, and (3) distribution efficiency (Levitt 1960). I leverage Levitt's valuable work, preserving his original intention of having current and potential customers as the primary stakeholders to marketing. At the same time, this research increases the scope of the construct in order to encompass the valuable and more frequently occurring incremental marketing innovation, in addition to the radical marketing innovation he directly referenced.

### *Marketing Innovation Reconciled*

To reconcile Levitt's construct intentions with existing definitions in the literature and provide a measureable construct that is distinct from product and process innovation, I have focused carefully on Levitt's essence with the construct as well as incorporating the elements of the five referenced marketing innovation definitions. While each definition provides us with a valuable perspective of the marketing innovation concept, none of the definitions alone provides sufficient boundaries for effective measurement and empirical exploration. However, taken together, they have the potential to form a construct definition that can be accurately measured and utilized to explain important phenomenon in marketing and ultimately differences in firm performance. To solve this marketing research dilemma, I conceptualize marketing innovation in the following manner: "the process of seeking and implementing new and substantially better methods of increasing the value that a customer and an organization derive from current or potential market offers, through customer perceptions or actual experiences that has been triggered by marketing activities." In other words, from a customer's perspective, they improve the value proposition but also exploit the full potential of market offers from the organization's perspective.

### *The Value of Redefining Marketing Innovation*

This newly defined marketing innovation construct has several important features that are worthy of attention as they help move the literature on innovation and marketing strategy forward. First, this new definition of marketing innovation includes *existing* and *new* products and services. One motive here is to separate the construct from product innovation, which focuses on new or improved products. While the author recognizes that new product development, and thus product innovation, is a critical component of marketing, it is only one of many activities associated with the marketing innovation construct; these activities are later defined in the marketing-product space of marketing innovation<sup>4</sup>. Next, a marketing-process space of marketing innovation is defined in order to capture as well as separately identify the organizational and customer value associated with improved efficiency in the order fulfillment process. Finally, and most importantly, in order to give adequate attention to innovative elements that are in the most direct control of marketing, a marketing-relationship space of marketing innovation is defined; this space is aimed specifically at attracting and retaining customers with existing products and services through innovative methods in pricing and promotion.

Overall, a portion of shared variance between product innovation and the newly defined marketing innovation and also the shared variance between marketing innovation and process innovation is recognized and varies based on the definitions utilized for these concepts.

Nonetheless, there are substantial activities in marketing innovation that do not involve the development of new products or new processes and therefore failure to separate marketing innovation from them is a strategic research flaw that leaves too much explained variance in firm

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<sup>4</sup> Marketing innovation spaces are detailed later in this section.

performance<sup>5</sup>. In summary, there is a set of valuable activities distinct from product and process innovation, referenced as the marketing-relationship space of marketing innovation that can be performed innovatively by marketing professionals and can have substantial impact on firm performance. This particular set of activities is discussed in detail later in this section. At the heart of this new marketing innovation definition is the acquisition and retention of customers specifically through value creation and value maintenance. This allows the definition to remain focused on the current or prospective customers as the primary stakeholders, making it boundary-spanning in nature. While other stakeholders (shareholders, employees, suppliers, etc.) are certainly important and benefit from marketing innovation activities, failure to concentrate marketing innovation to influences on customer value is a departure away from the core essence of the marketing concept. At the same time, it is recognized that marketing innovation does not operate in a vacuum, and therefore marketing activities that lead to product and process innovation in core business activities are incorporated in the construct through the marketing-product space and marketing-process spaces, respectively.

### *Improvements, Inventions, and Marketing Innovation*

Another important clarification provided in the new marketing innovation definition is the distinction between marketing improvement and marketing innovation. Consistent with the literature, “substantially better” qualifies the methods and activities in marketing innovation in order to distinguish them from seasonal changes in marketing or mere improvements in marketing activities. The literature consistently characterizes innovation as a level above that of improvements and extensions. Finally, the construct is unique from inventions in marketing such

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<sup>5</sup> There is more literature support for the distinction of product innovation from marketing innovation, namely the meta-analysis of innovation by Hauser, Tellis & Griffin (2005), the previously referenced work of Theodore Levitt (1960, 1962), and the working definitions from OECD.

that marketing innovations must be “implemented” in order to fit with this new definition. Inventions are ideas made manifest and these ideas *require* the organization’s cash flow; innovations are the ideas or inventions that have been successfully applied in practice. These innovations *bring* cash flow into the organization. This distinction is also consistent with the academic business literature on invention and innovation (Brown 1992, Heunks 1998).

In summary, this new marketing innovation conceptualization provides value by (1) incorporating both radical and incremental activities, (2) distinguishing it from product and process innovation, (3) maintaining the current or prospective customer as the primary stakeholder, (4) embracing the boundary spanning perspective, and (5) creating distinction from improvements and inventions. I continue by providing a detailed discussion of the components of marketing innovation followed by antecedents, manifestations, and organizational consequences experienced with high levels of marketing innovation. Next, I continue exploring marketing innovation and introduce the core business processes to operationalize the construct for valid and efficient measurement.

### *Core Business Processes*

Srivastava, Shervani, and Fahey (1999) argue that marketing should be viewed as an organizational discipline, and when marketing capability is infused into the core business processes, firm performance is substantially enhanced and marketing activities are better documented. Their established framework redefines marketing through three processes that create customer value through the development of new customer solutions, enhancement of input acquisition and output transformation, and the creation of relationships with market entities. These three core business processes are (1) the product development management (PDM)

process, (2) the supply chain management (SCM) process, and (3) the customer relationship management (CRM) process, respectively.<sup>6</sup> Note that because CRM has been defined in several different ways in the marketing strategy literature, I clarify the definition adopted in this research: CRM means the implementation of marketing tools aimed at adding new product or service value for the purpose of acquiring new or maintaining existing customers (Srivastava, Shervani and Fahey 1999).

### *Spaces of Marketing Innovation*

By viewing marketing innovation through the lens of this established core business process framework, there are natural respective “spaces” for marketing innovation. First, the *marketing-product space* of marketing innovation focuses on ascertaining new needs from existing and potential customers as well as coordinating product-design activities internally and externally to commercialize at a faster rate. This space maps to the product development management process. The *market-process space* maps to the supply chain management process, and the *marketing-relationship space* maps to the customer relationship management process.

Theoretically, the use of the Srivastava, Shervani, and Fahey’s (1999) three core business process framework provides a strong foundation for this research and will better position the work for future empirical testing for several reasons. This framework is ideal because it theoretically links marketing phenomena initially to customer value, and ultimately shareholder value, with the three core processes. The research has been consistently cited in the marketing strategy literature and introduced a dramatic shift in how the marketing-related activities

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<sup>6</sup> The use of this framework follows the established pattern in the literature on marketing knowledge (Hanvanach, Droge and Calatone 2003) among others.

influence long-term firm performance. More specifically, it requires assessments of marketing activities to demonstrate efficiency and effectiveness in driving critical business processes that lead to financial performance and shareholder value improvements. The activities in each of the processes are common and fundamental business tasks that are most critical to organizational goal attainment, emphasizing customer functionality over product focus. Finally, the activities are theoretically proven to reduce the time for market acceptance, accelerate organizational cash flow, and reduce the risk in this cash flow. It is for these key reasons that it provides an ideal foundation for this research.

As previously discussed, I conceptualize marketing innovation as “the *process* of seeking and implementing new and substantially better methods of increasing the value that a customer and an organization derives from current or potential market offers, through customer perceptions or actual experiences triggered by marketing activities.” Essentially the *process* has been effectively captured through the core business process framework of Srivastava, Shervani, and Fahey (1999) in their comprehensive assessment of activities that should be embedded in marketing as just described. In Table 1 - Marketing Innovation Activities and Scale Items as shown through the Revised Core Business Subprocesses, the original core business processes are shown with minor revisions noted to improve the effectiveness of this research, particularly to improve the ability to effectively measure the construct. A rationale is provided for each modification.

#### Defining Marketing Innovation through the Core Business Processes

In order for this construct to make a substantial contribution for marketing strategy researchers and managers, the marketing activities of marketing innovation must be effectively identified,

defined, and measured in a theoretically sound manner. Because the activities identified in the core business process framework drive organizational and customer value, it is an ideal method of more precisely defining, describing, and measuring marketing innovation. Thus, to remain consistent with the marketing strategy literature as well as to provide an effective guide for the marketing activities that are most critical to driving organizational performance, marketing innovation is more formally identified as:

*The degree of novelty in the implementation of the three core business processes of: (1) product development management, (2) supply chain management, and (3) customer relationship management.*

The antecedents and consequences of marketing innovation are discussed in the next section.

### SECTION 3: ANTECEDENTS AND CONSEQUENCES OF MARKETING INNOVATION

A necessary step in the conceptualization process is to identify the antecedents and consequences of the focal construct (Bagozzi 1984). I follow a proven pattern in the marketing strategy literature as demonstrated through the conceptualization and measurement of market orientation construct (Jaworski and Kohli 1993, Kohli and Jaworski 1990), carefully defined and indicating the importance of each key antecedent for this newly defined marketing innovation construct. There are the two main antecedents of marketing innovation – marketing insight and marketing imagination. Marketing insight and marketing imagination represent the capabilities or characteristics of firms that make strong contributions to development and fostering of marketing innovation. These internal antecedents are considered more enduring than circumstantial because they are difficult for firms to change; they are highly embedded in the organization and require substantial effort and time to alter. Their modification often needs to include changes to corporate structure, top management, or substantial modification to the mix of corporate capital as they affect the corporate philosophy and principles that govern the organization.

There are multiple sub-components of the two antecedents that contribute to the focal construct of marketing innovation; however, because there is strong theoretical support for some specific sub-components in explaining behaviors and conditions that precede marketing innovation, six have been selected to be addressed individually for theoretical underpinning. Specifically, I discuss the importance of: (1) active scanning and (2) market experimentation from marketing insight; and (3) marketing department architecture, (4) lack of marketing myopia, (5) market research, and (6) permissiveness cultivation from marketing imagination. Each antecedent and their associated sub-antecedents are described next.



### *Marketing Insight*

Marketing insight is the ability to continually understand market and industry trends, patterns, and trajectories using prior experience, intuition, and other information and to leverage this ability for the configuration of organizational resources (Bowen 1990, Crossan, Lane and White 1999, Roberts and Eisenhardt 2003, Beck, et al. 2004). More clearly, for definition purposes, marketing insight is the act of seeing into a situation and apprehending the true inner nature and underpinnings of a market phenomenon that affect the creation, development, communication, and delivery of products or services (Linoff 2004, Roberts and Eisenhardt 2003). Organizations with marketing insight not only have intuition and understand what is occurring in current and future markets, they are effective at recognizing the root cause that drives the market phenomenon in question. This is a highly coveted capability for marketing innovation as it identifies the deeper event or trend currently being experienced or observed in the organization's focal industry and surrounding industries. Instead of responding to occurrences in the market, organizations with marketing insight think deeper and more accurately on a consistent basis, comprehending true causation and inner workings of the activities in the market. For example, while some mobile phone manufacturers produced devices with greater screen sizes in order to satisfy consumers' desire to view web pages or detailed maps on the go, those with marketing insight thought beyond and see the true nature of the phenomenon. Thinking deeper and using insight, they recognize that individuals want complete freedom from desktop and laptop devices on a frequent basis, having the ability to successfully conduct business for extended periods of time with multiple activities (video conference calling, opening multiple document attachment types with ease, completing advanced banking transactions, etc.) at any place and at any time. Marketing insight is related to, but at the same time very different from, market foresight. With

market foresight, an organization recognizes a market phenomenon before other industry participants (McCardle 2005); whereas, with marketing insight, there is no temporal element, but more importantly for innovation purposes, the true and inner nature of the market phenomenon is clearly understood. For an organization to be effective at marketing innovation, marketing insight is essential. Without such skill, the organization can make a series of costly mistakes that can erode customer confidence and firm performance. Two of the most important components of marketing insight that are especially relevant to marketing innovation are mentioned here for emphasis: (1) active scanning - the degree to which the firm collects information from the external environment on a continual basis in order to gain a better understanding of market conditions that can influence future market conditions and thus firm performance (Beal 2000, Day 1994, Maier, Rainer and Snyder 1997), and (2) market experimentation - the activities undertaken by the firm to gain knowledge through testing new ideas on current and potential customers in hopes of gaining new information with regard to developing greater customer value (Day 1994, Garvin 1993, McCardle 2005, Slater and Narver 2000). In short, marketing insight is a capability that is highly critical to the effective implementation of marketing innovation activities due to its ability to detect and respond to future market conditions in a manner that is more timely, efficient, and effective relative to an organization's direct and indirect competitors.

### *Marketing Imagination*

The second and arguably the most critical primary antecedent to marketing innovation, marketing imagination, is herein defined as the ability of the organization to disassociate with the current processes, methods, and activities in order to construct and visualize mental pictures of what is or is not actually present and what has never been actually experienced. Marketing imagination, while defined in less comprehensive terms, has been previously recognized in the

literature as a component of marketing innovation (Levitt 1960). It is essential for robust idea generation to occur and this ideation has been indicated as the most difficult and important part of innovation (Hauser, Tellis and Griffin 2005), among others. Marketing imagination goes beyond creativity in that it is a higher-order construct. While creativity involves developing newer and more radical alternatives (Amabile, et al. 1996, Andrews and Smith 1996, Menon, et al. 1999) and identifying and describing new ideas that are unique and useful (Higgins 2008), marketing imagination takes these alternatives and ideas to another level through visualization and creation of mental pictures. Central to understanding marketing imagination is the recognition that businesses and end consumers buy solutions, not things, and more importantly, that the superior organization executes meaningful, not obvious, solutions (Levitt 1983). There are several critical components of marketing imagination that are of paramount importance to creation and development of marketing innovation in an organization. I discuss each of these briefly:

Marketing department architecture is herein defined as the manner in which the organization's marketing functional activities are arranged as suggested in the literature (Baldwin and Clark 1997, Sanchez 1999). Marketing professionals responsible for creative idea generation and the construction of imaginary pictures of the organization's market solutions should not be burdened with day-to-day marketing operations (Levitt 1960). Having a marketing task force that is treated as a separate operation without profitability criteria is crucial to obtaining new-to-the-world, fresh solutions to current and latent customer needs (Levitt 1960). Extending this concept further, when organizations place profitability pressures, short-term sales objectives, and other practical or routine tasks on members of the marketing team responsible for new customer

solutions, these restrictions severely limit the range of imagination employees generate, forcing the organization to operate in the current state instead of in the more fruitful imaginary future (King 1985). There are multiple methods of achieving a department architecture that is conducive to marketing imagination; however, separation from typical financial pressures and task deadlines appears to be most essential for marketing imagination to successfully take place.

Another important subcomponent is lack of marketing myopia. Through this concept, Levitt indicates that business professionals should exercise extreme caution to avoid too narrowly defining their lines of business in order to avoid missing important opportunities by failing to identify latent and emerging competitors and substitutes for their market offerings (Levitt 1960, 1983). This is certainly an important ingredient in marketing innovation. Taken a step further, when organization members envision all possible solutions to the customer needs that they are filling and proposing to fill, it increases the probability that richer, more distant alternative choices are revealed. This increases the chance of identifying organizational solutions that are further from typical methods of practice.

Market research defined as subjective and objective data acquired from current and prospective customers is another important ingredient in marketing imagination that can activate marketing innovation in a firm. With market research data, team members can be encouraged to apply imagination in order to convert raw findings into meaningful and useful information to better meet customer needs (Levitt 1983). The interpretation of marketing research findings offers a fruitful avenue to foster creativity thinking and

previously unconsidered solutions. This is critical to successful marketing innovation activities.<sup>7</sup>

Permissiveness culture is the fourth sub-component in marketing imagination that is worthy of individual attention. Levitt (1960) compares the ideal internal marketing operation to be much like that of an outside advertising agency where the encouragement is to take risks, be bold, and go for the not-so-obvious courses of action without fear of reprimand in the event the action falls short of expectation. Permissive culture includes the elements of risk-taking, but in this research I go beyond to reflect the philosophy of the team operation and the individuals they directly answer to. Without such empowerment and encouragement, the set of alternatives considered is reduced in quantity and quality to those that will not be subject to corporate leadership criticism and this substantially decreases the probability of performance-influencing marketing activities.

### *Summary of Antecedents of Marketing Innovation*

In summary, these two primary antecedents – marketing insight and marketing imagination -- are predicted to explain a substantial amount of the variance in the levels of marketing innovation present in organizations. These antecedents taken together capture the essential ingredients necessary for a firm to create superior value to customers through marketing activities.

Marketing imagination will be hypothesized as stronger than marketing insight to assess the presence of marketing innovation in an organization because of its effective representation of an

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<sup>7</sup> The research recognizes that too little as well as too much emphasis on market research is not optimal for marketing innovation. Proposing a curvilinear antecedent relationship however creates unnecessary complexity. In order to account for the possibility that a firm has over-relied on market research, specific correlation tests will be conducted on those observations with the highest levels of market research to determine if there is a statistically significant effect.

organization's (1) marketing department architecture, (2) lack of myopia, (3) market research usage, and (4) permissiveness culture. All of these marketing imagination factors are important to marketing innovation cultivation and implementation, and these elements are central to the marketing innovation construct. It is for this reason that it is predicted to have a stronger means of detecting the presence or absence of marketing innovation in comparison with the elements associated with marketing insight. It is also important to note here that other elements were considered that can offer some degree of influence on marketing innovation, including agglomeration economies, e.g. (Marshall 1922, Porter 2000), competitive intensity (Chandy and Tellis 1988), firm age (Heunks 1998), industrial technology intensity (Chandy and Tellis 1988), organization size (Hurley and Hult 1998), and personnel education and experience level (Heunks 1998); however, their lack of consistent literature support for a major impact on marketing innovation requires their exclusion from a parsimonious research model. Nonetheless, consistent with the marketing strategy literature, these variables will be controlled for in order to test the impact of marketing imagination and other research variables for their unique contributions and impact; this is particularly customary when measuring the impact on firm performance.

Next, the consequences and manifestations of marketing innovation through the various spaces of marketing innovation are discussed.

### *Common Consequences of Marketing Innovation*

To fully decompose and effectively measure the impact of marketing innovation in organizations, spaces of marketing innovation are defined that map to each core business process as discussed in the previous section. Through a brief discussion of the activities and manifestations of three marketing innovation spaces, the development of theoretically supported

hypothesis is facilitated. These spaces will be discussed in further detail in the subsequent section along with their related hypotheses.

There are three key manifestation types of marketing innovation shown through the three core business processes (Srivastava, Shervani and Fahey 1999). From the innovative implementation of the product-development management process, marketing innovation can result in greater hit rates of new product introductions, faster commercialization of new product ideas, reduced time to sales takeoff, and enhanced profitability from effective segmentation of innovators, early adopters, early majority, and late majority, e.g., (Brown 1992, Hauser, Tellis and Griffin 2005). These are examples resulting from the activities successfully implemented in the marketing-product space of marketing innovation. Next, marketing activities from the marketing-process space of marketing innovation offers the organization the opportunity to experience increased revenue and cash flow from alternative sales channels, improved component quality and value through procurement input, and reduction in customer service costs through technology, outsourcing, or streamlined operating procedures. Lastly, organizations with high levels of marketing innovation can experience a significant increase in customer retention and loyalty, heightened perceived switching costs for consumers, and added value from risk-reducing branding, superior service, or customized solutions. These are the result of excellent execution of activities in the market-relationship space of marketing innovation. As previously mentioned, these are especially valuable to the organization as they offer the ability to contribute directly to organizational financial performance without the mediating effects of product or process innovation<sup>8</sup>. As defined by Srivastava, Shervani, and Fahey (1999), CRM activities lead to accelerated and enhanced cash flows as well as reduced volatility of these cash flows. When

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<sup>8</sup> This will be discussed in greater detail with the discussion of the comprehensive research model.

these CRM activities are taken to innovative levels as suggested by marketing innovation, these firm performance benefits are postulated to increase to levels beyond that of average industry performance, and arguably can take good firm performance to great levels. In a similar light, social media development from marketing innovation is expected to increase the number of customers that find value in the organization's products. Using social media to innovatively portray the features and benefits of existing products to new customer segments is expected to positively impact firm performance. Social media affords levels of mass-customization and consumer segmentation that are not possible with traditional media (Strauss and Frost 2009). In addition, the use of social media enables frequent interactive communication between the organization and its customers which is expected to have a positive influence on the number of loyal customers. Before ending this introduction of marketing innovation consequences, it is important to recognize that there is a synergistic effect among the three different spaces of marketing innovation, such that excellence in one space often contributes to successful idea implementation in the other two spaces<sup>9</sup>.

The documentation of specific tangible examples in each of the marketing innovation spaces is not meant to restrict the construct to these observations, but rather to help researchers and managers gain a greater grasp of the marketing innovation and to establish a basis for further qualitative and quantitative research. Examples of activities that would be present in organizations that successfully practice marketing is valuable to record for comparison with qualitative research findings and for possible use in probing questions. One goal of the preliminary qualitative research is to capture a sufficient number of additional examples of

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<sup>9</sup> Ibid.



marketing innovation in order to provide an effective means of quantitatively measuring the marketing innovation construct at the marketing-space level.

Next, the research model and hypothesized relationships among marketing innovation, its antecedents, and firm performance are presented.

## SECTION 4: RESEARCH MODEL & HYPOTHESES DEVELOPMENT

In reviewing the core business activities presented earlier, a sound argument was made that marketing insight and marketing imagination are needed to perform core business activities innovatively enough to make a substantial difference in firm performance. Upon more careful theoretical inspection of these antecedents and the nomological network for marketing innovation, it becomes clear that higher levels of marketing insight and marketing imagination foster marketing innovation, but market orientation significantly influences these relationships.

Empirical testing regarding the impact of marketing innovation on firm performance is suggested as shown in Figure 4 - Research Model – Toward a More Comprehensive View of Marketing Innovation. This model ultimately suggests that marketing innovation, as predicted by two key antecedents and one moderator, has direct effects on firm performance. The mathematical representations for the research model are shown below:

### *Mathematical Model 1 – Marketing Innovation*

$$\begin{aligned} \text{MARKETING INNOVATION}_i &= \alpha_0 + \alpha_1 (\text{MARKETING INSIGHT}_i) \\ &+ \alpha_2 (\text{MARKETING IMAGINATION}_i) \\ &+ \alpha_3 (\text{MARKETING INSIGHT}_i * \text{MARKETING ORIENTATION}_i) \\ &+ \alpha_4 (\text{MARKETING IMAGINATION}_i * \text{MARKETING ORIENTATION}_i) + \varepsilon_i \end{aligned}$$

### *Mathematical Model 2 – Firm Performance*

$$\begin{aligned} \text{FIRM PERFORMANCE}_i &= \alpha_0 + \alpha_1 (\text{MARKETING INNOVATION}_i) \\ &- \alpha_2 (\text{MARKETING INNOVATION}_i * \text{PRODUCT INNOVATION RADICALNESS}_i) \end{aligned}$$

$$+ \alpha_3 (\text{MARKETING INNOVATION}_i * \text{PROCESS INNOVATION LEVEL}_i) + \varepsilon_i$$

In discussing the research conjectures, I focus first on the particulars of relationship between each of the antecedents and marketing innovation, indicating why market orientation influences the antecedents of marketing innovation as well as some specific relationships between the antecedents and the individual spaces of marketing innovation. Then, in the second half of the section, I discuss the specific relationships regarding marketing innovation and firm performance and introduce the moderating roles of product innovation type and level of process innovation.

#### *Hypothesis Development for the Antecedents of Marketing Innovation*

First, the antecedents of marketing insight and marketing imagination restrict the level of marketing innovation that an organization can experience. An absence of one or both of these antecedents weakens an organization's ability to perform marketing innovation activities and thereby has negative consequences to firm performance. On the other hand, a combination of these antecedents at high levels enhances and reinforces their individual relationships with marketing innovation. By carefully utilizing the theoretical underpinnings from each of the two antecedents, I hypothesize how these relationships can be enhanced and hindered and how their impact within the spaces of marketing innovation is distinguished. First, I discuss the impact on marketing innovation in general from both marketing insight and marketing imagination and present the associated hypothesis, H<sub>1a</sub> and H<sub>1b</sub>. Following this, I characterize their impacts on the specific individual spaces of marketing innovation with Hypotheses H<sub>2a</sub>, H<sub>2b</sub>, and H<sub>2c</sub>.

### *Marketing Insight*

Marketing insight enables organizations to anticipate market trajectories and configure resources to meet future market needs and wants before other market players, and this is argued to be critical to the development of marketing innovation. The organization's ability to intuitively recognize opportunities in current and future markets provides a powerful basis for the development and fostering of marketing innovation. Through the use of active scanning, market experimentation, and other insight-gaining activities, the organization builds a base of wisdom that should positively influence the ability to complete core business activities in new and better ways. A critical capability involving sensing, detecting, and responding to future market events with optimal timing, marketing insight plays a powerful role in developing and fostering marketing innovation.

### *Hypothesis 1a – Marketing Insight and Marketing Innovation*

*H<sub>1a</sub>: An organization's level of marketing innovation is positively and directly impacted by marketing insight.*

### *Marketing Imagination*

The construction of abstract mental pictures to develop unique methods of meeting customer needs and wants is a primary force in all areas of marketing innovation. First, successful marketing innovation requires a detachment from what is and an ability to focus on what never has been and what could be. Without such imaginative focus, radical introductions would not occur and the organization would have a portfolio of me-too products (Chandy and Tellis 1988). Routine customer relationship management activities cannot be converted to substantially new and better events without marketing imagination. There is a series of tasks that are required in

order for customers to feel deeply connected with the market offering provider, including acknowledgement, interactivity, importance, customization, etc. Doing this in the same manner as other organizations will not create sufficient distinction or competitive advantage and will fail to invoke the innovation–firm performance link; new or substantially better methods are required for innovation to occur. Finally, the ability to be unique and imaginative in fulfilling customer orders and on-going customer support can create a relative benefit through marketing innovation as it assists in the advancement of the supply chain management process. From a customer and other stakeholder perspective, ingenious or imaginative contractual negotiation, alliance specifics, selection procedures, specific asset investments, order-fulfillment optimization strategies, and quality-control methods can separate an organization from other industry players. In summary, marketing imagination is argued to be a potent predictor of an organization’s level of marketing innovation for reasons previously documented in the construct’s introduction and because of its ability to fundamentally alter the behavior and perspective of the firm in a manner that encourages the flexible and radical execution of core business activities.<sup>10</sup>

#### *Hypothesis 1b – Marketing Imagination and Marketing Innovation*

*H<sub>1b</sub>: An organization’s level of marketing innovation is positively and directly impacted by marketing imagination.*

#### *Antecedents and Their Impact on the Specific Marketing Innovation Spaces*

Marketing innovation is a multi-dimensional construct and while the construct overall captures the organization’s ability to embed a marketing mindset in the core business activities at novel

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<sup>10</sup> The specific advantages of marketing imagination over marketing insight are further explained in the marketing innovation individual spaces discussion in the next section.

levels, the specific activities among the three marketing innovation spaces have unique characteristics and behaviors. Because the nature of the activities in the product-space, process-space, and relationship-space are distinct dimensions of marketing innovation, the impact of the antecedents should not be assumed to have the same impact for each innovation space. In the next three sections, I detail how the three spaces respond differently to marketing insight and marketing imagination.

### *Marketing-Product Space of Marketing Innovation*

The product development management (PDM) process is defined as the development of new customer solutions and/or the reinvigoration of existing solutions and comprises the set of activities in the marketing-product space of marketing innovation. Five key activities define this core business process (1) ascertaining new customers and new needs, (2) designing product solutions, (3) managing internal functions, (4) developing external networks, and (5) efficiently coordinating product design activities<sup>11</sup>. The question of whether the organization needs to perform these activities or not is one of firm survival; all organizations must do these activities in order to survive long term. However, this research is concerned with the degree of novelty that is employed with the execution of these activities that can result in a superior customer need and want fulfillment, superior product design, valuable dominant design pioneering, and other value-creating outcomes. Marketing insight as defined in this research is the key element that enables this to occur. Activities 3 through 5 (Table 1 - Marketing Innovation Activities and Scale Items as shown through the Revised Core Business Subprocesses) describe the ability of the firm to gather internal and external resources of all types to commercialize a solution prototype within a

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<sup>11</sup> Note: Table 1 - Marketing Innovation Activities and Scale Items as shown through the Revised Core Business Subprocesses references these items. Note that numbering varies slightly as 3 items were removed for parsimony during the initial tem-review process.

period of time that creates value. The overwhelming consumer demand experience from a new product launch, such as X-Box 360 and Apple iPhone, that causes firms to experience rapid sales takeoff and faster recovery of developmental dollars is a tangible example. These favorable launches can be attributed to marketing-product space activities that provide the ability to effectively commercialize ideas faster than competitors, reduce the sales-takeoff window with a strong understanding of consumer needs and wants, and effectively segment target users for optimal marketing strategy execution. Again, marketing insight is the primary capability that provides the knowledge, perspective, and know-how for the organization to complete this commercialization process innovatively. How innovatively the PDM activities of identifying and fulfilling new customer needs by garnishing and coordinating internal and external resources in a timely fashion represents the level of marketing innovation in the marketing-product space that is possessed by the organization and is facilitated to the greatest degree by marketing insight.

To summarize, marketing insight is most critical to the product development process. While developing creative mental pictures for future market offerings (marketing imagination) is an important contributor to the marketing-product space of innovation, it does not have the impact that marketing insight does. Numerous conclusive empirical studies in first mover advantage (Kalyanaram, Robinson and Urban 1995, Lieberman and Montgomery 1988, Suarez and Lonzolla 2007) and similar research indicate that timing can be very advantageous in the achieving sales takeoff for new or substantially modified market offerings. Specifically, it has been shown that the first-moving organization has more time to thwart competitive entry than the followers, and thus the greatest likelihood of providing a competitive advantage (Kalyanaram, Robinson and Urban 1995, Lieberman and Montgomery 1988). In other words, the greater the

level of marketing insight the greater the timing advantage an organization enjoys, enabling it to take action and meet future market needs in advance of the competition.

*Hypothesis 2a –Marketing-Product Space Innovation and Marketing Insight*

*H<sub>2a</sub>: The marketing-product space is impacted more by marketing insight than marketing imagination..*

On the other hand, the marketing-process and marketing-relationship spaces contain the specific marketing innovation activities that offer the greatest potential for using marketing imagination as these are the core business activities that organizations most often fail to disassociate with current methods in order to explore more innovative options. I proceed with a discussion of each of these spaces and then articulate the proposed relationships.

*Marketing-Process Space of Marketing Innovation*

The supply chain management (SCM) process is defined as the continual enhancement of the acquisition of inputs and their transformation into desired customer outputs; it defines the marketing innovation activities that take place in the marketing-process space of marketing innovation. Table 1 identifies the ten key activities in this process; they primarily involve: (1) supplier procurement and logistics management (items 7-10)<sup>12</sup>, (2) work flow and manufacturing execution (items 11-14), (3) distribution channel administration (item 15), and (4) product use facilitation (item 16). For this space of marketing innovation, the area of interest is what level of innovation is used when selecting, monitoring, and evaluating individuals and organizations that contribute supplies, transportation services, manufacturing, and customer support services of the

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<sup>12</sup> Note items 8 and 10 were combined.



organization's products. One marketing innovation example in this space is micro-agent distribution that enables the organization's products to reach remote villages in developing areas by non-traditional transportation means (Prahalad and Ramaswamy 2003); this and other similarly innovative activities create a positive influence on firm performance when successfully executed. Relative to the direct and indirect competitors, how much better and substantially different is the organization's method of implementation and execution of these SCM activities? The detailed answer to this question measures the level of marketing innovation in the market-process space that the organization enjoys. A lack of marketing imagination makes this space of marketing innovation, as well as the others, difficult if not impossible to complete for it is within these elements that components for marketing innovation can be innovatively carried out. In short, both marketing imagination and marketing insight impact all three spaces significantly, but there is stronger theoretical evidence for impact of marketing insight on product-space innovation (previously presented in H<sub>2a</sub>), and for the impact of marketing imagination on process-space innovation (H<sub>2b</sub> below).

*Hypothesis 2b –Marketing-Process Space Innovation and Marketing Imagination*

*H<sub>2b</sub>: The marketing-process space is impacted more by marketing imagination than marketing insight.*

*Marketing-Relationship Space of Marketing Innovation*

Lastly, I address the marketing-relationship space of marketing innovation. The customer relationship management (CRM) process is defined as the creation and leveraging of linkages and relationships to external marketplace entities, especially channels and end users, and is represented in the marketing-relationship space of marketing innovation. This last and final

space is the cornerstone piece of marketing innovation and is the only space that contains the greatest theoretical support to provide a direct impact on firm performance.<sup>13</sup> It is in this marketing innovation space that (1) new customers and new needs are determined (items 17-19 from Table 1), (2) advertising and promotion strategies are created and implemented (items 20-21)<sup>14</sup>, (3) customer service and loyalty are fostered (items 22, 24-26), and (4) sales programs are developed and executed (item 23). As in the PDM process, identification of customer needs takes place in this set of core business activities as well because often these newly identified needs can be satisfied with the organization's *existing* products and service. A common thread throughout these CRM activities is the need for marketing imagination; the disassociation with current methods and the ability to have sufficient organization slack and resources to be able to think creatively and beyond the boundaries of current practice. The innovative implementation of advertising and promotion requires marketing imagination to enable consumers to distinguish messages from competitor offerings, create brand image, and message recall; consumers can be made aware of how products previously unknown to them or not fully understood by them can meet their current or emerging needs. Organizations that implement advertising and promotion in ways that are new and substantially better than competitors demonstrate value-generating marketing innovation talent in marketing-relationship space; without marketing imagination, their success is severely limited as their activities will not be creative, unique, or exciting. This subset of CRM activities has incredible potential to further exploit the organization's sunk costs from research and development dollars that have been expended for the firm's currently available products, and enhances the organization's cash flow and other performance measures in a positive manner (Anderson, Fornell and Mazvancheryl 2004, Mithas, Krishnan and Fornell

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<sup>13</sup> This relationship is presented later in this section, H<sub>4d</sub>.

<sup>14</sup> Note these items were combined to form one item.

2005, Srivastava, Shervani and Fahey 1999). New environmentally-friendly packaging, new portion sizes, unique merchandising efforts, unique competitive differentiation methods, and new market identification and development are examples of marketing activities that can be marketing innovations in this space. Note, however, that it is not simply new packaging or new market development. Rather, it is the new, imaginative ways of implementing the new packaging and the new ways of identifying the new markets or further developing existing ones that creates the distinction between traditional marketing activities and marketing innovation.

It is important to recognize that marketing insight is still a significant predictor of the level of marketing innovation in the market-relationship space; it offers organizations the ability to foreshadow market movements, configure organizational funding and personnel faster than competitors, and intuitively recognize opportunities for advertising messages, loyalty programs, and sales force assistance. Nonetheless, marketing imagination is more potent in this space because paramount to novel execution in this marketing innovation space is the ability to dissociate and dream, avoiding the tendency to default back to current and prior ways of doing these critical customer-relationship activities and forge forward with riskier, but more potentially customer-satisfying methods of interacting and meeting the consumer's product and service experience requirements.

*Hypothesis 2c –Marketing-Relationship Space Innovation and Marketing Imagination*

*H<sub>2c</sub>: The marketing-relationship space is impacted more by marketing imagination than marketing insight.*

Next, we discuss the moderating role of market orientation explaining how it impacts of the roles that marketing insight and marketing imagination play on marketing innovation in general.

### *The Moderating Role of Market Orientation*

Market orientation has been defined in the literature as the set of cross-functional processes and activities directed at creating and satisfying customers through continuous needs-assessment (Deshpande and Farley 1996), as well as in other similar manners, e.g. (Hurley and Hult 1998, Jaworski and Kohli 1993, Kohli and Jaworski 1990). Market orientation includes the organization-wide generation of market intelligence, dissemination across departments, and organization-wide response to it. There are three components of market orientation: (1) customer orientation, (2) competitor orientation, and (3) interfunctional coordination (Kohli and Jaworski 1990). Customer orientation and competitor orientation represent a relative emphasis on collecting and processing information pertaining to customer preferences and competitor capabilities, respectively (Lukas and Ferrell 2000). Market orientation has been empirically linked to organizational innovation in general for its ability to focus an organization on market needs and unique effective methods of serving those needs; this makes a strong argument for its inclusion in the research model for marketing innovation (Han, Kim and Srivastava 1998) There are three specific sub-antecedents to market orientation that deserve attention in order to properly position market orientation in the research model for marketing innovation: (1) competitive benchmarking is the market-based learning process by which a firm seeks to identify best practices that produced superior results and uses this information to enhance its own competitive advantage (Vorhies and Morgan 2005), (2) corporate culture<sup>15</sup>, also known as organization

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<sup>15</sup> The literature indicates corporate culture is "why things happen the way they do" versus organizational climate, "what happens around here" (Schneider and Rentsch 1988).

culture, is the pattern of shared values and beliefs that help individuals understand organizational functioning and thus provide them with the norms for behavior in the organization<sup>16</sup> (Deshpande and Webster 1989), and (3) learning orientation is the degree to which the firm stresses the value of learning for the long-term benefit of the firm (Huber 1991, Hult and Ketchen 2001, Sinkula, Baker and Noordewier 1997).

Firms with high levels of market orientation have greater ability to understand continually changing customer needs and respond to them in a favorable manner, but, at the same time, they can become short-sighted by over-relying on the information from the current market place. Regardless of the level of product development, process development, or relationship development an organization is experiencing, the ability to effectively communicate and build relationships with end users is a skill that requires knowledge of market conditions. Nonetheless, becoming so market oriented and so focused on the approval of current key customers prior to trialing changes to core business processes can hinder marketing imagination. What competitors are doing, another key component of market orientation, as well as what end users indicate is important, but the ability to disconnect from the current market environment and the ability to see beyond the direction provided by customers and competitors is required to perform marketing innovation on a regular meaningful basis. In summary, market orientation's influence on the relationship between marketing insight and marketing innovation is predicted to be positive and linear; more market orientation will continue to improve the use of the organization's marketing insight for marketing innovation. However, for marketing imagination, there is an optimal level of market orientation that organizations need in order to create informal

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<sup>16</sup> Deshpande and Webster reviewed more than 100 studies in organizational behavior, sociology, and anthropology before defining organizational culture in this manner.

boundaries for marketing imagination and to keep such endeavors channeled in the most ideal direction, but beyond a certain point market orientation competes for the limited organizational resources that are often unable to perform the activities of market orientation and marketing imagination simultaneously. In other words, pursuing the highest levels of marketing orientation comes at the expense of performing key marketing imagination activities.

*Hypothesis 3a – Market Orientation and Marketing Insight*

*H<sub>3a</sub>: The relationship between marketing insight and marketing innovation is positively and directly moderated by the organization's level of market orientation.*

*Hypothesis 3b – Market Orientation and Marketing Imagination*

*H<sub>3b</sub>: The relationship between marketing imagination and marketing innovation is positively moderated by the organization's level of market orientation to a point and then this moderating influence levels off and / or becomes negative.*

### *Marketing Innovation and Firm Performance*

Firm performance has been operationalized as sales growth, profit, cash flow, and shareholder value as frequently measured in marketing strategy research (Deshpande, Farley and Webster 1993, Kohli and Jaworski 1990, Kotabe 1990, Srivastava, Shervani and Fahey 1999). While certain spaces of marketing innovation will have effects on new product success, time to sales takeoff, and return on marketing investment, the four primary measures of sales growth, profit, cash flow, and shareholder value are more comprehensive long-term measures recognized in the literature for persistent changes in firm performance and are better choices for empirical measurement. These firm performance measures offer the greatest potential for building a powerful research foundation on marketing innovation and explain the most important aspects of firm consequences.

The core business process activities and the quality of their execution as defined through marketing innovation are argued to positively impact performance (Srivastava, Shervani and Fahey 1999). This relationship between marketing innovation and firm performance is complex; there are several different activities associated with the innovative implementation of the core business processes, some of which require greater commitment of organizational resources and risk than others. Depending on the primary industry in which the organization operates, there are certain high-gain activities that have a clear and logical association between implementation and performance and these processes are ordinary executed first. These activities face limited challenges to the organization to implement and thus a basic level of marketing innovation can be introduced; firm performance is positively impacted. However, as organizations perform at higher and higher levels of marketing innovation, the performance returns from the execution of these activities declines. The activities of marketing innovation begin to improve firm

performance at an increasing rate in the beginning; this is the behavior of the rational organization that implements those activities with greatest marginal return upfront as discussed. Later, once these relatively easy-to-execute, limited-risk marketing innovation activities have been exhausted, further marketing innovative strategies continue to improve firm performance, but at a decreasing rate. They require greater risk in the commitment of cash flow, personnel, and other limited firm resources; the associated returns often take longer time horizons to capitalize on the return. In general, these more challenging marketing innovation activities have higher uncertainty and a lower rate of return to the organization. Thus, overall, the relationship between marketing innovation and firm performance is argued to be non-linear; firm performance will increase at an increasing rate in the initial stages of marketing innovation implementation, but, at later phases, the firm performance returns are realized at a decreasing rate, leveling off quickly.

*Hypothesis 4a – Marketing Innovation and Firm Performance*

*H<sub>4a</sub>: The relationship between an organization's level of marketing innovation and organizational performance is curvilinear, initially increasing at an increasing rate to a point, and then increasing at a decreasing rate.*

While a number of factors can strength or weaken the relationship between marketing innovation and firm performance, I use theory to select the most powerful influencers in order to establish the most parsimonious research model. According to the literature, these factors are the type of product innovation and the level of process innovation executed by the organization, each discussed next.



### *The Moderating Role of Radical Product Introductions*

The type of product innovation the organization is presently implementing will strengthen or weaken the relationship between marketing innovation and firm performance because of the manner in which it positions the organization to current and potential customers. Specifically, it is the degree of radicalness in the organization's current product innovation that will impact marketing innovation's ability to impact firm performance. When radical changes in the organization's market offers are introduced, marketing innovation is important, however current and prospective customers are likely to be more interested in dramatic changes in product formulation and usage benefits. Marketing innovation certainly facilitates the introduction and acceptance of radical new product innovation, but this occurs to a lesser extent than what is experienced when incrementally innovative products are the focus. Because there is not the equivalent intrinsic buzz associated with incremental innovations relative to radical innovations, the role of marketing innovation, specifically through the marketing-process and marketing-relationship activities, plays a greater role in converting marketing innovation to firm performance. Marketing innovation activities can act as a proxy for the excitement and attention-gaining ability typically experienced with radical product innovation. Also, with incremental innovations, customers are more concerned with the quality of product or service components, delivery, advertising messages, acquisition and upgrade promotions, etc. for purchase and referral decisions. Thus, under the more incremental market offering introductions, the role of marketing innovation has a greater influence on firm performance.

*Hypothesis 4b – Marketing Innovation and Product Innovation Radicalness*

*H<sub>4b</sub>: The relationship between an organization's level of marketing innovation and the organization's performance is negatively moderated by an organization's degree of radicalness in current product innovation.*

*The Moderating Role of Process Innovation*

Similarly to product innovation, the level of process innovation influences the connection between marketing innovation and firm performance. Without process innovation, it is difficult for the organization to realize improved firm performance because it struggles to formalize and implement the innovative ideas and activities in a manner that creates value to the end-user while at the same time minimizing the costs to the organization. The level of process innovation the organization utilizes will strengthen the relationship between the marketing innovation and firm performance as it captures critical customer information regarding needs and extracts this information in making core business decisions. This is manifested mainly in the data-warehousing and order-fulfillment systems employed by the organization, manifestations of process innovation.

*Hypothesis 4c – Marketing Innovation and Process Innovation*

*H<sub>4c</sub>: The relationship between an organization's level of marketing innovation and an organization's performance is positively moderated by an organization's level of process innovation.*

### *Survivors, Good Performers, and Great Performers*

A primary goal of this research is to identify the levels of marketing innovation required at various firm performance thresholds. Firm survival is the first level of firm performance and requires innovation in the marketing-product or marketing –process space. Next, good performance is obtained with the addition of innovation from the marketing-relationship space. Ultimately, great performance is achieved through an interaction of above-average levels in two or more marketing-innovation spaces. This great performance is postulated to be robust across a variety of moderating conditions.

With rare exception, there are certain critical elements of marketing innovation that are required for the first level of firm performance: “survivors.” Basically, all firms that remain in business for more than 18 months will need to incorporate and execute marketing innovation in the core business process activities at a rudimentary level to simply stay in business. Firms that fail to discover and implement marketing innovation in the core business activities to at least a basic level are unable to provide sufficient perceived value to customers, thwart competitive entry, or operate on a day-to-day basis with the required efficiency to secure earnings that even minimally satisfy stakeholders. Non-surviving firms close involuntarily because they fail to meet the demands of debt holders or equity partners, or can choose to close voluntarily because the opportunity cost of maintaining an operation with relatively weak financial returns is greater than that of the stakeholders pursuing other avenues.

In order to reach the next level of firm performance, “good performers,” an additional level of marketing innovation in the core business activities is necessary. In other words, to go beyond survival and perform at a good level, the firm will need to financially satisfy the needs and wants

of the firm's equity partners or shareholders. Reaching this level on a regular basis over time requires the implementation of marketing innovation in the core business activities that establishes at least a moderate competitive advantage in product development, supply chain management, or customer relationship management. This relative superior execution of one or more of the core business processes places the firm in a more stable financial position as customer retention reaches levels beyond that of competing organizations because these consumers enjoy greater perceived value from the firm's improved product offerings, more beneficial cost structure, and/or superior customer marketing communication via CRM.

The ultimate stage of firm performance as defined in this research is the "great performers," and represents the firms that consistently rank in the top 20% of the primary industry. It is postulated that firms that execute marketing innovation consistently and with exceptional care and diligence can reach this coveted level of performance and sustain this over time. A one unit increase in marketing innovation begins to yield less and less return to organizational performance as the firm experiences additional hardship in executing the more detailed and difficult business processes with marketing innovation. Those processes that can be executed in new and better manners without significant company alteration have already been implemented by the organization, and often, the competitors. The differentiating factor between the good and the great is the continuing development and implementation of the marketing innovation, despite the decreasing marginal utility relative to those activities that were initially executed.

### *Firm Performance and the Marketing-Relationship Space*

The most important path from the marketing innovation to firm performance occurs through the market-relationship space. This space of marketing innovation reflects the highly valuable specific subset of core business activities -- customer relationship management. It is postulated to have the strongest influence on marketing innovation because these activities are the most visible and powerful activities that influence consumer perceptions of value. As previously discussed, there is a tremendous opportunity for competitive advantage creation in this area regardless of an organization's strategic industry ranking in product or process development.

The powerful contributors to enhanced firm performance occurs through the marketing-relationship space include customer service excellence and loyalty building, both of which have the ability to create revenue streams with greater reliability (Ganesh, Arnold and Reynolds 2000). Firms that excel in implementing customer excellence and customer loyalty programs in innovative manners are postulated to outperform their industry peers in multiple firm performance metrics<sup>17</sup> The consistent need for focus and implementation by marketing teams on social networking, viral marketing efforts, consumer promotion and consumer support blogs, and other interactive communication between customers and the organizations are examples of new media development. This is an exciting area for researchers and practitioners to explore as indicated by the Marketing Science Institute (Marketing Science Institute 2008) and represents an innovative means of executing CRM. Those organizations that strive for superior performance in market-relationship space of marketing innovation will leverage advances in technology in order to reach current and potential customers via mobile devices, social networking sites, and other non-traditional media. Organizations must use these new mediums for their current and

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<sup>17</sup> This is discussed in greater detail in the research model presented later in this research.

potential customer communication if they wish to attract and retain the young consumer market. Technologically advanced consumers, especially those under the age of 25, are difficult to reach with traditional television, radio, newspaper, and direct mail (Strauss and Frost 2009). Organizations with high levels of marketing innovation recognize they must use social media in order to reach the new emerging consumer segment.

Finally, the marketing-relationship space of marketing innovation is manifested in the level of innovativeness in the sales program development and execution. Organizations with superior sales training (Pettijohn, Pettijohn and Taylor 2007), clearly defined sales processes and procedures (Walker, Churchill and Ford 1975), and successfully adopted sales force technology (Cascio, Mariadoss and Mouri 2010) can establish competitive advantages that can materialize into improved firm performance. One example here is when in-house sales representatives or outside sales agents are trained, coached, and provided with essential value-adding tools to customize presentations and recommendations; by converting product features into product benefits directly aimed at solving customer-identified problems, customer intimacy is enhanced and increased value is lodged in the customer's mind initiating a cycle of re-purchase and referral that can substantially boost firm performance without additional firm expenditure. Again, it is not simply doing these activities, it is their innovative implementation that invokes marketing innovation and triggers the positive impact to firm performance.

In short, the marketing-relationship space of marketing innovation offers the greatest opportunity to convert the innovative execution of core business process activities to firm performance. Organizations can re-introduce something, as if it were new, even if it is not; if it is perceived to

be new from the consumer's perspective, value has been created (Rogers 1986) and organizational performance is positively impacted. This occurs most frequently in the marketing-relationship space.

*Hypothesis 4d – Marketing-Relationship Space Innovation and Firm Performance*

*H<sub>4d</sub>: There is a positive, direct relationship between an organization's level of marketing innovation in the market-relationship space and an organization's performance, and this relationship with organization performance will be the strongest of the three marketing innovation spaces.*

With hypotheses formally structured, the methods used to test these important relationships are now discussed.

## SECTION 5: RESEARCH DESIGN AND METHODOLOGY

In order to empirically evaluate the research model for marketing innovation presented, three proven research methods are utilized: in-depth interviews, primary data collection, and secondary data analysis. Details for each of these methods are presented in the following sections.

### *In-Depth Field Interviews*

Prior to empirical research, and as previously mentioned, in-depth interviews can be a valuable endeavor to ensure the entire domain of the marketing innovation construct has been explored and evaluated (Churchill 1979). In addition, further thoughts into marketing innovation as well as the distinctions between marketing innovation and (1) process innovation, (2) product innovation, (3) market orientation, and (4) other similar constructs are expected be uncovered through practitioner dialogue. The researcher followed a process similar to that of Kohli and Jaworski (1990) in their qualitative assessment of the market orientation construct. As in their research, a purposive or “theoretical” sampling plan (Glaser and Strauss 1967) was utilized in order to gain a broad perspective from business-to-consumer and business-to-business marketplaces, as well as viewpoints from executives that work primarily in marketing and those that do not. The target respondents had to meet one or more of the following criteria: (1) direct overall profit accountability, (2) marketing functional role, (3) technology-related functional role, and / or (3) upper management or board member capacity. Whenever possible, three professionals from each organization were interviewed, one from each functional area: (1) marketing, (2) technology, and (3) upper management (CEO, President, Chairman of the Board, etc.). Relatively large (greater than 250 employees) and relatively small (less than 25 employees)



will be represented in the in-depth interview sample for greater diversity and extended generalizability. At the same time, it was important to maintain a reasonable research scope in order to be cost effective and timely in data collection. I focused on data collection from the following areas: (1) business-to-business sales, (2) financial services, and (3) consumer entertainment. Overall, this process of marrying the published marketing literature with that of managerial observations, often termed discovery-oriented observation, has been shown to be an effective method of robust construct development (Menon, et al. 1999)<sup>18</sup>.

An open-ended, yet structured, interview format was used beginning with a brief summary of the research to provide an introduction to dialogue but insufficient to enable respondents to provide information that was what the researcher wanted to hear (acquiescence bias). The purpose of the in-depth interview was three-fold. First, to validate the two lower-order constructs associated with marketing innovation: marketing insight and marketing imagination. As previously mentioned, there is strong theoretical support that indicates that substantial variance in the ability to develop and utilize marketing innovation among firms can be explained with these two constructs. Nonetheless, there is a possibility that practitioners may reference an additional variable or indicate that one of the theoretically-supported constructs is not as useful as the literature might suggest. It is with this important objective that an interview script has been carefully developed. Second, to confirm that the core business processes as defined in this research are an effective means of determining which firms have high or low levels of marketing innovation. Again, there is strong literature support for the use of the product development process, supply chain management process, and the customer relationship management processes

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<sup>18</sup> Components of a similar approach, the participant-observation method, will also be incorporated in this method for additional depth and comprehensiveness (Workman 1993).

for measuring marketing innovation, but it is critical that support from executives is secured in order to have practical and sound findings and implications for future researchers and managers. When managers indicate a firm has high levels of marketing innovation, will they be able to locate this evidence from the observation of the manner in which the core business processes are carried out? This is an important question that should be answered in the in-depth interviews. Finally, it will be important to determine the relationships between marketing innovation and overall firm performance. Executives will be asked to share circumstances that indicate how and when marketing innovation has influenced firm performance (in a negative or positive manner). This is aimed at verifying or identified additional moderating or mediating influences between marketing innovation and firm performance. It is with these three objectives that I present the field interview script.

#### *Initial In-Depth Interview Script*

After a brief introduction, each interviewee was asked to respond to a series of questions. The first five have been adapted from Kohli and Jaworski (1990):

What does the term “marketing innovation” mean to you?

What kinds of things does a company with high levels of marketing innovation do?

What organizational factors foster or discourage this innovation?

What are the positive consequences of this innovation?

What are the negative consequences of this innovation?

Can you think of business situations in which this innovation may not be very important?

How does marketing innovation relate with:<sup>19</sup>

marketing insight (the ability to sense patterns and trends using prior experience and intuition)?

marketing imagination (creativity and the construction of mental pictures of what has never been actually experienced)?

market orientation (activities directed at creating and satisfying customers through continuous needs-assessment)?

How do you believe marketing innovation can be effectively measured?

How can marketing innovation influence firm's performance?

If clarification is requested, I will discuss three categories of firm performance: firm survival, good (above industry average) performance, and great performance (top 10% of the industry in a variety of measures – revenue growth, profitability, customer satisfaction, and shareholder value).

### *Revised In-Depth Interview Script*

After the completion of a pre-test with seven in-depth interviews, the flow of the interviews was analyzed and a determination was made to slightly revise the script in order to avoid using the term marketing innovation in the initial stages of the interview. The purpose of this revision was to determine if the respondent would be able to use the phrase marketing innovation or some close resemblance of marketing innovation from a discussion of the three core business processes. This would increase the power of the findings if this would occur, but more

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<sup>19</sup> Each of the 3 definitions below has been shortened slightly to improve two-way communication and facilitate response. These modifications are necessary to avoid reading from a script and to avoid having to show the respondent written definitions.

importantly it better structured the interview for open dialogue prior to the introduction of the focal construct. The revised script is below:

What is the importance of the three core business processes?

How does your firm handle these processes?

When you do these processes differently, does it matter? (yes / no, why?)

When you do them differently, what do you call this?

If necessary: if you were to bottle this “mojo,” what would you call it?

If necessary: if I called this marketing innovation, would I be far off?

What are the things you have in your firm that foster or discourage this?

(tease out the responses.)

If necessary: does this include marketing insight, marketing imagination, and market orientation?

Regarding marketing insight (and also marketing imagination and marketing orientation, separately) – how critical is this to this marketing innovation? Is it the presence or absence that makes it better, or is it required from the beginning?

Does it affect firm performance?

How important is it?

What performance measures are really influenced?

(customer service, profit, revenue, loyalty, etc.)

As a percentage, how much does it matter?

The researcher was prepared for further clarification of each question if necessary as well as the opportunity to probe deeper with additional questions; this was necessary on a very limited

number of interview questions. The goal was to obtain new perspectives for the construct as well as document specific examples and illustrations that can be compared with extant literature to enable more comprehensive research findings on the domain of the construct. Care, however, was exercised to avoid leading the responding or restricting the flow of information from the respondent to the researcher. Each interview was scheduled to be completed within 60 minutes. A laptop was utilized to capture notes based on the interviewee responses and all interviews were electronically recorded for detailed post-evaluation by the researcher and other subject matter experts.

#### *Findings from In-Depth Interview*

The theoretical framework for marketing innovation identified in the literature is consistent with the findings from the field interviews and additional information was obtained that helped to better assess the focal construct and its antecedents and consequences through this method. First, the field interviews enabled greater clarity regarding the domain of marketing innovation.

Without exception, all of the firm activities associated with the marketing innovation construct were represented in the core business processes of product development management, supply chain management, and customer relationship management (Srivastava, Shervani and Fahey 1999). Thus, the theoretical domain of the construct that was constructed initially was sufficiently broad enough in order to capture all of the related activities and thoughts of the practitioners. Also, the practitioner input focused largely on activities in the marketing-relationship space and, to a lesser degree, the marketing-product space. There was relatively less discussion of activities in the marketing-process space of marketing innovation. Moreover, the marketing-process space activities were mentioned in the context of linking the consequences of marketing innovation to firm performance.

Second, several practitioners referenced the fact that systems (processes) were required in order to capture the positive consequences of marketing innovation for firm performance. The underlying theme here was that without a method of effectively increasing the order-processing ability or the information requests from current and prospective customers following awareness-generating marketing innovation activities, stakeholder value would not be realized. On multiple occasions it was stated that far too often that firms are “innovative marketers,” yet fail to effectively plan and staff for the increased demands placed on the organization following innovative advertising and promotional activities. This is why several respondents stated that firms could be marketing innovative, yet not superior performers. This provided direct support for the importance of marketing-process activities in the marketing innovation construct as well as the process innovation moderating force between other marketing innovation activities and firm performance.

Third, support for the two of the first-order constructs of marketing innovation – marketing insight and marketing imagination – was adequately documented. Marketing imagination received the strongest support in the literature and also received the strongest support in the field interviews. Interviewees saw marketing imagination (sometimes referenced as frequent creativity and unusual ways of satisfying customer needs) as the engine behind marketing innovation; this is highly consistent with theory. In addition, the practitioners often remarked of a positive and direct relationship between marketing insight and marketing innovation. The field interview comments frequently referenced marketing insight as essential to marketing innovation using several related statements, including “having a pulse on the market” and “be able to capitalize on

a market trends,” provided the needed input to properly position this as the second first-order construct leading to the higher-order marketing innovation construct. Fourth, being focused on the customer and competitor (market orientation) was most often referenced as a guideline in the development of marketing innovation and was not given the same level of airtime or interest by respondents as marketing insight or marketing imagination. Thus, its placement as a moderating force was well supported.

In summary, the in-depth interview process was an effective means of combination the findings from published marketing literature and managerial observations previously mentioned as critical to robust construct development (Menon, et al. 1999) with the executives offering strong, consistent support for the research model and additional points of interest. These interview findings were critical in adapting and polishing the scale items using for the primary data collection discussed in the next section enabling the researcher to ensure that all areas that receive attention were measured in the survey instrument in a manner that would most effectively capture the essence of the appropriate construct.

### *Primary Data Collection*

Following qualitative interviews, primary data collection via online survey method from qualified business executives was undertaken. Overall, the purpose was to confirm the findings from the qualitative research and provide an initial test of the research hypotheses. The sampling frame included both relatively large and relatively small organizations as well as those from both high and low technology industries to provide the greatest application of the findings. At the same time, it was important to curtail the scope of the sample sufficiently to avoid too many cross-sectional factors that would offer alternate explanations to the findings. As discussed in the

in-depth interview methodology, a sufficiently broad and diverse perspective from the marketplace was sought, while keeping a reasonable perspective on the research in order to provide sufficient depth of industry focus to gain deeper understandings. Again, similar to the in-depth interview selection process, the target respondents needed to have familiarity with overall organization profit, marketing function familiarity, technology responsibilities, and / or upper management membership to qualify as participants. This provided the valuable heterogeneity in the respondents based on organization role. From an industry perspective, the sampling frame consisted of a relatively balanced number of participants from different organizational sizes (small, medium, and large based on employee base) as defined in the strategy literature (Kotabe 1990, Matsuno, Mentzer and Rentz 2000) and the overall business population. It is important to note that the majority of businesses (61%) according to the US Census Bureau contain less than 5 employees, followed by the second largest group with contains between 5 and 9 (19%). Using a strict stratified sampling method to mirror the population would have resulted in having 80% of the respondents from these categories which would not be the ideal scope for this research. Thus, a modified stratification process was utilized to avoid over-representation from these two segments, limiting their participation to 15% of the respondents. To ensure proper industry representation, organizations were sampled by North American Industry Classification System (NAICS). Again using a stratified sampling method, a minimum of 10% of the survey respondents were solicited from NAICS codes from the following sections: (1) 31-33: manufacturing, (2) 42: wholesale trade, and (3) 44-45: retail trade. The goal was to provide sufficient variation of source participants, while at the same time, providing the ability to secure data from a large group of organizations to secure the necessary sample size in a reasonable amount of time.



The survey procedure followed that of the Tailored Design Method, which focuses on visual-design principles and social exchange principles in order to minimize total survey error in coverage, sampling, non-response, and measurement (Dillman, Smyth and Christian 2009, Groves 1989). By selecting a large enough random sample, and designing the instrument that encourages most people to respond honestly and precisely, this primary data collection will be most successful in effectively assessing the proposed relationships (Dillman, Smyth and Christian 2009). The value of the Tailored Design Method lies in its ability to create effective interaction with respondents in order to improve cooperation and valid answers by customizing the entire survey process for the characteristics of the sample (Dillman, Smyth and Christian 2009). First, an email was sent to participants to request their participation in an important study involving marketing strategy. Three days later, an email was sent to the participants to formally request survey completion with an embedded unique hyperlink in the body of the email to facilitate completion as well as efficient participant completion tracking. Three business days later, those individuals that had responded were emailed a letter to again request participation; the letter will include a uniform resource locator (URL) for survey completion online. Ten business days later, an email reminder was sent to all non-respondents to encourage participation and an option to request a paper survey in the mail was added. Finally, a postcard reminder was sent to all non-participants. Because a sufficient number of respondents was initially secured, a second wave of emails to additional respondents was not necessary.

#### *Research Model Variable Operationalization*

There are seven research model variables, listed in order in the research model: marketing insight, marketing imagination, market orientation, marketing innovation, level of process

innovation, product innovation radicalness, and firm performance. Four of these variables will be measured using reliable, published scales from the existing literature: market orientation (Jaworski and Kohli 1993, Kohli, Jaworski and Kumar 1993), level of process innovation (Heunks 1998), radicalness in product innovation (Chandy and Tellis 1988), and firm performance (Kotabe 1990). The remaining three constructs will have new scales developed by adapting scale items from related constructs or creating new items that are intended to tap into the complete domain of the construct (Churchill 1979). Marketing insight will be initially assessed using 25 scale items, 17 Likert items and 8 semantic-differential items [ (Andrews and Smith 1996, Beck, et al. 2004) among others]. Marketing imagination will be initially assessed using 15 Likert items [ (Beck, et al. 2004, Ganesan, Malter and Rindfleisch 2005, Rindfleisch and Moorman 2001, Roberts and Eisenhardt 2003) among others]. The items utilized for the scales discussed in this section are summarized in Table 3 - Initial Scale Information for Research Model Variables. Marketing innovation is discussed next.

### *Marketing Innovation Measurement*

The focal construct, marketing innovation, is theoretically grounded in the core business processes of product development management, supply chain management, and customer relationship management (Srivastava, Shervani and Fahey 1999). These processes map to the individual spaces of marketing innovation. Further, the following figures respectively address the marketing-product space, marketing-process space, and marketing-relationship space summarizing the domain of each space and providing a concrete example for reference; see Figure 1 - Scale Items and Specific Examples for Marketing-Product Space Innovation, Figure 2 - Scale Items and Specific Examples for Marketing-Process Space Innovation, and Figure 3 - Scale Items and Specific Examples for Marketing-Relationship Space Innovation.

Remember that is the innovative execution of the example that triggers the marketing innovation benefits and consequences. The marketing innovation construct will be measured by asking respondents to rate their organization's ability to innovatively perform the modified core business process activities that have been validly and reliably defined in the published literature (Srivastava, Shervani and Fahey 1999). There were relatively few modifications needed to the original published items to create an appropriately modified version of these items for capturing the complete domain of marketing innovation. Using a Likert scale from 1, not innovative at all, to 7, exceptionally innovative, respondents will be asked to assess the level of innovativeness or novelty in which their organization regular executes the individual items from the core business processes. The revision and rationale for any item that was modified is summarized in Table 1 - Marketing Innovation Activities and Scale Items as shown through the Revised Core Business Subprocesses.

#### *Control Variable Measurement*

As suggested by the literature on innovation, the following variables will be operationalized as controls to the research model: competitive intensity (Jaworski and Kohli 1993), corporate culture (Deshpande, Farley and Webster 1993), leadership style (Deshpande, Farley and Webster 1993), market turbulence (Jaworski and Kohli 1993), organization size (Hurley and Hult 1998), personnel experience level (Heunks 1998), and technological turbulence (Jaworski and Kohli 1993). The control variables are intended to handle criticism from alternative explanations as well as provide a secondary means of ensuring no practically significant variable has been omitted from the research model.

## SECTION 6: DATA ANALYSIS AND FINDINGS

In order to provide an effective empirical assessment of the relationships proposed in this research, the cross-sectional sample data from the online survey respondents was carefully analyzed. In the following sections, detailed information about data quality, non-response bias, common method bias, psychometric properties, and hypotheses testing are presented. The section ends with a post-hoc analysis that offers further insight into several of interesting relationships demonstrated in this research.

### *Sample Specifics*

In order to ensure sufficient statistical ability to detect the relationships proposed in this research through primary data collection, a careful analysis of all the items required was undertaken to ensure the proper sample size was created. With the use of Tchebysheff's theorem as detailed in Dillman, et al, (2009), sample size can be effectively calculated. By determining the lower and upper-bound scores for the entire questionnaire (range), the estimated population variance, and the desired confidence level, it was determined that 245 surveys were needed in order to complete the analysis if all items were utilized (Dillman, Smyth and Christian 2009). Because it was estimated that 10% of the items would be dropped from the analysis, the 245 quantity was used as the ideal and maximum sample size, still providing sufficient latitude to eliminate unusable surveys if needed and have a sufficiently adequate sample size. The calculation process is summarized in Table 4 - Sample Size Calculation and Other Survey Properties.

Overall, 248 usable survey responses were obtained from a sample of 1,000 business executives, generating an effective response rate of 24.8%. Two surveys were discarded because the

respondent indicated in the free-response section that (1) she was a housewife and had never been employed, and (2) another that indicated they had never been employed. As mentioned in the next section, one respondent had over 40% of their responses missing and was therefore discarded (also referenced in the next section on Data Quality). This reduced the 251 completed surveys to 248 usable surveys. Next, the survey responses were analyzed for the appropriate level of responsibility in the organization. Of the executives that completed the survey, 6% indicated upper management responsibility, 40% middle management, 29% supervisory / entry-level management, and 24% non-management. This provides an effective cross-section of responsibility levels, however it is important to assess if there was a substantial difference among the respondent categories. A two-tailed t-test for independence between the samples on the key variables between the non-management and the management responses revealed there was a significant difference in responses in key variables: marketing imagination, marketing innovation, marketing insight, and market orientation.

Table 5 – Assessment of Response Bias, Management versus Non-Management contains the detail regarding the differences in means and standard deviations between these groups. There are 187 management respondents and 60 non-management respondents. All data analysis were performed using the management respondents only sample and then again with all 248 respondents; this is because a possibility exists that a non-management respondent may lack the level of business knowledge and expertise needed to provide the level of depth required on certain survey items. This replication process ensures more robust hypotheses and post-hoc testing. Similar response bias analyses were performed with the respondent's key area of

responsibility (marketing, technology, operations, chief officer, or other) and number of company employees; no significant differences were found.

As planned, survey respondents were systematically sampled in order to provide representation in all relevant high-level NAICS categories – manufacturing, wholesale trade, and retail trade. In particular, of the 94% of the respondents that provided an industrial category, the retail trade accounted for 40% of the respondent's response, followed by manufacturing 26%, and the wholesale trade 11%; the remaining respondents were from the following categories: construction 6%, utilities 6%, and agriculture 5%. This provided a strong representation in each of the three primary desired categories and adequate representation in other categories as initially intended; this sample frame strengthens the generalizability of the findings even though the external validity is most often robust to differences in sample quality (Blair and Zinkham 2006). This information is summarized in Table 6 – Classification of Respondent's Organization, which reports the frequencies and percentages for all respondents and then separately for the management respondents.

In a similar manner, Table 7 – Size of Respondent's Organization summarizes the size of the organizations represented by the respondents in the sample with 36% of the respondents from organizations with greater than 1,000 employees (37% for the management only sample). This was an important consideration since all companies in the Fortune 500 list have more than 100,000 employees and adequate representation in this segment is essential given the context of the study. At the same time, it was important to sample smaller organizations in order to increase the value of the implications of the research and be able to provide conclusions that have impact

for all organizations regardless of employee size as discussed previously. Additional data testing procedures are discussed next followed by a detailed analysis of the scales developed for this research.

#### *Tests for Data Quality, Non-Response Bias, and Common-Method Bias*

All appropriate survey items were checked using standard procedures for critical to the type of data analysis undertaken for this research. All item data were assessed for missing data, outliers, non-linearity, and heteroskedasticity. No item had more than three missing values; in all cases the elimination of one respondent with several missing values reduced the missing number for any one item to only two values. Analysis used list-wise elimination in the event the value was missing with the exception of structural equation model fitting, which required missing data replacement in order to calculate the fit indices and modification indices; for these cases, the recommended expectation maximum procedure was utilized prior to SEM testing as required (discussed later) (Kline 1998). Data were also carefully assessed for appropriate levels of skewness and kurtosis and in order to ensure that the data approximated a normal distribution, a key assumption for regression analysis and other statistical procedures. All items fell within acceptable guidelines for the statistical testing procedures undertaken and a check for normality was completed a second time following the calculation of composite scores for the research model and control variables. No significant departures from normality were noted. Further, variables included in the structural equation model were assessed for multivariate normality with no substantial violation to this important assumption.

Next, non-response bias was assessed by comparing the mean scores on key research variables between the early and late respondents with a two-tailed t-test for independence. As indicated in

Armstrong and Overton (1977), comparing the response between those that respond early in the surveying process with those that respond in the end, especially after repeated contact attempts, can enable a researcher to detect non-response bias. As reported in Table 8 - Assessment of Non-Response Bias, Early versus Late Respondents, there were no significant differences between the early and late respondents in either sample grouping, all 248 respondents or the 187 management-only respondents. Only one variable approached statistical significance, marketing knowledge, with a test statistic p-value of 0.159; no action was taken.

To ensure common-method bias did not influence the findings, survey items were designed such that no response was easier or more likely to be selected than any other response due to the instrument layout (Dillman, Smyth and Christian 2009, Podsakoff, et al. 2003, Campbell and Fiske, Convergent and Discriminant Validation by the Multitrait-Multimethod Matrix 1959). In addition, organizational representation by more than one (ideally three) respondents was sought which helps to reduce the impact of common method bias (Podsakoff, et al. 2003). Lastly, a careful analysis of all survey items was undertaken using the Harman Single Factor Test with all respondents and again with just the management responses. In accordance with the standard procedure for this check of common-method bias, all survey items are factor analyzed using a Principle Components Extraction method with a Varimax-rotated solution to ensure that no one factor is able to account for more than 50% of the variance in the overall dataset (Podsakoff, et al. 2003). As indicated in Table 9 – Results from the Harman’s Single Factor Test for Common Method Bias, common method bias is not a likely concern given that there was sufficient variance in the data explained by multiple factors. Next, the data analysis continues with a scale development discussion prior to assessing the research hypotheses.



### *Scale Development and Use*

As indicated earlier, three new scales were developed in order to complete this research: marketing imagination, marketing insight, and marketing innovation. In addition, several existing scales were utilized. The scale development process for the new measures, involving a comprehensive assessment of internal validation, internal reliability, convergent validity, and discriminant validity (Churchill 1979, Netemeyer, Sharma and Bearden 2003), is discussed next followed by details about the published scales utilized.

### *Marketing Insight Scale Purification Process*

From the 15 items included in the initial survey, four items were dropped during a review process with three marketing strategy academicians and a pre-tested survey instrument leaving 11 items for analysis. Following Churchill's (1979) methodology, coefficient alpha was examined. After analyzing 248 observations, the coefficient alpha is a strong .933 with all 11 items. After reviewing the corrected item-total correlation statistics, all items correlate well except items 54 (a reverse-coded item). This item was removed and the coefficient alpha is now .946 with the remaining 10 items. Now, all the items correlate well (.6 or higher) with the remaining other items. Dropping the lowest item (item 66 at 0.601 corrected-item to total correlation) would not improve the reliability significantly, nor should an improvement to reliability be sought at this current strong level of reliability.

Next, factor analysis was conducted using the maximum likelihood estimation procedure, deemed most appropriate for scale development since the communalities are assumed to be less than 1.0 and accounts for measurement error in the variables (Thurstone and Chave 1929). The

analysis reveals we have a strong measure of Kaiser-Meyer-Olkin of Sampling Adequacy (.918), and a good measure for Bartlett's Test of Sphericity, which confirms sufficient correlation among the items and rejects the identity matrix null hypothesis,  $\chi^2(55)=2258, p<.001$ . The communalities suggest that all items are explained well by the single factor with the exception of the 3 items (items 64, 65, 66) which loaded on a second factor at loadings above .3. Each of them items was reviewed carefully for theoretical relevance to the construct even though they are all related to top management. After carefully considering this possible second dimension to the construct, it was deemed that these top management items diverge from the true intended purpose and definition of the construct and were not critical to the construct's validity (Churchill 1979, Nunnally 1976). Each item was dropped from the analysis one at a time beginning with the one with the largest loading on the second factor. Following this procedure, all 7 items remaining loaded on a single factor with loadings exceeding .7 (indicated a shared variance of 49% or more between the item and the factor / construct), and this single factor explained 64.4% of the variance in the items.

After completing a similar procedure for marketing imagination which is detailed in the next section, marketing insight and marketing imagination were analyzed simultaneously via factor analysis to ensure that two factors emerged when combining the items from both new constructs to demonstrate initial discriminant validity between the constructs (Campbell and Fiske, Convergent and Discriminant Validation by the Multitrait-Multimethod Matrix 1959). Factor analysis was performed with maximum likelihood estimation and Promax with Kaiser Normalization rotation; this oblique rotation method was deemed most appropriate given the theoretical support for the correlation between marketing insight and marketing imagination.

This resulted in the loss of item 55, which cross-loaded at .368, leaving the scale at 6 items. Because the anticipated correlation among the factors was confirmed as theoretically anticipated with oblique rotation, orthogonal rotation methods were not evaluated.

To ensure that the individual measurement error in each of these items was properly accounted for and to increase the level of confidence in the validity of the measure, a structural equation model was tested (Aaker and Bagozzi 1979, Fornell and Larcker 1981). To test the 6 items that remained for the marketing insight construct (items 67-72), a latent construct of marketing insight was established with variance set to 1.0 and each of the 6 items were given reflective paths from the construct to the items with their path values unconstrained. Each item was modeled with its own unique and uncorrelated error component for initial assessment of the construct. The initial model fit was  $\chi^2(9, n=248)=47, p<.01$ ; CMIN/df=5.27, NFI=.967, RFI=.944, CFI=.973, RMR=.063, and RMSEA=.132. This indicates a fair to poor-fitting model and often the initial cause is the lack of independence in the error term of the individual items (Sivo, et al. 2006). Because there is theoretical support for the correlation of many of these error terms, this less-than-ideal level of fit was anticipated. After reviewing the modification indices for suggested correlation of error terms, each correlation was given careful consideration or the removal of the associated item was considered. During this iterative process, it was deemed theoretically inappropriate to any item. Instead, the error terms between two sets of items, items 67 and 68 as well as items 71 and 72, were correlated as theoretically justified. Following this procedure, the remaining 10 items fit the model well,  $\chi^2(7, n=248)=15.3, p>.01$ ; CMIN/df=2.19, NFI=.989, RFI=.977, CFI=.994, RMR=.034, and RMSEA=.062. All indicators had high loadings

on the factor as evidence of convergent validity (Kline 1998); this structural equation model is shown in Figure 6 - Marketing Insight Item Modeling.

The same procedure was performed with the management-only sample and the final results are indicated in Table 11 - Marketing Insight, 6-Item Final Scale Properties. Note that one additional set of item errors was correlated to improve overall fit in the management due to the strong theoretical support available for this modification-index suggested correlation. Following these procedures, coefficient alpha was re-calculated with the final items and careful comparison of these reliabilities with marketing imagination and other constructs was made using construct correlation matrices from both sample sets (see Table 20 - Means, Standard Deviations, Reliabilities, and Correlations for Key Constructs, All Respondents and Table 21 - Means, Standard Deviations, Reliabilities, and Correlations for Key Constructs, Management Respondents). A review of these correlations provides further support for convergent and discriminant validity such that marketing insight correlates much higher with itself than with any other construct in the two matrices (Campbell and Fiske 1959, Bagozzi 1984, Nunnally 1976), and further no correlations with other factors are excessively high (greater than .85) provided the desired distinctiveness of the construct (Kline 1998).

#### *Marketing Imagination Scale Purification Process*

From the 25 items included in the initial survey, three items were dropped during a review process with three marketing strategy academicians and a pre-tested survey instrument leaving 22 items for analysis. Following Churchill's (1979) methodology, coefficient alpha was examined. After analyzing 248 observations, the coefficient alpha is a strong .942 with all 22 items in the original scale. After reviewing the corrected item-total correlation statistics, all items

correlate well except items 48<sup>20</sup>, 49, 95, and 99 (reverse-coded items) and items 96 and 97 (semantic-differential items). These items were removed, one at a time to ensure nothing else changes, and the coefficient alpha is now .962 with the remaining 16 items. Now, all the items correlate well (.7 or higher) with the remaining other items. Dropping the lowest item (item 100 at 0.703 corrected-item to total correlation) would not improve the reliability, nor should an improvement to reliability be sought at this current strong level of reliability.

Next, factor analysis was conducted using the maximum likelihood estimation procedure, deemed most appropriate for scale development since the communalities are assumed to be less than 1.0 and accounts for measurement error in the variables (Thurstone and Chave 1929). The analysis reveals we have a strong measure of Kaiser-Meyer-Olkin of Sampling Adequacy (.954), and a good measure for Bartlett's Test of Sphericity, which confirms sufficient correlation among the items and rejects the identity matrix null hypothesis,  $\chi^2(136)=4504, p<.001$ . The communalities suggest that all items are explained well by the single factor with 65.6% of the variance explained by this factor, with the exception of 4 items which loaded on a second factor at loadings above .3. Each of them items (94, 98, 100, 101) was reviewed carefully for theoretical relevance to the construct and where carefully considered as a second dimension to the construct; however, it was determined that these items and this possible second dimension were not critical to the construct's validity (Churchill 1979, Nunnally 1976). Each item was dropped from the analysis one at a time beginning with the one with the largest loading on the second factor. Following this procedure, all 13 items remaining loaded on a single factor with loadings exceeding .7 (indicated a shared variance of 49% or more between the item and the

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<sup>20</sup> Item 48 is a unique item in the survey such that the ideal score is at the mid-point of the Likert scale. Even after transforming this item, it still did not correlate well with the remaining items and was dropped.

factor / construct), and this single factor explained 70.3% of the variance in the 12 remaining items.

Next, as previously described in the previous section regarding the marketing insight scale purification process, marketing imagination and marketing insight were analyzed simultaneously via factor analysis to ensure that two factors emerged when combining the items from both new constructs to demonstrate initial discriminant validity between the constructs (Campbell and Fiske, Convergent and Discriminant Validation by the Multitrait-Multimethod Matrix 1959). Factor analysis was performed with maximum likelihood estimation and Promax with Kaiser Normalization rotation; this oblique rotation method was deemed most appropriate given the theoretical support for the correlation between marketing insight and marketing imagination. All items loaded above .6 on their intended factors with the exception of items 55 and 56, which cross-loaded at .368 and .416, respectively. Beginning with item 56, these two problematic items were dropped from the analysis, one a time, in order to arrive at a theoretically-sound two-factor solution.

To ensure that the individual measurement error in each of these items was properly accounted for and to increase the level of confidence in the validity of the measure, a structural equation model was tested (Aaker and Bagozzi 1979, Fornell and Larcker 1981) (Aaker and Bagozzi 1979, Fornell and Larcker 1981). To test the 11 items that remained for the marketing imagination construct (items 50-53, 57-63), a latent construct of marketing imagination was established with variance set to 1.0 and each of the 11 items were given reflective paths from the construct to the items with their path values unconstrained. Each item was modeled with its own

unique and uncorrelated error component for initial assessment of the construct. The initial model fit was  $\chi^2(44, n=248)=341, p<.01$ ; CMIN/df=7.75, NFI=.887, RFI=.858, CFI=.899, RMR=.125, and RMSEA=.165. This indicates a poor-fitting model and often the initial cause is the lack of independence in the error term of the individual items (Sivo, et al. 2006). Because there is theoretical support for the correlation of many of these error terms, this initial unacceptable level of fit was anticipated. After reviewing the modification indices for suggested correlation of error terms, each correlation was given careful consideration or the removal of the associated item was considered. During this iterative process, it was deemed theoretically appropriate to remove one item (item 63). In addition, each remaining error term was correlated with one or two other error terms to indicate that the variance that that could not be explained by the item was associated with the variance that could not be explained by another item. The only error term that received more than two correlation paths was item 61, which was given 4 error correlations as theoretically justified. Following this procedure, the remaining 10 items fit the model well,  $\chi^2(25, n=248)=49.3, p>.01$ ; CMIN/df=1.97, NFI=.982, RFI=.967, CFI=.991, RMR=.060, and RMSEA=.063. All indicators had high loadings on the factor as evidence of convergent validity (Kline 1998); the structural equation model is graphically depicted in Figure 5- Marketing Imagination Item Modeling.

Again, this entire process was repeated using the management-only data to ensure against an invariant factor structure with the less sophisticated all-respondents sample that included 61 non-managers. There were no significant differences found and the model fit indices are highly similar. This information, as well as all the items, means, standard deviations, item loadings, average variance extracted, and final reliabilities is summarized in Table 12 - Marketing

Imagination, 10-Item Final Scale. Following these procedures, coefficient alpha was re-calculated with the final items and careful comparison of these reliabilities with marketing imagination and other constructs was made using construct correlation matrices from both sample sets (see Table 20 - Means, Standard Deviations, Reliabilities, and Correlations for Key Constructs, All Respondents and Table 21 - Means, Standard Deviations, Reliabilities, and Correlations for Key Constructs, Management Respondents). A review of these correlations provides further support for convergent and discriminant validity such that marketing imagination correlates much higher with itself than with any other construct in the two matrices (Campbell and Fiske 1959, Bagozzi 1984, Nunnally 1976), and further no correlations with other factors are excessively high (greater than .85) provided the desired distinctiveness of the construct (Kline 1998).

#### *Marketing Innovation Scale Purification Process*

From the 27 activities that were theoretical grounded as the key activities in the core business processes, 19 of these items were carefully selected for inclusion in the survey instrument. This process was detailed earlier and was summarized in Table 1 - Marketing Innovation Activities and Scale Items as shown through the Revised Core Business Subprocesses. In selecting these 19 items, special care was taken to provide adequate representation for each of the subprocesses: product development management process, supply chain management process, and customer relationship management process. The activities defined in these processes provided the basis for the theoretically-relevant items utilized the measurement of marketing innovation as a whole and in its separate spaces: marketing-product space innovation, marketing-process space innovation, and marketing-relationship space. There were no additional items were dropped or revised during the initial survey review process with three marketing strategy academicians and a pre-



tested survey instrument. Like marketing imagination and marketing insight, Churchill's (1979) methodology was followed. After analyzing 248 observations, the coefficient alpha is a strong .976 with all 19 items. After reviewing the corrected item-total correlation statistics, all items correlate well (.7 or higher) with the remaining other items. Dropping the lowest item (item 14 at 0.707 corrected-item to total correlation) would not improve the reliability significantly, nor should an improvement to reliability be sought at this current strong level of reliability.

Next, factor analysis was conducted using the maximum likelihood estimation procedure, deemed most appropriate for scale development since the communalities are assumed to be less than 1.0 and accounts for measurement error in the variables (Thurstone and Chave 1929). The analysis reveals we have a strong measure of Kaiser-Meyer-Olkin of Sampling Adequacy (.958), and a good measure for Bartlett's Test of Sphericity, which confirms sufficient correlation among the items and rejects the identity matrix null hypothesis,  $\chi^2(171)=5275, p<.001$ . The communalities suggest that all items are explained well by the single factor, which explains 68.6% of the variance in the 19 items.

To ensure that the individual measurement error in each of these items was properly accounted for and to increase the level of confidence in the validity of the measure, a structural equation model was tested (Aaker and Bagozzi 1979, Fornell and Larcker 1981) (Aaker and Bagozzi 1979, Fornell and Larcker 1981). To test the 19 items for the marketing innovation construct (items 3-21), a latent construct of marketing innovation was established with variance set to 1.0 and each of the 19 items were given reflective paths from the construct to the items with their path values unconstrained. Each item was modeled with its own unique and uncorrelated error

component for initial assessment of the construct. The initial model fit was  $\chi^2(152, n=248)=833$ ,  $p<.01$ ; CMIN/df=5.48, NFI=.847, RFI=.828, CFI=.871, RMR=.152, and RMSEA=.135. This indicates a fair to poor-fitting model and often the initial cause is the lack of independence in the error term of the individual items (Sivo, et al. 2006). Because there is theoretical support for the correlation of many of these error terms, this less-than-ideal level of fit was anticipated. After reviewing the modification indices for suggested correlation of error terms, each correlation was given careful consideration or the removal of the associated item was considered. During this iterative process, it was deemed theoretically inappropriate to any item. Instead, the error terms sets of items were correlated in order of strength of theoretical justified beginning with correlations with the three individual spaces of marketing innovation. This resulted in a statistically-significantly improved model,  $\chi$  difference of 385,  $p<.01$ , with the following fit statistics:  $\chi^2(131, n=248)=448$ ,  $p<.01$ ; CMIN/df=3.42, NFI=.918, RFI=.892, CFI=.940, RMR=.112, and RMSEA=.099. To further improve the model fit, additional correlations among the error terms of the items from different spaces was modeled if the two items had a theoretical justification for the correction. Following this procedure, the 19 items representing the latent construct marketing innovation fit the model well,  $\chi^2(117, n=248)=255$ ,  $p<.01$ ; CMIN/df=2.18, NFI=.953, RFI=.931, CFI=.974, RMR=.088, and RMSEA=.069. This was a statistically-significant improvement from the previous model,  $\chi$  difference of 193,  $p<.01$ . All indicators had high loadings on the factor as evidence of convergent validity (Kline 1998); the model is shown in Figure 7 - Marketing Innovation Item Modeling.

As with marketing insight and marketing imagination, the same procedure was performed with the management-only sample which produced slightly improved fit indices; the results are shown

in Table 13 - Marketing Innovation, 19-Item Final Scale. Following these procedures, coefficient alpha was re-calculated with the final items and careful comparison of these reliabilities with marketing imagination and other constructs was made using construct correlation matrices from both sample sets (see Table 20 - Means, Standard Deviations, Reliabilities, and Correlations for Key Constructs, All Respondents and Table 21 - Means, Standard Deviations, Reliabilities, and Correlations for Key Constructs, Management Respondents). A review of these correlations provides further support for convergent and discriminant validity such that marketing innovation correlates much higher with itself than with any other construct in the two matrices (Campbell and Fiske 1959, Bagozzi 1984, Nunnally 1976), and further no correlations with other factors are excessively high (greater than .85) provided the desired distinctiveness of the construct (Kline 1998).

#### *Psychometric Properties for the Research Model*

The research model was estimated using AMOS 16.0, structural equation modeling (SEM) software, in order to account for measurement error and test hypothesized relationships simultaneously. As a statistical methodology using a confirmatory perspective to structural theory, SEM provides the ideal method of evaluating the casual relationships proposed herein (Byrne 1998). SEM assesses and corrects for measurement error and enables the incorporation of latent variables (ie: marketing innovation) from observed variables (ie: the degree of novelty in ascertaining customer needs) (Byrne 1998, Bagozzi and Yi 1988, Kline 1998). In addition, each path in the research model was also assessed individually using multiple regression. This dual procedure of model testing enables greater confidence in the results and also ensures that the constructs that are utilized in the structural paths are both adequate in validity and reliability. The measurement model was examined using a variety of statistical procedures including tests of

normality, coefficient alpha, unrotated and rotated factor loadings, average variance extracted, convergent validity, discriminant validity, and practical significance / effect size. Appropriate statistical measures were followed for linear and non-linear moderation testing (Baron and Kenny 1986) and all other relevant statistical testing [ (Bagozzi and Yi 1988, Nunnally 1976), among others].

#### *Market Orientation Published Scale Usage*

In order to capture the domain of the market orientation construct as indicated in discussion The Moderating Role of Market Orientation in SECTION 4: RESEARCH MODEL & HYPOTHESES DEVELOPMENT, the MARKOR published scale was utilized (Kohli, Jaworski and Kumar 1993). This scale has strong validity and repeated use in the literature and has been effectively demonstrated to capture essence of the construct. As indicated in Table 14 - Marketing Orientation Published Scale Properties, the scale performed well psychometrically with a reliability of .97 (coefficient alpha) with all respondents and .95 among the management-only respondents. The single market orientation scale factor explained an average of 68.5% of the variance with all respondents and 62.1% among just the managers. All factor loadings were .69 or above, above the .6 standard (Nunnally 1976). This information as well as the means and standard deviations for the individual items are provided for both samples in Table 14 - Marketing Orientation Published Scale Properties. It is important to note that the 7 reverse-coded items were dropped from the scale because they produced an artifactual second factor (Spector, et al. 1997). While there are multiple reasons for this occurrence, it is most likely due to the extreme nature of the items or confusion among the respondents (Spector, et al. 1997).

### *Radicalness of Product Innovation Scale Usage*

To assess the moderating role of current degree of product radicalness, two items from the well-cited published scale for this purpose were utilized (Chandy and Tellis 1988). The reliabilities were .77 for all respondents and .80 for the managers. The means and standard deviations are summarized in Table 15 - Radicalness of Product Innovation Published Scale Properties.

### *Firm Performance Published Scale Usage*

Firm performance has been frequently assessed using sales growth, pre-tax profit, cash flow, and shareholder value [ (Deshpande, Farley and Webster 1993, Kotabe 1990) among others] in the strategy literature. Consistent with this pattern, a four Likert-scale items were used to enable the respondent to rank their organization with that of their direct competitors on the four reference measures. The four items proved to be a reliable and valid measure with .92 reliability and 69% of variance extracted on the single intended factor among all respondents. The managers' sample performed similarly with a coefficient alpha of .89 and 62% variance extracted. All loadings were .74 or above. This information and the means and standard deviations of each item for both samples are provided in Table 16 - Firm Performance Published Scale Properties.

### *Competitive Intensity, Culture, Leadership, Market Turbulence, and Technological Turbulence Published Scale Usage for Control Variables*

The control measures used in the research model were assessed using valid and reliable published scales in the literature. There were no notable measurement issues with any of these scales. The item detail and scale properties are shown in the following tables: Table 17 - Competitive Intensity Published Scale Properties, Table 18 - Market Turbulence Published Scale Properties, and Table 19 - Technological Turbulence Published Scale Properties. For culture and

leadership, published scales from Deshpande, Farley and Webster (1993) were utilized that asked the respondent to distribute 100 points among four different cultural styles and then a second time among four different leadership styles.

### *Test of Hypothesized Relationships*

For robustness, each of the individual hypothesized relationship was tested using multiple regression with both the entire sample of 248 non-management and management respondents and separately with just the 187 management respondents. Finally, the research model as a whole was tested in structural equation modeling via path analysis. First, the results of the hypothesized relationship are presented followed by a discussion of the results of the SEM analysis of the entire model. For reference all the hypothesized relationships are summarized in Table 24 - Summary of Hypotheses Test Results, All Respondents and Table 25 - Summary of Hypotheses Test Results, Management Respondents. For organizational purposes, a discussion of the results is reserved for SECTION 7: DISCUSSION AND CONCLUSION.

### *Results for Marketing Innovation Antecedents – H1<sub>a</sub> and H1<sub>b</sub>*

As hypothesized, marketing insight is a significant, positive and direct predictor of marketing innovation; All Respondents:  $F(1,246)=165, p<.01; \beta=.67, t(246)=12.8, p<.01, R^2=.40,$

Management Respondents Only:  $F(1,185)=75, p<.01; \beta=.58, t(183)=8.6, p<.01, R^2=.29.$

Marketing insight as a stand-alone variable has the ability to detect between 29% and 40% of the variance in marketing innovation. By increasing marketing insight 14% (1 unit on a 7-unit scale), an organization enjoys a 10% (0.67-unit) increase in marketing innovation. This effect is robust, remaining statistically significant in the presence of marketing imagination and market

orientation with large practical significance represented by marketing insight's partial correlation values in the presence of these additional variables. As hypothesized, marketing imagination is a significant, positive and direct predictor of marketing innovation; All Respondents:  $F(1,246)=194, p<.01; t(246)=13.9, p<.01; \beta=.73, t(242)=13.4, p<.01, R^2=.44$ ; Management Responses Only:  $F(1,183)=101, p<.01; \beta=.64, t(183)=10.7, p<.01, R^2=.46$ . Further, it is a more powerful predictor than marketing insight, explaining between 44% and 46% of the variance in marketing innovation as compared with marketing insight which explains 29% to 40% of the variance. By increasing marketing imagination 14% (1 unit on a 7-unit scale), an organization enjoys greater than a 10% (0.73-unit) increasing in marketing innovation. Like marketing insight, the effect of marketing imagination is robust, remaining statistically and highly practically significant in the presence of marketing insight and market orientation as indicated by its high partial correlation values with marketing innovation.

*Results for Marketing Innovation Spaces – H2<sub>a</sub>, H2<sub>b</sub>, and H2<sub>c</sub>*

Regarding the impact of the antecedents on the individual spaces of marketing-product, marketing-process, and marketing-relationship space innovation, support for H2<sub>a</sub>, indicating that marketing insight impacts marketing-product space more than the other spaces, was not found; Product-Space:  $F(1,246)=117, p<.01, R^2=.32, \beta = .67, \beta_{\text{Standardized}} = .57, t(246)=10.8, p<.01$ ; Process-Space:  $F(1,246)=120, p<.01, R^2=.33, \beta = .64, \beta_{\text{Standardized}} = .57, t=10.9, p<.01$ ; Relationship-Space: CRM:  $F(1,246)=151, p<.01, R^2=.38; \beta=.71, \beta_{\text{Standardized}} =.62, t=12.3, p<.01$ . Support for H2<sub>b</sub> and H2<sub>c</sub> was obtained, indicating that marketing-process space and the marketing-relationship space are impacted most by marketing imagination. To summarize, marketing imagination impacts marketing-relationship space most, followed by the marketing-process next, were found in management sample; Product-Space:  $R^2=.245, \beta = .63, \beta_{\text{Standardized}} =$

.50,  $F(1,185)=60$ ,  $p<.01$ ,  $t=7.8$ ,  $p<.01$ ; Process-Space:  $R^2=.32$ ,  $\beta = .69$ ,  $\beta_{\text{Standardized}} = .57$ ,  $F(1,185)=88$ ,  $p<.01$ ,  $t=9.4$ ,  $p<.01$ ; Relationship-Space:  $R^2=.329$  (.326 adjusted),  $\beta = .70$ ,  $\beta_{\text{Standardized}} = .57$ ,  $F(1,185)=91$ ,  $p<.01$ ,  $t=9.5$ ,  $p<.01$ . Additional support for H2c, but not H2b, was found in the all respondents sample; Product-Space:  $R^2=.332$  (.329 adjusted),  $\beta = .71$ ,  $\beta_{\text{Standardized}} = .58$ ,  $F(1,246)=122$ ,  $p<.01$ ,  $t=11.0$ ,  $p<.01$ ; Process-Space:  $R^2=.388$  (.385 adjusted),  $\beta = .72$ ,  $\beta_{\text{Standardized}} = .62$ ,  $F(1,246)=156$ ,  $p<.01$ ,  $t=12.5$ ,  $p<.01$ ; Relationship-Space:  $R^2=.400$  (.398 adjusted),  $\beta = .75$ ,  $\beta_{\text{Standardized}} = .63$ ,  $F(1,246)=164$ ,  $p<.01$ ,  $t=12.8$ ,  $p<.01$ .

### *Results for Market Orientation – H3<sub>a</sub> and H3<sub>b</sub>*

Regarding the moderating roles of market orientation, H3<sub>a</sub> was not supported; there was not a moderating influence of market orientation on the relationship between marketing insight and marketing innovation; All Respondents:  $F(3,244)=86$ ,  $p<.01$ ; Insight:  $\beta= .33$ ,  $\beta_{\text{Standardized}} = .32$ ,  $t=2.88$ ,  $p<.01$ , VIF = 6.0; Orientation:  $\beta=.67$ ,  $\beta_{\text{Standardized}} = .67$ ,  $t=5.48$ ,  $p<.01$ , VIF 7.5; Moderation:  $\beta= -.03$ ,  $\beta_{\text{Standardized}} = -.24$ ,  $t=1.37$ ,  $p>.05$  ( $p=.173$ ); Management Respondents:  $F(3,183)=44$ ,  $p<.01$ ; Insight:  $\beta= .15$ ,  $\beta_{\text{Standardized}} = .14$ ,  $t= 0.96$ ,  $p>.05$ , VIF = 6.5; Orientation:  $\beta=.49$ ,  $\beta_{\text{Standardized}} = .49$ ,  $t=3.11$ ,  $p<.01$ , VIF 7.7; Moderation:  $\beta= .01$ ,  $\beta_{\text{Standardized}} = .05$ ,  $t=0.23$ ,  $p>.05$ . Instead, there was a positive, direct effect of market orientation on marketing innovation,  $F(2,241)=152$ ,  $p<.01$ . In the management only analysis, after removing insight from the equation, there is a positive moderating effect of marketing insight on the relationship between market orientation and marketing innovation,  $F(2,184)=65$ ,  $p<.01$ ; Orientation:  $\beta=.42$ ,  $\beta_{\text{Standardized}} = .41$ ,  $t=3.03$ ,  $p<.01$ ; Moderation:  $\beta= .03$ ,  $\beta_{\text{Standardized}} = .24$ ,  $t=1.78$ ,  $p>.05$ ,  $R^2=.41$ ,  $f^2=(.41-.40)/(.41)=.02$  (very small effect size).



Regarding H3<sub>b</sub>, market orientation does play a significant moderating role on the relationship between marketing imagination and marketing innovation, but it also plays a direct role as well, providing partial support to our hypothesized relationship; All Respondents:  $F(4,243)=68$ ,  $p<.01$ ; Imagination  $\beta=.91$ ,  $\beta_{\text{Standardized}} = .87$ ,  $t=3.83$ ,  $p<.01$ ,  $VIF=26.7$ ; Orientation  $\beta=.84$   $\beta_{\text{Standardized}} = .84$ ,  $t=5.99$ ,  $p<.01$ ;  $MO \times Im$   $\beta = -.26$ ,  $\beta_{\text{Standardized}} = -1.97$ ,  $t=-2.84$ ,  $p<.01$ ,  $MO^2 \times Im$   $\beta=.02$ ,  $\beta_{\text{Standardized}} = 1.05$ ,  $t=2.41$ ,  $p<.05$ ,  $R^2=.53$ ;  $f^2=(.53-.44)/(.53)=.17$  (medium effect size). Management Respondents:  $F(4,182)=38$ ,  $p<.01$ ; Imagination  $\beta=1.02$ ,  $\beta_{\text{Standardized}} = .96$ ,  $t=3.69$ ,  $p<.01$ ,  $VIF=22.3$ ; Orientation  $\beta=.71$   $\beta_{\text{Standardized}} = .16$ ,  $t=4.36$ ,  $p<.01$ ,  $VIF=8.7$ ;  $MO \times Im$   $\beta = -.31$ ,  $\beta_{\text{Standardized}} = -2.42$ ,  $t=-3.03$ ,  $p<.01$ ,  $MO^2 \times Im$   $\beta=.03$ ,  $\beta_{\text{Standardized}} = 1.52$ ,  $t=2.93$ ,  $p<.01$ ,  $R^2=.45$ ,  $f^2=(.45-.42)/(.45)=.07$  (small effect size). To clarify, the relationship was indeed non-linear as anticipated, however the relationship was U-shaped as opposed to the anticipated inverted-U shape that was predicted. It is important to note that the variable inflation factor (VIF) is unacceptably high warning us of the presence of multicollinearity among the predictor variables. These results are thus interpreted with cautionary and are final result conclusion for this hypothesis will be address with structural equation model fits in the coming section.

#### *Results for Marketing Innovation and Firm Performance – H4<sub>a</sub>, H4<sub>b</sub>, H4<sub>c</sub>, and H4<sub>d</sub>*

Support for H4<sub>a</sub> was partially provided by both samples. The all respondents' sample confirms a positive, but linear, relationship between marketing innovation and firm performance;  $F(2,245)=53$ ,  $p<.01$ ; Innovation  $\beta=-.28$ ,  $\beta_{\text{Standardized}} = .33$ ,  $t=1.49$ ,  $p<.10$ ; Innovation-Squared  $\beta=.03$   $\beta_{\text{Standardized}} = .23$ ,  $t=1.03$ ,  $p>.05$ ; after removing insignificant Innovation-Squared term:  $F(1,246)=104$ ,  $p<.01$ ; Innovation  $\beta=.47$   $\beta_{\text{Standardized}} = .55$ ,  $t=10.2$ ,  $p<.01$ ,  $R^2=.30$ . This is a strong and highly practically significant relationship explaining 30% of the variance in firm performance and remaining robust in the presence of control variables competitive intensity,

corporate culture, leadership style, market turbulence, and technological turbulence. Similarly findings were confirmed with the management sample, however support for a non-linear relationship was also received,  $F(2,185)=23$ ,  $p<.01$ ; Innovation  $\beta=-.18$ ,  $\beta_{\text{Standardized}} = -.22$ ,  $t=-.79$ ,  $p>.05$ ; Innovation-Squared  $\beta=.07$   $\beta_{\text{Standardized}} = .66$ ,  $t=2.39$ ,  $p<.05$ ; after removing insignificant Innovation term:  $F(1,185)=46$ ,  $p<.01$ ; Innovation-Squared  $\beta=.05$   $\beta_{\text{Standardized}} = .45$ ,  $t=6.80$ ,  $p<.01$ ,  $R^2=.20$ . The relationship was hypothesized as curvilinear, increasing at an increase rate to a point and then increasing at a decreasing rate; the results from the management sample indicate that this curvilinear relationship does not increase at a decreasing rate, however. Thus, partial instead of full support is indicated.

Again, following the proper procedures for moderation testing, there is no direct effect of product innovation radicalness on firm performance. As hypothesized, however, there is a negative interactive effect of radical product innovation on marketing innovation, such at higher levels of radical product introductions, the effect of marketing innovation on firm performance is reduced by a small, but significant amount, approximately 0.5% ( $1/7 \times -.04$ ). The negative impact of level of current product innovation radicalness was achieved with both samples: all respondents:  $F(2,245)=54$ ,  $p<.01$ ; Innovation:  $\beta=.53$ ,  $\beta_{\text{Standardized}} = .62$ ,  $t=9.37$ ,  $p<.01$ ; Radicalness:  $\beta=-.02$   $\beta_{\text{Standardized}} = -.13$ ,  $t=-1.90$ ,  $p<.05$ ,  $R^2=.31$ ,  $f^2=(.31-.30)/.31=0.03$  (small effect), and management-only respondents:  $F(2,184)=28$ ,  $p<.01$ ; Innovation-Squared:  $\beta=.06$ ,  $\beta_{\text{Standardized}} = .54$ ,  $t=7.37$ ,  $p<.01$ ; Radicalness:  $\beta=-.03$   $\beta_{\text{Standardized}} = -.20$ ,  $t=-2.70$ ,  $p<.01$ ,  $R^2=.23$ ,  $f^2=(.23-.20)/.23=0.13$  (small effect). Thus, full support for H4<sub>b</sub> is provided.

H4<sub>c</sub> indicated that degree of process innovation can positively moderate the marketing innovation – firm performance relationship. This was not supported; instead, a direct effect of process innovation on firm performance was found in both samples: all respondents:  $F(2,245)=69, p<.01$ ; Marketing Innovation  $\beta=0.47$ ,  $\beta_{\text{Standardized}} = 0.55$ ,  $t=5.51$ ,  $p<.01$ ,  $VIF=4.5$ ; PI  $\beta=.56$ ,  $\beta_{\text{Standardized}} = 0.70$ ,  $t=6.44$ ,  $p<.01$ ; MIxPI  $\beta= -.06$ ,  $\beta_{\text{Standardized}} = -.46$ ,  $t= -2.82$ ,  $p<.01$   $R^2 = .453$ ,  $f^2 = (.453-.436)/(.453) = 0.04$  (very small effect), and management-only respondents:  $F(3,181)=33, p<.01$ ; Marketing Innovation-Squared  $\beta=0.07$ ,  $\beta_{\text{Standardized}} = 0.66$ ,  $t=4.23$ ,  $p<.01$ , PI  $\beta=.62$ ,  $\beta_{\text{Standardized}} = 0.84$ ,  $t=4.69$ ,  $p<.01$ ; MIxPI  $\beta= -.08$ ,  $\beta_{\text{Standardized}} = -.71$ ,  $t= -2.67$ ,  $p<.01$   $R^2 = .35$ ,  $f^2 = (.35-.33)/(.35) = 0.06$  (very small effect). As hypothesized, there is an interactive effect of process innovation on marketing innovation, however it is a negative interaction. This finding, while unexpected, is somewhat justified given the strength of the direct effect,  $\beta_{\text{Standardized}} = 0.70$  and  $0.84$ , that absorbed the impact on firm performance. (Note: PI was a single-item scale.)

Finally, H4<sub>d</sub>, indicating that the marketing-relationship space was the most powerful predictor of firm performance among the three marketing-innovation spaces, was fully supported in both samples: All Respondents: Product-Space:  $R^2=.69$ ,  $\beta = .94$ ,  $\beta_{\text{Standardized}} = .83$ ,  $F(1,246)=553$ ,  $p<.01$ ,  $t=23.5$ ,  $p<.01$ ; Process-Space:  $R^2=.86$ ,  $\beta = .99$ ,  $\beta_{\text{Standardized}} = .93$ ,  $F(1,246)=1542$ ,  $p<.01$ ,  $t=39.3$ ,  $p<.01$ ; Relationship-Space:  $R^2=.91$ ,  $\beta = 1.05$ ,  $\beta_{\text{Standardized}} = .96$ ,  $F(1,246)=2546$ ,  $p<.01$ ,  $t=50.5$ ,  $p<.01$ ; and Management Respondents: Product-Space:  $R^2=.62$ ,  $\beta = .90$ ,  $\beta_{\text{Standardized}} = .79$ ,  $F(1,185)=298$ ,  $p<.01$ ,  $t=17.3$ ,  $p<.01$ ; Process-Space:  $R^2=.85$ ,  $\beta =1.02$ ,  $\beta_{\text{Standardized}} = .92$ ,  $F(1,185)=1065$ ,  $p<.01$ ,  $t=32.6$ ,  $p<.01$ ; Relationship-Space:  $R^2=.89$ ,  $\beta = 1.04$ ,  $\beta_{\text{Standardized}} = .95$ ,  $F(1,185)=1539$ ,  $p<.01$ ,  $t=39.2$ ,  $p<.01$ . As hypothesized, the relationship-space of marketing innovation explains the greatest variance in firm performance, 90%, as compared with product-

space, 69%, and process-space, 86%. Further, this relationship holds when controlling for competitive intensity, corporate culture, leadership style, market turbulence, and technological turbulence.

Multicollinearity did not appear to be a problem when reviewing the tolerances / variable inflation factor levels; however, high correlations among the marketing innovation spaces lower the confidence of the findings in H1<sub>b</sub>, H2<sub>b</sub>, and H4<sub>d</sub>. Nonetheless, every effort was made to isolate their individual effects given the high correlations among the spaces by testing each space in a separate regression equation.

#### *Results of Structural Equation Model Testing*

Using structural equation model, the entire research model was simultaneously tested for the relationships proposed herein. Because the comprehensive research model (Figure 4 - Research Model – Toward a More Comprehensive View of Marketing Innovation) required two separate regression equations for testing outside of structural equation model environment because of the two dependent variables utilized (marketing innovation, firm performance), the SEM method provides a more methodologically sound manner to assess the research model as a whole (Kline 1998). To begin, the research model was reproduced in AMOS structural equation modeling software. Because modeling of the individual items associated with each of the latent constructs would have created 39 additional paths (marketing insight 6, marketing imagination 10, marketing innovation 19, and firm performance 4) for the base model alone, sample size limitations and model complexity deems path analysis the most appropriate SEM option (Fan and Sivo 2007). While a path analysis model does not enable the research to model the individual error associated with each individual measurement item as in a full structural equation

model, the dependent variables (marketing innovation, firm performance) are able to be modeled with their own unique error component and all proposed relationships (marketing insight – marketing innovation, marketing imagination – marketing innovation, marketing innovation – firm performance, as well as all proposed interactions) can be assessed at once. Thus path analysis provides a strong methodological advantage to traditional regression analysis or partial least squares (Fan and Sivo 2007).

To assess model fit, the analysis began with the observed composite measures for marketing insight, marketing imagination, marketing innovation, and firm performance as the “base” model. These four rectangular representations reflected were calculated by summing the scores of all the items in the respectively scale and dividing this by the number of items in the scale to arrive at a composite score for each observed variable. These are the same composite scores that were utilized in the individual assessment of the hypotheses results via multiple regression analysis previously discussed. Paths from marketing insight and marketing imagination to marketing innovation were drawn as hypothesized and then a third path from marketing innovation to firm performance was drawn as postulated. Marketing insight and marketing imagination were permitted to correlate as theoretically supported and methodologically encouraged in SEM (Fan and Sivo 2007, Sivo, et al. 2006). Unique error terms for marketing innovation and firm performance were modeled as appropriate. The model fit was substantially less than acceptable by all fit indices,  $\chi^2(2) = 89$ ,  $p > .05$ , NFI = .85, CFI = .86, and RMSEA = .42.

Two additional structural models were created working from the base model and adding the additional moderating relationships one at a time as proposed in the research. Model 2 was

created using the base model and adding product innovation radicalness moderation to firm performance. Model fit improved:  $\chi^2(5) = 172$ ,  $p > .05$ , NFI = .92, CFI = .93, and RMSEA = .37. Next, the moderating effect of market orientation was added to the structural model, creating Model 3,  $\chi^2(6) = 173$ ,  $p > .05$ , NFI = .95, CFI = .95, and RMSEA = .34. Model fit was a substantial improvement from the base model and an improvement to Model 2 regarding Normed Fit Index and Comparative Fit Index. Taking into account all fit indices, Model 3 with all hypothesized relationships (except for Process Innovation moderation which was not supported) fit the data best providing additional support to the overall research model proposed, but more specifically relationships postulated in H1<sub>a</sub>, H2<sub>a</sub>, H3<sub>a</sub>, H3<sub>b</sub>, H4<sub>a</sub>, and H4<sub>b</sub>. It is also important to note that  $\chi$  falsely penalizes models with larger numbers of manifest variables, so a higher value is not necessarily a serious fit issue. Also, if the larger models were more inaccurate than the base model they would be punished by the Comparative Fit Index (CFI) (Sivo, et al. 2006); this did not occur. This entire model-building and fit-assessment process was repeated using the management-only data. As anticipated, given the greater sophistication of the sample and the additional supported hypotheses compared to the all-respondents samples, all model fits were substantially better. The same conclusion was also reached – Model 3 with all hypothesized relationships (except for Process Innovation moderation) fit the data best considering all fit indices. These structural equation modeling results are summarized in Table 28 - Summary of Research Model Fit Results Explaining Marketing Innovation and Firm Performance, All Respondents and Table 29 - Summary of Research Model Fit Results Explaining Marketing Innovation and Firm Performance, Management Respondents. (Note the discussion for Model 4 will be addressed in the following section, Post-Hoc Analysis.)

### *Post-Hoc Analysis*

Given the relationships uncovered, several new research questions can be formulated. The following summarizes the post-hoc testing that was performed in order to address some of the most anticipated variable-relationship inquiries.

First, it is important to note that marketing insight has a direct impact on firm performance, All Respondents:  $F(1,246)=213, p<.01$ ; Insight  $\beta=0.61, \beta_{\text{Standardized}} = 0.68, t=14.6, p<.01, R^2=.46$ ; Management Respondents:  $F(1,185)=86, p<.01$ ; Insight  $\beta=0.50, \beta_{\text{Standardized}} = 0.56, t=9.26, p<.01, R^2=.32$ . This is also true for marketing imagination, All Respondents:  $F(1,246)=158, p<.01$ ; Imagination  $\beta=0.56, \beta_{\text{Standardized}} = 0.63, t=12.6, p<.01, R^2=.39$ ; Management Respondents:  $F(1,185)=58, p<.01$ ; Imagination  $\beta=0.43, \beta_{\text{Standardized}} = 0.49, t=7.60, p<.01, R^2=.24$ . However, when one adds the theoretically suggested control variables to the equation, these direct impacts are significantly less powerful than those that operate through marketing innovation.

Next, because the management sample was able to provide more support than the all-respondents sample as well as improved SEM model fit, it was important to assess whether or not this was due to greater management experience as opposed to their management role. When examining the differences between all respondents with 20 or more years of experience (47.5% of the sample) in comparison with those with less (52.5% of the sample), relationships were individually tested to see if those with greater experience responded differently than those without; no significant differences were found among the following relationships: marketing innovation to firm performance, marketing imagination to marketing innovation, and marketing insight to marketing innovation. This confirmed that it is the management role as opposed to

greater work experience that provided the additional business sophistication required to detect the more subtle relationships hypothesized.

Next, the size of the organization was investigated for influence on the key relationships proposed in this research. First, there is a significant positive effect for organizations with 250 or more employees (52.9% of the sample) on the relationship between marketing innovation and firm performance, all respondents -  $F(2,245)=61, p<.01$ ; Innovation  $\beta=0.43, \beta_{\text{Standardized}} = 0.51, t=9.42, p<.01, \text{partial } \rho=.52$ ; Size  $\beta=0.49, \beta_{\text{Standardized}} = 0.19, t=3.46, p<.01, \text{partial } \rho=.22, R^2=.33$ ; management respondents -  $F(2,184)=27, p<.01$ ; Innovation  $\beta=0.34, \beta_{\text{Standardized}} = 0.41, t=6.28, p<.01, \text{partial } \rho=.42$ ; Size  $\beta=0.46, \beta_{\text{Standardized}} = 0.20, t=2.98, p<.01, \text{partial } \rho=.22, R^2=.23$ . The larger organizations convert marketing innovation to greater firm performance by approximately 7% ( $0.49 \times 1/7, \beta$  multiplied times one unit on the 7-point scale). The positive significant effect of the larger organization is also statistically significant in the previously discussed direct relationships between marketing imagination and firm performance, and marketing insight and firm performance; however, the practical significance in these cases is substantially diminished to 2% to 3%, a small effect size (Cohen 1988).

Finally, while not formally hypothesized, it was informally predicted that upper-deciles performing firms, those in the top 20% of the sample, would have significantly greater levels of all three spaces of marketing innovation. This was confirmed in all cases: All Respondents: marketing innovation (in general):  $M(\text{mean}) 4.89 > M 3.76, t(246)= 4.80, p<.01$ ; marketing-product space:  $M 4.83 > M 3.54, t(246)= 4.82, p<.01$ ; marketing-process space:  $M 4.81 > M 3.65, t(246)= 4.62, p<.01$ ; marketing-relationship space:  $M 5.12 > M 3.86, t(246)= 4.88, p<.01$ ;



and, Management Respondents: marketing innovation (in general):  $M 4.86 > M 4.03$ ,  $t(185) = 3.39$ ,  $p < .01$ ; marketing-product space:  $M 4.68 > M 3.82$ ,  $t(185) = 3.07$ ,  $p < .01$ ; marketing-process space:  $M 4.80 > M 3.87$ ,  $t(185) = 3.42$ ,  $p < .01$ ; marketing-relationship space:  $M 5.11 > M 4.17$ ,  $t(185) = 3.49$ ,  $p < .01$ .

Regarding the structural equation modeling process, additional theoretically-supported paths were tested in order to try and achieve improved model fit. First process innovation was added to the model as (1) a moderator of the relationship between marketing innovation and firm performance (as hypothesized but not supported), (2) a predictor of firm performance, and (3) as both a predictor and moderator of the relationship (1 and 2). These model alterations did not significantly improve the fit of the model. In a similar fashion, market orientation was added as a direct path to marketing innovation and to firm performance; these also did not significantly improve the model fit. However, direct paths were added from marketing insight to firm performance as well as from marketing imagination to firm performance. Model fit improved significantly in both samples; all respondents:  $\chi^2(4) = 85$ ,  $p > .05$ , NFI = .97, CFI = .98, and RMSEA = .29; and management respondents:  $\chi^2(4) = 63$ ,  $p > .05$ , NFI = .97, CFI = .97, and RMSEA = .28.

Table 28 - Summary of Research Model Fit Results Explaining Marketing Innovation and Firm Performance, All Respondents and Table 29 - Summary of Research Model Fit Results Explaining Marketing Innovation and Firm Performance, Management Respondents contain the fit indices for all 5 models tested. This confirms that marketing insight and marketing

imagination can directly impact firm performance; however, as previously discussed, the impact is significantly greater via marketing innovation and with a stronger practical effect.

## SECTION 7: DISCUSSION AND CONCLUSION

### *Research Contribution*

This new marketing innovation conceptualization adds value to the marketing literature for several reasons. As mentioned, marketing innovation is distinct from and goes substantially beyond the realm of product innovation as it is the set of activities that increases the value to the organization and to the consumer through new and existing market offers. It is also distinct from process innovation as it does not encompass modifications to production or manufacturing methods, yet through the marketing-process space it provides valuable input to marketing innovation from informing the design and to executing supply chain activities. With the marketing innovation defined and the components, antecedents, manifestations, and consequences of marketing innovation effectively detailed, it was possible to more confidently make a detailed distinction among Product Innovation, Process Innovation, and Marketing Innovation, as well as begin to uncover the unique contributions of marketing innovation for strategic researchers and practitioners.

Through this research process, greater precision in the identification, description, and empirical testing of (1) the activities of marketing innovation, (2) the first-order constructs or antecedents of marketing innovation, (3) the associated moderating influences with these antecedents, and (4) the relationship to firm performance for marketing innovation have substantially assisted theory development, construct measurement, and further empirical testing. The preliminary qualitative research findings provided an important and necessary step in the research process that disentangled the role of marketing innovation from other areas of organizational innovation as well as increased the accuracy of the manner in which this construct and its associated impact on

firm performance were effectively quantified. Because of this important exploratory research process, the quantitative research was able to test the research model with greater confidence through primary data from qualified business executives. It is through these two key research methods that specific research conclusions are confirmed that further clarify and measure the specific impact of marketing innovation on firm performance as well as discuss the other important characteristics of marketing innovation. To articulate how this valuable, newly defined construct, functions in the complex strategic environment, the conclusions are organized in the following order: new construct measurement and importance, marketing innovation and firm performance, and managerial implications. This is then followed by a discussion of limitations and future research.

#### *New Construct Measurement and Importance*

Three new scales have been constructed and empirically tested that offer substantial value to strategic researchers and management practitioners. First, the ability of an organization to accurately measure, benchmark, continually monitor, and seek to improve their marketing innovation levels is now possible with the 19-item scale introduced in this research. It has been empirically demonstrated to explain 31% of firm performance and its explanatory power remains statistically and practically significant in the presence of a myriad of control variables. Further, the ability of the organization to exploit areas of strength in marketing innovation and improve on areas of deficiency within marketing innovation is facilitated with the division of the construct in three spaces: marketing-product, marketing-process, and marketing-relationship. Organizations can routinely measure and monitor their marketing innovation levels with online surveys to employees and third-party contractors, taking action from this marketing innovation

score to further develop this capability will translate into improved sales growth, pre-tax profit, cash flow, and shareholder value as demonstrated in the results of this research.

In addition to offering the empirically sound measurement of market innovation, we extended the scale development research contribution by offering strategic academicians and managers the ability to measure how to develop and foster marketing innovation through scales for marketing insight and marketing imagination. Marketing insight, that powerful ability to continually understand market and industry trends, patterns, and trajectories using prior experience, intuition, and other information and to leverage this ability for the configuration of organizational resources, explains up to 40% of the variance in marketing innovation. Again, this relationship remains robust in the presence of other variables in the nomological network that have a theoretical relationship to fostering marketing innovation, namely marketing imagination and market orientation (the other variables in this portion of the research model). The underlying components of active scanning and market experimentation discussed in marketing insight's conceptualization are able to be measured with strong psychometric accuracy through the 6-item scale presented in this research. Moreover, the second antecedent variable to marketing innovation, marketing imagination, the ability of the organization to disassociate with current processes, methods, and activities in order to construct and visualize mental pictures of what is or is not actually present and what has never been actually experienced, is a third power variable that organizations can now empirically assess with confidence. Marketing imagination is the most powerful antecedent to marketing innovation as predicted with ability to explain up to 46% of the variance in marketing innovation among organizations. Even when other variable measures are introduced to help explain marketing innovation, it remains as the most

parsimonious, accurate, and valuable method of determining if an organization has what it takes to develop and foster marketing innovation and thus be able to enjoy the performance-enhancing results of marketing innovation. Using 10 items, organizations are able to assess marketing imagination with strong empirically tested precision and identify the strength of its underlying characteristics -- optimal marketing department architecture, lack of marketing myopia, effective market research skill and usage, and marketing functional are culture of permissiveness -- discussed earlier in this research. While measurements exist for creativity, and shared variance between marketing imagination and creativity exist, it is important to note that marketing imagination is the more strategically valuable, higher-order construct that converts the creative new ideas and alternatives to another level through visualization and mental picture creation. Figure 9 - The Effect of Marketing Imagination on Marketing Innovation at Various Levels of Market Orientation (Surface Chart) and Figure 10 - The Effect of Marketing Imagination on Marketing Innovation at Various Levels of Market Orientation (Line Chart) illustrate marketing imagination improves marketing innovation at all levels of market orientation; furthermore, at even the lowest levels of market orientation, organizations can achieve above-average levels of marketing innovation with marketing imagination. This offers additional usefulness to researchers and managers in explaining marketing innovation and firm performance in dynamic environments.

### *Marketing Innovation and Firm Performance Importance*

Beyond establishing the powerful overall connection of marketing innovation to firm performance (see Figure 11 - The Effect of Marketing Innovation on Firm Performance), explaining up to 30% of the variance in firm performance, this research characterizes that relationship in sufficient detail to facilitate further study as well as offer organizational leaders

the ability to implement specific strategic action plans. Using the marketing-innovation spaces, managers can specifically improve, stabilize, and more confidently forecast improvements in overall firm performance metrics by assessing their marketing innovation levels in the product, process, and relationship spaces. This research demonstrated that marketing innovation operates independently from process innovation (unsupported H4<sub>c</sub>), but works in unison with radical product introductions. To clarify, it is empirically proven that frequent radical product introductions can hinder the translation of marketing innovation into firm performance improvements, which was hypothesized and fully supported. Figure 12 - The Effect of Marketing Innovation on Firm Performance at Various Levels of Radical Product Innovation (Surface Chart) and

Figure 13 - The Effect of Marketing Innovation on Firm Performance at Various Levels of Radical Product Innovativeness (Line Chart) illustrate this relationship phenomenon. While this does mean that organizations that continually offer radical new products at a faster rate their competitors have slightly less value from marketing innovation, it offers these organizations a strategic alternative from the costly radical product introductions that they deem marginally successful. Especially when brand or corporate identity are put at stakes with an extremely radical and risky launch, organizations now know that investing in marketing innovation activities can offer firm performance enhancement without product formulation changes that avoid the potential financial downfalls from failed product unveilings. Finally, through Hypothesis 4<sub>a</sub>, we demonstrated that the marketing-relationship space is the most powerful marketing innovation space in predicting firm performance. This is a valuable contribution given that resource limitations often force organizations to choose which marketing activities can be implemented as well as recommended the order of implementation of such activities; this finding indicates that marketing-relationship space activities should be prioritized over activities in the marketing-product or marketing-process spaces.

Finally, through post-hoc analysis, the predictive ability of marketing innovation to identify the top-performing firms with their statistically and practically significant higher mean scores in each of the marketing innovation spaces was obtained. This is a important finding for organizational executives to utilize to more confidently ensure that they remain in the upper deciles of firm performance or take steps to reach these levels. In addition, the marketing innovation space levels are a powerful means to help organizations select strategic allies for co-marketing, co-branding, and joint-development opportunities. By recognizing that potential



partners will have greater contributions to offer at higher levels of marketing innovation in the respective spaces (product, process, or relationship), the requesting (receiving) organization can evaluate these potential partners in an objective and theoretically sound manner and make a more informed choice.

### *Managerial Implications*

Marketing strategy needs new and improved emphasis on leveraging existing investments in research and development and engineering in order to improve investor returns and the overall performance of the organization. This comes from finding new value in the organization's existing and newly launched products. In order to provide funds for future endeavors, stakeholders of all kinds need reassurance that organizations are doing everything in their power to fully exploit their market position, product line, and equity in the marketplace to provide the highest possible return for a given level of risk. The ability to segment and re-segment markets, and position and re-position brands in the changing market conditions and in association with new market development are benefits demonstrated to be observed in firms with high levels of marketing innovation. (Recall that all relationships were robust to competitive intensity, market turbulence, and technological turbulence control variables, among others.) An organization with high levels of marketing innovation has been demonstrated to pioneer new and more effective means of implementing marketing activities. The traditional steps of innovation are more narrowly defined for marketing innovation with this research, enabling facilitated implementation even in more complicated strategic environments. In doing so, they reach more current and potential customers and achieve higher sustained performance among their industry peers. There are also two auxiliary benefits to the use of the new marketing innovation worthy of mention.

First, friction between the marketing department and the departments of research and development and engineering can be reduced with increased focus on market-relationship space of marketing innovation as defined in this research. This respective marketing innovation space distinctly encourages marketing departments to recognize that one of the most important deliverables that they can provide to the organization has nothing to do with new product introductions or production-process improvements, but rather using their talents to “make lemonade with the organization’s existing lemons.” Instead of placing blame or directing poor departmental performance on other departments, marketing departments that position marketing innovation as an important part of their departmental vision recognize that innovative and strategic marketing plans for existing products can be of greater importance under certain internal and external conditions than those for new products. Through this research, they now understand there is a direct link to firm performance with the innovative execution of these marketing plans. This vision coupled with close monitoring by organizational leaders can reduce conflict between (1) research and development and marketing and (2) engineering and marketing, as marketing innovation herein defined can be performed in the absence of research and development or engineering input. A second positive side effect of the newly defined marketing innovation construct is the functional accountability provided to the organization’s marketing team. By creating an effective description and measurement of innovative performance that is unique and specific to marketing activities, organizations can more accurately distinguish marketing innovation from other organizational innovation, enabling a greater ability to track and analyze the returns from marketing investments due to the more formally defined unique characteristics in comparison with that of other innovative activities

more distant from the marketing function. This is a welcomed metric for all stakeholders in the organization as it ensures that funds allocated for marketing result in increased value for consumers and the organization in general. Return on marketing investment (ROMI) or related calculations are proposed to reach levels beyond that of industry peers or the organization's historical levels as a result of high levels of marketing innovation. Marketing metrics are also consistently a top priority for marketing research activities as indicated by the Marketing Science Institute (MSI). Higher scores in marketing innovation relative to industry peers means promotional and other marketing activities are implemented at higher innovative levels, resulting in improved overall profitability to the organization. This improved profitability should encourage stakeholders to invest additional funds in marketing-related activities, enhancing long-term firm revenue growth, customer loyalty, and employee satisfaction.

### *Limitations*

Like all research, there are limitations that should be discussed to qualify the findings and set the foundation for improvements in future research on this topic. While combining managers and non-managers in the same sample offered us the ability to demonstrate that the majority of the valuable relationships in this research can be detected by non-managers, it prevented the ability to complete a comprehensive and separate exploratory and confirmatory factor analysis with two different sets of managers. Only the all respondents sample was large enough to remain statistically powerful enough to complete the confirmatory factor analysis with separate data. Because it was uncovered that there are statistically significant differences between the non-managers and managers, but it would have been ideal to perform this additional confirmatory check with managers only on the three newly created scales. Further, although a careful and detailed process was followed to compute the necessary sample size, a larger sample size in

general would have enabled the estimation of research variables with fewer items on certain constructs. This could have provided a more parsimonious assessment of marketing innovation and perhaps lay the foundation for a more streamlined marketing innovation scorecard that could be used to rapidly and preliminary assess organizations for the most likely areas of strength and weakness associated with the current level and development progress of marketing innovation. Factors can be estimated with only three items when sample size is 500; however, six items are required with a sample size of 100, and 12 items are needed at a sample size of 50 (Cohen 1988). This is important information to keep in mind for future study.

Second, while survey instrument design received carefully attention to detail, hindsight is always 20/20. It would have been highly valuable to include a secondary means of assessing the activities in the marketing-product, marketing-process, and marketing-relationship spaces using scenarios instead of Likert-type items only. Because their theoretically predicted high correlation was indeed observed, finer measures to discriminate among the spaces would have been of great benefit to more confidently and more fully characterize the contributions and other workings of these individual marketing innovation spaces. Also, objective and longitudinal firm performance measures are a necessary addition in order to present the findings with the greatest level of confidence. While initial data-collection plans included organizational identification and the ability to link the responses to CompuStat and other audited financial measures, this ability was retracted by the third-party service provider just prior to full survey launch and an alternative provider that offered this option at the same cost could not be located. Finally, a third unique method to assess the research conjectures, such as a third-party dataset on innovation statistics and firm performance, would have been a worthy addition to offer even greater credibility to the

important findings uncovered. Each of these limitations is addressed in the next section, Future Research.

### *Future Research*

There are several paths for future research in this area. The most obvious areas have been addressed in the limitations section. Plans are currently in place to collect an additional set of management data with organization ticker symbols included and are projected to further support the research hypotheses herein. The ticker symbol will also provide the ability to assess firm performance longitudinally and account for the anticipated lag in the fostering and developing of marketing innovation and the associated change in firm performance over time. This survey instrument will also address scenario items discussed in the limitations that will shed additional light on the more subtle distinctions sought after among the marketing innovation spaces. In a similar manner, it may be helpful to re-assess the moderating role of market orientation by unpacking its individual components -- intelligence generation, intelligence dissemination, and responsiveness -- to more accurately define the inter-workings of the relationships outlined in the research model. This would provide greater specifics for researchers and managers alike. Next, assessing the longer term impacts of marketing innovation as well as marketing insight and imagination should be detailed. The additional primary dataset just described and a secondary dataset (detailed next) will enable these valuable analyses.

Next, successful empirical testing has been recently published in the *Journal of Marketing* using the Product Launch Analytics (previously ProductScan) database (Sorescu and Spanjol 2008). The strength of the database is in the innovation ratings they provide for companies. The database administrator counts the number of innovative consumer products launched *and* the

number of innovative popular-press report mentions that a given company receives over a given time period. While Sorescu and Spanjol's work focused on the differential effects of incremental and radical innovation, the level of innovation detail provided in the database enables effective operationalization of product innovation, process innovation, and marketing innovation. This can be done by mapping the six innovation categories they use in the following manner: *formulation* – product innovation; *technology* – process innovation; and *merchandising, new market, packaging benefit, and positioning* – marketing innovation. Since the database goes back as far as 1980, and permits the downloading of data over specific data ranges, an effective longitudinal analysis is possible. While the database does not contain a firm performance dependent variable, linking the database with CompuStat or another similar database is possible and would provide these needed dependent variables, provided the sample selected is on public companies. This was the avenue that Sorescu and Spanjol pursued in their work. Complete access to the Product Launch Analytics database and meaningful variable operationalization measures have been shared by a fellow researcher for use in this research provided written acknowledge of contribution is included with publication. This shared data also includes market share data for the industry sampling frame previously mentioned and thus will be able to validate self-reported values by survey respondents. This would be an excellent additional method to further increase the confidence of the research findings herein.

## APPENDIX A – FIGURES

Figure 1 - Scale Items and Specific Examples for Marketing-Product Space Innovation

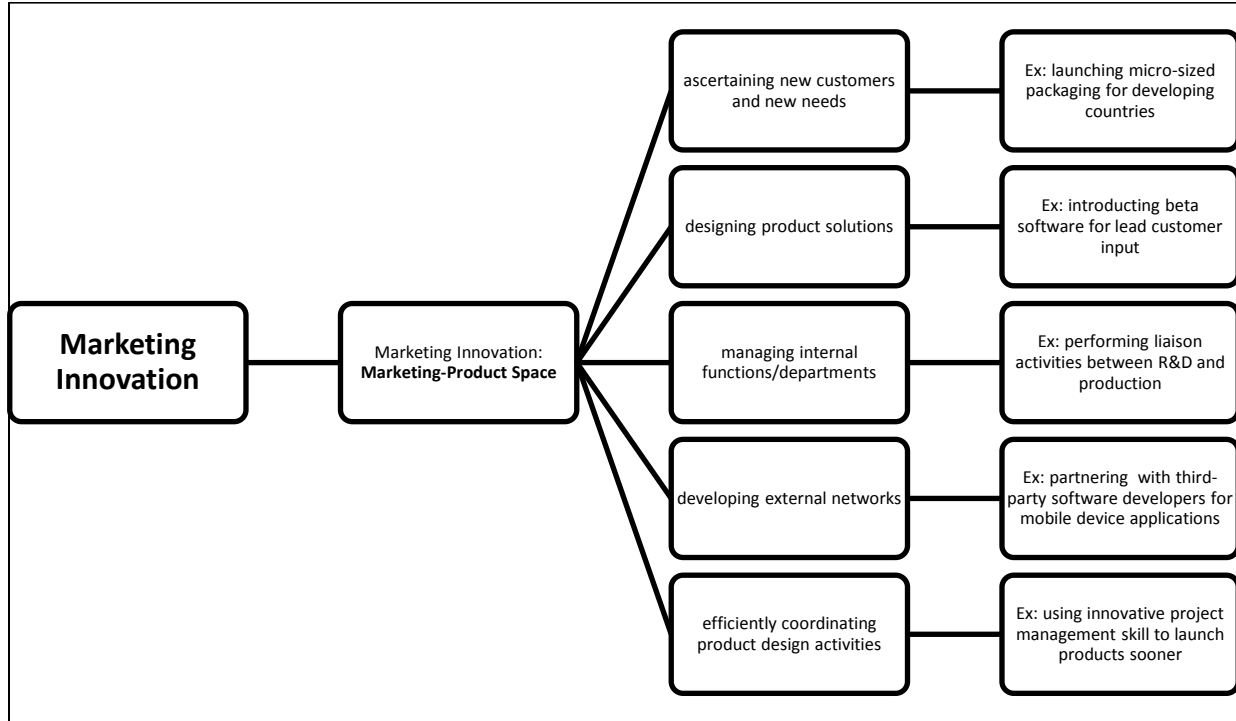


Figure 2 - Scale Items and Specific Examples for Marketing-Process Space Innovation

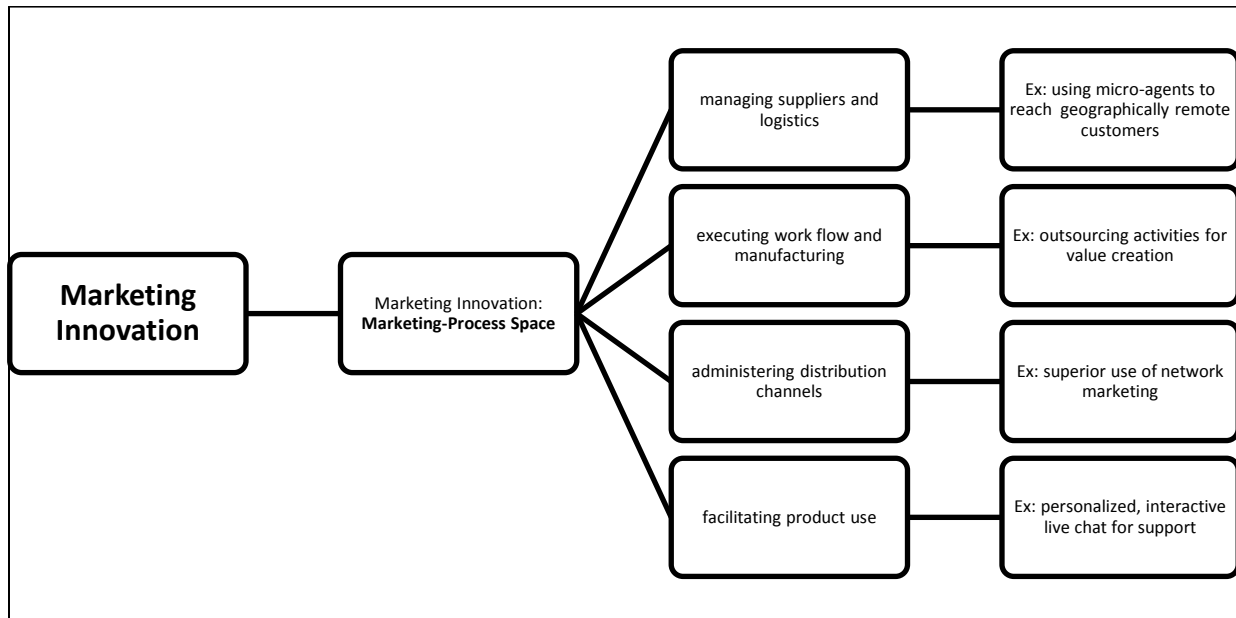


Figure 3 - Scale Items and Specific Examples for Marketing-Relationship Space Innovation



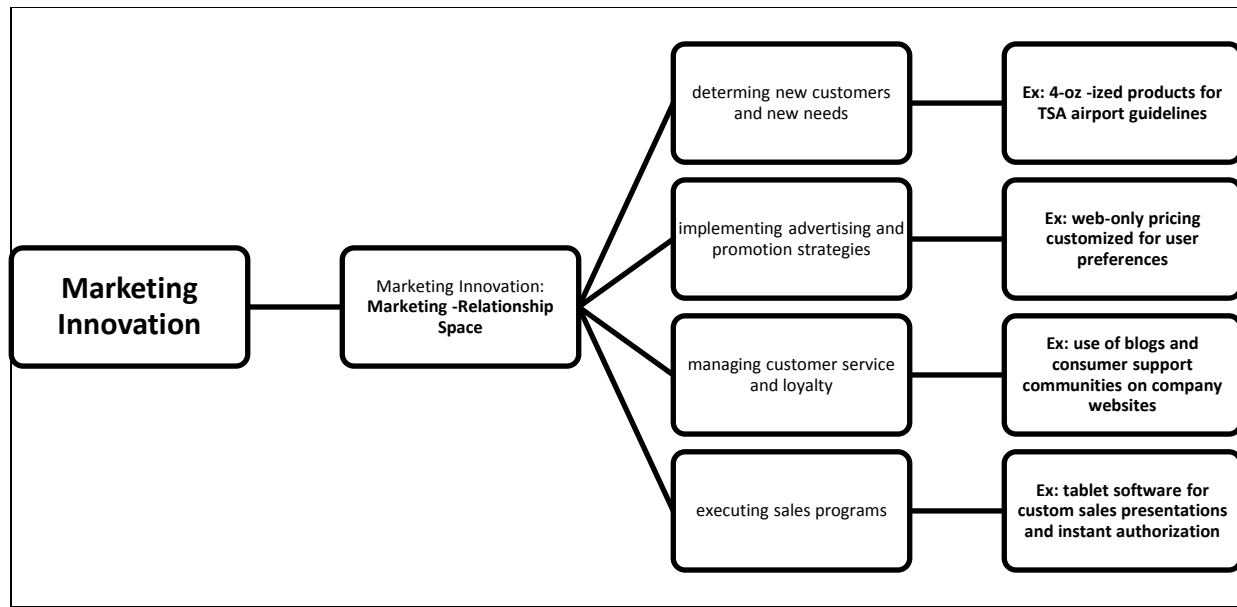


Figure 4 - Research Model – Toward a More Comprehensive View of Marketing Innovation

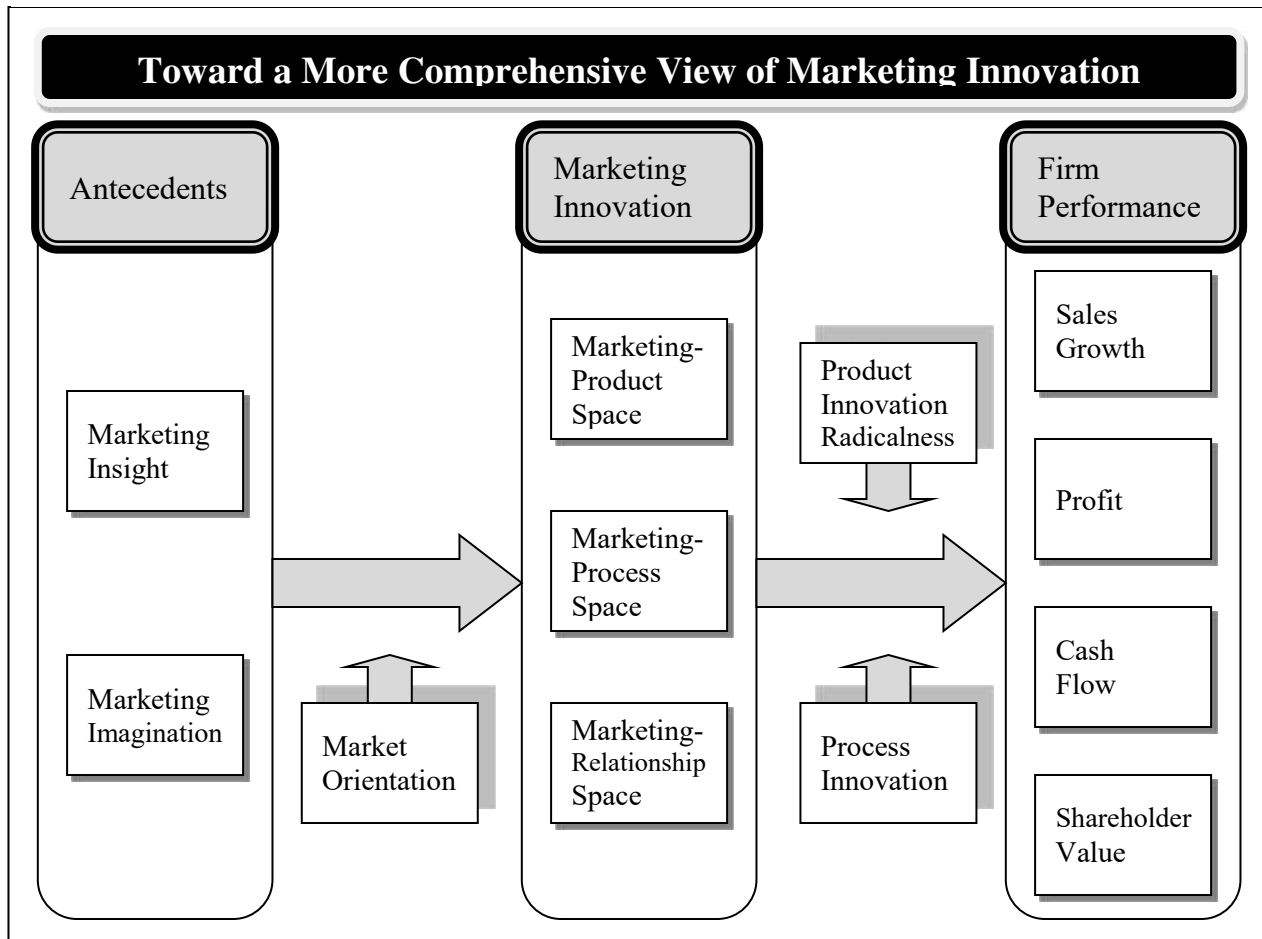
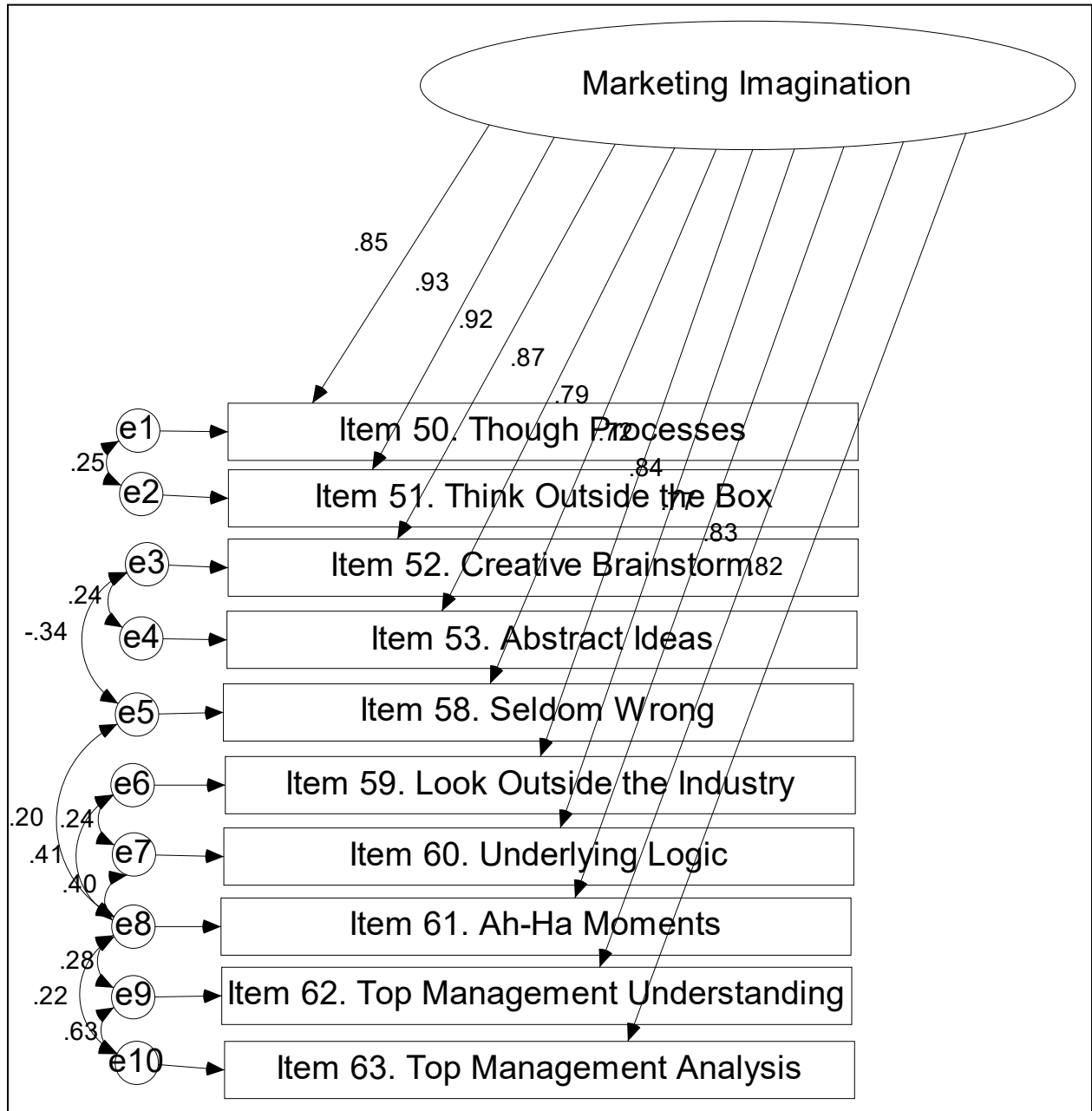
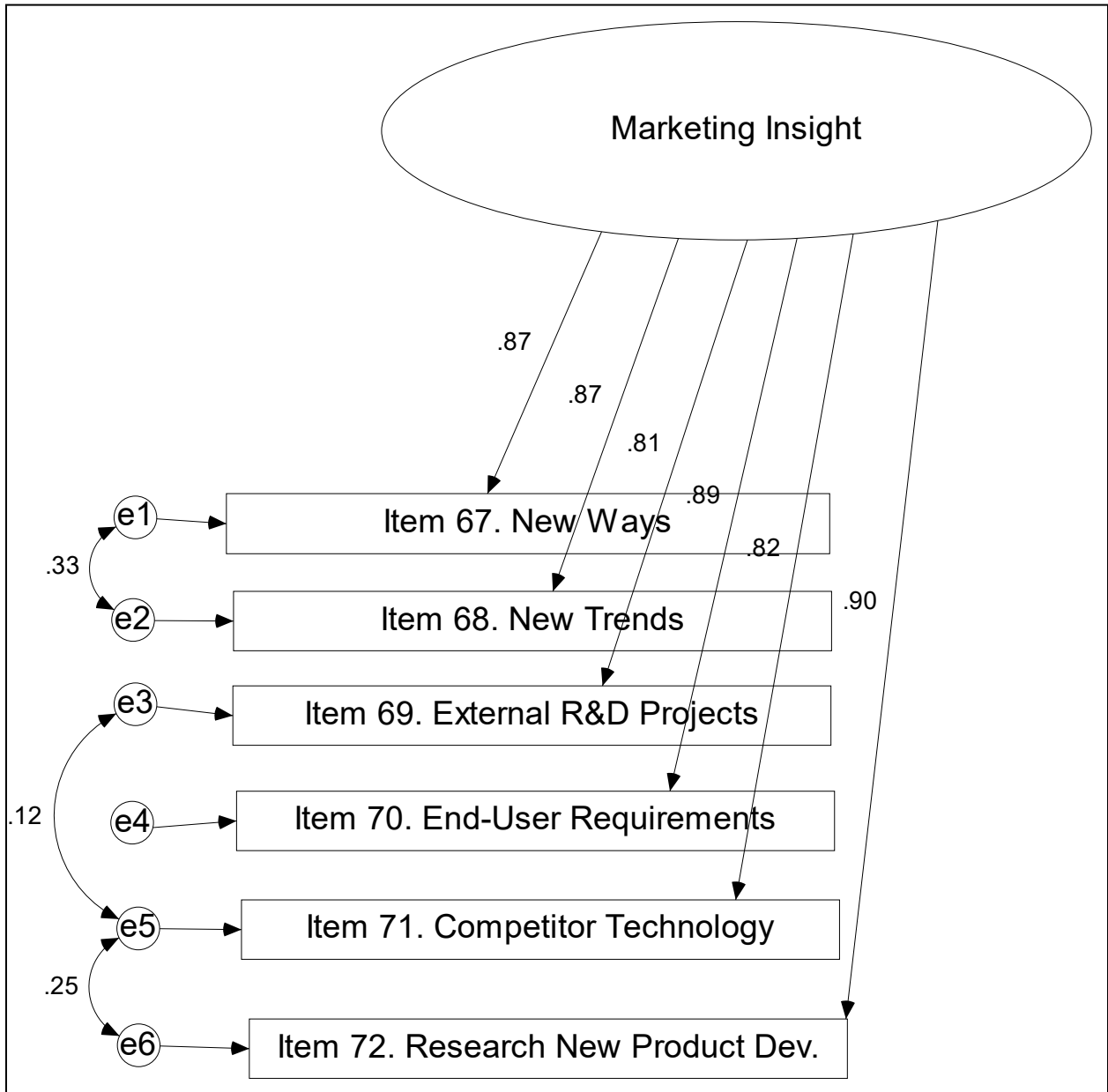


Figure 5- Marketing Imagination Item Modeling<sup>21</sup>



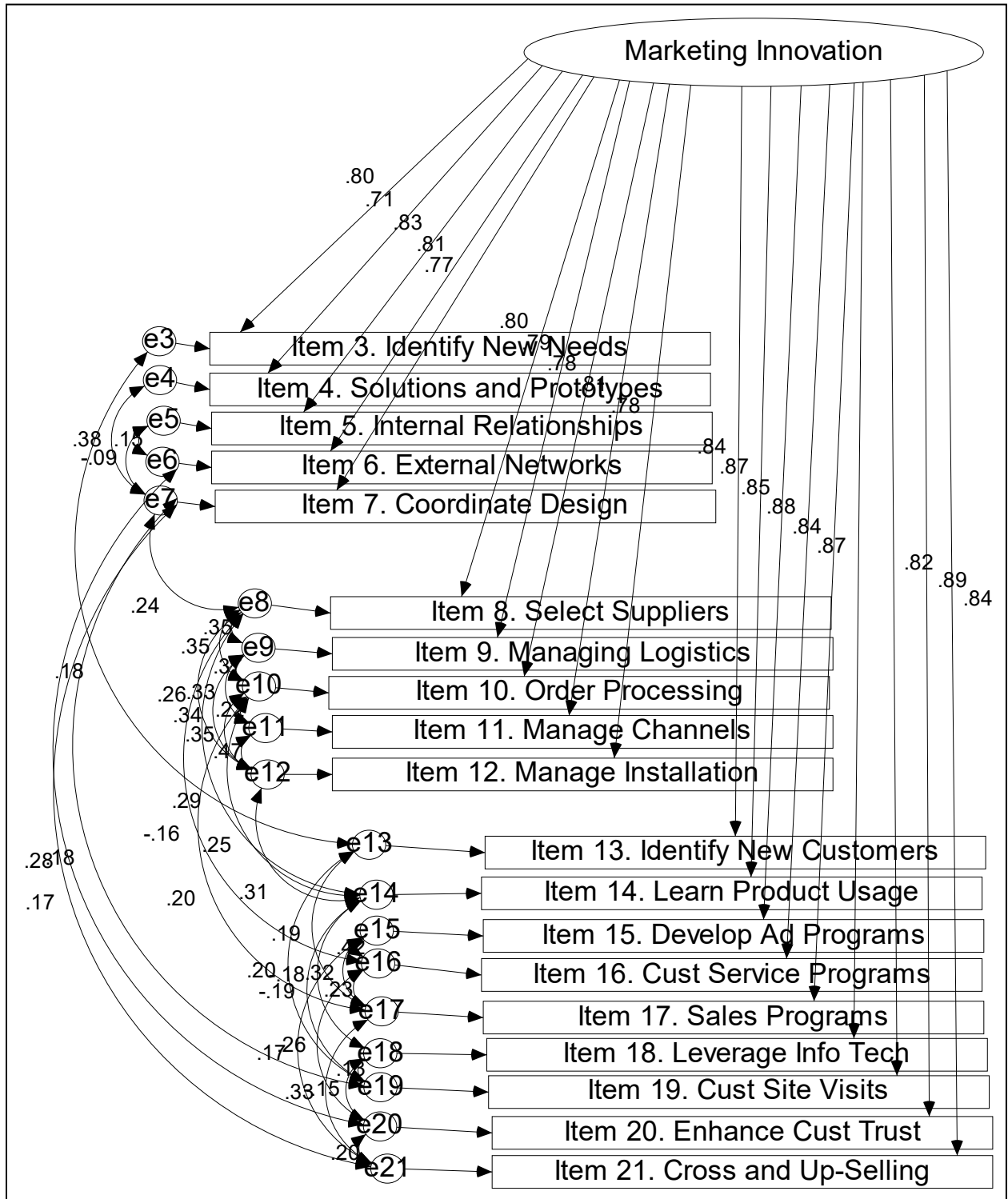
<sup>21</sup> Structural standardized coefficients shown are from the all respondents sample. The management only coefficients for Items 50 through 53 and Items 58 through 63 are very similar: .79, .91, .92, .86, .70, .64, .78, .70, .76, and .77, respectively.

Figure 6 - Marketing Insight Item Modeling<sup>22</sup>



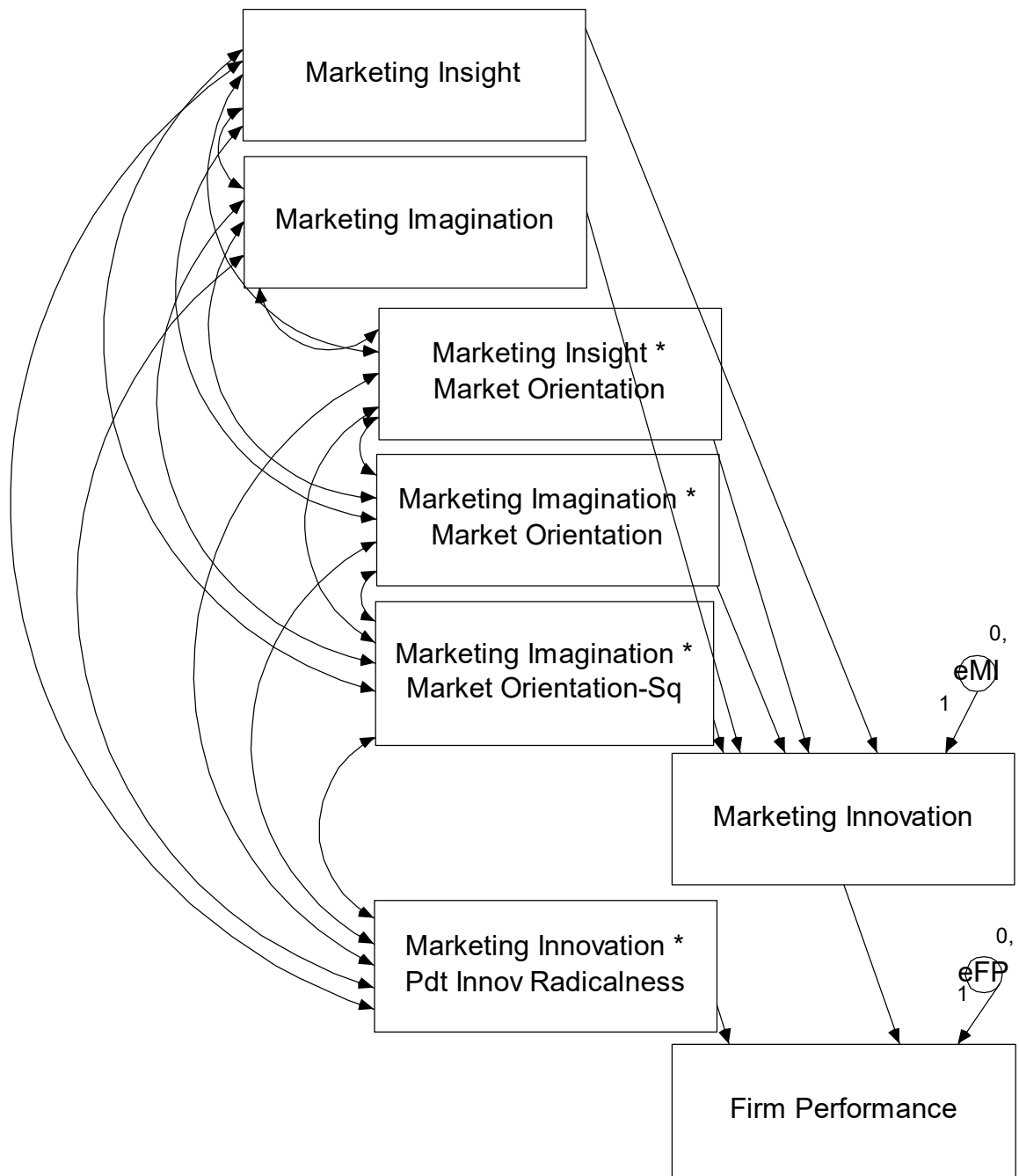
<sup>22</sup> Structural standardized coefficients shown are from the all respondents sample. The management only coefficients for Items 67 through 72 are very similar: .87, .82, .75, .84, .73, and .90, respectively.

Figure 7 - Marketing Innovation Item Modeling<sup>23</sup>



<sup>23</sup> Coefficients standardized shown are from the All Respondents sample. Please reference Table 13 - Marketing Innovation, 19-Item Final Scale for the actual figures for management-only sample structural coefficients, which are highly similar.

Figure 8 - Structural Equation Path Model Results<sup>24</sup>



<sup>24</sup> Structural standardized coefficients are displayed for the management only sample. The all respondents sample coefficients are similar. Fit index details are shown in Table 29 - Summary of Research Model Fit Results Explaining Marketing Innovation and Firm Performance, All Respondents and Table 30 - Summary of Research Model Fit Results Explaining Marketing Innovation and Firm Performance, Management Respondents

Figure 9 - The Effect of Marketing Imagination on Marketing Innovation at Various Levels of Market Orientation (Surface Chart)

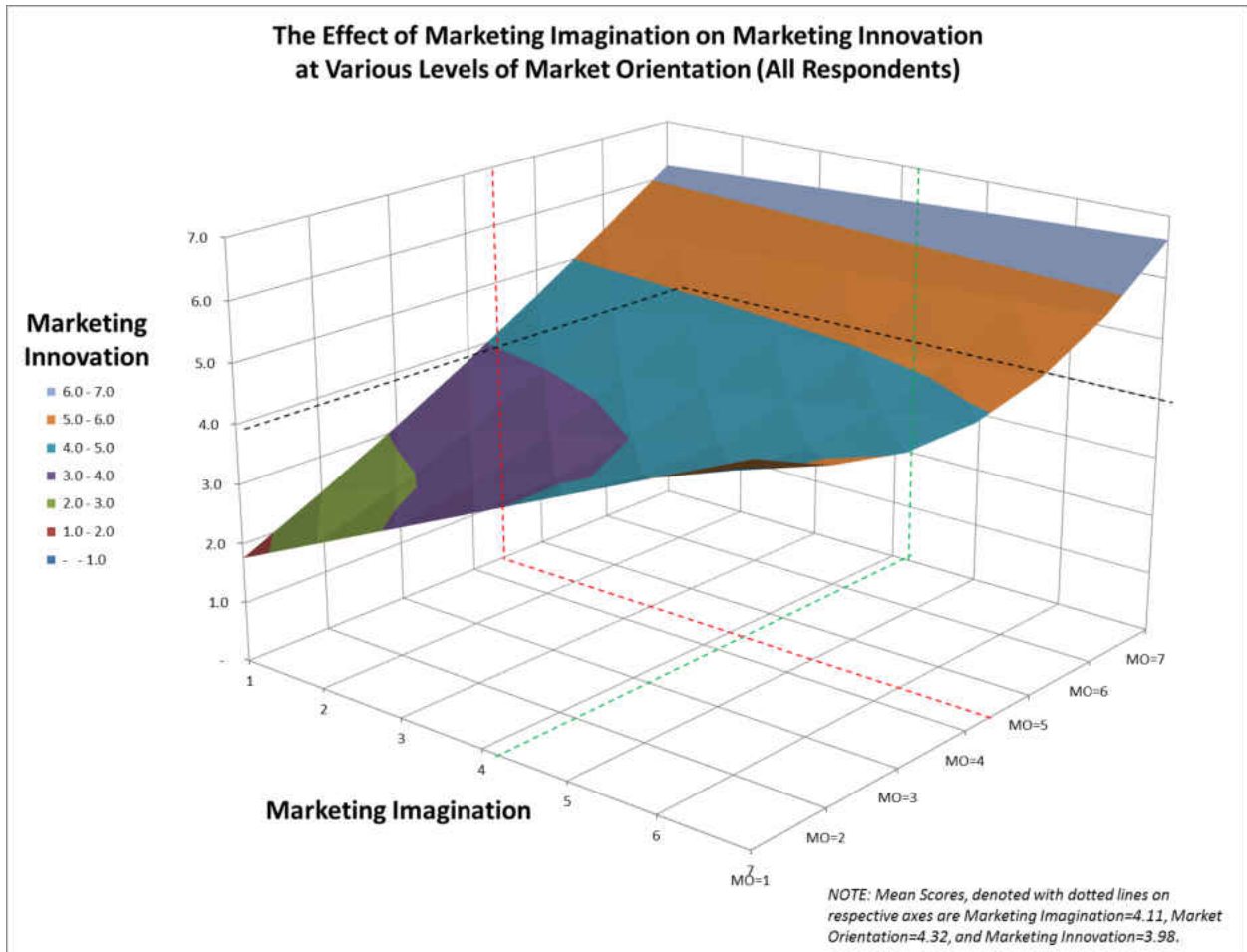


Figure 10 - Impact of Marketing Imagination of Marketing Innovation at Various Levels of Market Orientation (Line Chart)

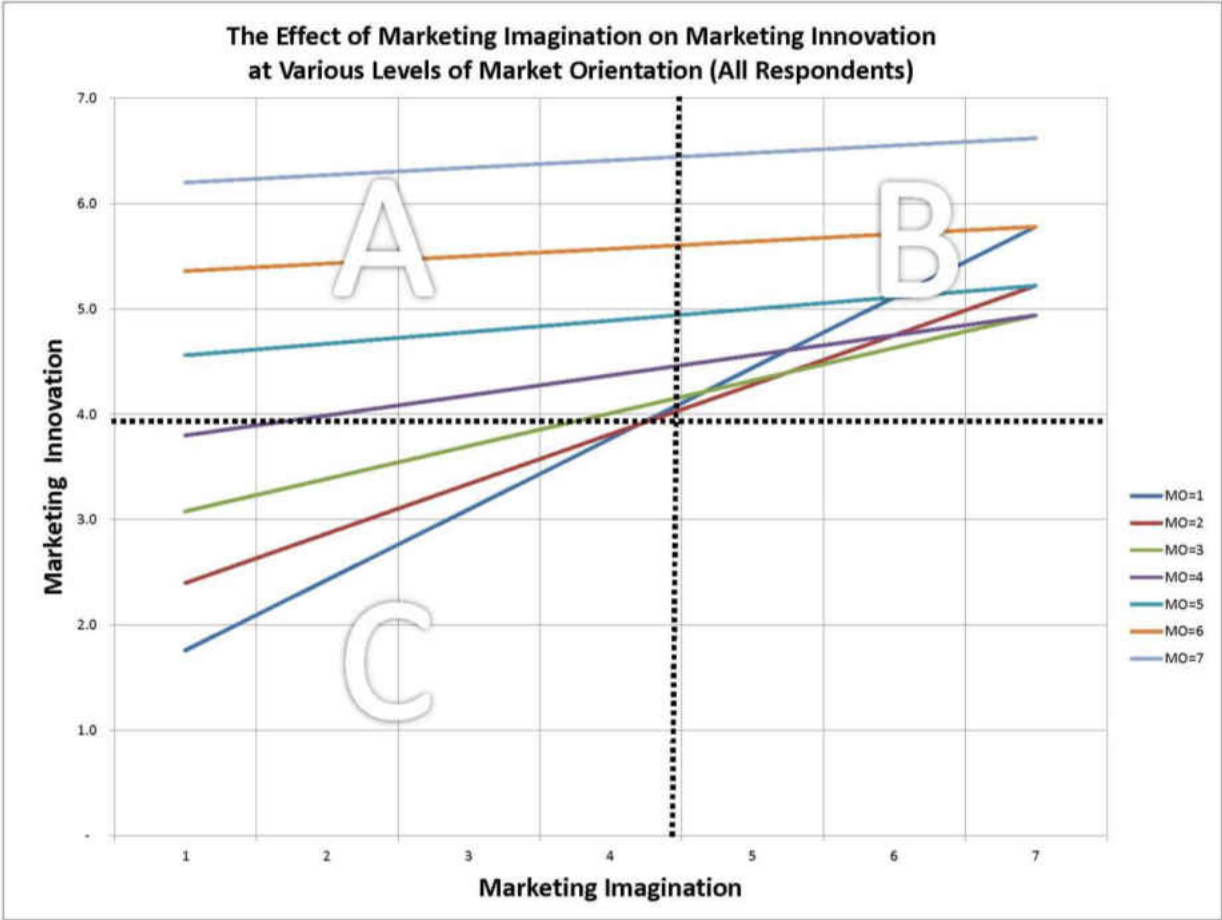




Figure 11 - The Effect of Marketing Innovation on Firm Performance

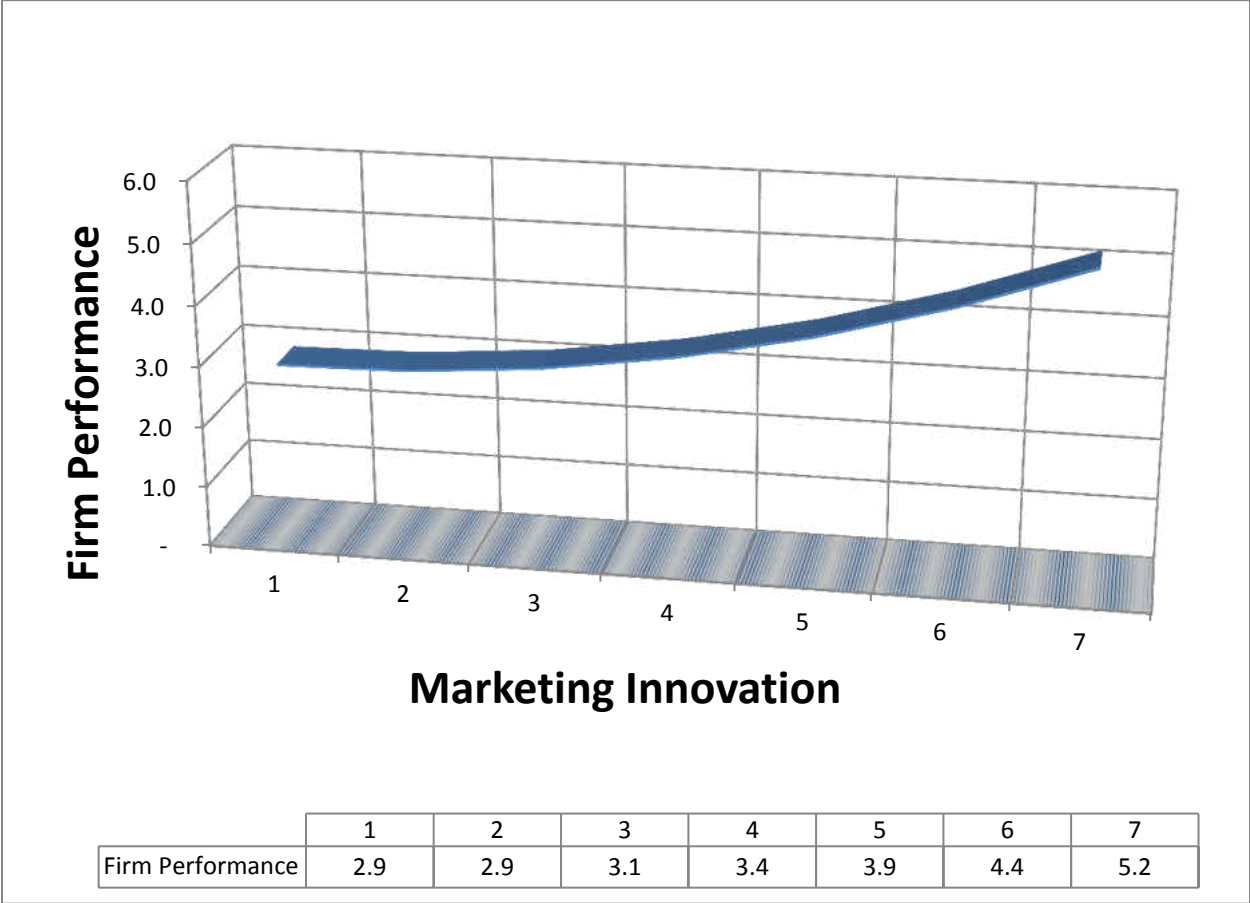


Figure 12 - The Effect of Marketing Innovation on Firm Performance at Various Levels of Radical Product Innovation (Surface Chart)

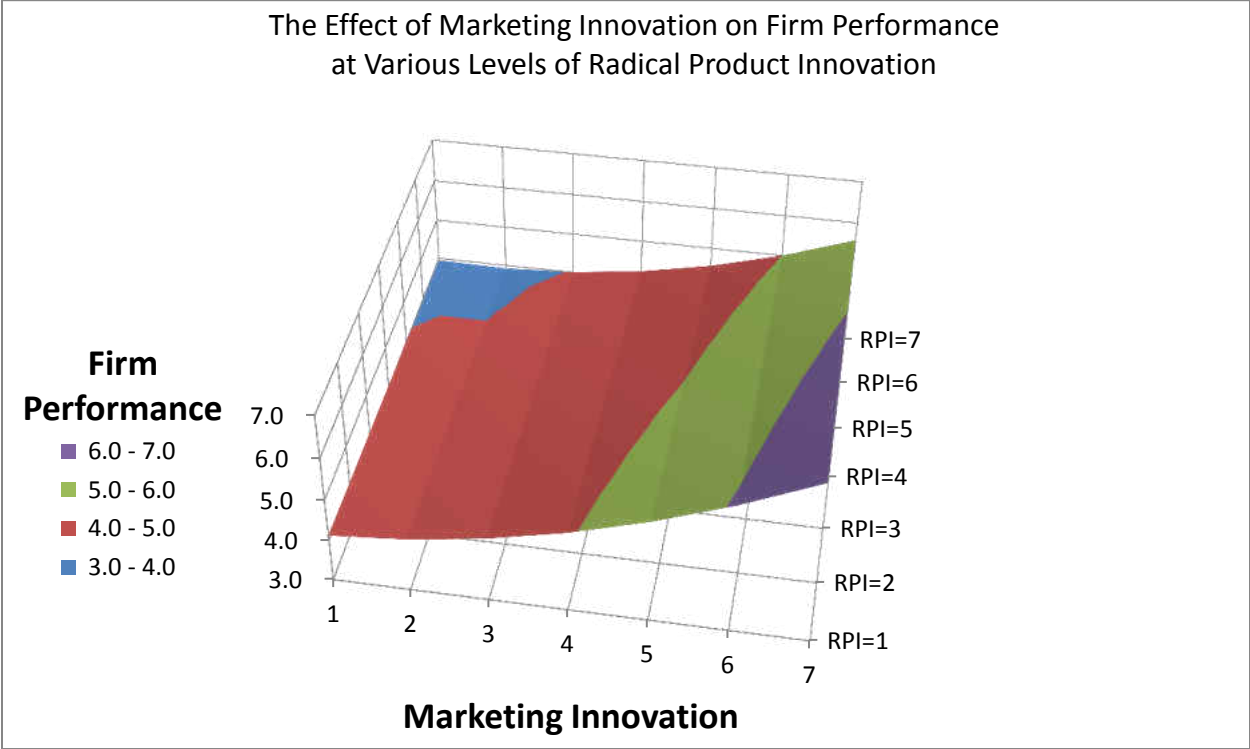
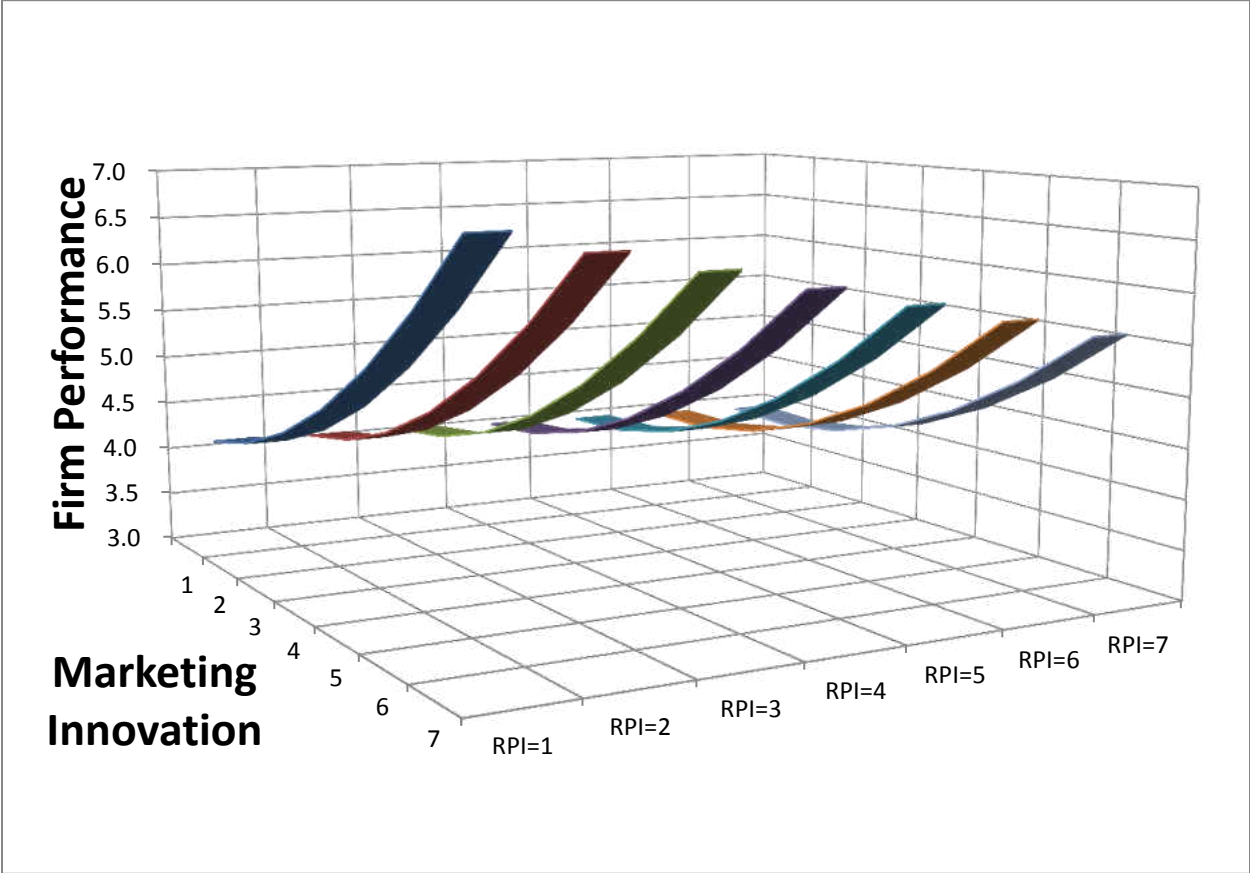


Figure 13 - The Effect of Marketing Innovation on Firm Performance at Various Levels of Radical Product Innovativeness (Line Chart)



## APPENDIX B – TABLES

Table 1 - Marketing Innovation Activities and Scale Items as shown through the Revised Core Business Subprocesses

<b>The Degree of Novelty in the Execution of the Core Business Activities</b>	<b>Revisions and Rationale</b>
<i>Product Development Management (PDM) Process:</i>	
Ascertaining new customer needs.	Revised to: “Ascertaining new needs from <i>existing and potential</i> customers” in order to better capture that new products can draw current and potential customers.
Designing tentative new product solutions.	Revised to: “Designing and developing new product solutions and prototypes” combining 2 & 3 for parsimony.
Developing new solution prototypes. Identifying and managing internal functional/departmental relationships.	Removed after combining with 2. Revised to “Identifying and managing internal functional/departmental relationships <i>for product development purposes</i> ” to qualify activities to product development.
Developing and sustaining networks of linkages with external organizations.	Revised to “Developing and sustaining networks of linkages with external organizations <i>for product development purposes</i> ” to qualify activities to product development.
Coordinating product design activities to speed up business processes.	Unchanged.
<i>Supply Chain Management (SCM) Process:</i>	
Selecting and qualifying desired suppliers.	Unchanged.
Establishing and managing inbound logistics.	Revised to: “Establishing and managing <i>inbound and outbound</i> logistics” to combine inbound and outbound logistics for parsimony.
Designing and managing internal logistics.	Unchanged.
Establishing and managing outbound logistics.	Removed after combining with inbound logistics.
Designing work flow in product/solution assembly.	Removed to exclude production activities.
Running batch manufacturing.	Removed to exclude production activities.
Acquiring, installing, and maintaining process technology.	Removed to exclude production activities.
Order processing, pricing, billing,	Unchanged.

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<b>The Degree of Novelty in the Execution of the Core Business Activities</b>	<b>Revisions and Rationale</b>
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rebates, and terms.

Managing (multiple) channels.

Revised to “Managing multiple distribution channels” to remove ambiguity.

Managing customer services such as installation and maintenance to enable product use.

Revised to “Managing installation and maintenance to enable product use” in order to remove ambiguity from customer services.

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**Customer Relationship Management (CRM)****Process:**

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Identifying potential new customers.	Unchanged.
Determining the needs of existing and potential new customers.	Unchanged.
Learning about product usage and application.	Unchanged.
Developing/executing advertising programs.	Revised to: “Developing/executing advertising and promotion programs” to combine advertising <i>and promotion</i> programs for parsimony.
Developing/executing promotion programs.	Removed after combining with advertising programs.
Developing/executing service programs.	Revised to: “Developing/executing <i>customer</i> service programs” to distinguish it from employee and other service programs.
Developing/executing sales programs.	Unchanged.
Acquiring/leveraging information technology/system for customer contact.	Unchanged.
Managing customer site visit teams.	Unchanged.
Enhancing trust and customer loyalty.	Revised to “Enhancing <i>customer</i> trust and customer loyalty” to distinguish it from employee and other types of trust.
Cross-selling and upselling of product service offerings.	Unchanged.

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Source: (Srivastava, Shervani and Fahey 1999)

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Table 2 – Comparisons of Product, Process, and Marketing Innovation

	Product Innovation	Process Innovation	Marketing Innovation
<b>Type of Product</b>	New	Existing	New and Existing
<b>Focal Audience</b>	Market	Internal	Boundary Spanning (Market & Internal)
<b>Primary Scope of Innovation</b>	Exploration	Exploitation	Exploration & Exploitation
<b>Primary Degree of Innovation</b>	Radical	Incremental	Radical & Incremental
<b>Temporal Focus</b>	Future	Current	Current & Future
<b>Antecedents</b>	Research & Development; Engineering	Time and Motion Studies, Quality Control	Marketing Insight, Marketing Imagination
<b>Components</b>	Idea Generation, Organization Form, Product Champions, Commitment	Advanced Technology – Hardware & Software, Process Control	Distant Search, Opportunity Recognition, Flexible Strategic Execution, Examine & Revise Strategy
<b>Primary Consequence at Business-Unit Level</b>	Survival	Market-Based Performance	Upper Deciles Firm Performance through Cash Flow and Customer Growth
<b>Primary Consequence on Market Share</b>	Customer Acquisition through new product offerings	Customer Retention through lower prices, improved quality, or reduced delivery time	Customer Acquisition and Retention through improved consumer perceptions of value
<b>Primary Consequence on Profitability</b>	Increased Revenue	Cost Reduction	Increased Return on Marketing Investment through increased customer base, frequency of purchase, or size of average order
<b>Primary Consequence on</b>	Ensures revenue stream for changing	Provides internal savings for R&D	Expands and further develops target



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**Growth**

market

investment

markets

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***Sources: (Hauser, Tellis and Griffin 2005, Hurley and Hult 1998, Levitt 1960, Levitt 1962).***

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Table 3 - Initial Scale Information for Research Model Variables

Construct	Survey Items
<p>Marketing Imagination (Andrews and Smith 1996, Beck, et al. 2004)</p>	<p>(Survey Item #48) In my company, marketing plans have a specific format that is used by everyone. (1) Strongly Disagree to (7) Strongly Agree (dropped in pre-test) We have a precise timetable for a completing marketing plan. (dropped in pre-test) I need more hours in the day to get my work done. (dropped in pre-test) I feel like I'm always 'fighting fires.' (49) I never have enough time to think ahead. (50) We place special importance on innovative thought processes within our organization. (51) We take pride in a collective ability to think "out of the box." (52) We often indulge in creative brainstorming sessions. (53) We encourage abstract ideas from our employees that might not have immediate relevance to our business today. (56) Our organization is often the "trend predictor" in our industry. (57) We often come up with clever and effective solutions to unusual problems. (58) Our organization is seldom wrong with solutions to complex problems. (59) We often look outside our industry for solutions to complex problems. (60) We study each problem until we understand the underlying logic. (61) Our top management meetings often lead to "ah ha" moments that result in breakthrough understanding of the problem or situation at hand. (62) Our top management believes in having a full understanding of all our problems. (63) Our top management spends time in detailed analysis of all our problems.</p> <p>Compared to what your competitors were doing last year, your organization's most recent marketing program is ( Survey Item #94) (1) Dull to (7) Exciting (95) (1) Fresh to (7) Routine (96) (1) Conventional to (7) Unconventional (97) (1) Usual to (7) Unusual (98) (1) Commonplace to (7) Original</p>

	<p>The most recent marketing program for your organization or one of its products was</p> <p>(99) (1) Trendsetting to (7) Warmed Over (r)</p> <p>(100) (1) Average to (7) Revolutionary</p> <p>(101) (1) Nothing Special to (7) An Industry Model</p>
<p>Marketing Insight, adapted from (Beck, et al. 2004, Bowen 1990, Crossan, Lane and White 1999, Roberts and Eisenhardt 2003, Ganesan, Malter and Rindfleisch 2005, Rindfleisch and Moorman 2001)</p>	<p>(dropped in pre-test) My organization's interpretation of market experiences is definitely right.</p> <p>(54) Other organizations can understand unusual market occurrences better than my organization. (r)</p> <p>(dropped in pre-test) My organization has jumped to conclusions too quickly. (r)</p> <p>(dropped in pre-test) Some of the ideas my organization was certain of turned out to be false. (r)</p> <p>(55) My organization knows better than other organizations what is really happening in the market.</p> <p>(dropped in pre-test) I can trust my organization's judgment about market conditions at all times.</p> <p>(64) We have a top management team with several years of progressive experience in our industry.</p> <p>(65) We have a top management team consisting of individuals with senior-level experience in other related industries.</p> <p>(66) We have a top management team consisting of individuals with senior-level experience in other unrelated industries</p> <p>Please rate the amount of new product-related information that your organization has acquired over the past 6 months in the following areas:</p> <p>(Survey Item #67) Information about new ways to approach product and process development.</p> <p>(68) Information about new trends in your industry.</p> <p>(69) Information about R&amp;D projects conducted outside your firm.</p> <p>(70) Information about end-user requirements and trends in customer expectations.</p> <p>(71) Information about competitors' technology.</p> <p>(72) Research findings related to the development of new products.</p>
<p>Market Orientation<sup>25</sup> (Kohli, Jaworski and Kumar 1993, Jaworski and Kohli 1993)</p>	<p>In this business unit, we meet with customers at least once a year to find out what products or services they will need in the future.</p> <p>In this business unit, we do a lot of in-house market research.</p> <p>We are slow to detect changes in our customers' product preferences. (r)</p>

<sup>25</sup> This market orientation scale is comprised of items in three categories: Intelligence generation items are 1-6; intelligence dissemination items are 7-11; responsiveness items are 12-20. .

	<p>We poll end users at least once a year to assess the quality of our products and services.</p> <p>We are slow to detect fundamental shifts in our industry (e.g., competition, technology, regulation). (r)</p> <p>We periodically review the likely effect of changes in our business environment (e.g., regulation) on customers.</p> <p>We have interdepartmental meetings at least once a quarter to discuss market trends and developments.</p> <p>Marketing personnel in our business unit spend time discussing customers' future needs with other functional departments.</p> <p>When something important happens to a major customer of market, the whole business unit knows about it within a short period.</p> <p>Data on customer satisfaction are disseminated at all levels in this business unit on a regular basis.</p> <p>When one department finds out something important about competitors, it is slow to alert other departments. (r)</p> <p>It takes us forever to decide how to respond to our competitor's price changes. (r)</p> <p>For one reason or another we tend to ignore changes in our customer's product or service needs. (r)</p> <p>We periodically review our product development efforts to ensure that they are in line with what customers want.</p> <p>Several departments get together periodically to plan a response to changes taking place in our business environment.</p> <p>If a major competitor were to launch an intensive campaign targeted at our customers, we would implement a response immediately.</p> <p>The activities of the different departments in this business unit are well coordinated.</p> <p>Customer complaints fall on deaf ears in this business unit. (r)</p> <p>Even if we came up with a great marketing plan, we probably would not be able to implement it in a timely fashion. (r)</p> <p>When we find that customers would like us to modify a product of service, the departments involved make concerted efforts to do so.</p>
<p>Degree of Radicalness in Product Innovation (Chandy and Tellis 1988)</p>	<p>Your organization rarely introduces products that are radically different from existing products (radical means really new as compared to incrementally new products). (r)</p> <p>Percentage of total sales from radical product innovations introduced in the last three years. [less than 1%; 1-5%; 5-10%; 10-20%; 20-30%; more than 30%]</p> <p>Please indicate the number of radical product innovations introduced by your organization in the last three years.</p>
<p>Level of Process</p>	<p>Relative to your primary competition, the level of change in your</p>

<p>Innovation (Heunks 1998)</p>	<p>organization's production process is (1) very low to (5) very high.</p>
<p>Firm Performance (Kotabe 1990, Matsuno, Mentzer and Rentz 2000)</p>	<p>Relative to your primary competition...  Your organization's sales growth is (1) very low to (5) very high.  Your organization's pre-tax profit is (1) very low to (5) very high.  Your organization's cash flow is (1) very low to (5) very high.  Your organization's shareholder value is (1) very low to (5) very high.</p>

Table 4 - Sample Size Calculation and Other Survey Properties

Survey Contents	Analysis			
Construct	Items	% of Items	Lo Score	Hi Score
<i>Main Constructs:</i>				
Marketing Innovation	25	20%	25	175
Marketing Insight	28	22%	28	196
Market Orientation	20	16%	20	140
Marketing Imagination	14	11%	14	98
Radical Product Innovation	3	2%	3	21
Industry Maturity / Details	5	4%	5	35
Firm Performance	6	5%	6	42
<i>Controls:</i>				
Process Innovation	1	1%	1	7
Firm Characteristics	4	3%	4	28
Respondent Characteristics	6	5%	6	42
Competitive Intensity	6	5%	6	42
Market Turbulence	5	4%	5	35
Technological Turbulence	<u>4</u>	<u>3%</u>	<u>4</u>	<u>28</u>
Total	127	100%	127	889
Score Range	6			762
Estimated population variance ( $\sigma^2$ )	1			16,129
Population size (N)	30,000			
Margin of error or bound (B)	15%		76	
Confidence factor (D)	0.00375			
Sample size needed (n)	245			
<b>Source: (Dillman, Smyth and Christian 2009)</b>				

Table 5 – Assessment of Response Bias, Management versus Non-Management

Variable	Non-Management Mean (SD) (N=60)	Management Mean (SD) (N=187)	t-statistic <sup>26</sup> (p-value, two-tailed test)
Marketing Imagination	3.48 (1.72)	4.30 (1.26)	3.41 (0.001)
Marketing Insight	3.63 (1.78)	4.43 (1.31)	3.23 (0.002)
Marketing Innovation	3.30 (1.80)	4.20 (1.40)	3.54 (0.001)
Firm Performance	4.07 (1.64)	4.72 (1.11)	2.89 (0.005)

Table 6 – Classification of Respondent's Organization

Classification	Frequency	Percent
<i>All Respondents:</i>		
Agriculture, Forestry	10	4.0
Mining	1	0.4
Utilities	15	6.0
Construction	16	6.5
Manufacturing	64	25.8
Wholesale Trade	27	10.9
Retail Trade	<u>101</u>	<u>40.7</u>
Sub-Total	234	94.4
Missing	<u>14</u>	<u>5.6</u>
Grand-Total	248	100.0
<i>Management Respondents:</i>		
Agriculture, Forestry	8	4.5
Mining	1	0.5
Utilities	12	6.4
Construction	7	3.7
Manufacturing	52	27.8
Wholesale Trade	18	9.6
Retail Trade	<u>79</u>	<u>42.2</u>
Sub-Total	177	94.7
Missing	<u>10</u>	<u>5.3</u>
Grand-Total	187	100.0

<sup>26</sup> Values reported do not assume equal variances. Levene's Test for Equality of Variances was performed on each variable and the F-values were greater than 7.14 with all significances levels below 0.05. This indicates the variances between the two groups had unequal variance.

Table 7 – Size of Respondent’s Organization

Number of Employees	Frequency	Percent
<i>All Respondents:</i>		
1-4	25	10.1
5-9	9	3.6
10-19	12	4.8
20-49	17	6.9
50-99	28	11.3
100-249	26	10.5
250-499	22	8.9
500-999	20	8.1
1,000 or more	<u>89</u>	<u>35.9</u>
Total	248	100.0
<i>Management Respondents:</i>		
1-4	10	5.3
5-9	9	4.8
10-19	11	5.9
20-49	12	6.4
50-99	21	11.2
100-249	20	10.7
250-499	18	9.6
500-999	16	8.6
1,000 or more	<u>70</u>	<u>37.4</u>
Total	187	100.0

Table 8 - Assessment of Non-Response Bias, Early versus Late Respondents

Variable	Early Respondents Mean (SD)	Late Respondents Mean (SD)	t-statistic <sup>27</sup> (p-value, two-tailed test)
<i>All Respondents:</i>			
	(n=183)	(n=65)	
Marketing Imagination	4.08 (1.41)	4.18 (1.48)	-0.47 (0.64)
Marketing Insight	4.17 (1.52)	4.41 (1.35)	-1.10 (0.27)
Marketing Innovation	3.93 (1.56)	4.14 (1.52)	-0.94 (0.35)
Firm Performance	4.51 (1.29)	4.71 (1.26)	-1.05 (0.30)
<i>Management Respondents:</i>			
	(n=138)	(n=49)	
Marketing Imagination	4.24 (1.28)	4.53 (1.43)	-1.28 (0.20)
Marketing Insight	4.35 (1.35)	4.66 (1.22)	-1.42 (0.16)

<sup>27</sup> Values reported assume equal variances. Levene’s Test for Equality of Variances was performed on each variable and the F-values were less than 0.81 with all significances levels above 0.05 as required for this assumption.



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Marketing Innovation	4.18 (1.37)	4.27 (1.49)	-0.41 (0.68)
Firm Performance	4.68 (1.11)	4.86 (1.12)	-0.98 (0.33)

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Table 9 – Results from the Harman’s Single Factor Test for Common Method Bias<sup>28</sup>

Factor	% of Variance		Cumulative %	
	Unrotated	Unrotated	Rotated	Unrotated
1	40.928	40.928	38.875	38.875
2	9.670	50.598	8.830	47.705
3	6.715	57.313	7.701	55.406
4	5.521	62.835	6.414	61.820
5	5.173	68.008	6.188	68.008
6	3.939	71.946		
7	3.826	75.772		
8	3.666	79.437		
9	3.205	82.643		
10	2.611	85.254		
11	2.310	87.564		
12	2.236	89.800		
13	1.934	91.734		
14	1.532	93.266		
15	1.440	94.705		
16	1.345	96.051		
17	1.168	97.219		
18	0.948	98.167		
19	0.847	99.014		
20	0.508	99.522		

<sup>28</sup> Performed using Principal Component Analysis with unrotated and Varimax-rotated solutions as recommended by Podsakoff, et al. (2003). This test was also performed with management only respondents and the results were similar.

Table 10 – Respondent’s Years of Full-Time Experience

Years of Experience	Frequency	Percent
<i>All Respondents:</i>		
0-5	40	16.3
6-10	31	12.6
11-15	30	12.2
16-20	28	11.4
21-25	26	10.6
26-30	26	10.6
31-35	29	11.8
36-40	20	8.1
41 or more	<u>16</u>	<u>6.5</u>
Total	248	100.0
<i>Management Respondents:</i>		
0-5	20	10.7
6-10	23	12.3
11-15	28	15.0
16-20	23	12.3
21-25	21	11.2
26-30	21	11.2
31-35	20	10.7
36-40	17	9.1
41 or more	<u>14</u>	<u>7.5</u>
Total	187	100.0

Table 11 - Marketing Insight, 6-Item Final Scale Properties

Items	Mean <sup>29</sup>	Standard Deviation	Loading
Please rate the amount of new product-related information that your organization has acquired over the past 6 months in the following areas:			
(Survey Item #67) Information about new ways to approach product and process development.	4.25 (4.45)	1.66 (1.53)	.87 (.87)
(68) Information about new trends in your industry.	4.53 (4.79)	1.63 (1.46)	.87 (.82)
(69) Information about R&D projects conducted outside your firm.	3.87 (3.99)	1.61 (1.52)	.81 (.75)
(70) Information about end-user requirements and trends in customer expectations.	4.33 (4.51)	1.68 (1.55)	.89 (.84)
(71) Information about competitors' technology.	4.16 (4.33)	1.68 (1.59)	.82 (.73)
(72) Research findings related to the development of new products.	4.31 (4.57)	1.70 (1.54)	.90 (.90)

Summary, All Respondents:

Coefficient alpha = 0.95

Average variance extracted = 75.5%

Model Fit Statistics via SEM:

$\chi^2(7, n=248)=15.3, p>.01, CMIN/df=2.19$

NFI=.989, RFI=.977, CFI=.994

RMR=.034, RMSEA=.069

Summary, Management Respondents Only:

Coefficient alpha = 0.93

Average variance extracted = 69.2%

Model Fit Statistics via SEM:

$\chi^2(6, n=187)=12.1, p>.05, CMIN/df=2.032$

NFI=.986, RFI=.966, CFI=.993

RMR=.038, RMSEA=.074

Sources: (Beck, et al. 2004, Bowen 1990, Crossan, Lane and White 1999, Roberts and Eisenhardt 2003, Ganesan, Malter and Rindfleisch 2005, Rindfleisch and Moorman 2001)

Table 12 - Marketing Imagination, 10-Item Final Scale Properties

Items	Mean	Standard Deviation	Loading
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<sup>29</sup> All Respondents, Management Only Respondents shown in parenthesis.

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(Survey Item #50) We place special importance on innovative thought processes within our organization.	4.28 (4.48)	1.67 (1.56)	.85 (.79)
(51) We take pride in a collective ability to think "out of the box."	4.40 (4.63)	1.73 (1.61)	.93 (.91)
(52) We often indulge in creative brainstorming sessions.	4.16 (4.36)	1.86 (1.78)	.92 (.92)
(53) We encourage abstract ideas from our employees that might not have immediate relevance to our business today.	4.06 (4.31)	1.81 (1.70)	.87 (.86)
(58) Our organization is seldom wrong with solutions to complex problems.	3.87 (4.05)	1.56 (1.41)	.79 (.70)
(59) We often look outside our industry for solutions to complex problems.	3.79 (4.00)	1.69 (1.60)	.72 (.64)
(60) We study each problem until we understand the underlying logic.	4.13 (4.36)	1.68 (1.52)	.84 (.78)
(61) Our top management meetings often lead to "ah ha" moments that result in breakthrough understanding of the problem or situation at hand.	3.91 (4.07)	1.67 (1.51)	.77 (.70)
(62) Our top management believes in having a full understanding of all our problems.	4.32 (4.53)	1.81 (1.67)	.83 (.76)
(63) Our top management spends time in detailed analysis of all our problems.	4.23 (4.46)	1.82 (1.70)	.82 (.77)

Summary, All Respondents:

Coefficient alpha = 0.96  
Average variance extracted = 71.7%  
Model Fit Statistics via SEM:  
 $\chi^2(25, N=248)=49.3, p>.01, CMIN/df=1.970$   
NFI=.982, RFI=.967, CFI=.991  
RMR=.060, RMSEA=.063

Summary, Management Respondents:

Coefficient alpha = 0.95  
Average variance extracted = 64.5%  
Model Fit Statistics via SEM:  
 $\chi^2(25, N=187)=44.5, p>.01, CMIN/df =1.781$   
NFI=.974, RFI=.953, CFI=.988  
RMR=.068, RMSEA=.065

Sources: (Andrews and Smith 1996, Beck, et al. 2004)

All Respondents, Management Only Respondents shown in parenthesis.

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Table 13 - Marketing Innovation, 19-Item Final Scale Properties

<b>Items</b>	<b>Mean</b>	<b>Standard Deviation</b>	<b>Loading</b>
In these activities, how NOVEL (how striking, original, or unusual) is your organization?			
Product-Space:			
(Survey Item #3) Identifying new needs from existing and potential customers.	4.08 (4.31)	1.89 (1.73)	.80 (.76)
(4) Designing and developing new product solutions and prototypes.	3.84 (4.04)	1.97 (1.85)	.71 (.65)
(5) Identifying and managing internal functional relationships.	4.02 (4.22)	1.77 (1.68)	.83 (.80)
(6) Developing and sustaining networks of linkages with external organizations.	3.98 (4.13)	1.75 (1.63)	.81 (.78)
(7) Coordinating product design activities to speed up business processes.	3.74 (3.96)	1.80 (1.67)	.77 (.70)
Process-Space:			
(8) Selecting and qualifying desired suppliers.	4.00 (4.17)	1.82 (1.77)	.80 (.78)
(9) Establishing and managing inbound and outbound logistics.	3.94 (4.12)	1.81 (1.69)	.79 (.80)
(10) Order processing, pricing, billing, rebates, and terms.	3.91 (4.09)	1.87 (1.76)	.78 (.74)
(11) Managing multiple distribution channels.	3.82 (4.03)	1.85 (1.74)	.81 (.78)
(12) Managing installation and maintenance to enable product use.	3.73 (3.93)	1.84 (1.73)	.78 (.74)
Relationship-Space:			
(13) Identifying potential new customers.	4.35 (4.61)	1.88 (1.70)	.84 (.79)
(14) Learning about product usage and application.	4.07 (4.29)	1.85 (1.75)	.87 (.85)
(15) Developing and executing advertising and promotion programs.	3.92 (4.20)	1.86 (1.73)	.85 (.83)
(16) Developing and executing customer service programs.	4.16 (4.42)	1.88 (1.73)	.88 (.86)
(17) Developing and executing sales programs.	3.95 (4.22)	1.88 (1.76)	.84 (.82)
(18) Acquiring and leveraging information technology for customer contact.	4.03 (4.26)	1.81 (1.65)	.87 (.84)
(19) Managing customer site visit teams.	3.90 (4.14)	1.82 (1.68)	.82 (.78)
(20) Enhancing customer trust and	4.32	1.87	.89

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customer loyalty.	(4.54)	(1.71)	(.88)
(21) Cross-selling and up-selling of product service offerings.	3.95	1.94	.84
	(4.21)	(1.83)	(.81)

Summary, All Respondents:

Coefficient alpha = 0.98

Average variance extracted = 68.7%

Model Fit Statistics via SEM:

$\chi^2(117, N=248)=255, p<.01, CMIN/df=2.18$

NFI=.953, RFI=.931, CFI=.974

RMSEA=.069

Summary, Management Respondents:

Coefficient alpha = 0.97

Average variance extracted = 64.1%

Model Fit Statistics via SEM:

$\chi^2(117, N=187)=201, p<.01, CMIN/df=1.72$

NFI=.945, RFI=.919, CFI=.976

RMSEA=.062

Source: (Srivastava, Shervani and Fahey 1999)

All Respondents, Management Only Respondents shown in parenthesis.

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Table 14 - Marketing Orientation Published Scale Properties<sup>32</sup>

<b>Items</b>	<b>Mean</b>	<b>Standard Deviation</b>	<b>Loading</b>
<i>Intelligence Generation:</i>			
(Survey Item #28) In this business unit, we meet with customers at least once a year to find out what products or services they will need in the future.	4.49 (4.73)	2.02 (1.90)	.78 (.73)
(29) In this business unit, we do a lot of in-house market research.	4.15 (4.38)	1.91 (1.82)	.84 (.81)
(31) We poll end users at least once a year to assess the quality of our products and services.	4.22 (4.40)	1.96 (1.90)	.78 (.75)
(33) We periodically review the likely effect of changes in our business environment (e.g., regulation) on customers.	4.44 (4.73)	1.84 (1.66)	.83 (.78)
<i>Intelligence Dissemination:</i>			
(34) We have interdepartmental meetings at least once a quarter to discuss market trends and developments.	4.54 (4.89)	1.94 (1.81)	.83 (.78)
(35) Marketing personnel in our business unit spend time discussing customers' future needs with other functional departments.	4.26 (4.49)	1.86 (1.76)	.87 (.84)
(36) When something important happens to a major customer of market, the whole business unit knows about it within a short period.	4.37 (4.56)	1.90 (1.77)	.76 (.69)
(37) Data on customer satisfaction are disseminated at all levels in this business unit on a regular basis.	4.20 (4.43)	1.85 (1.75)	.81 (.78)
<i>Responsiveness:</i>			
(41) We periodically review our product development efforts to ensure that they are in line with what customers want.	4.49 (4.72)	1.81 (1.69)	.91 (.89)
(42) Several departments get together periodically to plan a response to changes taking place in our business environment.	4.26 (4.52)	1.78 (1.64)	.88 (.86)
(43) If a major competitor were to launch	4.38	1.86	.82

<sup>32</sup> Reverse-coded items contained in the original scale did not load strongly and produced an artifactual second factor. These items were dropped from the scale (Spector, et al. 1997).



an intensive campaign targeted at our customers, we would implement a response immediately.	(4.62)	(1.69)	(.76)
(44) The activities of the different departments in this business unit are well coordinated.	4.14	1.75	.82
(47) When we find that customers would like us to modify a product of service, the department involved makes a concerted effort to do so.	(4.32)	(1.65)	(.81)
	4.45	1.71	.80
	(4.70)	(1.53)	(.74)

Coefficient alpha: .97 (.95)

Variance Extracted: 68.5% (62.1%)

Source: (Kohli, Jaworski and Kumar 1993)

All Respondents, Management Only Respondents shown in parenthesis.

Table 15 - Radicalness of Product Innovation Published Scale Properties

Items	Mean	Standard Deviation
(Survey Item #102) Your organization rarely introduces products that are radically different from existing products (radical means really new as compared to incrementally new products).	3.95	1.67
	(4.02)	(1.54)
(103) Our organization lags behind in introducing radical product innovations.	3.58	1.84
	(3.51)	(1.76)

Coefficient alpha: .77 (.80)

Source: (Chandy and Tellis 1988)

All Respondents, Management Only Respondents shown in parenthesis.

Table 16 - Firm Performance Published Scale Properties

<b>Items</b>	<b>Mean</b>	<b>Standard Deviation</b>	<b>Loading</b>
Relative to our primary competition, our organization's			
(Survey Item #115) sales growth is (1) very low to (5) very high.	4.45 (4.60)	1.49 (1.35)	.90 (.86)
(116) pre-tax profit is (1) very low to (5) very high.	4.46 (4.64)	1.44 (1.31)	.91 (.90)
(117) cash flow is (1) very low to (5) very high.	4.59 (4.73)	1.50 (1.38)	.83 (.79)
(118) shareholder value is (1) very low to (5) very high.	4.28 (4.39)	1.46 (1.36)	.80 (.74)
Coefficient alpha: .92 (.89)			
Variance Extracted: 69.3% (61.7%)			

Source: (Kotabe 1990)

All Respondents, Management Only Respondents shown in parenthesis.

Table 17 - Competitive Intensity Published Scale Properties

<b>Items</b>	<b>Mean</b>	<b>Standard Deviation</b>	<b>Loading</b>
(Survey Item #79) The competition in our industry is cut-throat.	4.23 (4.50)	1.89 (1.77)	.72 (.64)
(80) There are many "promotion wars" in our industry.	3.76 (4.00)	1.81 (1.74)	.77 (.74)
(81) Anything that one industry competitor can offer, others can readily match.	4.09 (4.29)	1.62 (1.50)	.78 (.74)
(82) Price competition is a hallmark of our industry.	4.12 (4.34)	1.86 (1.77)	.83 (.84)
(83) We hear of a new competitive move almost every day.	3.66 (3.85)	1.71 (1.62)	.84 (.80)
Coefficient alpha: .89 (.87)			
Variance Extracted: 62.0% (57.1%)			

Source: (Jaworski and Kohli 1993)

All Respondents, Management Only Respondents shown in parenthesis.

Table 18 - Market Turbulence Published Scale Properties

<b>Items</b>	<b>Mean</b>	<b>Standard Deviation</b>	<b>Loading</b>
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(Survey Item #85) In our kind of business, customer's product preferences change quite a bit over time.	3.97 (4.13)	1.67 (1.56)	.80 (.74)
(86) Our customers tend to look for new products all the time.	4.12 (4.33)	1.75 (1.66)	.83 (.83)
(87) We are witnessing demand for our products and services from customers who have never bought them before.	4.02 (4.25)	1.67 (1.54)	.75 (.66)
(88) New customers tend to have product-related needs that are different from those of our existing customers.	3.66 (3.82)	1.58 (1.46)	.70 (.60)

Coefficient alpha: .85 (.80)  
Variance Extracted: 59.3% (50.7%)

Source: (Jaworski and Kohli 1993)  
All Respondents, Management Only Respondents shown in parenthesis.

Table 19 - Technological Turbulence Published Scale Properties

<b>Items</b>	<b>Mean</b>	<b>Standard Deviation</b>	<b>Loading</b>
(Survey Item #90) The technology in our industry is changing rapidly.	4.24 (4.48)	1.80 (1.68)	.84 (.64)
(91) Technological changes provide big opportunities in our industry.	4.30 (4.52)	1.76 (1.60)	.91 (.74)
(92) A large number of new product ideas have been made possible because of technological breakthroughs in our industry.	4.21 (4.43)	1.74 (1.59)	.86 (.74)

Coefficient alpha: .93 (.90)  
Variance Extracted: 81.2% (75.7%)

Source: (Jaworski and Kohli 1993)  
All Respondents, Management Only Respondents shown in parenthesis.

Table 20 - Means, Standard Deviations, Reliabilities, and Correlations for Key Constructs, All Respondents

Construct	Mean	SD	1	2	3	4	5	6	7	8	9	10
Marketing Imagination (1)	4.11	1.49	.96									
Marketing Insight (2)	4.24	1.48	.82**	.95								
Market Orientation (3)	4.32	1.55	.87**	.80**	.97							
Marketing Innovation (4)	3.98	1.55	.67**	.64**	.70**	.98						
Process Innovation (5)	3.89	1.67	.69**	.72**	.69**	.52**	NA					
Product Innovation Radicalness (6)	3.77	1.58	-.11	-.13*	-.16*	-.08	-.10	.77				
Firm Performance (7)	4.44	1.33	.63**	.68**	.64**	.55**	.60**	-.10	.92			
Competitive Intensity (8)	3.97	1.48	.62**	.69**	.67**	.54**	.60**	.08	.51**	.89		
Market Turbulence (9)	3.94	1.39	.68**	.73**	.69**	.60**	.69**	-.01	.58**	.73**	.85	
Technological Turbulence (10)	4.25	1.66	.65**	.71**	.67**	.52**	.61**	-.05	.52**	.68**	.74**	.93

\*p<.05, \*\*p<.01

Table 21 - Means, Standard Deviations, Reliabilities, and Correlations for Key Constructs, Management Respondents

Construct	Mean	SD	1	2	3	4	5	6	7	8	9	10
Marketing Imagination (1)	4.32	1.32	.95									
Marketing Insight (2)	4.43	1.32	.73**	.93								
Market Orientation (3)	4.56	1.39	.83**	.72**	.95							
Marketing Innovation (4)	4.20	1.40	.61**	.54**	.64**	.97						
Process Innovation (5)	4.07	1.58	.59**	.64**	.61**	.42**	NA					
Product Innovation Radicalness (6)	3.77	1.51	-.24**	-.26**	-.34**	-.21**	-.21**	.80				
Firm Performance (7)	4.59	1.18	.49**	.56**	.52**	.42**	.51**	-.26**	.89			
Competitive Intensity (8)	4.20	1.36	.52**	.60**	.58**	.43**	.47**	.03	.34**	.89		
Market Turbulence (9)	4.13	1.23	.58**	.62**	.59**	.49**	.59**	-.10	.43**	.63**	.80	
Technological Turbulence (10)	4.48	1.49	.59**	.65**	.58**	.42**	.52**	-.16*	.42**	.63**	.65**	.90

\*p<.05, \*\*p<.01

Table 22 – Marketing Innovation (DV) Summary Statistics

<b>Items</b>	<b>Mean</b>	<b>Median</b>	<b>Standard Deviation</b>	<b>Range</b>
Marketing innovation overall	3.98 (4.20)	4.04 (4.19)	1.55 (1.40)	1.0-7.0 (1.0-7.0)
Marketing-product space innovation	3.93 (4.13)	3.98 (4.10)	1.55 (1.40)	1.0-7.0 (1.0-7.0)
Marketing-process space innovation	3.88 (4.07)	3.92 (4.25)	1.64 (1.54)	1.0-7.0 (1.0-7.0)
Marketing-relationship space innovation	4.11 (4.37)	4.09 (4.25)	1.70 (1.54)	1.0-7.0 (1.0-7.0)

All Respondents, Management Only Respondents shown in parenthesis.

Table 23 - Firm Performance (DV) Summary Statistics

<b>Items</b>	<b>Mean</b>	<b>Median</b>	<b>Standard Deviation</b>	<b>Range</b>
Firm performance overall	4.44 (4.59)	4.42 (4.46)	1.33 (1.18)	1.0-7.0 (1.0-7.0)
Sales growth	4.45 (4.60)	4.00 (4.00)	1.49 (1.35)	1.0-7.0 (1.0-7.0)
Pre-tax profit	4.46 (4.64)	5.00 (4.00)	1.44 (1.31)	1.0-7.0 (1.0-7.0)
Cash flow	4.59 (4.73)	5.00 (5.00)	1.50 (1.38)	1.0-7.0 (1.0-7.0)
Shareholder value	4.28 (4.39)	4.00 (4.00)	1.46 (1.36)	1.0-7.0 (1.0-7.0)

All Respondents, Management Only Respondents shown in parenthesis.

Table 24 - Summary of Hypotheses Test Results, All Respondents

Exogenous Variables	Endogenous Variable	H#	Path Coefficient (t-values), p-values; or R <sup>2</sup>	Results
Marketing Insight	Marketing Innovation	1a	0.67 (12.8), p<.01	Supported
Marketing Imagination	Marketing Innovation	1b	0.73 (13.4), p<.01	Supported
Marketing Insight	Marketing-Product Space	2a	R <sup>2</sup> =0.32 < R <sup>2</sup> =0.33	Not Supported, Other spaces are impacted more
Marketing Imagination	Marketing-Process Space	2b	R <sup>2</sup> =0.39 > R <sup>2</sup> =0.33	Supported
Marketing Imagination	Marketing-Relationship Space	2c	R <sup>2</sup> =0.40 > R <sup>2</sup> =0.38	Supported
Marketing Insight *Market Orientation	Marketing Innovation	3a	-0.03 (1.37) p>.05 ns	Not Supported, Direct Effect of Market Orientation
Marketing Imagination *Market Orientation	Marketing Innovation	3b	Interaction: -0.26 (-2.84); Interaction <sup>2</sup> : 0.02 (2.41)	Partially Supported, Different Curvilinear Shape
Marketing Innovation	Firm Performance	4a	MI: 0.47 (10.2) MI <sup>2</sup> : 0.03 (1.03)	Partially Supported, Positive and Linear
Marketing Innovation *Product Innovation Radicalness	Firm Performance	4b	-0.02 (-1.90) p<.05	Supported
Marketing Innovation *Process Innovation	Firm Performance	4c	-0.06 (-2.82) p>.05 ns	Not Supported, Direct Effect of Process Innovation
Marketing-Relationship Space	Firm Performance	4d	(R <sup>2</sup> =0.91 > R <sup>2</sup> =0.69) and (R <sup>2</sup> =0.91 > R <sup>2</sup> =0.86)	Supported

Table 25 - Summary of Hypotheses Test Results, Management Respondents

Exogenous Variables	Endogenous Variable	H#	Path Coefficient (t-values) or R <sup>2</sup>	Results
Marketing Insight	Marketing Innovation	1a	0.58 (8.6) p<.01	Supported
Marketing Imagination	Marketing Innovation	1b	0.64 (10.7) p<.01	Supported
Marketing Insight	Marketing-Product Space	2a	R <sup>2</sup> =0.20 < R <sup>2</sup> =0.25	Not Supported, Other spaces are impacted more
Marketing Imagination	Marketing-Process Space	2b	R <sup>2</sup> =0.32 > R <sup>2</sup> =0.23	Supported
Marketing Imagination	Marketing-Relationship Space	2c	R <sup>2</sup> =0.33 > R <sup>2</sup> =0.28	Supported
Marketing Insight *Market Orientation	Marketing Innovation	3a	0.01 (0.23) p>.05 ns	Not Supported, Direct Effect of Market Orientation
Marketing Imagination *Market Orientation	Marketing Innovation	3b	Interaction: -0.31 (-3.03); Interaction <sup>2</sup> : 0.03 (2.93)	Partially Supported, Different Curvilinear Shape
Marketing Innovation	Firm Performance	4a	MI: -0.18 (-0.79) MI <sup>2</sup> : 0.07 (2.39)	Partially Supported, Positive and Curvilinear*
Marketing Innovation *Product Innovation Radicalness	Firm Performance	4b	-0.03 (-2.79) p<.01	Supported
Marketing Innovation *Process Innovation	Firm Performance	4c	-0.71 (-2.67) p<.01, wrong direction	Not Supported, Direct Effect of Process Innovation
Marketing-Relationship Space	Firm Performance	4d	(R <sup>2</sup> =0.89 > R <sup>2</sup> =0.62) and (R <sup>2</sup> =0.89 > R <sup>2</sup> =0.85)	Supported

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*\*Denotes Different Findings from All Respondents Sample*

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Table 26 - Summary of Hypotheses Test Results, All Respondents, Logistic Transformation

Exogenous Variables	Endogenous Variable	H#	Path Coefficient (t-values), p-values; or R <sup>2</sup>	Results
Marketing Insight	Marketing Innovation	1a	0.27 (11.83), p<.01	Supported
Marketing Imagination	Marketing Innovation	1b	0.29 (13.20), p<.01	Supported
Marketing Insight	Marketing-Product Space	2a	R <sup>2</sup> =0.35 < R <sup>2</sup> =0.40	Not Supported, Other spaces are impacted more
Marketing Imagination	Marketing-Process Space	2b	R <sup>2</sup> =0.39 > R <sup>2</sup> =0.33	Supported*
Marketing Imagination	Marketing-Relationship Space	2c	R <sup>2</sup> =0.39 > R <sup>2</sup> =0.38	Supported
Marketing Insight *Market Orientation	Marketing Innovation	3a	0.00 (0.12) p>.05 ns	Not Supported
Marketing Imagination *Market Orientation	Marketing Innovation	3b	Interaction: -0.03 (-0.26); Interaction <sup>2</sup> : 0.05 (1.13)	Not Supported*
Marketing Innovation	Firm Performance	4a	MI: 0.11 (1.58) MI <sup>2</sup> : 0.04 (1.13)	Not Supported (p=.06)*
Marketing Innovation *Product Innovation Radicalness	Firm Performance	4b	-0.16 (-5.85) p<.01	Supported
Marketing Innovation *Process Innovation	Firm Performance	4c	-0.01 (-0.62) p>.05 ns	Not Supported, Direct Effect of Process Innovation
Marketing-Relationship Space	Firm Performance	4d	(R <sup>2</sup> =0.26 < R <sup>2</sup> =0.29) and (R <sup>2</sup> =0.26 > R <sup>2</sup> =0.23)	Not Supported, Product-Space matters most*

\*Indicates different findings with this log transformed model than from traditional regression testing.

Table 27 - Summary of Hypotheses Test Results, Management Respondents, Logistic Transformation

Exogenous Variables	Endogenous Variable	H#	Path Coefficient (t-values) or R <sup>2</sup>	Results
Marketing Insight	Marketing Innovation	1a	0.24 (7.18) p<.01	Supported
Marketing Imagination	Marketing Innovation	1b	0.28 (9.28) p<.01	Supported
Marketing Insight	Marketing-Product Space	2a	R <sup>2</sup> =0.20 < R <sup>2</sup> =0.30	Not Supported, Other spaces are impacted more
Marketing Imagination	Marketing-Process Space	2b	R <sup>2</sup> =0.32 > R <sup>2</sup> =0.22	Supported
Marketing Imagination	Marketing-Relationship Space	2c	R <sup>2</sup> =0.31 > R <sup>2</sup> =0.28	Supported
Marketing Insight *Market Orientation	Marketing Innovation	3a	0.08 (1.29) p>.05 ns	Not Supported
Marketing Imagination *Market Orientation	Marketing Innovation	3b	Interaction: - 0.30 (-1.85); Interaction <sup>2</sup> : 0.15 (2.57)	Partially Supported, Different Curvilinear Shape
Marketing Innovation	Firm Performance	4a	MI: -0.09 (- 1.01) MI <sup>2</sup> : 0.11 (2.54)	Partially Supported, Positive and Curvilinear
Marketing Innovation *Product Innovation Radicalness	Firm Performance	4b	-0.14 (-3.42) p<.01	Supported
Marketing Innovation *Process Innovation	Firm Performance	4c	0.01 (-0.61) p>.05	Not Supported, Direct Effect of Process Innovation
Marketing-Relationship Space	Firm Performance	4d	(R <sup>2</sup> =0.11 < R <sup>2</sup> =0.12) and (R <sup>2</sup> =0.11 > R <sup>2</sup> =0.09)	Not Supported, Product-Space matters most

*\*Denotes Different Findings from All Respondents Sample*



Table 28 - Summary of Research Model Fit Results Explaining Marketing Innovation and Firm Performance, All Respondents<sup>33</sup>

<b>Model</b>	<b><math>\chi</math></b>	<b>df</b>	<b>NFI</b>	<b>CFI</b>	<b>RMSEA</b>
Base Model: Marketing Insight, Marketing Imagination via Marketing Innovation	89	2	.85	.86	.42
Add Product Innovation Radicalnesss Moderation	172	5	.92	.93	.37
Add Market Orientation Moderation Effect	173	6	.95	.95	.34
Add direct path from Marketing Insight to Firm Performance and Marketing Imagination to Firm Performance	85	4	.97	.98	.29

Table 29 - Summary of Research Model Fit Results Explaining Marketing Innovation and Firm Performance, Management Respondents<sup>34</sup>

<b>Model</b>	<b><math>\chi</math></b>	<b>df</b>	<b>NFI</b>	<b>CFI</b>	<b>RMSEA</b>
Base Model: Marketing Insight, Marketing Imagination via Marketing Innovation	45	2	.86	.86	.34
Add Product Innovation Radicalnesss Moderation	107	5	.93	.93	.33
Add Market Orientation Moderation Effect	104	6	.95	.96	.30
Add direct path from Marketing Insight to Firm Performance and Marketing Imagination to Firm Performance	63	4	.97	.97	.28

<sup>33</sup> Model was also fitted with control variables competitive intensity, culture, leadership style, market turbulence, and technological turbulence. The fit indices did not significantly improve the fit of any of the models.

<sup>34</sup> Model was also fitted with control variables competitive intensity, culture, leadership style, market turbulence, and technological turbulence. The fit indices did not significantly improve the fit of any of the models.

## APPENDIX C – SURVEY INSTRUMENT

**Questionnaire**

**1. Indicate the primary functional area of your role in the organization:**

- Marketing       Technology       Operations       Chief Officer       Other

**2. How often do you participate in company marketing decisions?**

- Never       Annually       Quarterly       Monthly       Weekly       2-4x Weekly       Daily

**INSTRUCTIONS:**

**In these activities, how NOVEL (how striking, original, or unusual) is your organization?**

	Not Novel	Somewhat Novel	Very Novel
3. Identifying new needs from existing and potential customers.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
4. Designing and developing new product solutions and prototypes.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
5. Identifying and managing internal functional relationships.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
6. Developing and sustaining networks of linkages with external organizations.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
7. Coordinating product design activities to speed up business processes.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
8. Selecting and qualifying desired suppliers.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
9. Establishing and managing inbound and outbound logistics.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
10. Order processing, pricing, billing, rebates, and terms.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
11. Managing multiple distribution channels.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
12. Managing installation and maintenance to enable product use.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
13. Identifying potential new customers.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
14. Learning about product usage and application.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
15. Developing and executing advertising and promotion programs.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
16. Developing and executing customer service programs.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
17. Developing and executing sales programs.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

18. Acquiring and leveraging information technology for customer contact.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
19. Managing customer site visit teams.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
20. Enhancing customer trust and customer loyalty.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
21. Cross-selling and up-selling of product service offerings.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

*Relative to your competition, indicate your organization's level of innovation in the following categories:*

	Much Less Innovative	About As Innovative As Competitors	Much More Innovative
22. Product or service formulation	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
23. Use of technology	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
24. Merchandising	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
25. New geographic market expansion	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
26. Packaging benefits	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
27. Value positioning in the consumer's mind	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

*Please rate your organization on the following activities:*

	Strongly Disagree	Somewhat Agree	Strongly Agree
28. We meet with customers at least once a year to find out what products or services they will need in the future.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
29. We do a lot of in-house market research.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
30. We are slow to detect changes in our customers' product preferences.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
31. We poll end users at least once a year to assess the quality of our products and services.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
32. We are slow to detect fundamental shifts in our industry (e.g., competition, technology, regulation).	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
33. We periodically review the possible effects of changes in our business environment (e.g., regulation) on customers.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
34. We have interdepartmental meetings at least once a quarter to discuss market trends and developments.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
35. Marketing personnel in our business unit spend time discussing customers' future needs with other functional departments.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

36. When something important happens to a major customer, the whole business unit knows about it within a short period.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
37. Data on customer satisfaction are disseminated at all levels in our business unit on a regular basis.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
38. When one department finds out something important about competitors, it is slow to alert other departments.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
39. It takes us forever to decide how to respond to our competitor's price changes.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
40. For one reason or another, we tend to ignore changes in our customer's product or service needs.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
41. We periodically review our product development efforts to ensure that they are in line with what customers want.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
42. Several departments get together periodically to plan a response to changes taking place in our business environment.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
43. If a major competitor were to launch an intensive campaign targeted at our customers, we would implement a response immediately.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
44. The activities of the different departments in our business unit are well coordinated.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
45. Customer complaints fall on deaf ears in our business unit.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
46. Even if we came up with a great marketing plan, we probably would not be able to implement it in a timely fashion.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
47. When we find that customers would like us to modify a product or service, the departments involved make concerted efforts to do so.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

**Please rate your organization on the following activities:**

	Strongly Disagree		Somewhat Agree		Strongly Agree
48. In our company, marketing plans have a specific format that strictly adheres to established procedures and processes for all marketing activities.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
49. We never have enough time to think ahead.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
50. We place special importance on innovative thought processes within our organization.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
51. We take pride in a collective ability to think "out of the box."	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>



52. We often indulge in creative brainstorming sessions.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
53. We encourage abstract ideas from our employees that might not have immediate relevance to our business today.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
54. Other organizations can understand unusual market occurrences better than our organization.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
55. Our organization knows better than others what is really happening in the market.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
56. Our organization is often the "trend predictor" in our industry.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
57. We often come up with clever and effective solutions to unusual problems.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
58. Our organization is seldom wrong with solutions to complex problems.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
59. We often look outside our industry for solutions to complex problems.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
60. We study each problem until we understand the underlying logic.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
61. Our top management meetings often lead to "ah ha" moments that result in breakthrough understanding of the problem or situation at hand.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
62. Our top management believes in having a full understanding of all our problems.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
63. Our top management spends time in detailed analysis of all our problems.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
64. We have a top management team with several years of progressive experience in our industry.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
65. We have a top management team consisting of individuals with senior-level experience in other RELATED industries.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
66. We have a top management team consisting of individuals with senior-level experience in other UNRELATED industries.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

*Please rate the amount of new product-related information that your organization has acquired over the past 6 months in the following areas:*

	Low	Average			High
67. Information about new ways to approach product and process development.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
68. Information about new trends in your industry.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

69. Information about R&D projects conducted outside your firm.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
70. Information about end-user requirements and trends in customer expectations.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
71. Information about competitors' technology.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
72. Research findings related to the development of new products.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

*Please rate your organization on the following activities:*

	Strongly Disagree		Somewhat Agree		Strongly Agree
73. Relative to your competition, the level of annual change in your organization's production process is substantially higher.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
74. Our industry is still in the infancy or early growth stage.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
75. Our industry would be characterized as a high-technology industry.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
76. Our industry is more unstable than most, changing more rapidly and unpredictably.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
77. Demand in our industry has been growing rapidly over the past 3 years.	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
78. Innovation and R&D are more prevalent in our industry than in most industries.	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
79. The competition in our industry is cut-throat.	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
80. There are many "promotion wars" in our industry.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
81. Anything that one industry competitor can offer, others can readily match.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
82. Price competition is a hallmark of our industry.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
83. We hear of a new competitive move almost everyday.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
84. Our competitors are relatively weak.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
85. In our kind of business, customers' product preferences change quite a bit over time.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
86. Our customers tend to look for new products all the time.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
87. We are witnessing demand for our products and services from customers who have never bought them before.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
88. New customers tend to have product-related needs that are different from those of	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

our existing customers.

89. We cater to many of the same customers as we used to in the past.

90. The technology in our industry is changing rapidly.

91. Technological changes provide big opportunities in our industry.

92. A large number of new product ideas have been made possible because of technological breakthroughs in our industry.

93. Technological developments in our industry are rather minor.

**Compared to what your competitors are doing, your organization's most recent marketing program is:**

94. Dull	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Exciting
95. Fresh	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Routine
96. Conventional	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Unconventional
97. Usual	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Unusual
98. Commonplace	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Original
99. Trendsetting	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Warmed Over
100. Average	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Revolutionary
101. Nothing Special	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	An Industry Model

**102. Our organization rarely introduces products that are radically different from existing products. Radical means "really new to the industry" products as compared to "incrementally new" products.**

Strongly Disagree	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Somewhat Agree	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Strongly Agree	<input type="radio"/>
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**103. Our organization lags behind in introducing radical product innovations.**

Strongly Disagree	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Somewhat Agree	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Strongly Agree	<input type="radio"/>
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**104. Our organization's percentage of total sales from radical product innovations introduced in the last 3 years is:**



105. Please indicate or estimate the NUMBER of radical product innovations introduced by your organization in the last three years.

Please indicate your organization's level of knowledge on the following items:

	We need to know much more			We know some			We know a great deal now
106. Channel member behavior and motivation	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
107. Customer motivation to purchase our products or services	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
108. Customer purchase behavior	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
109. Customer usage behavior	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
110. Strategies of direct competitors	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
111. Political and legal trends	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
112. Economic trends	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
113. Technological trends	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
114. Demographic trends	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

The next two questions relate to what your operation is like. Each of these items contains four descriptions of organizations. Please distribute 100 points among the four descriptions depending on how similar the description is to your organization. None of the descriptions is any better than any other; they are just different. For each question, please use all 100 points. You may divide the points in any way you wish. Most organizations will be some mixture of those described.

115. Kind of Organization (Please distribute 100 points):

- My organization is a very personal place. It is like an extended family. People seem to share a lot of themselves.
- My organization is a very dynamic and entrepreneurial place. People are willing to stick their necks out and take risks.
- My organization is a very formalized and structural place. Established procedures generally govern what people do
-



My organization is very production oriented. A major concern is with getting the job done, without much personal involvement.

---

Total

**116. Leadership (Please distribute 100 points):**

The head of my organization points is generally considered to be a mentor, sage, or a father / mother figure.

The head of my organization is generally considered to be an entrepreneur, an innovator, or a risk taker.

The head of my organization points is generally considered to be a coordinator, an organizer, or an administrator.

The head of my organization is generally considered to be a producer, a technician, or a hard-driver.

---

Total

**Relative to our primary competition, our organization's:**

	Well BELOW Average			Average			Well ABOVE Average		
115. sales growth is	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
116. profit before tax is	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
117. cash flow is	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
118. shareholder value is	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
119. customer service is	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
120. employee satisfaction is	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

**121. How many employees work in your establishment?**

- 1-4
- 5-9
- 10-19
- 20-49
- 50-99
- 100-249
- 250-499
- 500-999
- 1,000 or more

**122. Please rank these geographic regions in the order in which they contribute to your organization's total revenue. Use 1 for largest contributing region, 2 for the next, etc. Use 0 for regions that contribute no revenue.**

- Africa
- Asia
- Australia
- Europe

- North America
- South America

**123. In which country is your organization headquartered?**

**124. If your headquarters is in the United States, please indicate the state:**

**125. Indicate the primary classification for your organization:**

- Agriculture, Forestry, Fishing, Hunting
- Mining
- Utilities
- Construction
- Manufacturing
- Wholesale Trade
- Retail Trade

**Please indicate the category that best describes your position in the organization:**

- Upper / Top Management, Partner, or Owner
- Middle Management
- Supervisor or Entry-Level Management
- Non-Management

**Indicate your work experience:**

126. Total years of full-time employment	<input type="text"/>
127. Years in this industry	<input type="text"/>

128. Years with this organization

*129. Please indicate if any of the statements on this survey were unclear in any way so they may be revised for future respondents.*

**THANK YOU!**

*If you wish to receive a copy of the aggregated results of this research showing the benchmark scores for your industry, please provide the following information.*

*To contact the researcher for any reason, please email [rcascio@bus.ucf.edu](mailto:rcascio@bus.ucf.edu).*

Name	<input type="text"/>
Organization	<input type="text"/>
Email	<input type="text"/>

Thank you for participating in this academic research.

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