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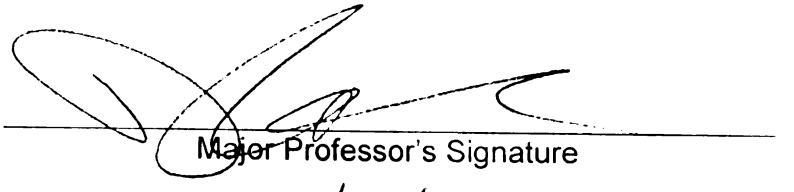
MARKETING STRATEGY DECISION MAKING:
THE UNINTENDED CONSEQUENCES OF
INCORPORATING COMPETITIVE INFORMATION

presented by

JESSICA J. HOPPNER

has been accepted towards fulfillment
of the requirements for the

PH.D. degree in MARKETING



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MARKETING STRATEGY DECISION MAKING: THE UNINTENDED CONSEQUENCES OF INCORPORATING COMPETITIVE INFORMATION

By

Jessica J. Hoppner

A DISSERTATION

Submitted to
Michigan State University
in partial fulfillment of the requirements
for the degree of

DOCTOR OF PHILOSOPHY

Marketing

2010

ABSTRACT

MARKETING STRATEGY DECISION MAKING: THE UNINTENDED CONSEQUENCES OF INCORPORATING COMPETITIVE INFORMATION

By

Jessica J. Hoppner

Unintended consequences in decision making result when undetected biases in judgment are introduced through the reliance of individuals on decision heuristics to reduce the complexity of evaluating and incorporating information into their decisions. Marketing managers, although assumed within the extant marketing strategy literature to be objective decision makers, are subject to the same biases within their marketing strategy decision making when evaluating and incorporating competitive information. Competitive information refers to information that details the actions taken by or to be taken by firms designated as competitors. Marketing managers must evaluate the quality and the timing of competitive information, which address whether and when a competitor is described to take action, respectively. For instance, if marketing managers learned about a possible new product introduction of a competitor, they would need to evaluate the extent to which the competitive information is accurate (i.e., its quality) and the extent to which the competitive information refers to actions that have occurred, are occurring, or will occur (i.e., its timing) Thus, this dissertation, comprised of two essays, examines the unintended consequences in marketing strategy decision making that result when marketing managers rely on decision heuristics to incorporate competitive information based upon their evaluation of the quality of the competitive information (Essay One) and the timing of the competitive information (Essay Two).

ACKNOWLEDGEMENTS

Four years and one hundred and forty-eight pages later, my career as a doctoral student has come to an end. Over the course of my time as a doctoral student, through the good and the bad, it was with the unwavering support of so many people that I was allowed to achieve my goal. It is to these people that I owe a massive debt of gratitude.

First and foremost, an innumerable amount of thanks belong to my advisor, my mentor, and most of all to my friend, Dr. David A. Griffith. Without your time, energy, and crazy belief in the kind of scholar I could become, I would have never been able to be where I am today. It takes a special kind of person to take on a "g.w.k." as a doctoral student and then give her free reign to uncover the projects and research that she truly loved. At times I think you had much more faith in me and my abilities than I had challenging me to be better – for which I am truly grateful.

I would also like to thank my dissertation committee, Dr. Thomas J. Page, Jr., Dr. Cheri Speier, and Dr. R. Dale Wilson, for their support and guidance throughout the entire dissertation process. Their insights have helped to shape this work.

I also consider myself to be incredibly lucky to have ended up in a doctoral program where I could find my other two "amigos" to celebrate and commiserate important milestones with. Ravi and Ryan, my time in the doctoral program would not have been the same without either of you.

Last but not least, I would like to thank my family. It is easy to dream big when you know that you will always have your family behind you supporting you, whether be it emotionally or financially. Thank you for always being there. I love you all.

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INTRODUCTION

Central to the practice of and research in the domain of marketing strategy is understanding how the actions of competitors, ranging from simple moves such as a price promotion to more complex moves such as a new product introductions and strategic alliances, influence the subsequent reactions of marketing managers from competing firms (Varadarajan and Jayachandran 1999). Although most examinations of competitive behavior either explicitly or implicitly assume that marketing managers act objectively when determining their marketing strategy reactions, it has been demonstrated that marketing managers are subjectively influenced in their marketing strategy decision making through the manner in which the competitive information is incorporated.

Competitive information refers to information that details the actions taken by or to be taken by firms designated as competitors. Marketing managers must evaluate the quality and the timing of competitive information, which address whether and when a competitor is described to take action, respectively. For instance, if marketing managers learned about a possible new product introduction of a competitor, they would need to evaluate the extent to which the competitive information is accurate (i.e., its quality) and the extent to which the competitive information refers to actions that have occurred, are occurring, or will occur (i.e., its timing).

Unintended consequences in decision making result when undetected biases in judgment are introduced through the reliance of individuals on decision heuristics to reduce the complexity of evaluating and incorporating information into their decisions. Marketing managers, although assumed within the extant marketing strategy literature to be objective decision makers, are subject to the same biases within their marketing

strategy decision making when evaluating and incorporating competitive information. Decision heuristics refer to the series of rules of thumb employed by decision makers (Poulton 1994), and according to behavioral decision theory, the specific decision heuristics employed by decision makers introduces undetected, severe, and systematic biases in judgment (Tversky and Kahneman 1974). The specific decision heuristic upon which marketing managers will rely and thus the bias that will develop leading to the unintended consequences in their marketing strategy decision making depends upon the facet of competitive information which requires evaluation.

Thus, this two essay dissertation examines the unintended consequences in marketing strategy decision making that result when marketing managers rely on decision heuristics to incorporate the different facets of competitive information. Specifically, essay one examines the quality facet of competitive information, whereas essay two examines the timing facet of competitive information. Behavioral decision theory is utilized as the theoretical framework in each essay to examine how the facet of competitive information is evaluated and incorporated within the marketing manager's marketing strategy decision making and to analyze the unintended consequences that, unfortunately, is likely to result. The following provides a more detailed overview for each of the two essays.

Essay one investigates how marketing managers integrate competitive information of an uncertain quality into their marketing strategy decision making. By utilizing the representativeness and availability decision heuristics of behavioral decision theory as the theoretical framework, this essay examines how marketing managers incorporate rumors about the future strategic marketing actions of competitors into the

development of their own marketing strategies. Rumors, varying in terms of their characteristics, are studied to determine the likelihood to which marketing managers will respond and whether rumors can cause marketing managers to irrationally alter the direction of their marketing strategy. A two-stage longitudinal experiment is employed. This essay demonstrates how managerial perceptions and behavioral decision biases, enacted as a result of evaluating the information contained within a competitive rumor, can lead a marketing manager to alter their decision making process through their desire to respond to competitive rumors. Hence, this essay provides greater understanding for marketing academics as well as marketing managers of the unintended consequences in marketing strategy decision making when it comes to the pervasive impact of competitive rumors.

Essay two investigates how marketing managers integrate the complexities of time within their marketing strategy decision making. By utilizing the dimensions of national culture, the social psychology of time and behavioral decision theory's prospect theory as an integrated theoretical framework, this essay examines how culture influences how marketing managers incorporate their time orientation and their organization's time orientation as well as temporally and strategically framed information into their strategic marketing decisions. A two country cross-cultural case scenario is employed. This essay demonstrates how managerial perceptions and behavioral decision biases, enacted as a result of their cultural perceptions, can lead a marketing manager to systematically make strategic decisions of a certain magnitude, timing, and time horizon, to have the conflict between their individual and organizational time orientation influence their decision evaluations, and to over rely on minimizing competitive threats or maximizing

opportunities when developing their marketing strategy. Hence, this essay provides greater understanding for marketing academics as well as marketing managers of the unintended consequences in marketing strategy decision making when it comes to strategizing from the past, the present, or the future.

ESSAY ONE: RUMOR HAS IT: MARKETING STRATEGY REACTIONS TO RUMORED ACTIONS BY COMPETITORS

INTRODUCTION

Rumor has it that Microsoft is planning to introduce a new smartphone to directly compete with Apple's iPhone and Google's G1 (Letzing 2008), that Sony is planning to make its Playstation 3 "more competitive" against Microsoft's Xbox in terms of price (Pigna 2008), and that Netflix is planning to expand its online entertainment distribution capabilities via internet enabled video game consoles to further establish its market leader status against Blockbuster (Brightman 2008).[1] The competitive landscape is continually littered with rumors regarding the strategic marketing actions to be taken by competitors (e.g., decisions regarding products, promotion, pricing, and distribution). In a world filled with rampant speculation and where the line between fact and fiction is blurred, what are marketing managers to believe, and consequently, to do?

Rumors are defined as the emergence and circulation of topically relevant information that has not yet been publicly confirmed or denied by official sources (Kapferer 1990; Rosnow and Kimmel 2000). Considered to be attributions based on circumstantial evidence, rumors develop as the direct result of the uncertainty that exists in the surrounding environment and the desire of individuals to possess information that makes sense of these uncertain surroundings (Kimmel 2004b; Walker and Beckerle 1987). As such, rumors seek to serve the same function as official information under circumstances where access to official information is restricted by providing meaningful

[1] The competitive rumor regarding Netflix has since been verified to be true, as Netflix officially announced a partnership with Microsoft to stream online content over Xbox360's Xbox Live service (Wildstrom 2008). The Microsoft rumor and the Sony rumor have been verified to be false, as both companies have, to a certain extent, issued official statements denying the competitive rumors (Harrow 2008; Pigna 2008).

explanations for events that have unexpectedly occurred and/or for what events will likely occur in the uncertain future (Oberlechner and Hocking 2004; Pendleton 1998). The propensity for rumors to develop regarding a competitor's marketing strategy is understandable considering the uncertainty that surrounds the competitive business environment in which marketing managers must make decisions as well as the limited availability of official information pertaining to the future strategic marketing actions of competitors.

Research on the influence that competitive rumors have on the marketing strategy decision making of marketing managers is surprisingly lacking considering the frequency with which they develop and the extent to which they spread.[2] One area, however, where previous research has demonstrated the significant influence that rumors have on an individual's decision making ability is within the context of financial trading (e.g., Difonzo and Bordia 1997; Oberlechner and Hocking 2004; Pound and Zeckhauser 1990). For instance, it has been demonstrated that individuals persistently depart from their previously determined trading strategy as a direct result of overweighting the importance that the explanation that the information contained within a competitive rumor provides, ultimately lowering their resulting financial welfare (Nelson, Bloomfield, Hales, and Libby 2001). DiFonzo and Bordia (1997, p. 346) conclude that for rumors to powerfully effect an individual's decision making they "do not have to be believed or trusted," but rather "they simply have to make sense". Hence, drawing from the extant rumor research in financial trading, is it likely that marketing managers may also react to competitive

[2] Within the extant marketing literature, research on rumors has focused either on consumer reactions to or management's ability to refute conspiracy and contamination rumors (e.g., Iyer and Debevec 1991; Tybout, Calder, and Sternthal 1981). Some examples include the conspiracy rumor which stated that Proctor & Gamble's moon and stars logo was a symbol of Satanism or the contamination rumor which stated that McDonald's hamburgers were made with worm meat (Kimmel 2004b).

rumors by incorporating the information that they contain into their marketing strategy decision making, leading marketing managers to overweight their importance and alter the firm's strategic direction?

Utilizing behavioral decision theory, this research examines how marketing managers incorporate rumors about competitors' future strategic marketing actions when developing their own marketing strategies. Specifically, the following research questions are addressed:

(1) How do the information components that comprise a competitive rumor influence the likelihood of marketing managers to develop a strategic response?

(2) Can the emergence of a competitive rumor cause marketing managers to alter the firm's strategic marketing direction?

(3) How do marketing managers subsequently react to the changes, if any, that they have made to the firm's marketing strategy when an official announcement confirms the competitive rumor to be true or to be false?

By addressing these questions, this research contributes to the field of marketing in three distinct ways. First, this research contributes to the marketing strategy literature by examining how managerial perceptions and behavioral biases enacted as a result of the decision heuristics used to evaluate the information components of a competitive rumor can increase the likelihood of marketing managers to develop a strategic response. Second, this research extends the extant literature on competitive behavior by demonstrating that by overweighting the importance of competitive rumors within their marketing strategy decision making, competitive rumors can not only cause marketing

managers to alter the firm's strategic marketing direction, but also cause them to remain committed and/or escalate their commitment to this change in strategic direction regardless of whether an official announcement confirms the competitive rumor to be true or to be false. Third, from a managerial perspective, this research provides important guidance and caution to marketing managers for understanding the unintended consequences that rumored actions of competitors can have on their marketing strategy decision making.

THEORETICAL BACKGROUND

The Influence of Competitive Rumors on Marketing Strategy

Marketing strategy is defined as a complex set of activities, processes, and routines involved in the design and execution of marketing plans (Menon, Bharadwaj, Adidam, and Edison 1999) and its development requires marketing managers to make decisions regarding product development, pricing, channel management, marketing communications, selling, market information management, marketing planning, and marketing implementation (Vorhies and Morgan 2005). When developing their marketing strategy, marketing managers are faced with a decision making situation surrounded by uncertainty; uncertainty with respect to the business environment, the future marketing actions of competitors, and the consequences of making inappropriate marketing strategy responses. As such, the selection of which information to use by marketing managers in order to reduce the surrounding uncertainty and to guide their strategy making becomes critical, where information available on the business environment provides insight into the competitive forces governing the industry and

information on competitors helps managers prepare future offensive or defensive marketing strategies (Porter 1980). Traditionally, it had been concluded that a high level of perceived credibility was critical to marketing managers when selecting which information to use; however, it has been suggested that credibility may be less important than the relevance of the information to the current situation (Menon and Varadarajan 1992). Complicating the marketing managers' search for credible and/or relevant information to help determine the proper marketing strategy actions to pursue is that the earliest indicators of changes to come or of actions to be taken by competitors in an uncertain environment are often no more than rumors (Sauter and Free 2005).

Rumors develop frequently within the competitive environment (Kimmel 2004b); most notably with respect to the future actions of competitors (cf., Brightman 2008; Letzing 2008; Pigna 2008). Rumors are defined as the emergence and circulation of topically relevant information that has not yet been publicly confirmed or denied by official sources (Kapferer 1990; Rosnow and Kimmel 2000). They emerge as the direct result of uncertainty existing in the surrounding environment (Kimmel 2004b) and of the natural desire for individuals to seek information that provides meaningful explanations for events that have unexpectedly occurred and/or for what events will likely occur in the uncertain future (Oberlechner and Hocking 2004). Through its emphasis on a topic of relevance, the explicit intention of a rumor is for the information it contains to be believed and acted upon by decision makers, as the implication of any rumor is that it communicates some truth (Allport and Postman 1947; DiFonzio and Bordia 2002). Prior research in the context of financial trading has repeatedly demonstrated that rumors have a pervasive influence on decision making as individuals repeatedly react to rumors in the

marketplace despite knowing that the information contained within rumors is unverified (Difonzo and Bordia 1997, 2002; Pound and Zeckhauser 1990). Moreover, the influence that a competitive rumor has on an individual's decision making derives from the evaluation of the information contained within a competitive rumor with respect to its credibility and its ability to make sense of the uncertainty in the competitive environment (Kimmel 2004a; Nelson et al. 2001).

Correspondingly, the influence of competitive rumors on marketing strategy decision making will depend on how the information contained within the rumor is evaluated by marketing managers. The information contained in a competitive rumor can be divided into three main components: (1) the source, which refers to from whom the rumor was heard; (2) the charge, which refers to what the rumor is about; and (3) the target, which refers to who the rumor is about (Koenig 1985). For example, to analyze one of the competitive rumors introduced earlier: Microsoft (i.e., the target) plans to introduce a smartphone (i.e., the charge) as was claimed by an industry analyst (i.e., the source) (cf., Letzing 2008). Specifically, the extent to which the information contained within the rumor (i.e., the source, the charge, and the target) is assessed to be credible and to make sense will influence the likelihood of marketing managers to respond and the nature of their marketing strategy response.

Credibility refers to the extent to which information is worthy of belief. As rumors lack secure standards of evidence (i.e., unverified), it is often difficult for individuals to directly ascertain the credibility of the information that they contain. Instead, individuals evaluate the credibility of a rumor based upon the credibility of its source (Allport and Postman 1947). Source credibility is determined based upon the

extent to which the source is considered to possess the characteristics of expertise and trustworthiness (Dholakia and Sternthal 1977). Sources that possess these characteristics are determined to be highly credible and are able to positively influence the believability and acceptance of rumors (Pendleton 1998). Furthermore, rumors that are able to make sense of the uncertain environment are also able to positively influence whether an individual believes and accepts the rumor because individuals "continually seek to extract meaning from our environment" because "we want to know the why, how, and wherefore of the world that surrounds us" (Allport and Postman 1947, p. 37). The ability of a rumor to make sense, which refers to the extent to which the information provides a reasonable explanation, depends primarily on the plausibility of the connection between what the rumor is about (i.e., the charge) and the uncertainty existing in the competitive environment.

Evaluating Competitive Rumors: Behavioral Decision Theory

When unguided by objective evidence, the appropriateness of incorporating information within the decision making process is made in accordance with the subjective preference of individuals (Allport and Postman 1947). Behavioral decision theory was developed in order to better understand decision making under conditions of uncertainty by identifying the manner in which individuals incorporate information into their decisions (Slovic, Fischhoff, and Lichtenstein 1977); for under behavioral decision theory, it has been shown that the behavioral heuristics used by individuals influence how information is evaluated, interpreted, and responded to (Einhorn and Hogarth 1981). In managerial decision making, often the only viable option for managers when evaluating information

is to represent their own feelings and judgments by using behavioral heuristics (Taylor 1984). While behavioral heuristics reduce the complexity of evaluating uncertain information (Poulton 1994), using heuristic strategies, unfortunately, also often leads to undetected biases in judgment that can be both severe and systematic (Tversky and Kahneman 1974).

Under behavioral decision theory, two heuristic strategies that are commonly used by decision makers to evaluate uncertain information are representativeness and availability (Taylor 1984; Tversky and Kahneman 1974). An individual using the representativeness heuristic evaluates uncertain information based upon the degree to which the information corresponds to the typical characteristics of a given set of objects (e.g., a sample of actors or a set of actions) (Tversky and Kahneman 1974). When using the representativeness heuristic, the uncertain information contained within a competitive rumor will be assessed to be appropriate to incorporate within one's decisions if the source from which the rumor emanates or the actions and/or actor the rumor describes possesses characteristics that fit with their beliefs of an individual or an action that is credible. For instance, a marketing manager is likely to evaluate the information contained within the Netflix rumor identified earlier (cf., Brightman 2008) to be credible using the representativeness heuristic, because the industry analyst for a reputable securities firm (i.e., source of the competitive rumor) is representative of an individual who is likely to be believed since the analyst embodies the characteristics of expertise and trustworthiness (Pornpitakpan 2004).

Using the availability heuristic, an individual evaluates uncertain information based upon the ease with which similar instances can be recalled by an individual and/or

similar instances can be imagined by an individual (Taylor 1984). As such, if the source from which the rumor comes or the actions and/or actor the rumor describes are easily recallable or imaginable, using the availability heuristic, the uncertain information contained within a competitive rumor will be assessed to be appropriate to incorporate within one's decisions. For instance, a marketing manager is likely to evaluate the information contained in the Sony rumor identified earlier (cf., Pigna 2008) to make sense using the availability heuristic, because the price cut (i.e., charge of the competitive rumor) in reaction to a highly competitive marketplace is not only easy to imagine, but moreover because it has occurred before (cf., Rosmarin 2007). Thus, utilizing behavioral decision theory, a series of hypotheses examines how marketing managers incorporate rumors about competitors' future marketing actions, varying in terms of its information characteristics, into their marketing strategy decision making.

HYPOTHESES DEVELOPMENT

Marketing Strategy Reactions to Competitive Rumors

Marketing strategy decisions must be made by marketing managers within an uncertain competitive environment where access to verified information is lacking pertaining to both the future of the environment as well to the future strategic marketing actions of competitors. When operating under these conditions of uncertainty, the "lack of information and a strong interest in what is going on makes one very receptive to any communication" (Koenig 1985, p.24) and the uncertain information provided by competitive rumors that emerge as a result of these conditions is better than none at all. Specifically, how the information components of a competitive rumor are evaluated by

marketing managers using their behavioral heuristics, in terms of the credibility of its source, the ability of the charge to make sense of uncertainty, the competitor described within the target, and the interactions between these components, will determine the influence of a competitive rumor on the marketing strategy decision making of marketing managers and their likelihood to respond to competitive rumors.

Competitive rumors are evaluated to be credible based upon the extent to which the source from which the rumor was heard is determined to be credible (Allport and Postman 1947; Pendleton 1998). Utilizing the behavioral heuristic of representativeness, marketing managers will evaluate the information contained in a competitive rumor to be appropriate to incorporate within ones' decisions if it is heard from a source that consistently corresponds with the characteristics of individuals known to provide credible information. Specifically, sources that represent individuals who are perceived to be an expert and/or trustworthy would be evaluated by marketing managers to be credible (Dholakia and Sternthal 1977). Once a marketing manager perceives the source of the competitive rumor to be credible, the uncertain information contained within the rumor becomes worthy of being believed, accepted, and acted upon when developing their marketing strategy. Therefore, since a credible competitive rumor describes a competitive action that marketing managers perceive as likely to occur, marketing managers will find that it is necessary to respond. Thus, it is hypothesized that:

H_1: Marketing managers are more likely to respond to competitive rumors that are from a source with a high-level of credibility than to competitive rumors that are from a source with a low-level of credibility.

Competitive rumors are evaluated to make sense based upon the extent to which the charge of the rumor provides a reasonable explanation for what may happen within

the uncertainty existing in the environment (DiFonzo and Bordia 2007). Utilizing the behavioral heuristic of availability, marketing managers will evaluate the information contained in a competitive rumor to be appropriate to incorporate within ones' decisions if the charge describes marketing actions that are easily available within their minds. Specifically, charges that correspond to marketing actions that are easy to imagine or are similar to actions that have already been taken that are easily recalled would be evaluated by marketing managers to make sense (Taylor 1984). Once a marketing manager perceives the charge of the competitive rumor to have an ability to make sense of the uncertainty in the environment, the uncertain information contained within the rumor becomes worthy of being believed, accepted and acted upon when developing their marketing strategy. Therefore, since a competitive rumor that has the ability to makes sense of the uncertainty in the environment describes a competitive action that marketing managers perceive as likely to occur, marketing managers will find that it is necessary to respond. Thus, it is hypothesized that:

H_2: Marketing managers are more likely to respond to competitive rumors that have a charge with a superior ability to make sense of the uncertainty in the environment than to competitive rumors that have a charge with an inferior ability to make sense of the uncertainty in the environment.

Competitive rumors that develop within the uncertain environment are often considered to not be simultaneously from a highly credible source and have a charge with the ability make sense of uncertainty. Rather, a tradeoff exists between competitive rumors that are highly credible but do not have the ability make sense of the uncertainty and competitive rumors that do have the ability to make sense of uncertainty but are not highly credible. When selecting which information to use within their decision making,

it had been consistently concluded that a high level of perceived credibility was critical to marketing managers; alternatively, whereas it has been suggested that for marketing managers the relevance of information to the current situation may be more important than its credibility (Menon and Varadarajan 1992). This tradeoff is proposed to occur because relevant information, which makes sense of the uncertainty in the environment, provides individuals with a rationale for making decisions. Previous research on the impact of financial rumors lends support to this supposition as it has been empirically shown that individuals do often trade credibility for information that provides a causal story for what is happening in their environment (i.e., ability to make sense) (Nelson et al. 2001), leading to the conclusion that for rumors to powerfully affect decision making in regard to the reactions that they bring forth, rumors "do not have to be believed or trusted," (e.g., be credible) but rather "they simply have to make sense" (DiFonzo and Bordia 1997, p. 346). Therefore, since it provides the rationale for their marketing strategy decisions, marketing managers will trade credibility for the ability of the competitive rumor to make sense of uncertainty in the environment when responding to competitive rumors. Thus, it is hypothesized that:

H_3: Marketing managers are more likely to respond to competitive rumors that have a charge with a superior ability to make sense of the uncertainty in the environment but are from a source with a low-level of credibility than competitive rumors that are from a source with a high-level of credibility but have a charge with an inferior ability to make sense of the uncertainty in the environment.

Competitive rumors emerge describing a variety of targets, where a significant factor is the degree to which the target firm is identified as a major competitor, for it influences whether a marketing manager deems it necessary to monitor a firm's

competitive behavior (Porac and Rosa 1996). Since major competitors have a substantial market presence (e.g., more resources, market share, and market influence) and their actions will be reported more frequently on by the press, marketing managers are more likely to monitor major competitors when developing their marketing strategies (Clark and Montgomery 1999). Utilizing the behavioral heuristic of representativeness, due to the important role that the major competitor represents to the environment, marketing managers will evaluate information pertaining to the actions of major competitors as having a stronger correspondence with the competitive environment within which they operate and be more representative of the future direction of the industry. Once a marketing manager perceives the target of the competitive rumor to be a major competitor, the uncertain information contained within the rumor becomes worthy of being believed, accepted and acted upon when developing their marketing strategy. Therefore, since a competitive rumor with a major competitor as a target describes a competitive action that marketing managers perceive as likely to occur, marketing managers will find that it is necessary to respond. Thus, it is hypothesized that:

H_4: Marketing managers are more likely to respond to competitive rumors that have a major competitor as the target than to competitive rumors that have a minor competitor as the target.

Competitive rumors develop to provide explanations that make sense of the uncertainty in the environment pertaining to the actions to be taken by competitors; however, a tradeoff once again exists depending not only on the credibility of the competitive rumor and the ability of the competitive rumor to make sense of uncertainty in the environment, but also on the competitor described as the target of the competitive rumor. When selecting which information to use within their decision making, marketing

managers will find it necessary to respond to competitive rumors that involve a major competitor but come from a source with a low-level of credibility and have an inferior ability to make sense of uncertainty over those that involve only a minor competitor but come from a highly credible source and have a superior ability to make sense of uncertainty. This tradeoff is proposed to occur because information on major competitors provides marketing managers with better insight into what they perceive to be the significant competitive threats facing the firm as well as insight into the future direction of the industry. Utilizing the behavioral heuristic of availability, marketing managers are able to more easily imagine the competitive rumor occurring, regardless of the rumor's credibility and sense-making ability, because of the significant threat that the major competitor represents to the firm. Therefore, since it provides insight into threats in and the future of the competitive environment, marketing managers will trade credibility and the ability of the competitive rumor to make sense of uncertainty in the environment for the degree of competitor when responding to competitive rumors. Thus, it is hypothesized that:

H_5: Marketing managers are more likely to respond to competitive rumors that are from a source with a low-level of credibility and have a charge with an inferior ability to make sense of the uncertainty in the environment but focus on a major competitor than to competitive rumors that are from a source with a high-level of credibility and have a charge with a superior ability to make sense of the uncertainty in the environment but focus on a minor competitor.

Altering the Direction of Marketing Strategy

Although Allport and Postman (1947, p.148) advised "that it is never under any circumstances safe to accept a rumor as a valid guide for belief or conduct", decision makers, nonetheless, still act upon the competitive rumors that develop within the

marketplace. Due to the need for certainty, marketing managers will integrate the information from competitive rumors into their decision making to determine the strategic marketing direction of their firm during situations of uncertainty. Specifically, rumors have repeatedly been shown to have a significant influence on more than the decision making ability of individuals in terms of changing their beliefs and expectations for the future, but also in terms of altering their long-term strategy (Difonzo and Bordia 2002). For example, in the context of financial trading, by overweighting the influence of rumors into their decision making, individuals alter their long-term strategy when making their trading decisions and consequently lowering their financial welfare (Nelson et al. 2001). Hence, it is likely that marketing managers, much like financial traders, may also react by overweighting the importance of competitive rumors by integrating the information they contain into their marketing strategy decision making, leading a marketing manager to alter their strategic direction. Thus, it is hypothesized that:

H_6: Marketing managers will make changes to the direction of their marketing strategy in reaction to competitive rumors.

Similar to their ability to affect a marketing manager's marketing strategy decision making when the truth of it is unknown, competitive rumors should also have an effect on decision making when its lack of truth is revealed. Competitive rumors which have influenced the decisions of a marketing manager and that are later officially disconfirmed should influence the manager's subsequent reevaluations of their decisions made regarding changes to their marketing strategy. Specifically, as changes to the strategic marketing direction were made under conditions of uncertainty, when new information becomes available to assist in reevaluating their decision (e.g., the

competitive rumor was confirmed to be false), marketing managers will demonstrate an "escalation of commitment" by choosing to persist with their prior decision (Biyalogorsky, Boulding, and Staelin 2006). This occurs because marketing managers are influenced by sunk costs in their decision making and they do not want to appear to be wasteful by abandoning the investment of resources (e.g., money, time, and effort) to make changes to their strategic marketing direction (Arkes and Blumer 2000). Furthermore, managers as decision makers exhibit a need to be psychologically consistent as demonstrated by the tendency for managers to "make decisions to justify their earlier charted directions" (Despande and Gatignon 1994, p 278-9). Thus, it is hypothesized that:

H_7: Marketing managers will remain committed to the changes made to the direction of their marketing strategy when the competitive rumor is confirmed to be false.

METHOD

Rationale for Research Design Selection

To examine how marketing managers incorporate competitive rumors into their marketing strategy decision making, a two-stage longitudinal experimental design was selected as the appropriate research design. This research design was selected based upon the successful employment of experimental designs in previous examinations of the influence of rumors and on the incorporation of information within marketing strategy decision making (e.g., DiFonzo and Bordia 2002; Jaeger, Anthony, and Rosnow 1980; Mittal, Ross, and Tsiros 2002; Tybout, Calder, and Sternthal 1981). Moreover, this specific experimental design provides the ability to first manipulate the three main information components of a rumor (e.g., the source, the charge, and the target) and then

to manipulate the confirmation of the competitive rumor (e.g., true or false) in order to examine the influence of the different facets of competitive rumors on the likelihood of marketing managers to respond and the nature of their marketing strategy response.

Experimental Design

The two-stage longitudinal experimental design utilized a 2 x 2 x 2 factor between-subjects design followed by a 1 factor between subjects design. In Stage 1, participants were randomly assigned to one of eight experimental scenarios where the three main information components of the competitive rumor were manipulated. The manipulated factors were: (1) the credibility of the competitive rumor (high vs. low), which was manipulated via the source of the competitive rumor; (2) the ability of the competitive rumor to make sense of the uncertainty in the environment (high vs. low), which was manipulated via the charge of the competitive rumor; and (3) the competitor described within the competitive rumor (major vs. minor), which was manipulated via the target of the competitive rumor. In Stage 2, participants within each of the eight experimental scenarios were then randomly assigned to one of two experimental scenarios where the validity of the competitive rumor was manipulated via an official announcement by the competitor confirming or denying the competitive rumor. Four pretests were conducted to develop the manipulations for the experimental scenarios. The experimental scenarios for Stage 1 and Stage 2 developed as a result of the four pretests are presented in Appendix 1.1.

Pretest 1

The purpose of Pretest 1 was to determine the three main information components of a competitive rumor (e.g., source, charge, and target) with respect to (1) the level of credibility of an information source, (2) the ability of a potential marketing action to make sense of uncertainty in the competitive environment, and (3) the distinctions between the competitors described. Fifty-eight undergraduate marketing majors served as participants in Pretest 1. Each participant, on a pen and paper questionnaire, evaluated a series of possible sources based upon their level of credibility, a series of possible marketing actions based upon the level of insight it would provide to the uncertainty in the environment, and a series of possible competitor descriptions based upon the degree to which they would be viewed as a major or minor competitor. For each item evaluated, a simple mean was calculated. To compare the differences between the items evaluated, a paired-difference t-test with a Bonferonni adjustment was calculated. The results of Pretest 1 are provided in Appendix 1.2.

Based on the results of Pretest 1, the following information components of the competitive rumor were selected. For the source of the competitive rumor, an industry research analyst (M = 6.08) was selected as the source that possesses a high level of credibility and an industry blogger (M = 3.69) was selected as the source that possesses a low level of credibility. The difference in level of credibility between an industry research analyst and an industry blogger represents the largest significant difference between independent third party sources as is demonstrated by the paired means difference test (M = 2.390, SD = 1.377, $t_{BONF} = 3.189$, $t_{CALC} = 13.327$, p). For the charge of the competitive rumor, the introduction of a new product to the market (M =

5.12) was selected as the marketing action by a competitor that provided the most insight and had the ability to make sense of the uncertainty existing in the competitive environment. For the target of the competitive rumor, the direct description of the competition was selected, where the competing company will either be described as a major competitor (M = 6.66) or a minor competitor (M = 1.59). The difference between the direct description of major and minor competitor represents the largest significant difference in level of competitor as is demonstrated by the paired means difference test (M = 5.068, SD = 1.883, $t_{BONF} = 2.734$, $t_{CALC} = 20.669$, $p < .001$).

Pretest 2

The purpose of Pretest 2 was to evaluate the experimental background and manipulations developed and the Stage 1 and Stage 2 dependent measures selected for this experimental design. Based upon the results of Pretest 1, it was necessary to select a background context for the experiment where (1) the competitive environment is highly technologically uncertain and the introduction of a new product to the market is likely, (2) the competitive environment has a series of different individuals following its development (i.e., industry research analysts and industry bloggers), and (3) there is a mix of major and minor competitors within the environment. The netbook category within the personal computing industry was selected as an appropriate background. With respect to the manipulation of the ability of the charge to make sense of the uncertainty in the competitive environment, three different manipulations regarding the introduction of a new product to the netbook market were developed and assessed within this pretest. One hundred and twenty-four undergraduate marketing majors served as participants in

Pretest 2. Each participant was presented with the full two-stage longitudinal experimental design as a pen and paper questionnaire, where participants evaluated the Stage 1 and Stage 2 dependent variables based upon their randomly assigned Stage 1 and Stage 2 manipulations. The results of Pretest 2 allowed for the background description of the netbook category and the experimental manipulation that was evaluated to make the most sense of uncertainty (M = 4.667) to be further refined.

Pretest 3

The purpose of Pretest 3 was to identify any final refinements that need to be made to the experimental design and/or experimental procedure with respect to (1) the background developed for the experimental design, (2) the experimental manipulations, and (3) the dependent variables for Stage 1 and Stage 2. Further, conducting Pretest 3 as an online questionnaire allowed for any issues that may arise when conducting the experimental study online to be uncovered. One hundred and fourteen undergraduate marketing majors served as participants in Pretest 3. Each participant was presented with the full two-stage longitudinal experimental design as an online questionnaire, where participants evaluated the Stage 1 and Stage 2 dependent variables based upon their randomly assigned Stage 1 and Stage 2 manipulations.

Based upon the results of Pretest 3, some refinements were made to the experimental design and experimental procedure. First, the manipulation of the ability of the charge to make sense of uncertainty was refined after the manipulation check for the charge ($F_{1, 112} = 0.221, p = .639$) indicated that there no significant difference between the high make sense marketing action (M = 4.561) and the low make sense marketing

action (M = 4.456). The remaining manipulations for the source ($F_{1, 112} = 39.721, p < .001$, $M_{HIGH} = 5.193$ vs. $M_{LOW} = 3.536$), the target ($F_{1, 111} = 39.428, p < .001$, $M_{MAJOR} = 5.643$ vs. $M_{MINOR} = 3.579$), and confirmation ($F_{1, 111} = 119.940, p < .001$, $M_{FALSE} = 5.357$ vs. $M_{TRUE} = 2.193$) were all successful. Second, in order to improve the clarity of and the ease with which the experimental design was administered, small changes to the background description (i.e., wording) and to the dependent variables (i.e., format) were made and the flow of the experimental procedure (i.e., breaks between pages) was refined based upon observing the experience of the participants using the online questionnaire.

Pretest 4

The purpose of Pretest 4 was to confirm the differences between the manipulations developed for a high and low ability of a marketing action to make sense of uncertainty in the competitive environment based upon Pretest 3. Twenty undergraduate marketing majors served as participants in Pretest 4. Each participant, using a pen and paper questionnaire, was presented with three descriptions of a possible new product introduction in randomized order (i.e., the high sense manipulation, the low sense manipulation, and a mid-level sense manipulation). Each description was evaluated by participants based upon its' plausibility in connection to the competitive environment. As demonstrated by the paired means difference test with Bonferroni adjustment ($M = 1.250$, $SD = 2.245$, $t_{BONF} = 2.394$, $t_{CALC} = 2.490$, $p = .022$), there a significant difference between the high manipulation (M = 4.95) and the low manipulation (M = 3.7) in their ability to make sense of the environment.

Experimental Procedure

Within this experimental design, participants assumed the role of Vice President of Marketing for Barrington Corporation[3] whose responsibilities include the development and implementation of Barrington's marketing strategy. A description of the general characteristics and original marketing strategy of Barrington Corporation as well as the general characteristics and the uncertainty existing within the competitive environment was first provided to participants. Directly following this description, the randomly assigned Stage 1 competitive rumor manipulations regarding Lazzard Incorporation, a competitor of Barrington Corporation, was presented and participants then evaluated the set of Stage 1 dependent variables. After completing Stage 1, participants completed an unrelated filler task[4] in order to create a time lag between Stage 1 and Stage 2. Stage 2 of the experimental design begins when participants were informed that six months have passed and Barrington Corporation had begun to implement the strategic marketing decisions that they had made. The randomly assigned Stage 2 confirmation manipulations were then presented and participants evaluated the set of Stage 2 dependent variables and the manipulation checks. The experimental procedure is presented in Appendix 1.3.

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[3] Both firms used in this experimental design, Barrington Corporation and its competitor Lazzard Incorporated, are hypothetical. Hypothetical firms were used in order to limit any extraneous influence that prior beliefs of an existing firm's marketing strategy and/or marketing actions could have on the decision making of the participants. Further, both firm names have been used in prior research and respondents have been found to have no significant difference in preference based on name alone (Desai, Kalra, and Murthi 2008).

[4] The filler task took approximately five minutes to complete and required participants to evaluate their level of agreement with a series of items pertaining to general beliefs that were unrelated to the experimental scenario.

Experimental Study

Participants, Design, and Procedure

A market research firm was employed to administer the two-stage longitudinal experimental design. The market research firm used their proprietary online panel to contact potential participants. In order to ensure the appropriateness of the participants, participants were screened based upon their functional role (i.e., marketing), their job title (i.e., manager and above), and firm size (i.e., 50 employees and above). Participants, who fit each of the screening criteria, were then allowed to proceed to the experiment. Participants in this experimental study were 339 marketing managers[5] from the United States. Participants were randomly assigned to one of the eight possible experimental scenarios in Stage 1 (i.e., the credibility of the source (high vs. low), the ability of the charge to make sense (high vs. low), and the competitor described as the target (major vs. minor) and to one of the two possible experimental scenarios in Stage 2 (i.e., the confirmation of the competitive rumor (true vs. false). Within the experiment, participants were instructed to assume the role of Vice President of Marketing whose responsibilities include the development and implementation of a marketing strategy and make a series of decisions based upon the information provided. Participants took on average 26.5 minutes to complete the experimental study.

[5] By utilizing marketing managers as participants, the external validity of the experimental results will be increased and a key limitation of utilizing undergraduate students as decision makers suffered by many marketing strategy decision making studies will be avoided (Mittal et al. 2002).

Measures

The description of the items and response formats of the dependent measures and the manipulation checks for Stage 1 and Stage 2 are presented in Appendix 1.4.

Stage 1 Dependent Measures. Participants evaluated their likelihood to respond to the competitive information and the marketing strategy to be pursued after the Stage 1 competitive rumor manipulations. The likelihood to respond to competitive information was measured with the average of two items evaluated on a seven-point scale, ranging from "very unlikely" (1) to "very likely" (7), with an undecided point in the middle (4). The marketing strategy to be pursued was measured with a forced choice question that includes the options of (1) Continue the introduction of the netbook as originally planned (i.e., Do Not Change Marketing Strategy), (2) Introduce the netbook with minor modifications (i.e., Change Marketing Strategy/Minor Change), (3) Introduce the netbook with major modifications (i.e., Change Marketing Strategy/Major Change), (4) Delay the introduction of the netbook until more information is available (i.e., Change Marketing Strategy/Delay Strategy), and (5) Drop the introduction of the netbook (i.e., Change Marketing Strategy/Abandon Strategy).

Stage 2 Dependent Measures. Participants evaluated the marketing strategy to be pursued in relation to their Stage 1 decisions and the Stage 2 competitive rumor manipulations. The marketing strategy to be pursued was measured with a forced choice question that includes the options of (1) Continue the introduction of the netbook as originally planned, (2) Continue the introduction of the netbook as recommended six months ago, (3) Introduce the netbook with minor modifications, (4) Introduce the netbook with major modifications, (5) Delay the introduction of the netbook until more

information is available, and (6) Drop the introduction of the netbook. Based upon their response to the Stage 2 marketing strategy decision, respondents who have indicated that they would change their strategy based upon their Stage 1 marketing strategy decision can be classified as (1) Revert to Original (i.e., Option 1); (2) Maintain Change (i.e, Option 2); (3) Escalate Change (i.e., Option 3 and 4); and (4) Delay Change (i.e., Option 5).

Control Variables. To control for individual factors that might influence the decision making of participants, four control variables were included: (1) Gender (i.e., male or female); (2) Highest degree achieved (i.e., no degree, high school, associates, bachelors, masters, or doctorate); (3) Decision authority (i.e. the authority to make decisions similar to those in the experimental scenario); and (4) Years of experience.

Manipulation Checks. After completing the dependent variables for Stage 1 and Stage 2, participants responded to four seven-point manipulation checks. Participants first evaluated the three manipulations from Stage 1 regarding the level of credibility for the source of the initial competitive information ("low/high"), the level of plausibility of the product description of the initial competitive information ("low/high"), and the degree to which the firm identified within the initial competitive information was a competitor ("minor/major"). Participants then evaluated the Stage 2 manipulation regarding the confirmation of the initial competitive information by the competitor ("confirmed/denied").

Manipulation Checks

The results of the manipulation checks confirmed the successful manipulation of each of the factors. Specifically, significant differences were found for the Stage 1 manipulations of (1) the credibility of the source of the competitive rumor ($F_{1, 338} = 8.023$, $p = .005$, $M_{HIGH} = 4.60$ vs. $M_{LOW} = 4.16$); (2) the ability of the charge of the competitive to make sense of uncertainty existing in the environment ($F_{1, 338} = 15.358$, $< .001$, $M_{HIGH} = 4.65$ vs. $M_{LOW} = 4.14$); (3) the degree of competitor described by the target of the competitive rumor ($F_{1, 338} = 135.065$, $p < .001$, $M_{MAJOR} = 5.33$ vs. $M_{MINOR} = 3.26$). The manipulation check for the Stage 2 factor of confirmation of the competitive rumor was also successful ($F_{1, 338} = 226.865$, $p < .001$, $M_{FALSE} = 5.11$ vs. $M_{TRUE} = 2.61$).

RESULTS

Marketing Strategy Reactions to Competitive Rumors

The first set of hypotheses (H_1 to H_5) focused on the influence of a competitive rumor on marketing strategy decision making with respect to the likelihood of a marketing manager to respond. To test the relationship between how the information contained within a competitive rumor (i.e., the source, the charge, and the target) is evaluated and the likelihood of a marketing manager to respond, a 2 x 2 x 2 ANCOVA was conducted.[6] The results of the three-way ANCOVA analysis with interactions are presented in Table

[6] Years Experience is a continuous variable and was entered in the ANCOVA as a covariate. However, since Gender, Degree Achieved, and Decision Authority are categorical variables, to include each of these variables as covariates they were each entered in the ANCOVA as factors

1.1. The cell means of the eight different competitive rumor scenarios are presented in Table 1.2.

Table 1.1: Likelihood to Respond to Competitive Rumors ANCOVA Results

Factor	F-value	Significance Level	Observed Power
Credibility	4.917	.027	.599
Ability to Makes Sense	0.468	.494	.105
Competitor	3.929	.048	.507
Credibility * Makes Sense	0.175	.676	.070
Credibility * Competitor	0.648	.421	.126
Makes Sense * Competitor	0.109	.742	.062
Credibility * Makes Sense * Competitor	1.005	.317	.170
Covariates			
Gender	1.024	.312	.172
Degree Achieved	0.215	.956	.102
Decision Authority	0.129	.719	.065
Years Experience	0.669	.414	.129

Table 1.2: Likelihood to Respond to Competitive Rumors Marginal Mean Values

Competitive Rumor Information Component			Likelihood to Respond[a]
Source	***Charge***	***Target***	
High Credibility	High Ability to Make Sense	Major Competitor	5.885[b]
		Minor Competitor	5.904[c]
	Low Ability to Make Sense	Major Competitor	6.014[d]
		Minor Competitor	5.710[d]
Low Credibility	High Ability to Make Sense	Major Competitor	5.886[e]
		Minor Competitor	5.466[f]
	Low Ability to Make Sense	Major Competitor	5.669[f]
		Minor Competitor	5.414[g]

[a] Marginal means are estimated at the Years Experience covariate average of 19.19
[b] n = 46; [c] n = 43; [d] n = 42; [e] n = 44; [f] n = 41; [g] n = 40

In H_1, it was predicted that marketing managers are more likely to respond to competitive rumors that are from a source with a high-level of credibility than to

competitive rumors that are from a source with a low-level of credibility. The main effect of source credibility on the marketing manager's likelihood to respond was significant ($F_{1, 339} = 4.917, p = .027$; $M_{HIGH} = 5.878 > M_{LOW} = 5.609$). Thus, H_1 is supported.

In H_2, it was predicted that marketing managers are more likely to respond to competitive rumors that have a charge with a superior ability to make sense of the uncertainty in the environment than to competitive rumors that have a charge with an inferior ability to make sense of the uncertainty in the environment. The main effect of the charge's ability to make sense of uncertainty on the marketing manager's likelihood to respond was non-significant ($F_{1, 339} = 0.468, p = .494$; $M_{HIGH} = 5.785$ vs. $M_{LOW} = 5.702$). Thus, H_2 is not supported.

In H_3, it was predicted that marketing managers are more likely to respond to competitive rumors that have a charge with a superior ability to make sense of the uncertainty in the environment but are from a source with a low-level of credibility than competitive rumors that are from a source with a high-level of credibility but have a charge with an inferior ability to make sense of the uncertainty in the environment. The two-way interaction effect between the source credibility and the charge's ability to make sense of uncertainty on the marketing manager's likelihood to respond was non-significant ($F_{1, 339} = 0.175, p = .676$; $M_{LOW/HIGH} = 5.862$ vs. $M_{HIGH/LOW} = 5.676$). Thus, H_3 is not supported.

In H_4, it was predicted that marketing managers are more likely to respond to competitive rumors that have a major competitor as the target than to competitive rumors

that have a minor competitor as the target. The main effect of the degree of competitor described within the target on the marketing manager's likelihood to respond was significant ($F_{1, 339} = 3.929, p = .048$; $M_{MAJOR} = 5.863 > M_{MINOR} = 5.623$). Thus, H_4 is supported.

In H_5, it was predicted that marketing managers are more likely to respond to competitive rumors that are from a source with a low-level of credibility and have a charge with an inferior ability to make sense of the uncertainty in the environment but focus on a major competitor than to competitive rumors that are from a source with a high-level of credibility and have a charge with a superior ability to make sense of the uncertainty in the environment but focus on a minor competitor. The three-way interaction effect between the source credibility, the charge's ability to make sense of uncertainty, and the degree of competitor described within the target on the marketing manager's likelihood to respond was non-significant ($F_{1, 339} = 1.005, p = .317$; $M_{LOW/LOW/MAJOR} = 5.669$ vs. $M_{HIGH/HIGH/MINOR} = 5.904$). Thus, H_5 is not supported.

Altering the Direction of Marketing Strategy

The second set of hypotheses (H_6 and H_7) focused on the influence of a competitive rumor on marketing strategy decision making with respect to changes that marketing managers make to their firm's marketing strategy. To test the relationship between competitive rumors and the changes made to the direction of their marketing strategy by marketing managers, a chi-square goodness of fit analysis was conducted.

In H_6, it was predicted that marketing managers will make changes to the direction of their marketing strategy in reaction to competitive rumors. The results of chi-square goodness of fit analysis after the introduction of the competitive rumor in Stage 1 are presented in Table 1.3.

Table 1.3: Changes to Marketing Strategy Based on Competitive Rumors

	Do Not Change Marketing Strategy	Change Marketing Strategy	Total
All Competitive Rumor Scenarios	3.8% (13)	96.2% (326)	100% (339)
Statistical Testing:			
χ^2 Test for Expected Proportions[a]	$\chi^2(1) = 1.063E9$	$p < .001$	
χ^2 Test for Equal Proportions[b]	$\chi^2(1) = 55.366$	$p < .001$	

[a] It was necessary to set the expected values to 338.9999 for the "Do Not Change Strategy" category and 0.0001 for the "Change Strategy" category for calculation purposes.
[b] As there are four specific options for the "Change Strategy" category, the expected valuate is equal to 80% of the observations. The expected value for the "Do Not Change Strategy" category is equal to 20% of the observations.

The chi-square goodness of fit test for the expectation that all marketing mangers would not change the direction of their firm's marketing strategy was significant ($\chi^2_1 = 1.063E9, p < .001$), indicating that not all marketing managers remained committed to their firm's original marketing strategy. The chi-square goodness of fit test for equal probabilities was significant ($\chi^2_1 = 55.366, p < .001$), indicating that the distribution of the changes made to their marketing strategy is not equivalent to random selection. Further, the percentage of marketing managers indicating changing the direction of their marketing strategy (96.2%) is greater than the percentage of marketing managers indicating not changing their marketing strategy direction (3.8%). Thus, H_6 is supported.

To get a better understanding of the changes that marketing managers make to the direction of their firm's marketing strategy in reaction to competitive rumors, subsequent analyses were conducted to examine the extent of the change made and which information components of the competitive rumors have the greatest influence on the extent to which changes were made. To examine more fully the extent of changes made to the direction of their marketing strategy, the "Change Marketing Strategy" was broken down into its specific categories. Marketing managers indicated that they would make minor changes to their marketing strategy, major changes to their marketing strategy, delay their marketing strategy, and to abandon their marketing strategy all together. After testing that the distribution of the changes made to their marketing strategy was not equivalent to random selection as indicated by the significant chi-square goodness of fit test for equal proportions ($\chi^2_4 = 468.035, p < .001$), it was found that the majority of marketing managers that changed the direction of their marketing strategy indicated that they would make minor changes (62.2%), followed by those who would make major changes (29.2%). The results of the extent of changes made to marketing strategy and chi-square goodness of fit analysis are presented in Table 1.4.

Table 1.4: Extent of Changes Made Based on Competitive Rumors

	Maintain Strategy	Minor Changes	Major Changes	Delay Strategy	Abandon Strategy	Total
Competitive Rumors	3.8% (13)	62.2% (211)	29.2% (99)	4.4% (15)	0.3% (1)	100% (339)
Statistical Testing:						
χ^2 Test for Expected Proportions[a]			$\chi^2(4) = 5.455E8$		$p < .001$	
χ^2 Test for Equal Proportions[b]			$\chi^2(4) = 468.035$		$p < .001$	

[a] It was necessary to set the expected values to 338.9996 for the "Maintain Strategy" category and 0.0001 for each of the other categories for calculation purposes.
[b] The expected value for each category is equal to 20% of the observations.

To examine more fully which information components of the competitive rumors have the greatest influence on the extent of changes made to the direction of their marketing strategy, a multinomial logistic regression with interaction effects was estimated. Three outcomes of possible changes to their marketing strategy were examined: (1) Maintain Strategy (n = 13), (2) Minor Changes to Strategy (n = 211), and (3) Major Changes to Strategy (n = 99). These three outcomes were specifically selected to be able to examine what would likely cause a marketing manager to make minor changes from their original marketing strategy, to make major changes from their original marketing strategy, and to make major changes compared with minor changes from their original marketing strategy. The backward elimination stepwise method was utilized to remove insignificant interaction effects from the three-way interaction effect.[7] The

[7] Two interaction effects were removed from the model following this procedure. The three-way interaction between credibility, sense, and competitor information components was removed first and the two-way interaction between credibility and competitor information components was removed second.

results[8] of the multinomial logistic regression with interactions are presented in Table 1.5.

Table 1.5: Changes to Marketing Strategy Multinomial Logistic Regression Results

Comparison	Predictor	β	e^{β}	*p*-value
Minor Change vs. Maintain Strategy	Competitor	0.813	2.255	.489
	Credibility	0.939	2.556	.425
	Sense	1.177	3.246	.283
	Sense * Competitor	-2.027	0.132	.158
	Credibility * Sense	-1.554	0.211	.262
	Intercept	2.552		<.001
Major Change vs. Maintain Strategy	Competitor	1.633	5.119	.171
	Credibility	1.563	4.772	.191
	Sense	1.478	4.384	.196
	Sense * Competitor	-2.783	0.065	.059
	Credibility * Sense	-2.438	0.087	.087
	Intercept	1.311		.066
Major Change vs. Minor Change	Competitor	0.820	2.270	.019
	Credibility	0.624	1.867	.073
	Sense	0.301	1.351	.504
	Sense * Competitor	-0.756	0.470	.131
	Credibility * Sense	-0.884	0.413	.078
	Intercept	-1.241		<.001
Overall Goodness of Fit: -2 Log Likelihood = 49.714. p = .019				

When examining the information components of competitive rumors that increase the likelihood of marketing managers making a major change instead of maintaining their original marketing strategy, the results demonstrate a significant interaction effect between the ability of the charge to make sense and the credibility of the source as well as the ability of the charge to make sense and the competitor described within the rumor. The interaction odds/odds ratios for the likelihood of marketing managers making a

[8] Due to the exploratory nature of this supplemental analysis, results that are significant at the $p < .10$ were examined more closely.

major change compared with maintaining their original marketing strategy are presented in Table 1.6.

Table 1.6: Interaction Odds/Odds Ratios for Major Change vs. Maintain Strategy

Odds							
		Credibility				Sense	
		High	Low			High	Low
Sense	High	6.780	16.265	Competitor	High	5.150	18.992
	Low	17.708	3.710		Low	16.265	3.710
	Odds Ratio	0.383	4.384		**Odds Ratio**	0.317	5.119

First, the significant interaction effect between sense and credibility indicates that, given that the source of the competitive rumor has a low level of credibility, marketing managers are more likely to make major changes than maintain their original marketing strategy when the charge of the competitive rumor has a superior ability makes sense. Moreover, if the source has a high level of credibility, marketing managers will be more likely to make major changes when the ability of the charge to make sense is low. Second, the significant interaction effect between sense and competitor indicates that, given that a competitive rumor with a charge that has a low ability to make sense, marketing managers are more likely to make major changes than maintain their original marketing strategy when the target competitor is described as a major competitor; whereas when the competitor described is a minor competitor marketing managers will be more likely to make major changes if the charge makes a high level of sense.

Further, when examining the information components of competitive rumors that increase the likelihood of marketing managers to make a major change over making a minor change to their original marketing strategy, the results demonstrate a significant interaction effect between the ability of the charge to make sense and the credibility of

the source as well as the significant influence of the competitor described within the rumor. The interaction odds/odds ratios for the likelihood of marketing managers making a major change compared with making a minor change to their original marketing strategy are presented in Table 1.7.

Table 1.7: Interaction Odds/Odds Ratios for Major Change vs. Minor Change

Odds			
		Credibility	
		High	Low
Sense	High	0.301	0.391
	Low	0.540	0.289
	Odds Ratio	0.558	1.351

First, the significant interaction effect between sense and credibility indicates that, given that the source of the competitive rumor has a low level of credibility, marketing managers are more likely to make major changes than minor changes to their original marketing strategy when the charge of the competitive rumor makes sense. Moreover, if the source has a high level of credibility, marketing managers will be more likely to make major changes when the ability of the charge to make sense is low. Second, the significant effect of the competitor (i.e., the target information component) indicates that, given the conditions where the credibility of the sources is low and the ability of the charge to make sense is low, marketing managers are more likely to make major changes than minor changes to their original marketing strategy when the competitive rumor describes a major competitor.

In H_7, it was predicted that marketing managers will remain committed to the changes made to the direction of their marketing strategy when the competitive rumor is confirmed to be false. The results of the marketing strategy decisions to the changes

made after the confirmation of the competitive rumor in Stage 2 are presented in Table 1.8.

Table 1.8: Changes Based on the Confirmation of Competitive Rumors

	Revert to Original	Maintain Change	Escalate Change	Delay Change	Total
False Competitive Rumor Scenarios	10.7% (17)	49.7% (79)	39.0% (62)	0.6% (1)	100% (159)
True Competitive Rumor Scenarios	4.8% (8)	44.3% (74)	50.3% (84)	0.6% (1)	100% (167)
Total	7.7% (25)	46.9% (153)	44.8% (146)	0.6% (2)	100% (326)
Statistical Testing:					
False: χ^2 Test for Expected Proportions[a]		χ^2 (3) = 4.134E7		$p < .001$	
False: χ^2 Test for Equal Proportions[b]		χ^2 (3) = 102.006		$p < .001$	
True: χ^2 Test for Expected Proportions[c]		χ^2 (3) = 7.121E7		$p < .001$	
True: χ^2 Test for Equal Proportions[b]		χ^2 (3) = 134.725		$p < .001$	
False vs. True: χ^2 Test for Equality in Proportions		χ^2 (3) = 6.526		$p = .089$	

[a] It was necessary to set the expected values to 158.9997 for the "Maintain Change" category and 0.0001 for each of the other categories for calculation purposes.
[b] The expected value for each category is equal to 25% of the observations.
[c] It was necessary to set the expected values to 166.9997 for the "Maintain Change" category and 0.0001 for each of the other categories for calculation purposes.

The chi-square goodness of fit test for equal probabilities was significant (χ^2_3 = 102.006, $p < .001$), indicating that the distribution of the marketing strategy decisions after the rumor was confirmed to be false is not equivalent to random selection. The chi-square goodness of fit test for the expectation that all marketing managers who had changed their strategy would remain committed to the changes after the competitive

rumor was confirmed to be false was significant ($\chi^2_3 = 4.134E7, p < .001$), indicating that not all marketing managers remained committed to their changes. However, the percentage of marketing managers indicating that they will remain committed to the changes made to the direction of their marketing strategy when the competitive rumor is confirmed to be false was the largest (49.7%) followed by the percentage of marketing managers who would escalate changes to their marketing strategy (39.0%). Thus, H_7 is not supported.

To get a better understanding of how marketing managers react to the changes in the direction of marketing strategy when the competitive rumor is confirmed to be false compared with when the competitive rumor is confirmed to be true, a subsequent analysis was conducted to examine if any similarities exist in response. The chi-square test for equality of proportions the response of marketing managers who had changed their marketing strategy between competitive rumors that are confirmed to be false and to be true was non-significant ($\chi^2_3 = 6.526, p = .089$). This indicates that the proportion of each of the possible responses with respect to the change in marketing strategy direction is the same whether the competitive rumor was confirmed to be true or false.

DISCUSSION

The purpose of this research was to examine how marketing managers incorporate rumors about competitors' future strategic marketing actions when developing their own marketing strategies. An integrated conceptual framework focused on how the evaluation of the information contained within competitive rumors influenced the strategic response of marketing managers was empirically examined within a two-stage longitudinal

experimental design. The findings provide a number of interesting insights of both theoretical and managerial importance for those interested in marketing strategy decision making.

Theoretical Implications

Although Allport and Postman (1947, p.148) advised "that it is never under any circumstances safe to accept a rumor as a valid guide for belief or conduct," this research indicates that marketing managers, nonetheless, overwhelmingly respond to competitive rumors within their marketing strategy decision making. Specifically, marketing managers indicated a high likelihood of responding to the competitive rumor within their marketing strategy ($M_{GRAND} = 5.80$ out of 7.00), regardless of evaluating any of the information components contained within the competitive rumor. Theoretically, this result indicates that the natural desire for individuals to seek any information that provides meaningful explanations for what events will likely occur in the uncertain future overrides the need for verified information, even for marketing managers when developing their firm's marketing strategy in an uncertain competitive environment. It is, however, understandable for this reaction to occur as the explicit intention of a rumor is for the information it contains to be believed and acted upon by decision makers, as the implication of any rumor is that it communicates some truth (DiFonzio and Bordia 2002).

Interestingly, when evaluating the information components of the competitive rumor to determine their likelihood to respond to the rumor, marketing managers determine that the actions described are not as important as from whom the rumor is heard and to whom the rumor refers. Whereas the results indicate that the description of

the actions, or the ability of the charge to make sense of the uncertainty, has a non-significant effect, both of the other two information components of the competitive rumor, the source and the target, have a direct effect. The results further indicate that there are no significant interaction effects between any of the three information components on the likelihood to respond. Taken together, these results demonstrate the importance that the behavioral heuristic of representativeness has for marketing managers when evaluating competitive rumors. Under behavioral decision theory, the representativeness heuristic focuses on the ability of the characteristics of information to correspond to those characteristics that are typical to a given set of objects (Tversky and Kahneman 1974). In this context, marketing managers rely on their perception of the representativeness of the source and the target competitor described to determine whether it is appropriate to respond within their decision making. Specifically, marketing managers are more likely to respond to a competitive rumor if the source from which it comes has a high level of perceived credibility as well as if the target described is a major competitor. Further, when relying on behavioral heuristics in evaluating the source and the target of the competitive rumor, representativeness is so critical for marketing managers that they are unwilling to make any trade-offs on this subjective evaluation with other heuristics, such as availability, for determining the appropriateness of incorporating the information within their marketing strategy decision making.

More than just incorporating the competitive rumor within their marketing strategy decision making, marketing managers overweight the importance of competitive rumors by altering their strategic marketing direction. Consistent with the previous literature on the significant influence that rumors have on an individual's decision

making ability within the context of financial trading (e.g., DiFonzo and Bordia 1997; Nelson et al. 2001; Oberlechner and Hocking 2004; Pound and Zeckhauser 1990), this research demonstrated the willingness of marketing managers to alter their strategic marketing direction. Specifically, marketing managers varied from making minor or major changes to their original strategy to delaying the implementation of their strategy or abandoning it altogether. Based upon the extent to which changes to the direction of their marketing strategy were made, it appears as though the mere presence of a competitive rumor has a significant influence on the decision making of marketing managers. However, examining the results further indicate that how the information components of the competitive rumors are evaluated are influential for marketing managers when determining the extent to which the marketing strategy should be changed.

When determining whether to make a major change over maintaining their original marketing strategy, marketing managers willingly make theoretical tradeoffs between their subjective evaluations of the information components using the behavioral heuristics of representativeness and availability. For marketing managers, the interaction between the source and the target indicates that the possibility of a major competitor pursing an action, even one that does not make sense, is enough to cause marketing managers to increase the likelihood of making major changes to their marketing strategy, but minor competitors only have the same effect when the actions pursued makes sense. The nature of the competitor, as a result, introduces a predictable bias of marketing managers to react even if the competitive rumor isn't plausible. Theoretically this implies once the marketing manager has decided to respond to the competitive rumor, the

information contained within the competitive rumor need only to fulfill either the representativeness or the availability heuristic when determining the extent to which changes should be made.

Moreover, similar to the trade-off between the role of the competitor and the ability to make sense, a trade-off exists between credibility and the ability to make sense when marketing managers are determining whether to make a major change or to maintain to their marketing strategy. The interaction between the source and the charge indicates that they are more likely to make a major change to their marketing strategy if the actions described in the competitive rumor make sense but come from a source with a low-level of credibility or when the actions described in the competitive rumor come from a source with a high-level of credibility but the actions do not make sense. Theoretically this implies that, much like in the context of financial trading, for competitive rumors to powerfully effect marketing strategy decision making, they "do not have to be believed or trusted," (e.g., be credible) but rather "they simply have to make sense" (DiFonzo and Bordia 1997, p. 346).

Further, theoretical tradeoffs on the reliance of behavioral heuristics to evaluate the information components of the competitive rumor are made when determining whether to make a major change over making a minor change to their original marketing strategy. Similar to the decision to make major changes over maintaining their original strategy, the decision to make major changes over minor changes to their marketing strategy by marketing managers is significantly impacted by the tradeoff between credibility and the ability to sense. Moreover, the theoretical tradeoff between the credibility and the ability to make sense when selecting which information to use (e.g.,

DiFonzo and Bordia 1997; Menon and Varadarajan 1992) is complicated by the role of the competitor. The significant effect of the competitor indicates that, given the conditions where the credibility of the sources is low and the ability of the charge to make sense is low, marketing managers are more likely to make major changes than minor changes to their original marketing strategy when the competitive rumor describes a major competitor. As such, marketing managers systematically react excessively to information as long as it features a major competitor; implying that theoretically some biases overpower the need for information to possess credibility and/or the ability to make sense.

Not only have marketing managers been found to persistently respond to competitive rumors within their marketing strategy decision making and systematically make changes to the direction of their marketing strategy, marketing managers also consistently react to the strategy changes they made when an official announcement confirms the competitive rumor. When the competitive rumor is determined to be false, the majority of marketing managers were found to remain committed to their change in strategic direction. This result is theoretically consistent with the "escalation of commitment" bias, where the marketing managers do not want to appear to be wasteful by abandoning the investment of resources (Arkes and Blumer 2000; Biyalogorsky et al. 2006). This finding indicates that despite their previous decision to be based on inaccurate information, marketing managers demonstrate a need to be psychologically consistent by not only continuing but expanding their original decision to change to demonstrate that their earlier decision as justified (Despande and Gatignon 1994). What is more, the reaction of marketing managers to remain committed to and/or escalate their

commitment to this change in strategic direction once an official announcement is released is consistent whether the competitive rumor was confirmed to be true or false. Theoretically, this indicates that once a decision has been made to alter marketing strategy based upon competitive rumor, the change in direction is likely to be permanent regardless of what any additional verified information can bring to light on the nature of the unconfirmed competitive rumor.

Managerial Implications

For marketing managers engaged in marketing strategy decision making, this research provides important guidance and caution with respect to understanding the unintended consequences that rumored actions of competitors can have on their marketing strategy decision making in three important areas: (1) the vulnerability and persistence of marketing managers to respond to competitive rumors; (2) the systematic bias in reacting to competitive rumors; and (3) the permanence of changes made to the strategic marketing direction.

First, since the competitive landscape is continually littered with rumors regarding the strategic marketing actions to be taken by competitors, it is important to understand the effect that competitive rumors have on the marketing strategy decision making of marketing managers. The results of this research indicate that simply by being made aware of a competitive rumor influenced the likelihood of marketing managers to respond to the rumor as well as their decision to alter the strategic direction of their firm. Moreover, this susceptibility and persistence to respond to any competitive rumor is not deterred by the level of education achieved, the number of years of experience, or the

authority to implement these major marketing strategy changes that marketing managers possess. Given these results, all marketing managers are vulnerable to the influence of competitive rumors and no degree of education or experience overrides the natural desire to react to rumors. Ultimately, this natural desire of marketing managers results in the unintended consequence of using their authority to change the strategic marketing direction of their firm. As such, marketing managers are cautioned to be careful in their utilization of competitive rumors within their decision making and of the potential changes to their marketing strategy that can result as although as the earliest indicators of changes to come or of actions to be taken by competitors in an uncertain environment are often no more than rumors; they, nonetheless, remain only rumors.

Second, when the information components of the competitive rumor are evaluated by marketing managers, systematic biases result influencing whether the marketing manager will respond and the extent of the changes made to their strategy. The results of the research indicate that by relying on behavioral heuristics marketing managers increase their likelihood to respond to competitive rumors featuring a major competitor or from a credible source and that the presence of either of these information components causes marketing managers to unintentionally increase the likelihood of making major changes to their strategy in response to competitive rumors that describe actions which do not make sense. The role of the competitor is particularly striking, for it does not matter what marketing actions are described or from whom the rumor is heard just as long as a major competitor is involved. Granted it is never advisable to accept a rumor as a valid guide (Allport and Postman 1947), however the intense focus on major competitors leaves marketing managers susceptible to credible competitive marketing actions made

by minor competitors that could revolutionize a competitive environment in times of uncertainty. Thus, if there is to be a marketing strategy reaction to the rumored actions of competitors, marketing managers are cautioned that biases within their decision making consistently and predictably leaves the development of their marketing strategies dependent upon major competitors and vulnerable to actions of minor competitors.

Third, although for marketing managers to react to competitive rumors may be unintended, the reaction is not necessarily wrong if the rumor is true. It is, therefore, important to understand the effect that the confirmation of the competitive rumors, either to be true or to be false, has on the changes marketing managers made to their marketing strategy. The results of this research demonstrate a psychological commitment and/or an escalation in commitment that develops in response to the making of these marketing strategy decisions, regardless of whether the competitive rumor is true or false. Marketing managers reveal an unfortunate willingness to not only alter but maintain the new strategic marketing direction developed in reaction to competitive rumors in order to justify their previous decisions, even if their previous decisions were based on unsubstantiated information. Further, when speculation based upon circumstantial evidence is utilized as fact in marketing strategy decision making, interesting implications for marketing managers and the competitive environment emerge as rumors could possibly and effectively be used to purposively distract competitors or to shift the direction of an industry toward the benefit of a firm. Hence, marketing managers are cautioned about the permanent effect that competitive rumors can have on their strategic direction and the strategic direction of the competitive environment.

LIMITATIONS AND DIRECTIONS FOR FUTURE RESEARCH

Although this research provides insight into how marketing managers incorporate rumors about competitors' future strategic marketing actions when developing their own marketing strategies, the following limitations need to be considered when attempting to generalize the findings. The three main limitations of this research are: (1) the influence of competitive rumors on the decision making of marketing managers was examined through a role playing experimental scenario regarding hypothetical competitors and competitive rumors; (2) the competitive rumor was confirmed to be true or to be false based upon an official statement released by the competitor that was either a confirmation or a denial; and (3) the passage of time for the implementation of the marketing strategy decisions was simulated through a two-wave longitudinal experimental design. Although this research design was purposefully selected and designed based upon the extant literature to allow for the maximum amount of control to be maintained over the competitive rumor and the nature of the relationship between the competing firms presented, this control also limits the external generalizability of the findings as the influence of competitive rumors on the marketing strategy decision making of marketing managers will be influenced by the history of the competitive relationship between firms and the history of the competitive rumors emerging. To address these limitations, the influence of competitive rumors on marketing strategy decision making should be further examined using a context and a methodology where the marketing strategy reactions of real companies to real competitive rumors can be connected over time.

In addition to addressing the aforementioned limitations, the results of this research on marketing strategy decision making suggests numerous avenues for future

research. First, the credibility of the source of the competitive rumor was found to significantly influence the likelihood to respond to competitive rumors. Although within the current research the source component of the competitive rumor specifically focused on the individual who provided the competitive rumor (e.g., an industry research analyst or an industry blogger), further examining the medium within which the source is embedded could uncover interesting insights into how the competitive environment is evolving due to the increasing important role that technology is playing. For instance, the selection of an industry blogger as a source within this research demonstrates the prominence that websites and blogs have gained in recent years (e.g., Baker and Green 2005; 2008). In addition to how new technology influences the development of new sources of information (e.g., Gonsalves 2010; Woods 2009), future research on competitive rumors could examine how the emergence of new communication technology can influence the life-cycle of a competitive rumors with respect the frequency with which they develop, the duration of their existence, and the accuracy of their assertions.

Second, the findings of this research demonstrate that competitive rumors can not only cause marketing managers to alter the direction of their marketing strategy, but also cause them to remain committed to this change in strategic direction even if an official announcement confirms the competitive rumor to be false. Yet as only the marketing strategy decision making of marketing managers from the United States was examined within this research, any international aspect of the influence of competitive rumors was neglected. As competitive rumors emerge internationally (e.g., Parker, Palmer, and Taylor 2007; Waters and Thomas 2010), future research could extend to examine how the

increased internationalization of competition influences the strategic responses of marketing managers since a country-of-competitor orientation effect may exist. Further, as culture has been shown to influence the decision making process of individuals (e.g., Clark 1990; Schneider and De Meyer 1991; Tse, Lee, Vertinsky, and Wehrung 1988), future research could examine how the cultural dimensions (e.g., uncertainty avoidance, long-term orientation, power distance, individualism-collectivism, masculinity) could influence the impact of competitive rumors on marketing strategy decision making.

Third, the unintended consequences that rumored actions of competitors can have on the marketing strategy decision making of marketing managers was demonstrated by the findings of this research. Unintended consequences caused by competitive rumors may result in other areas as competitive rumors are likely to influence more than just strategic decisions focused on the external competitive environment and more than just marketing managers. For instance, as rumors have been shown to influence the decision making of marketing managers with respect to the competitive external environment, how do competitive rumors influence the decision making of marketing managers or other marketing professionals with respect to the competitive internal environment? This stream of potential future research would extend the extant rumor research (e.g., DiFonzo, Bordia, and Rosnow 1994; DiFonzo and Bordia 1997; 2002) by examining the influence of competitive rumors on the development of a firm's internal strategy and/or the individual's personal strategy pertaining to the performance of specific intra-company behaviors or accumulating specific marketing human capital. Moreover, competitive rumors may have unintended consequences within the market by not only having an effect on the marketing strategy of competing firms as was demonstrated by this research,

but by also having an effect on the strategy of consumers. Since consumers are becoming more aware of and frequently involved in the creation and circulation of competitive rumors (e.g., Griggs 2010), research could extend the current research by examining how competitive rumors influence the immediacy or the delay of their purchasing decision or on the purchasing decisions of other consumers.

CONCLUSION

Unintended consequences in marketing strategy decision making occur when marketing managers incorporate rumors about competitors' future strategic marketing actions when developing their own marketing strategies. The results of this research demonstrates that marketing managers overwhelmingly utilize competitive rumors within their decision making to make changes to the direction of their marketing strategy and ultimately remain committed to and/or escalate their commitment to this change in strategic direction regardless of whether the competitive rumor is true or false. For marketing academics, this research presents marketing managers as subjectively influenced decision makers seeking any information to guide their decisions within the uncertain competitive environment opening avenues for future research on how behavioral heuristics and decision biases influence marketing strategy making. For marketing managers, this research exposes the limitation in their marketing strategy decision making when it comes to understanding the pervasive impact of competitive rumors.

ESSAY TWO: STRATEGIZING FROM THE PAST, THE PRESENT, OR THE FUTURE? THE INFLUENCE OF CULTURE ON TIME IN MARKETING STRATEGY DECISION MAKING

INTRODUCTION

Time enters each examination of marketing strategy as a strategic decision to be made, as a factor influencing strategic decisions, and as a backdrop on which marketing strategy decisions interact (Das 2004). For instance, the business press has been inundated with articles providing information on the opportunities and threats stemming from the past, present, and future actions of competitors (e.g., Jana and Rowley 2009; Kiley 2009; Matlack 2009; Simon and Reed 2009). As such, underlying the examination of marketing strategy decision making is the question of how time influences the determination of which competitive information to use, varying in strategic and temporal context and the subsequent strategic marketing decisions of marketing managers. For time is an important element within and surrounding the marketing strategy decision making of marketing managers.

Recognizing the importance of time in strategy making, there has been a proliferation of research recently examining the role of time in marketing strategy. For instance, within the extant marketing literature, time has been examined with respect to strategic decisions, such as the timing of entry into a new market (Hennig-Thurau et al. 2007), into a new channel (Johnson and Tellis 2008), or of a new product introduction (Wu, Balasubramanian, and Mahajan 2004), the time required for strategic decisions regarding the need to appeal to customers (Fang 2008), to develop interorganizational relationships (Jap and Haruvy 2008) or to respond to competitors (Jayachandran and Varadarajan 2006) and the trade-off between the desired performance in the short-term

(Dekimpe and Hanssens 1999) and in the long-term (Pauwels, Silva-Risso, Srinivasan, and Hanssens 2004). Yet still the complexity of time within marketing strategy decision making has not been fully accounted for.

Time, within marketing strategy research, is assumed to operate based upon an external clock-and-calendar metric and be viewed in exactly the same manner by each individual, within each organization, and within each national culture (Das 1991). However, an alternative view of time which has received very little attention within the marketing literature, proposes that instead of time being based upon an objective external metric, it is socially constructed through the unique interpretation determined by the entity (i.e., individual, organization, or society) making the judgment (Mosakowski and Earley 2000). Specifically, the interpretation of time varies with respect to how individuals, organizations, and societies perceive their own connection to time through their preference for a specific time orientation as well as how events connect to the past, the present, and the future through their preference for a specific temporal and/or strategic framing (Butler 1995; McGrath and Tschan 2004). Neglecting the multidimensional characteristics of time is a major limitation of the extant marketing strategy literature, for as Das (2004, p. 59) notes "the essence of strategic decision making is the attempt to navigate the organization over time" and that "these decisions are made by individual strategy makers, whose psychological views of time cannot be ignored".

Utilizing the social psychology of time, behavioral decision theory's prospect theory, and the dimensions of national culture, this research examines how culture influences how marketing managers incorporate the complexities of time within their

marketing strategy decision making. Specifically, the following research questions are addressed:

(1) How does national culture influence the time orientations, the evaluation of competitive information, and the strategic marketing decisions of marketing managers?

(2) How does the dominant time orientation of marketing managers, as well as the differences between their own and their organization's time orientation, influence their strategic marketing decisions?

(3) How does the evaluation of competitive information by marketing managers in relation to temporal and strategic framing influence their strategic marketing decisions?

By addressing these questions, this research contributes to the field of marketing in three distinct ways. First, this research contributes to the marketing strategy literature by examining how national culture influences how time is incorporated within the marketing strategy decision making of marketing managers through the prevalence of dominant time orientations and how competitive information is evaluated to ultimately result in strategic decisions that differ in magnitude, timing, and time horizon. Second, this research extends the extant literature on decision making by demonstrating that predictable biases in the decision making of marketing managers emerge with respect to time not only the strategic decisions made but also the evaluation of the strategic decisions. Third, from a managerial perspective, this research provides important guidance and caution to marketing managers for understanding the unintended

consequences that the complexities of time can have on their marketing strategy decision making.

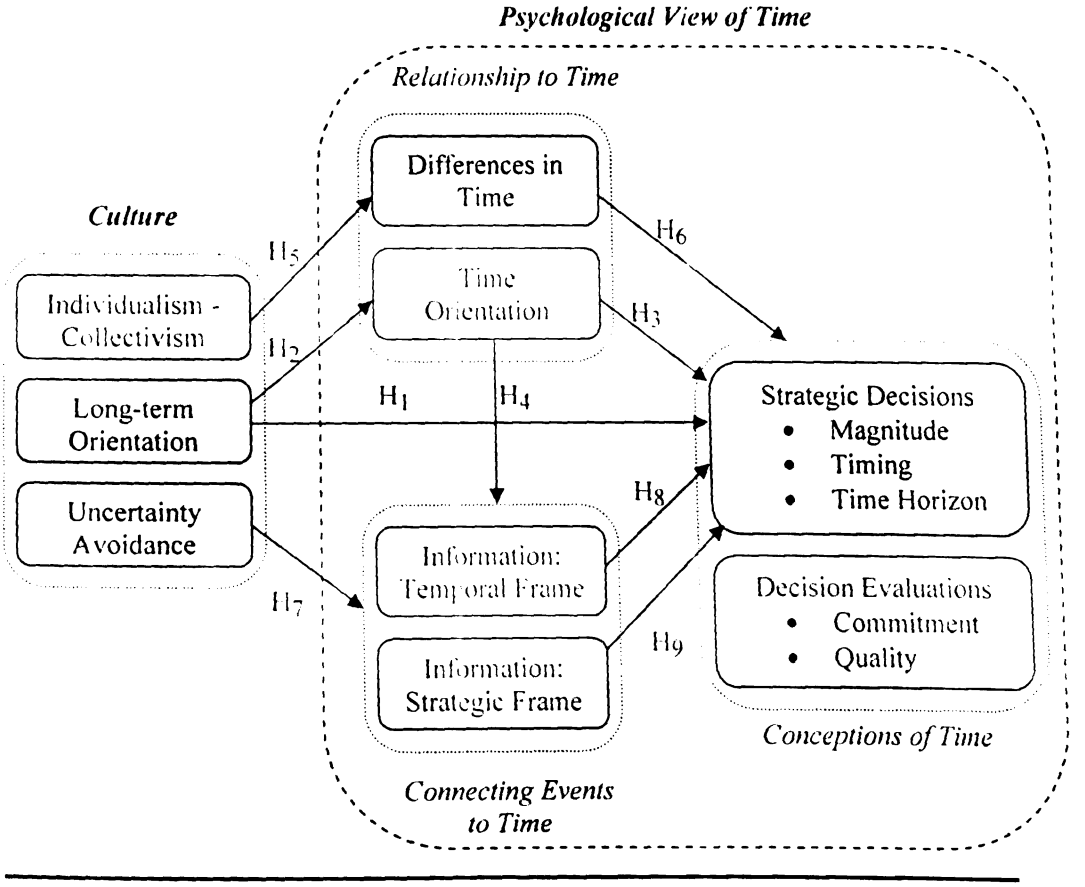
THEORETICAL BACKGROUND

Time in Marketing Strategy Decision Making

Marketing strategy decision making refers to the process by which marketing managers make their most fundamental decisions (Das and Teng 1999), where these decisions are "important, in terms of the actions taken, the resources committed, or the precedents set" (Mintzberg, Raisinghani, and Theoret 1976, p. 246). Every marketing strategy decision involves a decision regarding time. For example, whether deciding to introduce a new product or respond to a competitor's action, marketing managers not only must determine how much of their resources should be committed to their strategic decision (i.e., the magnitude of the strategic decision) (White, Varadarajan, and Dacin 2003), but also the most appropriate time as to when to implement their strategic decision (i.e., the timing of the strategic decision) and the appropriate time to subsequently elapse before evaluating the outcomes of their strategic decision (i.e., the time horizon of the strategic decision) (Wright and Weitz 1977). Some marketing strategy researchers have suggested that the best solution for managing the complexities associated with time is to have each marketing manager individually determine how time should properly be incorporated within their marketing strategy (Menon, Bharadwaj, Adidam, and Edison 1999). This approach would be appropriate if each marketing manager experiences time similarly; however, time varies based upon the perceptions of the individual.

Time can be abstractly referred to as a nonspatial continuum in which events occur in apparently irreversible succession from the past through the present to the future. The time continuum of an individual is influenced by the conception of time adopted, by the manner in which different entities, whether it is at the individual, the organizational, or the societal level, relate to time, and by the way events are connected to time (Ancona, Okhuysen, and Perlow 2001). Together these factors determine an individual's psychological view of time; which, as shown in Figure 1, will be directly influenced by the national culture to which the individual belongs and will directly influence their marketing strategy decision making.

Figure 2.1: Time in Marketing Strategy Decision Making



Conceptions of Time: Objective and Subjective

Within the extant strategy literature, the most prevalent conception of time is the objective view (Mosakowski and Earley 2000). In fact, it is presumed that within organizations all decision makers, inclusive of marketing managers, share this conception of time (Das 1991). The objective view is commonly associated with clock-and-calendar time, where cumulating equalized units allows for specificity for the agreement among and communication to diverse populations of individuals (Bluedorn and Denhardt 1988; Harvey, Griffith, and Novicevic 2000). For marketing managers, this allows for the 'minutes' needed to make a strategic marketing decision based on the competitive information they possess, the 'weeks' needed to develop and introduce a new product, or the 'years' needed to evaluate the consequences of their decisions to have a consistent structure across different individuals when developing marketing strategies and making significant strategic decisions.

While the influence of the objective view is apparent within the strategic decisions made by marketing managers as they are forced to equate time with this view (Das 1991), the resulting strategic decisions will also be subtly influenced by the subjective view. The subjective view posits that each entity experiences time idiosyncratically to determine their own meaning of time and their preference for the past, the present, or the future (Mosakowski and Earley 2000). Marketing managers experience both views of time simultaneously, which has the potential to cause conflict between their own objective and subjective views or between their individual conception and the conception of the organization within which they are embedded (McGrath 1988). Moreover, when these conflicts exist, the effects will not only be seen within the strategic

decisions, but also in how marketing managers evaluate their strategic decisions with respect to decision commitment (i.e., the willingness to invest effort to ensure that the strategic decision is successful) (Dooley and Fryxell 1999), and decision quality (i.e., the evaluation of the appropriateness of the strategic decision with respect to overall strategy and effectiveness) (Dooley and Fryxell 1999).

Relating to Time: Time Orientations

Throughout the marketing strategy decision making process, the psychological view of time influences strategic decisions through how entities relate to time (Bluedorn and Denhardt 1988). Developed in response to the permeating influence that temporal considerations have on everyday life, the descriptive theoretical framework of the social psychology of time proposes that individuals and groups differ in real and meaningful ways with respect to their time perspectives and that these differences influence their behavior and interactions (Jones 1988; McGrath 1988). The manner in which an individual relates to time, via their time perspective, is demonstrated through their time orientation. A time orientation refers to the relatively stable psychological tendency to emphasize a particular temporal frame, such as the past, the present, or the future (Kluckhohn and Strodtbeck 1961). An individual would ideally be able to "switch between thinking about the past, the present, or the future according to the demands of the situation," yet prior research has demonstrated that individuals develop a consistent temporal bias by adopting a dominant time orientation (McGrath and Tschan 2004, p. 38). These dominant orientations have been found to be correlated with different preferences with regard to risk in decision making (McGrath and Tschan 2004) and that

prior research in strategic management has demonstrated that these different dominant time orientations lead to differing abilities of individuals to evaluate the future consequences of their decisions, with a future-orientation demonstrating the most concern for the consequences of decisions over a long-term time horizon (Das and Teng 2001). For marketing managers, as a result, the dominant time orientation that they have assumed within their psychological view of time will consequently influence their strategic marketing decisions as well as their selection of which information to utilize.

As marketing strategy decisions are made by marketing managers for and within organizations, the time orientation of both entities, the individual marketing manager and the organization, needs to be considered. At the individual level, the time orientation influences the decision making preferences of marketing managers (Bluedorn and Denhardt 1988). It has been similarly proposed that at the organizational level the time orientation of the firm creates a unique temporal bias that significantly influences the strategy formulation and decision making process of their managers (Bluedorn 2000; Thoms and Greenberger 1995). Since time orientations develop independently at the different levels of analysis, there is the potential for differences to exist between how the marketing manager relates to time and how the organization relates to time. These differences in time orientation between the individuals and the organizations in which they are embedded, as described by the social psychology of time, can lead to conflicts when "misunderstandings occur when intention and action are judged, by different participants, on different temporal scales" (Jones 1988, p. 27; McGrath 1988). Specifically for marketing managers, the existence of differing time orientations and the resulting conflicts creates significant problems for developing coherent marketing

strategies (Harvey and Novicevic 2001). Unfortunately, the differences in how the entities relate to time, the reason behind the conflict between the marketing manager and their organization, often goes unrecognized by those involved (Jones 1988); thereby, leading to unintended consequences when making their strategic marketing decisions.

Connecting Events to Time: The Role of Information

The psychological view of time also influences strategic decisions of marketing managers by how the individual makes and emphasizes the connection between events and time. Events are related to time through both the temporal reference point and the strategic reference point of information. For example, a piece of information about an event could state that a competitor has introduced a new product to the market six months ago, is introducing a new product now, or will be introducing a new product in six months. The temporal reference point of information refers to the direct connection of the event to time through the description of when the event has, is, or will occur. Further, events are indirectly connected to time through the urgency that the information's description of the event creates via the strategic reference point. The strategic reference point of information refers to whether the information describes events that are opportunities or threats. The emphasis that marketing managers place upon specific temporal (i.e., past, present, or future) and strategic (i.e., opportunities or threats) reference points will subsequently influence how a decision maker interprets and responds to information (Bluedorn and Denhardt 1988).

Theoretically, the influence that the psychological view of time has on the information processing of marketing managers is consistent with and best explained by

the propositions of prospect theory. Prospect theory developed under behavioral decision theory as a descriptive decision making theory focusing on how the preferences and decisions made by individuals are influenced by the manner in which information is interpreted (Kahneman and Tversky 1979). Specifically, prospect theory proposes that imperfections in the perceptions of decision makers can cause them to emphasize particular decision frames and that decision makers are unaware of the potential effects that the different decision frames have on their preferences (Tversky and Kahneman 1981). Two dominant decision frames, the certainty frame and the gains/loss frame, have been identified within the literature to influence the interpretation of information and subsequent decision preferences. The certainty frame refers to the extent to which the information and the decision outcomes related to the information are viewed to be certain or to be probabilistic, while the gain/loss frame refers to the extent to which the information and the decision outcomes related to the information are assessed to result in a gain or a loss (Kahneman and Tversky 1979). The decision frame that will influence the decision making of marketing managers (i.e., certainty vs. probability; gain vs. loss) is partially controlled by how the marketing strategy problem is formulated and partially controlled by their own individual norms and tendencies when selecting which reference point to emphasize (Tversky and Kahneman 1981).[9] The selection of a reference point, therefore, is critical to the decision making process because it is from this point that the enactment of decision frames and the interpretation of information begins (Levy 1992).

[9] In this research, the enactment of the decision frames will only be influenced by the individual characteristics of the marketing managers. The marketing strategy problem will be formulated to be balanced between each potential frame, thereby allowing the marketing manager to select their own dominant emphasis.

Prior research in managerial decision making has argued that the selection of temporal and strategic reference points of information are critical determinants of whether the information will be used by marketing managers and of the manner in which a manager will respond with their strategic marketing decisions (Menon and Varadarajan 1992; Dutton and Jackson 1987). Consistent with prospect theory, the rationale for why the selection of the temporal and strategic reference point by marketing managers will subsequently have an effect on their decision preferences is that it is from these reference points that the dominant decision frames exert their influence. Specifically, it is from the temporal reference point where the influence of the certainty frame is evidenced, for information on events that have occurred in the past and that are occurring in the present are assessed to be more certain, while information on the events that are likely to occur in the future are assessed to be more probabilistic (Mitchell, Russo, and Pennington 1989). The influence of the gain/loss frame is evidenced from the strategic reference point, for opportunities represent positive situations that involve the likelihood of gain without loss, while threats represent negative situations that involve the likelihood of loss without gain (Jackson and Dutton 1988). As such, how marketing managers emphasize the temporal reference point, for certainty is preferred over probability, and the strategic reference point, for losses loom larger than gains, should influence their strategic marketing decisions.

The Influence of Culture on Time

Moreover, impacting the relationships within the psychological view of time will be the culture of the marketing manager. The relationship between the culture and the

interpretation of time is so fundamental that it has even been asserted that "time is culture," as the individual time perspectives as well as the characteristics of events and the time in which they occur vary significantly from culture to culture (Jones 1988, p. 21). National culture has been defined as the values-based collective programming of the mind which distinguishes members from one society from another society (Hofstede 2001).[10] As such, these cultural differences manifest themselves within individuals via persistent preferences for specific social processes and general rules for attention, interpretation, and responses to information in the decision making process (Tse, Lee, Vertinsky, and Wehrung 1988). Specifically, Hofstede's (2001) norms and values approach to culture identifies three dimensions of cultural values that are directly related to the influence of the psychological view of time on strategic decision making: long-term orientation, individualism-collectivism and uncertainty-avoidance.[11]

Long-term orientation refers to the extent to which strategic actions are valued either for their effects in the future or valued only for their effects in the short-term (Bearden, Money, and Nevins 2006). A long-term orientation is characterized by a dynamic, future-oriented mentality evidenced by the adoption of a long-term outlook and values emphasizing achieving success in the future; whereas a short-term orientation is characterized by a static, present-oriented mentality evidenced by the adoption of a short-term outlook and values emphasizing achieving success in the present (Hofstede 2001).

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[10] Although other approaches for examining culture exist within the extant literature (e.g., Triandis 1994), this study employs Hofstede's dimensions of culture as its values-based approach is theoretically the most appropriate for examining culture's influence on marketing strategy decision making at the national level.

[11] Researchers contend that only the cultural dimensions that are strongly related to the theoretical basis of the study should be examined (e.g., Hofstede 1983; Hofstede 1985; Griffith, Hu, and Ryans 2000). For this study, only the cultural dimensions of long-term orientation, individualism-collectivism, and uncertainty avoidance, are strongly related to time, the relationship between the individual and their organization, and the utilization of information; as such, these are the only cultural dimensions examined.

As a cultural dimension, long-term orientation is a reflection of a society's outlook orientation, with long-term oriented societies demonstrating a preference for patience and perseverance when making investments over time (Barkema and Vermeulen 1997). The cultural preference toward investments as well as their outlook on time will manifest themselves in the strategic decision making process through their influence on the marketing strategy decisions as well as the time orientations of the individuals.

Individualism-collectivism refers to the extent to which people in a society either prefer to act as individuals or prefer to act as members of a group (Steenkamp, Hofstede, and Wedel 1999). Societies which can be described as more individualistic are characterized by an emotional independence from the organization and a strong belief that their individual decisions are better than group made decisions; whereas societies which can be described as more collectivistic are characterized by an emotional dependence on the organization and a strong belief that group decisions are better than individually made decisions (Hofstede 2001). As a cultural dimension, individualism-collectivism is a reflection of a society's self orientation (Dawar et al. 1996), with societies higher in individualism demonstrating a preference for individual initiative (Newman and Nollen 1996). The cultural preference for emphasizing the individual compared to the group will manifest itself in the strategic decision making process through its influence on the existence and effect of differences in time orientations between the individual and organizational level.

Uncertainty avoidance refers to the extent to which uncertain situations are perceived to be threatening and the extent to which it is attempted to avoid these situations (Kirkman, Lowe, and Gibson 2006). Societies higher in uncertainty avoidance

are characterized by a "fear of failure" where they prefer to seek stability by avoiding change and taking additional risks; whereas societies lower in uncertainty avoidance are characterized by their "hope for success" evidenced by their greater tolerance for the unknown and their willingness to make risky decisions (Hofstede 2001). The cultural dimension of uncertainty avoidance is a reflection of a society's risk orientation (Dawar, Parker, and Price 1996), with societies higher in uncertainty avoidance demonstrating a preference for both maximizing certainty and for minimizing the potential for loss (Diamantopoulous et al. 2003; Schenider and de Meyer 1991). These cultural preferences for certainty and risk as well as their association to time will manifest themselves in the strategic decision making process through their influence on the utilization and effect of specific temporal and strategic reference points of information.

HYPOTHESES DEVELOPMENT

The Influence of Culture on Time in Strategic Decisions

Under the guidance of the dimensions of national culture, it has been demonstrated that decision making is influenced by the cultural values of the society to which the individual belongs (Hofstede 2001). Specifically, cultural dimensions result in persistent preferences for specific social processes that significantly influence the manner by which individuals respond in their decision making (Tse et al. 1988). Thus, for marketing managers, it is proposed that their cultural values influence the nature of time within their strategic marketing decisions.

The strategic decisions that a marketing manager must make regarding the appropriate level of investment, the appropriate time to implement, and the appropriate

time to evaluate the outcomes will be influenced by the alignment of the marketing manager on the cultural value of long-term orientation. The long-term orientation dimension of culture reflects patience, perseverance, and thrift with respect to time when making decisions (Barkema and Vermeulen 1997; Newman and Nollen 1996). Cultures with a long-term orientation are described as possessing willingness and commitment to making investments that will be valuable to the future (Bearden et al. 2006; Hofstede 2001). In contrast, cultures with a short-term orientation are described as possessing concern for any investments necessary that have an effect in the present in order to maintain their current situation (Bearden et al. 2006; Hofstede 2001). Emerging from this cultural preference for investment and time within decision making, marketing managers from a short-term oriented culture will make more strategic marketing decisions of a greater magnitude, of quicker timing, and of a shorter time horizon that are able to achieve more immediate financial gains so as to maintain their current situation (Nakata and Sivakumar 2001). In contrast, marketing managers from a long-term orientated culture will make strategic marketing decisions of a smaller magnitude, of slower timing, and with a longer time horizon in order to achieve significant financial benefits so as to allow for their situation to improve in future. Thus, it is hypothesized that:

H_1: Compared with marketing managers from a short-term oriented culture, marketing managers from a long-term oriented culture will make strategic decisions with (a) a smaller magnitude, (b) a slower timing, and (c) a longer time horizon.

The Influence of Culture on Time Orientations

Under the guidance of the social psychology of time, it has been demonstrated that decision making is influenced by how an individual develops their relationship to time (McGrath and Tschan 2004). Specifically, time orientations develop to form the relationship between an individual and time by creating a dominant time orientation, which significantly influences the manner by which individuals respond and utilize information in their decision making (McGrath1988; Mosakowski and Earley 2001). Complicating the relationship between the time orientation of an individual and his/her decision making is that these relationships to time arise from and are influenced by culture (Jones 1988). Thus, for marketing managers, it is proposed that their cultural values influence the nature of their relationship to time.

The time orientation of the marketing manager will be influenced by the alignment of the marketing manager on the cultural value of long-term orientation. The long-term orientation dimension of culture also provides insight into the time outlook of the individual. Cultures with a long-term orientation have been described as possessing a long-term outlook (Hofstede 2001), which suggests that individuals from these cultures have a concern for and emphasis on what will happen in the future. In contrast, cultures with a short-term orientation have been described as possessing a near-term outlook (Hofstede 2001), which suggests that individuals from these cultures have a concern for and emphasis on what is happening currently. Emerging from this cultural preference for time outlook, marketing managers from a long-term orientated culture will most likely develop a dynamic, future-oriented mentality commonly associated with a dominant future time orientation due to their emphasis on what will happen over time, whereas

marketing managers from a short-term orientated culture will most likely develop a mentality focusing on either the past or present due to their emphasis on examining what has and is happening now (Nakata and Sivakumar 2001). Thus, it is hypothesized that:

H_2: Compared with marketing managers from a short-term oriented culture, marketing managers from a long-term oriented culture are more likely to possess a future time orientation.

The time orientation, where the emphasis is placed upon the past, the present, or the future, will elicit different time horizons for evaluating strategic decisions depending upon which orientation is dominant for the marketing manager. The dominant time orientation of an individual determines the tendency of the individual to focus on a specific time frame and the events that are occurring with that time frame as well as the consequences of ones decisions within a specific time frame (Kluckhohn and Strodtbeck 1961). According to the social psychology of time, an individual with a present orientation would consider only the immediate consequences of their decision as their tendency is to primarily focus on what is happening currently and not what may happen in the future, whereas an individual with a future orientation would consider the future consequences of their decision as their tendency is to primarily focus on what will happen in the future (McGrath and Tschan 2004). Resulting from their temporal tendency, marketing managers with a future orientation will establish a longer time horizon due to their concern to be able to fully examine the long-term consequences of their decisions. Further, empirical support has previously been provided for the link between a dominant future time orientation and the establishment of a longer time horizon by managers for planning and evaluating strategic decisions (Das 1987; Das and Teng 2001). Thus, it is hypothesized that:

H_3: Compared with marketing managers with a past or present time orientation, marketing managers with a future time orientation will make strategic decisions with a longer time horizon.

Furthermore, time orientation will influence the marketing manager's selection of which information to utilize within their decision making process depending upon which orientation is dominant for the marketing manager. Within the decision making process, individuals have been found to have different preferences for information on events in relation to time and in relation to strategic issues depending upon their dominant time orientation (Das 1991). For marketing managers, the information on events has a temporal reference point that associates the event to a specific time period (i.e., the past, the present, or the future). Moreover, the information on events has a strategic reference point that associates the events to opportunities and threats. Regardless of an actual time period associated, opportunities are theorized to be perceived by individuals to have a future emphasis, whereas threats are theorized to be perceived by individuals to have a past-and-present emphasis (Das 2004). According to the social psychology of time, a dominant time orientation is characterized by an individual's preoccupation with a particular time period and events that occur in that time period; thereby leading individuals to demonstrate a distinct preference in their decision making to focus on information pertaining to events associated with their focal time period (McGrath and Tschan 2004). Drawing directly from the temporal focus of time orientations, information on events that is future-oriented in temporal framing will be utilized more by marketing managers with a future orientation as this information is aligned with the individual's preoccupation with the future and events that are likely to occur in the future. Moreover, information on events that is opportunity-framed will be utilized more by

marketing managers with a future orientation as future-oriented individuals have been found to emphasize detecting opportunities within their decision making (West and Meyer 1998). Thus, it is hypothesized that:

> H_4: Compared with marketing managers with a past or present time orientation, marketing managers with a future time orientation will utilize a greater amount of (a) future framed information, and (b) opportunity framed information.

As marketing strategy decisions are made by marketing managers within organizations, the time orientation of both entities needs to be considered (Bluedorn 2000). Since the dominant time orientations develop independently at the different levels, there is the potential for differences to exist between how the marketing manager views time and how their organization is predisposed to time. The existence of differences between the time orientation of the manager and their organization will be influenced by the alignment of the marketing manager on the cultural value of individualism-collectivism. The individualism-collectivism dimension of culture reflects self orientation (Dawar Parker, and Price 1996) demonstrated via the extent to which people of a culture prefer to act as individuals or as members of a group (Steenkamp, Hofstede, and Wedel 1999). Cultures higher on individualism are described as valuing standing apart and determining their own course of action (Nakata and Sivakumar 2001). For individuals from individualistic cultures, autonomy and independence are viewed as positive traits (Hofstede 2001; Newman and Nollen 1996), and as such they will prefer to pursue their own individual initiatives rather than adapt to their organizations beliefs. In contrast, cultures higher on collectivism are described as valuing belonging to the group (Nakata and Sivakumar 2001). For individuals from collectivistic cultures, conformity

and the subordination of personal preferences are viewed as positive traits (Hofstede 2001; Newman and Nollen 1996), and as such they will prefer to adapt their organization's perspective rather than maintain their own point of view. Emerging from this cultural preference pertaining to the relative importance of the individual versus the organization, differences in time orientation between the marketing manager and their organization are more likely to occur when the marketing manager is from an individualistic culture because the marketing manager will emphasize their independence from the organization, than when the marketing manager is from a collectivistic culture as the marketing manager will emphasize their desire to conform to the organization. Thus, it is hypothesized that:

H_5: Compared with marketing managers from a collectivist culture, marketing managers from an individualistic culture are more likely to have differences between their individual time orientation and their organization's time orientation.

The existence of differing time orientations between the marketing manager and their organization creates significant problems for developing coherent marketing strategies (Harvey and Novicevic 2001). Within marketing strategy decision making, the time orientation of the marketing manager and the time orientation of the organization simultaneously influences the strategy formulation of marketing managers as well as their preferences for strategic decisions (Bluedorn 2000; Bluedorn and Denhardt 1988; Thoms and Greenberger 1995). When differences do exist between the time orientations of the individual and the organization, misunderstandings emerge pertaining to the need for action and the intentions behind the action, which subsequently creates conflict in the strategic decision making process (Jones 1988); leading marketing managers to be less

willing to take significant strategic decisions out of caution. As a result, marketing managers will make smaller size investments with a slower timed introduction so that the strategic decision can be changed or aborted if subsequently determined to be made in an inappropriate direction. Further, as marketing managers are unable to determine the proper action due to the conflict created by the inability to reconcile their own time orientation with the time orientation of their organizations, marketing managers will be less committed to the decisions that they have made as well as believe their decisions to be overall lower in quality when evaluating their strategic decisions. Thus, it is hypothesized that:

H_6: Compared with marketing managers in organizations where their time orientations are aligned, when differences exist between the individual time orientation of marketing managers and their organization's time orientation,
(a) The magnitude of the strategic decision will be smaller.
(b) The timing of the strategic decision will be slower.
(c) The commitment to the strategic decision will be lower.
(d) The quality of the strategic decision will be lower.

The Influence of Culture on Information Utilization

Under the guidance of prospect theory, it has been demonstrated that decision making is influenced by how an individual connects events to time. Specifically, the utilization of information describing events with temporal and strategic frames significantly influences the manner by which individuals respond (Tversky and Kahneman 1981). The national culture of the individual determines the preference for attention, interpretation, and utilization of specific framed information (Tse et al. 1988). Thus, for marketing managers, it is proposed that their cultural values influence the nature of connecting events to time.

The utilization of specific temporally and strategically framed information will be influenced by the alignment of the marketing manager on the cultural value of uncertainty avoidance. The uncertainty avoidance dimension of culture reflects a society's risk orientation (Dawar et al. 1996). Cultures higher in uncertainty avoidance prefer to seek stability and predictability by avoiding change and risk-taking (Nakata and Sivakumar 2001). This is evidenced by the emphasis placed upon maximizing the potential for certainty and minimizing the potential for loss (Diamantopoulous et al. 2003; Schneider and De Meyer 1991). As such, higher uncertainty avoidance cultures are characterized by a "fear of failure" (Hofstede 2001). In contrast, cultures lower in uncertainty avoidance are characterized by a "hope for success" as evidenced by their greater tolerance for the unknown and their willingness to make risky decisions (Hofstede 2001). Emerging from this cultural preference for uncertainty, marketing managers from higher uncertainty avoidance cultures will pursue efforts to reduce the level of uncertainty within their decision making by utilizing information on events that already has or is currently happening (i.e., certain information), whereas marketing managers from lower uncertainty avoidance cultures will utilize information on events that might happen in the future (i.e., probabilistic) as they are more comfortable basing their decision making on the unknown. Further, derived from their cultural risk preferences, through their need to reduce the possibility of failure, marketing managers from higher uncertainty avoidance cultures will monitor for and utilize information from their environment that describes events that have the possibility to cause a loss to their situation (i.e., threats), whereas marketing managers from lower uncertainty avoidance cultures, through their desire to increase the possibility of success, will monitor and

utilize information from their environment describing events that have the ability to result in a gain to their situation (i.e., opportunities) (Nakata and Sivakumar 2001; Sallivan and Nonaka 1988). Thus, it is hypothesized that:

> H_7: Compared with marketing managers from a low uncertainty avoidance culture, marketing managers from a high uncertainty avoidance culture will utilize a greater amount of (a) past-and-present framed than future framed information, and (b) threat framed than opportunity framed information.

The connection to time provided by the temporal reference point of information, where events are described in relation to either the past, the present, or the future, evokes different strategic decisions depending upon which frame the marketing managers emphasize. Within the decision making process, individuals have been found to react differently to information that is certain than to information that is probabilistic (Tversky and Kahneman 1981). According to prospect theory, certainty is preferred over probability by individuals as it eliminates the element of risk from their decision making; thereby leading individuals to demonstrate a willingness in their decisions take greater action to immediately address events that are considered to be certain than on events that are considered to be probable (Kahneman and Tversky 1979). For marketing managers, the information that they posses on events that have occurred in the past or that are occurring in the present is interpreted to be certain, whereas the information on events that are likely to occur in the future is interpreted to be probabilistic (Mitchell et al. 1989). Drawing from the preference of certainty over probability, marketing managers who predominately utilize information describing events in the past-and-present will make strategic marketing decisions of a greater magnitude and of quicker timing in order to prepare their situation to react to events that are guaranteed to have an influence.

Moreover, motivated by their concern for certainty, these marketing managers will also employ a shorter time horizon to evaluate their strategic decisions so as to ensure that the actions have been successfully employed with respect to the events that are influencing their operating environment. Thus, it is hypothesized that:

H_8: Marketing managers who utilize a greater amount of past-and-present framed information will make strategic decisions with (a) a greater magnitude, (b) a quicker timing, and (c) a shorter time horizon.

Furthermore, the connection to time provided by the strategic reference point of information, where events are described in relation to opportunities or threats, evokes different strategic decisions depending upon which frame the marketing managers emphasize. When making decisions, individuals have been found to react differently to information that is interpreted to be a gain than to information that is interpreted to be a loss (Kahneman and Tversky 1979). According to prospect theory, losses loom larger than gains since individuals value what they have comparable to the things which they do not (Levy 1992); thereby leading individuals to demonstrate a willingness in their decisions to take greater action to immediately address events that are considered to result in a loss than to events that are considered to result in a gain (Tversky and Kahneman 1981). For marketing managers, the information that they possess on events that are positive situations are interpreted to be opportunities, which involve the likelihood of achieving a gain, whereas information on events that are negative situations are interpreted to be threats, which involve the likelihood of acquiring a loss (Jackson and Dutton 1988). Drawing from the preference of individuals to prevent losses over acquiring gains, marketing managers who predominately utilize information describing events identified as threats will make strategic marketing decisions of a greater

magnitude and of quicker timing in order to prevent the chance for any losses to accrue to their current situation. Moreover, motivated by their loss aversion, these marketing managers will also employ a shorter time horizon to evaluate their strategic decisions so as to ensure that their preventative actions have successfully achieved the consequences that they have desired. Thus, it is hypothesized that:

H_9: Marketing managers who utilize a greater amount of threat framed information is utilized will make strategic decisions with (a) a greater magnitude, (b) a quicker timing, and (c) a shorter time horizon.

METHOD

Rationale for Research Design Selection

To examine how time influences marketing managers and their marketing strategy decision making, the case scenario methodo was selected as the appropriate research design. This research design was selected because it allows for the micro-level aspects of time (e.g., information processing) to be captured within the experimental manipulations of the case scenario, while it also allows for the macro-level aspects of time (e.g., time orientations at the individual and organization level) to be captured through multi-item measures in a survey questionnaire. This feature of the design was important because it has been argued that selecting the proper method to examine the influence of time can be problematic since time can serve as an independent variable, a dependent variable, or as an element of the research design; and as such, laboratory experiments are more useful for examining the micro-level aspects of time, whereas surveys are more useful for examining the macro-level aspects of time issues (Menon and Varadarajan 1992). Moreover, the case scenario method has been successfully employed in previous

examinations of marketing strategy decision making (e.g., White, Varadarajan, and Dacin 2003).

Case Scenario

Developed based upon the procedure described in White et al. (2003), the case scenario focused on information on events related to competitors that pertain to the introduction of a new product. This context was selected because the magnitude, timing, and time horizon are important marketing strategy decisions when introducing a new product that must be appropriately made by marketing managers to ensure the firm's success (Bowman and Gatignon 1995). In administering the case scenario, participants were presented the complete case scenario questionnaire, which includes the case scenario followed by a series of survey measures. To develop and refine the case scenario, three pretests were conducted. The case scenario developed as a result of the three pretests is presented in Appendix 2.1.

Pretest 1

The purpose of Pretest 1 was to determine the information statements pertaining to the actions of competitors to be included within the case scenario. A list of possible information statements to include within the case scenario was generated by drawing from leading academic journals, case studies, and articles in the popular press. Fifty-eight undergraduate marketing majors served as participants in Pretest 1. Each participant, on a pen and paper questionnaire, evaluated a series of possible information statements based upon whether they were perceived to be an opportunity or a threat as

well as the strength of the information statement. For the opportunity/threat perception of each information statement, a frequency count was conducted. For the strength of each information statement evaluated, a simple mean was calculated. To ensure no differences in relative strength, a t-test with a Bonferonni adjustment was calculated. The results of Pretest 1 are provided in Appendix 2.2. Based on the results of Pretest 1, the following information statements pertaining to the actions of competitors were selected: (1) Patent license (Threat; M = 5.085), (2) Problems in product launch (Opportunity; M = 4.559), (3) New product design does not develop excitement among consumers (Opportunity; M = 4.525), (4) Hire new talented product development manager (Threat; M = 4.695), (5) Increasing R&D capabilities (Threat; M = 4.339), and (6) Dropped the release of a product (Opportunity; M = 3.983). There were no significant differences in the evaluation of the strength of any of the information statements.

Pretest 2

The purpose of Pretest 2 was to evaluate the context and information statements of the case scenario as well as the survey measures developed. Based upon the results of Pretest 1, it was necessary to select a context for the case scenario where (1) the competitive environment is highly technologically uncertain and the introduction of a new product to the market is likely, and (2) each of the information statements pertaining to the actions of competitors could occur. The digital camera category within the consumer photography market was selected as an appropriate background. The case scenario was then drafted, where each piece of information was manipulated with temporal and strategic framing. Specifically, one of the opportunity-evaluated and one of the threat-

evaluated information statements were each described to occur in the past, the present, or the future. Prior to Pretest 2, the case scenario was evaluated by a marketing manager working within the digital camera category for its presentation of a realistic description of information that may be encountered when developing their marketing strategies. Based upon the marketing manager's feedback, minor revisions in wording were made to the case scenario. One hundred and twenty-four undergraduate marketing majors served as participants in Pretest 2. Each participant was presented with the complete case scenario questionnaire. The results of Pretest 2 identified some refinements needed for the survey measures following the case scenario. First, the survey measures related to the strategic decisions of magnitude, timing, and time frame needed to be reworded and scale reformatted. These changes were made to more closely align with the measures from White et al. (2003). Second, the survey measures developed for the time orientation at the individual and organizational level were reformatted to more closely resemble the time orientation scale developed by Kluckhohn and Strodtbeck (1961).

Pretest 3

The purpose of Pretest 3 was to identify any final refinements that needed to be made to the case scenario and/or procedure with respect to (1) the background developed for the case scenario, (2) the information statements of the case scenario, and (3) the survey measures utilized. Further, conducting Pretest 3 as an online questionnaire allowed for any issues that may arise when conducting the case scenario online to be uncovered. One hundred and fourteen undergraduate marketing majors served as participants in Pretest 3. Each participant was presented with the complete case scenario questionnaire. Based

upon Pretest 3, in order to improve the clarity of and the ease of which the case scenario was administered, small changes in the background description (i.e., wording) and the dependent variables (i.e., format) were made and the flow of the case scenario procedure was refined based upon observing the experience of the participants using the online questionnaire.

Case Scenario Procedure

Within this case scenario, participants assumed the role of Vice President of Marketing for PhotoMax Incorporated[12] whose responsibilities include making recommendations regarding the development and introduction of new products. PhotoMax was described as having an organizational culture virtually identical to the culture at the participant's current organization.[13] Next, a description of the general characteristics and original product marketing strategy of PhotoMax as well as the general characteristics and the uncertainty existing within the competitive environment was provided to the participants. The case scenario, inclusive of six specific information statements, was then presented. Directly following the case scenario, participants were asked to make strategic decisions based upon the case, evaluate the decisions that they made and evaluate the extent to which the information in the case was used to make their decisions. Lastly, participants evaluated a series of individual and organization related survey measures.

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[12] PhotoMax Incorporated is a hypothetical firm, whose name derives from the PhotoWars strategy simulation of Sawhney and Malholtra (1999). A hypothetical firm was used in order to limit any extraneous influence that prior beliefs of an existing firm's marketing strategy and/or marketing actions could have on the decision making of the participants.

[13] Participants were informed of the identical organizational culture to ensure that the participants would make the decisions as if it were occurring within their current organization and that their responses to the organizational survey measures corresponded to an evaluation of their current organization. This process was utilized in White et al. (2003).

Data Collection

Since this research seeks to examine how culture influences how marketing managers incorporate the complexities of time within their marketing strategy decision making, it was necessary to select samples that not only had cultural differences on the dimensions examined but also possessed cross-cultural comparability. First, since this study employs Hofstede's cultural dimensions, with the intention of comparing cultural differences in decision making based upon the dimensions of uncertainty avoidance, long-term orientation, and individualism-collectivism between countries, the method of maximum differentiation proposed by Sivakumar and Nakata (2001) was employed to select the national cultures of the United States and Japan. Specifically, the United States was selected as the national culture that is lower on the uncertainty avoidance dimension (46), lower on the long-term orientation dimension (29), and higher on the individualism-collectivism dimension (91); whereas Japan was selected as the national culture that is higher on the uncertainty avoidance dimension (92), higher on the long-term orientation dimension (80), and lower on the individualism-collectivism dimension (46) (Hofstede 2010).[14] Second, cross-cultural comparability was achieved through the use of homogeneous samples to control for extraneous factors (Reynolds, Siminitras, and Diamantopoulous 2003) by utilizing a matching procedure based on the position of the respondent (i.e., marketing manager).

A market research firm was employed to administer the case scenario. The case scenario was first developed in English for administration in the United States, and

[14] The maximum differentiation procedure resulted in two countries with very similar profiles (i.e., Japan and South Korea). Japan was selected as the second national culture to be examined because it had the largest minimum difference between its score and the United States' score on any of the three cultural dimensions investigated (i.e., uncertainty avoidance, long-term orientation, and individualism-collectivism).

translated into Japanese for administration in Japan. The market research firm used their proprietary online panel to contact potential participants in both the United States and Japan. In order to ensure the appropriateness of the participants, participants were screened based upon their functional role (i.e., marketing), their job title (i.e., manager and above), and firm size (i.e., 50 employees and above). Participants, who fit the screening criteria, were then allowed to proceed to the case scenario. Participants in this case scenario were 309 marketing managers from the United States and 309 marketing managers from Japan. To complete the case scenario, participants from the United States took on average 27.2 minutes while participants from Japan took on average 21.5 minutes.

Measures

The measures utilized within this study were adapted from existing scales identified within the literature. A description of the items and response formats are provided in Appendix 2.3. The correlation matrix of the measures for the combined sample is presented in Table 2.1.

Strategic Decisions: Magnitude, Timing, and Time Horizon. Respondents will make three strategic decisions: magnitude, timing, and time horizon. The magnitude refers to the amount of resources that should be committed to their strategic decision, the timing refers to the most appropriate time as to when to implement their strategic decision, and the time horizon refers to the appropriate time to elapse before evaluating the outcomes of their strategic decision. Following White, Varadarajan, and Dacin (2003), two items, combined as a formative construct, are used to measure each of the

strategic decisions. The first item asked respondents, on a nine-point scale ranging from a substantial decrease to a substantial increase, how they would recommend changing the strategic decisions from the firm's average decision, while the second item asked respondents to provide a specific estimate of the strategic decision. Higher values indicate strategic decisions of a greater magnitude, a slower timing, and a longer time horizon.

Decision Evaluation: Commitment, and Quality. In response to their strategic decisions, respondents will make two different evaluations of their strategic decisions: commitment, and quality. Decision commitment refers to the willingness to invest effort to ensure that the strategic decision is successful, and was measured with a four item seven-point Likert scale adapted from Dooley and Fryxell (1999). The Cronbach's alpha for the decision commitment scale for the combined sample was .866. Decision quality refers to the evaluation of the appropriateness of the strategic decision with respect to overall strategy and effectiveness, and was measured with a four item seven-point Likert scale adapted from Dooley and Fryxell (1999). The Cronbach's alpha for the decision quality scale for the combined sample was .894.

Time Orientation. Time orientation refers to the relatively stable psychological tendency to emphasize a particular temporal frame, such as the past, the present, or the future (Kluckhohn and Strodtbeck 1961). This tendency exists at the individual level (i.e., individual time orientation) and at the organizational level (i.e., organizational time orientation). Both the individual time orientation and the organizational time orientation were measured with a three option rank-order scale adapted from the value orientation scale developed by Kluckhohn and Strodtbeck (1961). Respondents are coded as having

a past-orientation, a present-orientation, and a future-orientation at both the individual and organizational level based upon which description was ranked to be the most similar to their own beliefs or their organization's beliefs, respectively. Differences between a respondent's dominant individual time orientation and the dominant time orientation for their organization are also coded. The same time orientation at the individual and organizational level was coded as 0. A different time orientation at the individual and organizational level was coded as 1.

Information Use. The extent to which specific pieces of information from the case scenario would be used within their strategic decisions was measured following White et al. (2003). The case scenario contains six distinct pieces of competitive information that possessed both a temporal and a strategic frame (e.g., one piece of information is opportunity-framed and future-framed); where the six pieces of information are equally balanced between the three types of temporal framing (e.g., two past-framed, two present-framed, and two future-framed) and the two types of strategic framing (e.g., three opportunity-framed and three threat-framed). Respondents were asked to rate, on a seven-point scale, the extent to which they would use each piece of information to make their decisions. The pieces of information pertaining to a specific type of framing were treated as a formative indicator.

Control Variables. Based upon the extant managerial decision making literature, managerial expertise was operationalized as a formative indicator including job title, education, and years of experience (White et al. 2003) was included to control for differences in the expertise of individual respondents, whereas organization size was operationalized based upon firm sales to control for differences in organizations.

Table 2.1: Correlation Matrix

Table 2.1: Correlation Matrix

	1	2	3	4	5	6	7	8	9	10	11	12
1. SD: Magnitude	1											
2. SD: Timing	-.015	1										
3. SD: Time Horizon	-.038	.453	1									
4. DE: Commitment	.226	-.061	-.060	1								
5. DE: Quality	.207	-.052	-.093	.747	1							
6. IU: Past and Present	.334	.006	-.043	.445	.028	1						
7. IU: Future	.394	-.106	-.069	.377	.376	.592	1					
8. IU: Opportunities	.297	-.037	-.074	.435	.398	.807	.782	1				
9. IU: Threats	.396	-.106	-.065	.365	.362	.844	.701	.468	1			
10. TO: Future	.087	-.052	-.077	.218	.166	.132	.145	.119	.139	1		
11. TO: Differences	-.022	.039	.086	-.051	-.084	.013	-.042	-.038	-.042	-.013	1	
12. Expertise	.101	-.079	-.099	.128	.126	.102	.122	.110	.115	.097	.070	1
13. Organization Size	.079	.004	-.078	.049	.028	.041	.098	.028	.105	.087	.013	.255

Measurement Analysis

Measurement Validity and Reliability

Confirmatory factor analysis with EQS 6.1 (Bentler and Wu 2006) was used to estimate a measurement model composed of the reflective multi-item latent constructs of decision commitment, and decision quality for both the sample from the United States and from Japan. The results of the measurement models are presented in Table 2.2.

The overall chi-square goodness-of-fit index for the model for the United States is 88.721 with 19 degrees of freedom ($p < .05$) and for the model for Japan is 80.554 with 19 degrees of freedom ($p < .05$). For the sample from the United States, the comparative fit index (CFI) is .956, the normed fit index (NFI) is .945, the root mean square error of approximation (RMSEA) is .109 and the standardized root mean square residual (SRMR) is .052, whereas for the sample from Japan, the CFI is .959, the NFI is .947, the RMSEA is .103 and the SRMR is .045.; each of which meet the critical values for a model of good fit (Bollen 1989; Browne and Cudeck 1992; Hu and Bentler 1999). All of the factor loadings are large (range: .563 to .870) and significant (t-values > 2.00), providing evidence of convergent validity for both models.

Discriminant validity was assessed two ways. First, the constructs exhibit discriminant validity because the correlation between each construct is less than 1 by an amount greater than twice its standard error (Bagozzi and Warshaw 1990). Second, a series of chi-square difference tests were conducted between the model in which the correlations between all possible pairs of constructs is freely estimated and then between a series of models where each correlation was set to unity. The chi-square for the freely estimated model was significantly better than any of the unity-constrained models

(United States: $\chi^2_{CONSTRAINED}$ (20) = 230.834, $\Delta\chi^2$ (1) = 142.113, $p < .01$; Japan: $\chi^2_{CONSTRAINED}$ (20) = 151.330, $\Delta\chi^2$ (1) = 70.776, $p < .01$). As such, both constructs from each model show evidence of discriminant validity. Lastly, the composite reliability of constructs ranged from .771 to .828, indicating acceptable levels of reliability for each construct of both models.

Table 2.2: Measurement Models

Construct	United States Standardized Loadings	Japan Standardized Loadings
Decision Commitment		
DCO1	.676	.751
DCO2	.868	.855
DCO3	.843	.563
DCO4	.845	.797
Composite Reliability	.819	.771
Decision Quality		
DQ1	.870	.863
DQ2	.761	.733
DQ3	.711	.826
DQ4	.846	.868
Composite Reliability	.810	.828
Overall model fit indices:		
χ^2 (d.f.)	88.721 (19)	80.554 (19)
CFI	.956	.959
NFI	.945	.947
SRMR	.052	.045
RMSEA	.109	.103

Measurement Invariance Testing

The five step sequential procedure outlined by Steenkamp and Baumgartner (1998) was followed to assess the measurement invariance of the two reflective constructs of

decision commitment and decision quality. The results of the measurement invariance testing for the reflective constructs are presented in Table 2.3.

Table 2.3: Measurement Invariance

	χ^2 value	df	RMSEA	CAIC	CFI	NFI
Configural Invariance	169.273	38	.106	2734.587	.958	.946
Metric Invariance	181.113	44	.101	2734.587	.956	.944
Scalar Invariance	263.025	50	.102	2981.791	.958	.946
Factor Variance Invariance	264.315	52	.100	2981.791	.958	.946
Error Variance Invariance	304.209	58	.105	2948.445	.948	.934
Partial Error Variance Invariance	273.482	56	.097	2957.886	.957	.943

Configural invariance[15] was assessed by testing that the pattern of loadings were the same across the two countries. The fit of the model was satisfactory: $\chi^2 = 169.273$, d.f. = 38, $p < .01$; RMSEA = .106; CAIC = 2734.587; CFI = .958; NFI = .946, indicating configural invariance. Metric invariance was assessed by constraining all the factor loadings to be invariant across the countries. There was not a significant increase in the chi-square between the full metric invariance and the configural invariance models ($\Delta\chi^2$ (6) = 11.84, $p > .05$), indicating full metric invariance. Scalar invariance was assessed by constraining all the intercepts to be invariant across countries. Although there was a significant increase in the chi-square between the scalar invariance and metric invariance models ($\Delta\chi^2$ (6) = 81.912, $p < .05$) as well as between the scalar invariance and configural invariance models ($\Delta\chi^2$ (12) = 97.752, $p < .05$), there was not a substantial change in the fit indices of RMSEA, CFI, or NFI between any of the models. Hence, it can be concluded that scalar invariance is supported. Factor variance invariance was assessed

[15] For estimation purposes, the loadings of DCO3 and DQ3 were set to 1 in the models for both countries.

by constraining all the factor variances to be invariant across countries. The factor variance invariance model was essentially the same as for the scalar invariance model as there was not a significant increase in the chi-square between the factor variance invariance and the scalar invariance models ($\Delta\chi^2$ (2) = 1.295 p > .05), indicating factor variance invariance. Error variance was assessed by constraining all the error variances to be invariant across countries. Full error variance was not supported due to the significant increase in the chi-square between the error variance invariance and the factor variance invariance models ($\Delta\chi^2$ (6) = 39.894, p < .05) and the significant decrease in the fit indices. After releasing two of the error variance constraints (i.e., DCO2 and DQ4), there was not a significant increase in the chi-square between the partial error variance invariance and the factor variance invariance models ($\Delta\chi^2$ (4) = 9.167, p > .05), indicating partial error variance invariance. Through utilizing this procedure, the reflective measures of decision commitment, and decision quality were deemed to meet the requirements of measurement invariance to allow for further hypothesis testing.

RESULTS

The three sets of hypotheses focused on the influence of culture on the incorporation of time within their marketing strategy decision making, with respect to strategic decisions (H_1), time orientations (H_2 to H_6), and information utilization (H_7 to H_9). To test the proposed hypotheses pertaining to how culture and time influence the strategic marketing decisions of marketing managers, partial least squares analysis via Smart PLS was used. Since a primary concern of these hypotheses was with the prediction of dependent endogenous variables and the model incorporates both formative and reflective

indicators, a PLS analysis is the most appropriate (Diamantopoulous and Winklhofer 2001; Fornell and Bookstein 1992; White et al. 2003). Since PLS analysis makes no distributional assumptions, the bootstrapping method was used to examine the stability and the significance of the parameter estimates, with t-values computed on the basis of 500 bootstrapping runs. Three PLS models were estimated with the combined sample in which information utilization was divided into temporal framed information, strategic framed information, and differentials in temporal and strategic framing. The results of the PLS analysis for the temporal framed information are presented in Table 2.4 and the results of the PLS analysis for the strategic framed information are presented in Table 2.5. The results of the PLS analysis for differentials in framing are presented in Table 2.6. Further, to test the proposed hypotheses, a series of tests for the differences between means and proportions were also conducted. The results are first discussed in detail and then summarized in Table 2.15.

Table 2.5: PLS Results for Temporal Framing

	Information Utilization		Strategic Decisions			Decision Evaluations	
	Past/ Present	**Future**	**Magnitude**	**Timing**	**Time Horizon**	**Commitment**	**Quality**
Time Orientation							
Future	.123 (2.842***)	.130 (3.187***)			-.058 (1.028)		
Information Utilization							
Past/Present			.154 (3.634***)	.097 (1.245)	.003 (0.035)		
Future			.294 (7.284***)	-.156 (2.506**)	-.0489 (0.959)		
Differences in Time Orientation			-.006 (0.143)	.044 (0.954)		-.059 (1.421)	-.092 (2.344**)
Control Variables							
Expertise	.088 (1.309)	.090 (1.467)	.044 (0.882)	-.076 (1.004)	-.070 (0.772)	.127 (2.339**)	.133 (2.585***)
Organization	.007 (0.122)	.063 (1.329)	.032 (0.830)	.037 (0.822)	-.050 (1.140)	.017 (0.377)	-.005 (0.119)

$^{*}p < .10$; $^{**}p < .05$; $^{***}p < .01$

Table 2.6: PLS Results for Strategic Framing

Table 2.6: PLS Results for Strategic Framing

	Information Utilization		Strategic Decisions			Decision Evaluations	
	Opportunity	Threat	Magnitude	Timing	Time Horizon	Commitment	Quality
Time Orientation							
Future	.110 (2.789***)	.125 (3.135***)			-.057 (1.065)		
Information Utilization							
Opportunity			.140 (3.669***)	.024 (0.304)	-.048 (0.814)		
Threat			.322 (8.113***)	-.110 (1.521)	-.020 (0.410)		
Differences in Time Orientation			-.007 (0.176)	.041 (0.855)		-.060 (1.475)	-.093 (2.354**)
Control Variables							
Expertise	.101 (1.554)	.085 (1.226)	.041 (0.738)	-.081 (1.045)	-.073 (0.780)	.129 (2.296**)	.133 (2.718***)
Organization	.008 (0.134)	.072 (1.561)	.031 (0.790)	.035 (0.768)	-.051 (1.116)	.017 (0.411)	-.005 (0.120)

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

Table 2.7: PLS Results for Differentials in Framing

	Information Utilization		Strategic Decisions			Decision Evaluations	
	PP - F	T - O	Magnitude	Timing	Time Horizon	Commitment	Quality
Time Orientation							
Future	-.001 (0.030)	.033 (0.891)			-.040 (0.621)		
Information Utilization							
PP - F			-.105 (2.008**)	.095 (1.788*)	.054 (0.968)		
T - O			.058 (1.221)	-.018 (0.277)	.039 (0.875)		
Differences in Time Orientation			-.040 (0.710)	.051 (1.109)		-.062 (1.518)	-.094 (2.363**)
Control Variables							
Expertise	-.025 (0.556)	-.082 (0.962)	.040 (0.485)	-.102 (1.266)	-.124 (1.368)	.120 (1.885*)	.130 (2.111**)
Organization	-.059 (1.448)	.083 (2.114**)	.069 (1.042)	.034 (0.803)	-.048 (1.144)	.024 (0.558)	.001 (0.017)

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

The Influence of Culture on Time in Strategic Decisions

In H_1, it was predicted that marketing managers from a long-term oriented culture will make strategic decisions with a smaller magnitude (H_{1a}), a slower timing (H_{1b}), and a longer time horizon (H_{1c}) than marketing managers from a short-term oriented culture. To test the relationship between culture and the strategic decisions made, a MANCOVA was conducted. The results of the MANCOVA analysis are presented in Table 2.7. The means of strategic decisions by culture are presented in Table 2.8.

Table 2.7: MANCOVA Results for Culture's Influence on Strategic Decisions

	Multivariate Tests		Test for Between Subjects	
Factor	**Hotelling's Trace F-value**	**Significance Level**	**F-value**	**Significance Level**
Culture	7.524	< .001		
Magnitude			14.398	< .001
Timing			3.910	.048
Time Horizon			7.160	.008
Covariates				
Years Experience	0.398	.755		
Magnitude			0.110	.740
Timing			0.691	.406
Time Horizon			0.030	.863
Job Title	3.219	.004		
Magnitude			0.993	.371
Timing			1.891	.152
Time Horizon			8.595	< .001
Degree Achieved	2.069	.009		
Magnitude			3.328	.006
Timing			1.069	.376
Time Horizon			2.496	.030
Organization Size	0.953	.527		
Magnitude			0.614	.766
Timing			0.876	.536
Time Horizon			1.275	.254

Table 2.8: Strategic Decision Marginal Mean Values[16a]

	Long-Term Oriented (Japan)	Short-Term Oriented (United States)
Magnitude	0.999	1.237
Timing	0.838	0.880
Time Horizon	0.874	0.941
[a] Marginal means are estimated at the Years Experience covariate average of 20.19		

The mean magnitude of the strategic decision was significantly smaller for marketing managers from a long-term oriented culture ($M_{JAPAN} = .999$) than for marketing managers from a short-term oriented culture ($M_{UNITED\ STATES} = 1.237$). The mean timing of the strategic decision was significantly faster for marketing managers from a long-term oriented culture ($M_{JAPAN} = .838$) than for marketing managers from a short-term oriented culture ($M_{UNITED\ STATES} = .880$). The mean time horizon of the strategic decision was significantly shorter for marketing managers from a long-term oriented culture ($M_{JAPAN} = .874$) than for marketing managers from a short-term oriented culture ($M_{UNITED\ STATES} = .941$). Thus, H_{1a} is supported. H_{1b} and H_{1c} are contradicted.

The Influence of Culture on Time Orientations

In H_2, it was predicted that marketing managers from a long-term oriented culture are more likely to possess a future time orientation than compared with marketing managers

[16] The formative measures for the strategic decisions of magnitude, timing, and time horizon were re-scaled in order to allow for more ease in interpretation. The items were centered around the no change value for the first item in each scale and the average strategic decision for the second item. For each strategic decision, a value of 1 indicates maintaining the average strategic decision, a value about 1 indicates increasing the average strategic decision, and a value below 1 indicates decreasing the average strategic decision.

from a short-term oriented culture. To test the relationship between culture and time orientations, a two sample Z-test for differences in proportions was conducted. The results of the proportion difference testing are presented in Table 2.9.

Table 2.9: Individual Time Orientations

	Long-Term Oriented (Japan)	Short-Term Oriented (United States)
Past Orientation	12.9% (40)	13.9% (43)
Present Orientation	40.8% (126)	29.1% (90)
Future Orientation	46.3% (143)	57.0% (176)
Total	100% (309)	100% (309)
Statistical Testing [a]:		
Past: Equality in Proportions	Z = -.354	p = .723
Present: Equality in Proportions	Z = 3.037	p = .002
Future: Equality in Proportions	Z = -2.656	p = .007
[a] In each of these statistical tests, the long-term oriented culture was group one and the short-term oriented culture was group two.		

The most frequent individual time orientation in both the short-term and long-term oriented cultures was a future orientation. However, the proportion of marketing managers from a short-term oriented culture with a future time orientation ($P_{UNITED\ STATES}$ = 57.0%) was significantly greater than the proportion of marketing managers from a long-term oriented culture with a future time orientation (P_{JAPAN} = 46.3%). Thus, H_2 is contradicted.

To further understand the influence of culture on the adoption of an individual time orientation, the differences in proportion between the adoption of a present orientation and of a past orientation were also examined. The second most frequent adopted time orientation in both cultures was a present orientation. The results indicate that the proportion of marketing managers from a long-term oriented culture with a present time orientation (P_{JAPAN} = 40.8%) was significantly greater than the proportion

of marketing managers from a short-term oriented culture with a present time orientation ($P_{UNITED\ STATES}$ = 29.1%). A past time orientation was the least frequently adopted time orientation in both cultures and there was no significant difference in the proportion of marketing managers who adopted this time orientation between the long-term and short-term oriented cultures.

In H_3, it was predicted that marketing managers with a future time orientation will make strategic decisions with a longer time horizon than marketing managers with a past or present time orientation. The PLS analysis for the combined sample in both the temporal and strategic framing models indicates that the effect of a future time orientation on the time horizon was non-significant ($\beta_{TEMPORAL}$ = -.058, t = 1.028; $\beta_{STRATEGIC}$ = -.057, t = 1.065). Thus, H_3 is not supported.

In H_4, it was predicted that marketing managers with a future time orientation will utilize a greater amount of future framed information (H_{4a}) and opportunity framed information (H_{4b}) than marketing managers with a past or present time orientation. The PLS analysis in the temporal framing model indicates that the effect of a future time orientation on the utilization of future framed information was positive and significant ($\beta_{TEMPORAL}$ = .130, t = 3.187), while the strategic framing model indicates that the effect of a future time orientation on the utilization of opportunity framed information was positive and significant ($\beta_{STRATEGIC}$ = .125, t = 3.135). Thus, H_{4a} and H_{4b} are supported.

To further understand the influence of time orientation on the utilization of framed information, its effect on the utilization of past-and-present and threat framed information were also examined. The PLS analysis in the temporal framing model

indicates that the effect of a future time orientation on the utilization of past-and-present framed information was positive and significant ($\beta_{TEMPORAL} = .123$, $t = 2.842$). Further, the PLS analysis in the strategic framing model indicates that the effect of a future time orientation on the utilization of threat framed information was positive and significant ($\beta_{STRATEGIC} = .110$, $t = 2.789$). Moreover, the influence of a future time orientation on the differential preference for the utilization of specific temporal and strategic framed information was examined. The PLS analysis in differential framing model indicates that the effect of a future time orientation on the utilization of temporal framed information ($\beta_{PP\text{-}F} = -.001$, $t = 0.030$) and on the utilization of strategic framed information ($\beta_{T\text{-}O} = .033$, $t = 0.891$) was non-significant.

In H_5, it was predicted that marketing managers from an individualistic culture are more likely to have differences between their individual time orientation and their organization's time orientation than marketing managers from a collectivist culture. To test the relationship between culture and time orientation differences, a two sample test for differences in proportions was conducted. The results of the proportion difference testing are presented in Table 2.10.

Table 2.10: Differences in Time Orientations

	Collectivistic (Japan)	**Individualistic (United States)**
No Differences	49.5% (153)	41.4% (128)
Differences	50.5% (156)	58.6% (181)
Total	100% (309)	100% (309)
Statistical Testing[a]:		
No Differences: Equality in Proportions	Z = -2.020	$p = .043$
Differences: Equality in Proportions	Z = 2.020	$p = .043$

[a] In each of these statistical tests, the collectivistic culture was group one and the individualistic culture was group two.

The proportion of marketing managers from an individualistic culture with differences existing between their individual orientation and their organization's orientation ($P_{UNITED\ STATES} = 58.6\%$) was significantly greater than the proportion of marketing managers from a collectivistic culture with differences existing between their individual orientation and their organization's orientation ($P_{JAPAN} = 50.5\%$). Thus, H_5 is supported.

In H_6, it was predicted that when differences exist between the individual time orientation and their organization's time orientation marketing managers will make strategic decisions with a smaller magnitude (H_{6a}) and a slower timing (H_{6b}) than marketing managers who have aligned time orientations to their organization. The PLS analysis in both the temporal and strategic framing models indicates that the effect of a difference in time orientation has a non-significant effect on both the magnitude of the strategic decision ($\beta_{TEMPORAL} = -.006$, $t = 0.143$; $\beta_{STRATEGIC} = -.007$, $t = 0.176$) and the timing of the strategic decision ($\beta_{TEMPORAL} = .044$, $t = 0.954$; $\beta_{STRATEGIC} = .041$, $t = 0.855$). Thus, H_{6a} and H_{6b} are not supported.

Further, it was also predicted that the commitment to (H_{6c}) and the quality of the strategic decisions (H_{6d}) will be lower when differences in time orientation exist than compared to when no differences exist. The PLS analysis in both the temporal and strategic framing models indicates that the effect of a difference in time orientation has a non-significant effect on the commitment to the strategic decision ($\beta_{TEMPORAL} = -.059$, $t = 1.421$; $\beta_{STRATEGIC} = -.060$, $t = 1.475$) and a significant negative effect on the quality of

the strategic decision ($\beta_{TEMPORAL} = -.092$, $t = 2.344$; $\beta_{STRATEGIC} = -.093$, $t = 2.354$). Thus, H_{6c} is not supported and H_{6d} is supported.

The Influence of Culture on Information Utilization

In H_7, it was predicted that marketing managers from a high uncertainty avoidance culture will utilize a greater amount of past-and-present framed than future framed information (H_{7a}) and threat framed than opportunity information (H_{7b}) than compared with marketing managers from a low uncertainty avoidance culture. To test the relationship between culture and the differential preference for the differential utilization of temporal and strategic framed information, a MANCOVA was conducted. The results of the MANCOVA analysis are presented in Table 2.11. The means of differential utilization by culture are presented in Table 2.12.

There was no significant difference in the means between high uncertainty avoidance and low uncertainty avoidance cultures in their differential preference to utilize a specific type of temporal framing. The mean of the differential preference for utilizing strategic framed information for marketing managers from a high uncertainty avoidance culture ($M_{JAPAN} = 0.125$) was significantly different from the mean for marketing managers from a low uncertainty avoidance culture ($M_{UNITED\ STATES} = -0.252$). This indicates that marketing managers from a high uncertainty avoidance culture utilize more on threat framed information than opportunity framed information, whereas marketing managers from a low uncertainty avoidance culture utilize more

opportunity framed information than threat framed information. Thus, H_{7a} is not supported and H_{7b} is supported.

Table 2.11: MANCOVA Results for Culture's Influence on Differential Utilization

	Multivariate Tests		Test for Between Subjects	
Factor	**Hotelling's Trace F-value**	**Significance Level**	**F-value**	**Significance Level**
Culture	8.760	< .001		
PP - F			0.208	.648
T - O			15.291	< .001
Covariates				
Years Experience	1.947	.144		
PP - F			0.353	.552
T - O			3.104	.079
Job Title	1.210	.305		
PP - F			0.022	.978
T - O			2.365	.095
Degree Achieved	0.214	.995		
PP - F			0.252	.939
T - O			0.179	.971
Organization Size	1.282	.200		
PP - F			0.724	.670
T - O			1.730	.089

Table 2.12: Differential Utilization Marginal Mean Values[a]

	High Uncertainty Avoidance (Japan)	**Low Uncertainty Avoidance (United States)**
PP - F	-0.018	0.047
T - O	0.125	-0.252
[a] Marginal means are estimated at the Years Experience covariate average of 20.19		

Moreover, the influence of culture on the utilization of specific temporal and strategic framed information was examined. To test the relationship between culture and the utilization of specifically framed information, a MANCOVA was conducted. The

results of the MANCOVA analysis are presented in Table 2.13. The means of information utilization by culture are presented in Table 2.14.

Table 2.13: MANCOVA Results for Culture's Influence on Information Utilization

	Multivariate Tests		Test for Between Subjects	
Factor	**Hotelling's Trace F-value**	**Significance Level**	**F-value**	**Significance Level**
Culture	11.297	< .001		
Past-and-Present			16.893	< .001
Future			8.530	.004
Opportunities			29.489	< .001
Threats			2.201	.138
Covariates				
Years Experience	1.803	.146		
Past-and-Present			1.089	.297
Future			1.878	.171
Opportunities			0.042	.838
Threats			3.920	.048
Job Title	0.896	.497		
Past-and-Present			0.216	.806
Future			0.266	.766
Opportunities			0.846	.430
Threats			0.768	.464
Degree Achieved	0.375	.985		
Past-and-Present			0.572	.721
Future			0.743	.592
Opportunities			0.526	.757
Threats			0.630	.677
Organization Size	1.307	.146		
Past-and-Present			1.426	.182
Future			0.995	.439
Opportunities			1.563	.133
Threats			1.339	.221

Table 2.14: Information Utilizations Marginal Mean Values[a]

	High Uncertainty Avoidance (Japan)	Low Uncertainty Avoidance (United States)
Past-and-Present	4.364	4.716
Future	4.383	4.670
Opportunities	4.308	4.827
Threats	4.433	4.575
[a] Marginal means are estimated at the Years Experience covariate average of 20.19		

The mean of past-and-present framed information utilization was significantly less for marketing managers from a high uncertainty avoidance culture ($M_{JAPAN} = 4.364$) than for marketing managers from a low uncertainty avoidance culture ($M_{UNITED\ STATES} = 4.716$). The mean of future framed information utilization was significantly less for marketing managers from a high uncertainty avoidance culture ($M_{JAPAN} = 4.383$) than for marketing managers from a low uncertainty avoidance culture ($M_{UNITED\ STATES} = 4.670$). The mean of threat framed information utilization was not significantly different for marketing managers from a high uncertainty avoidance culture ($M_{JAPAN} = 4.433$) than for marketing managers from a low uncertainty avoidance culture ($M_{UNITED\ STATES} = 4.575$). The mean of opportunity framed information utilization was significantly less for marketing managers from a high uncertainty avoidance culture ($M_{JAPAN} = 4.308$) than for marketing managers from a low uncertainty avoidance culture ($M_{UNITED\ STATES} = 4.827$).

In H_8, it was predicted that as marketing managers utilize a greater amount of past-and-present framed information they will make strategic decisions with a greater magnitude (H_{8a}), a quicker timing (H_{8b}), and a shorter time horizon (H_{8c}). The PLS

analysis in differential framing model indicates that the effect of a differential preference for utilizing temporal framed information on magnitude was negative and significant ($\beta_{PP\text{-}F} = -.105$, $t = 2.008$), on timing was positive and significant ($\beta_{PP\text{-}F} = .095$, $t = 1.788$), and on time horizon ($\beta_{PP\text{-}F} = .054$, $t = 0.968$) was non-significant. This indicates that marketing managers utilizing a greater amount of past-and-present framed information over future framed information will make strategic decisions of a smaller magnitude and of a slower timing. Thus, H_{8a} and H_{8b} are contradicted. H_{8c} is not supported.

To further understand the influence temporal framed information on strategic decisions, the effect on the utilizing past-and-present and a greater amount of future framed information were also examined. The PLS analysis in the temporal framing model indicates that utilizing a greater amount of past-and-present framed information has a positive and significant effect on magnitude ($\beta_{TEMPORAL} = .154$, $t = 3.634$) and a non-significant effect on timing ($\beta_{TEMPORAL} = .097$, $t = 1.245$) and on time horizon ($\beta_{TEMPORAL} = .003$, $t = 0.035$). This indicates that as marketing managers utilize a greater amount of past-and-present framed information their strategic decisions will be of a greater magnitude. Moreover, the PLS analysis in the temporal framing model indicates that utilizing a greater amount of future framed information has a positive and significant effect on magnitude ($\beta_{TEMPORAL} = .294$, $t = 7.284$), a negative and significant effect on timing ($\beta_{TEMPORAL} = -.156$, $t = 2.506$) and a non-significant effect on time horizon ($\beta_{TEMPORAL} = -.049$, $t = 0.959$). This indicates that as marketing managers utilize a greater amount of future framed information their strategic decisions will be of a greater magnitude and with quicker timing.

In H_9, it was predicted that as marketing managers utilize a greater amount of threat framed information they will make strategic decisions with a greater magnitude (H_{9a}), a quicker timing (H_{9b}), and a shorter time horizon (H_{9c}). The PLS analysis in the differential framing model indicates that the effect of a differential preference for utilizing strategic framed information on magnitude ($\beta_{T-O} = .058$, $t = 1.221$), on timing ($\beta_{T-O} = -.018$, $t = 0.277$), and on time horizon ($\beta_{T-O} = .039$, $t = 0.875$) were each non-significant. This indicates that there is no difference in the magnitude, timing, and time frame of the strategic decisions of marketing managers who utilize a greater amount of threat framed information over opportunity framed information. Thus, H_{9a}, H_{9b}, and H_{9c} are not supported.

To further understand the influence strategic information on strategic decisions, the effect on the utilizing a greater amount of threat and a greater amount of opportunity framed information were also examined. The PLS analysis in the strategic framing model indicates that utilizing a greater amount of threat framed information has a positive and significant effect on magnitude ($\beta_{STRATEGIC} = .322$, $t = 8.113$) and a non-significant effect on timing ($\beta_{STRATEGIC} = -.110$, $t = 1.521$) and on time horizon ($\beta_{STRATEGIC} = -.020$, $t = 0.410$). This indicates that as marketing managers utilize a greater amount of threat framed information their strategic decisions will be of a greater magnitude. Moreover, the PLS analysis in the strategic framing model indicates that utilizing a greater amount of opportunity framed information has a positive and significant effect on magnitude ($\beta_{STRATEGIC} = .140$, $t = 3.669$) and a non-significant effect on timing ($\beta_{STRATEGIC} = .024$, $t = 0.304$) and on time horizon ($\beta_{STRATEGIC} = -.048$, $t = 0.814$). This

indicates that as marketing managers utilize a greater amount of opportunity framed information their strategic decisions will be of a greater magnitude.

Table 2.15: Summary of the Results

Hypothesis	Result
H_1: Compared with marketing managers from a short-term oriented culture, marketing managers from a long-term oriented culture will make strategic decisions with (a) a smaller magnitude, (b) a slower timing, and (c) a longer time horizon.	H_{1a}: Supported H_{1b}: Contradicted H_{1c}: Contradicted
H_2: Compared with marketing managers from a short-term oriented culture, marketing managers from a long-term oriented culture are more likely to possess a future time orientation.	H_2: Contradicted
H_3: Compared with marketing managers with a past or present time orientation, marketing managers with a future time orientation will make strategic decisions with a longer time horizon.	H_3: Not Supported
H_4: Compared with marketing managers with a past or present time orientation, marketing managers with a future time orientation will utilize a greater amount of (a) future framed information, and (b) opportunity framed information.	H_{4a}: Supported H_{4b}: Supported
H_5: Compared with marketing managers from a collectivist culture, marketing managers from an individualistic culture are more likely to have differences between their individual time orientation and their organization's time orientation.	H_5: Supported
H_6: Compared with marketing managers in organizations where their time orientations are aligned, when differences exist between the individual time orientation of marketing managers and their organization's time orientation, (a) The magnitude of the strategic decision will be smaller. (b) The timing of the strategic decision will be slower. (c) The commitment to the strategic decision will be lower. (d) The quality of the strategic decision will be lower.	H_{6a}: Not Supported H_{6b}: Not Supported H_{6c}: Not Supported H_{6d}: Supported

Table 2.15: Summary of the Results (continued)

Hypothesis	Result
H_7: Compared with marketing managers from a low uncertainty avoidance culture, marketing managers from a high uncertainty avoidance culture will utilize a greater amount of (a) past-and-present framed than future framed information, and (b) threat framed than opportunity framed information.	H_{7a}: Not Supported H_{7b}: Supported
H_8: As a greater amount of past-and-present framed information is utilized, marketing managers will make strategic decisions with (a) a greater magnitude, (b) a quicker timing, and (c) a shorter time horizon.	H_{8a}: Contradicted H_{8b}: Contradicted H_{8c}: Not Supported
H_9: As a greater amount of threat framed information is utilized, marketing managers will make strategic decisions with (a) a greater magnitude, (b) a quicker timing, and (c) a shorter time horizon.	H_{9a}: Not Supported H_{9b}: Not Supported H_{9c}: Not Supported

DISCUSSION

The purpose of this research was to examine how culture influences how marketing managers incorporate the complexities of time into their marketing strategy decision making. An integrated conceptual framework focused on the influence of culture on the time orientations, the evaluations of competitive information, and the strategic marketing decisions of marketing managers was empirically examined within a two country case scenario. The findings provide a number of interesting insights, of both theoretical and managerial importance, for those interested in marketing strategy decision making.

Theoretical Implications

Culture, as identified in previous examinations of decision making, results in persistent preferences for specific social process that significantly influence the manner by which

individuals respond (Tse et al. 1988). Results of this research demonstrate that the national culture of the marketing manager has a significant effect on the strategic decisions that they make when the same competitive marketing strategy decision making situation is presented. Specifically, marketing managers belonging to a long-term oriented culture made strategic decisions that were of a smaller magnitude of investment, of quicker timing for introduction to the market, and with a shorter time horizon for evaluation when compared with marketing managers from a short-term oriented culture. Although significant differences in the strategic decisions between cultures on the long-term orientation dimension were proposed, only the differences in magnitude were as expected. The effects of the long-term orientation dimension of culture on the objective time-based strategic decisions were quite surprising, for the marketing managers from a long-term oriented culture were in fact more short-term in their horizon for evaluation and immediate in their timing. When these time-based strategic decisions were further examined, it was identified that although marketing managers from a short-term oriented culture may have had a more long-term outlook in their timing and time horizon, they were also more likely to make time-based strategic decisions that were similar to previously made decisions. Alternatively, marketing managers from a long-term oriented culture made strategic decisions that departed more from the current decision norm. These results theoretically extend understanding on the influence of culture within marketing strategy decision making by indicating the long-term orientation dimension of culture may not explicitly be related to long-term time-based strategic decisions (e.g., Bearden et al. 2006), but rather in the willingness to dynamically depart from what has traditionally been accepted (i.e., remaining static in strategic decisions).

More than directly influencing the strategic decisions, the dimensions of culture influence the marketing strategy decision making process through the manner in which the marketing managers relate to time. The results indicate that between long-term and short-term oriented cultures a consistent pattern in the dominant time orientations of marketing managers exists; with a future time orientation as the most frequent, a present time orientation as the second most frequent and a past time orientation as the least frequent in both cultures. Despite this commonality, when compared across cultures, the proportion of marketing managers possessing a future time orientation is greater in the short-term oriented culture, whereas the proportion of marketing managers possessing a present time orientation is greater in a long-term oriented culture. The proportion of marketing managers possessing a past time orientation was equivalent. Taken together, these results seem to highlight two interesting theoretical insights. First, regardless of culture, marketing managers tend to not be oriented to the past. This may indicate that the dimension of long-term orientation may have less of a holistic view of past and future as previously theorized (e.g., Bearden et al. 2006). Further, this may have occurred because a more present or future time oriented outlook is desirable for navigating uncertain competitive environments in order to better focus on competitive events that are or will be occurring. Second, it appears as though the dominant time orientation for a marketing manager develops irrespective of national culture. This finding is contrary to the previous literature on the social psychology of time that asserted that the relationship between culture and the interpretation of time is so fundamental that "time is culture," (Jones 1988, p. 21). This might indicate that marketing managers across cultures are

trending toward certain orientations due to the advantages they provide in the decision making process of an increasingly culturally complex competitive environment.

As time orientations exist at both the individual and the organization level, culture again influences the relationship between how marketing managers relate to time with respect to how their organization relates to time (Bluedorn and Denhardt 1988; Thoms and Greenberger 1995). Specifically, differences in the dominant time orientation of marketing managers and their organization were found to more likely exist in individualistic cultures than collectivist cultures. From this result, it could be inferred that marketing managers from an individualistic culture are more likely to maintain their own time orientation independent from their organization, whereas marketing managers from a collectivist culture are more likely to assimilate their time orientation to that of the group. This would support the cultural dimensions' theoretical supposition that for collectivistic cultures the group is more important than the individual, whereas for individualistic cultures the individual is more important than the group (Hofstede 2001; Newman and Nollen 1996).

Interestingly, neither the differences in time orientation that exist between marketing managers and their organization nor the individual time orientation of the marketing managers have a significant effect on their strategic decisions. There was no effect on the magnitude and timing of strategic decisions whether differences in time orientation existed. Contrary to previous research (e.g., Das and Teng 2001), the time orientation of marketing managers did not have a significant effect on the time horizon of their strategic decision. These non-significant effects remained constant regardless of culture examined. Where the differences in time orientation between the individual and

the organization had an effect was on the evaluation of the strategic decisions; specifically, the strategic decisions will be evaluated to be of a lower quality. Further, the time orientation of the marketing managers has an effect on the utilization of competitive information; with marketing managers with a future time orientation utilizing a greater amount of competitive information than marketing managers with a past-or-present orientation. Theoretically, these results serve to refine the social psychology of time by indicating that the influence of time orientations may not be directly observable within the strategic decisions made (e.g., McGrath 1988; McGrath and Tschan), but rather within the evaluation stage or the decision making process itself.

Culture also influences the marketing strategy decision making process through its effect on the preference of marketing managers to utilize specific framed competitive information (Tse et al. 1988). Specifically, marketing managers from a high uncertainty avoidance culture demonstrated a preference for utilizing a greater amount of threat framed than opportunity framed competitive information whereas marketing managers from a low uncertainty avoidance culture demonstrated a preference for utilizing a greater amount of opportunity framed than threat framed competitive information. There were no significant differences in the differential preference for past-and-present framed or future framed between cultures. These results are theoretically consistent with cultural dimensions theory as marketing managers from a high uncertainty avoidance and a low uncertainty avoidance cultures exhibit their cultural biases to minimize the potential for loss and maximize the potential for gain, respectively, through their preference for utilizing strategic framed information (Diamantopoulous et al. 2003; Nakata and Sivakumar 2001; Schneider and De Meyer 1991). These cultural biases may lead to

unintended consequences in the marketing strategy decision making of marketing managers as marketing managers from a high uncertainty avoidance culture have the potential to have their strategic decisions become based more on the reactions to the developments of competitors due to their tendency to rely more on threat framed competitive information. Moreover, due to their tendency to rely more on opportunity framed competitive information, marketing managers from a low uncertainty avoidance culture may face unintended consequences as well by potentially overlooking a significant competitive action.

Within marketing strategy decision making, the utilization of temporal and strategic framed competitive information influences the strategic decisions made by marketing managers (e.g., Menon and Varadarajan 1992; Dutton and Jackson 1987). The results indicate that marketing managers will make strategic decisions of a larger magnitude as the extent to which utilization of each type of temporal (i.e., past-and-present, future) and strategic (i.e., opportunity, threat) framed competitive information increases. Surprisingly, only the strategic decision of timing was affected when marketing managers utilized more future framed information; otherwise, the time-based strategic decisions of timing and time horizon were unaffected by the utilization of competitive information. Taken together, these results seem to indicate that marketing managers are simultaneously willing to adjust the magnitude of their investment but are not willing to alter the average time-based strategic decisions based upon the competitive information utilized. Unintended consequences may result as within increasingly competitive environments success is not guaranteed to those who are able to spend more; rather the ability to time the introduction and establish the time for evaluation, based

upon the competitive environment, have become critical. By maintaining the status quo, marketing managers may lose out on many opportunities.

Moreover, the results of the marketing managers preference for the utilization of competitive information indicates that while there is no significant effect of the differential utilization of strategic framed information on any of the strategic decisions, there is a significant effect on magnitude and timing of the differential utilization of temporal framed information. Specifically, marketing managers who utilize more past-and-present framed information will make strategic decisions of a smaller magnitude and of slower timing. Theoretically, although these results were not hypothesized, they do demonstrate that within marketing strategy decision making the preferences for information based on prospect theory does not hold (e.g., Kahneman and Tversky 1979; Tversky and Kahneman1981). This potentially occurred due to differences in the decision making context. For marketing managers, their strategy decision making focuses on guiding their organization over time with the consequences of their decisions to unfold over time in relation to the uncertain competitive environment. These decisions are not based purely the probability versus certainty of competitive actions but also the ability of the decisions of the marketing managers to succeed within a combination of probability and certainty.

Managerial Implications

For marketing managers engaged in marketing strategy decision making, this research provides important guidance and caution with respect to understanding the unintended consequences that incorporating the complexities of time and culture can have on their

marketing strategy decision making in three important areas: (1) the effects of culture on strategic marketing decisions; (2) the effects of culture on the preference for utilizing certain temporally and/or strategically framed competitive information on strategic marketing decisions; and (3) the effects of differences in time orientation on strategic marketing decisions.

First, since strategic decisions are made by marketing managers who belong to various national cultures, it is important to understand the effect that culture has on their marketing strategy decision making. The results of this research indicates that when facing the same competitive environment and situation surrounding the development of their marketing strategy, marketing managers from different cultures will make significantly different strategic decisions in terms of magnitude, timing, and time horizon. Specifically, it was found that marketing managers from Japan, which represents a long-term oriented, high uncertainty avoidance, and collectivistic national culture, will make strategic marketing decisions of smaller magnitude, with quicker timing, and a shorter time horizon than marketing managers from the United States, which represents a short-term oriented, low uncertainty avoidance, and individualistic national culture. Given these results, a cultural bias is demonstrated regarding the incorporation of time when making strategic decisions regarding the magnitude of investment, and the time needed for implementation and evaluation. As such, marketing managers are cautioned to recognize not only their own inclination but also the inclination of other marketing managers, for unintended consequences can result. For instance, as firms and competition internationalize, misaligned cultural biases could result in a competitive

disadvantage for the firm creating difficulties in developing coherent marketing strategies or in competing in the marketplace.

Second, when utilizing information from a competitive analysis, systematic biases influencing the strategic marketing decisions of marketing managers can result based upon the preference for utilizing certain temporally and/or strategically framed competitive information. The results of this research indicate that relying on their cultural bias related to uncertainty avoidance, marketing managers tend to rely more on threat framed (i.e., high uncertainty avoidance) or opportunity framed information (i.e., low uncertainty avoidance). Hence, marketing managers are cautioned that these cultural biases may lead to unintended consequences in the marketing strategy decision making as the tendency to rely more on threat framed competitive information could result in strategic decisions becoming based more on the reactions to the developments of competitors, whereas relying more on opportunity framed competitive information could cause marketing managers to potentially overlooking a significant competitive action.

Third, since marketing managers make marketing strategy decisions within and for their organization, it is important to understand the influence on strategic decisions that results based upon whether the individual and the organization are aligned. Although the differences in time orientation that exist between marketing managers and their organization do not have a significant effect on the strategic decisions of marketing managers, they do have a significant effect on their evaluations. The results of this research demonstrated that when differences in time orientation exist the strategic decision will be evaluated to be of a lower quality. This evaluation of their strategic decision being of a lower quality could result from marketing managers believing that

their time-oriented view of the strategy that the organization should pursue is different from the strategy it is currently pursuing. Hence, marketing managers are cautioned to be aware of doubt in their decisions that a misalignment may cause.

LIMITATIONS AND DIRECTIONS FOR FUTURE RESEARCH

Although this research provides insight into the pervasive influence that culture has on how marketing managers incorporate time within their marketing strategy decision making, the following limitations need to be considered when attempting to generalize the findings. The three main limitations of this research are: (1) the influence of time on the decision making of marketing managers was examined through a hypothetical case scenario focusing on general competitors in only one highly technologically uncertain environment; (2) the information statements were restricted in amount, strength, and detail in order to balance between temporal and strategic frames to minimize information overload; and (3) the influence of culture was restricted to be examined within two countries at the national level. Although this research design was purposefully selected and designed based upon the extant literature to allow for the maximum amount of control and comparability to be maintained over the decision making scenario presented, this control also limits the external generalizability of the findings as the influence of time in the marketing strategy decision making of marketing managers will be influenced by the nature of specific relationships between competing firms and of the industry context.

To address these limitations, the influence of culture and time in marketing strategy decision making should be further examined using a context and a methodology

where the strategic decisions of real companies to real competitive information can be evaluated with respect to their magnitude, timing, and time horizon. In addition to addressing the aforementioned limitations, the results of this research suggest numerous avenues for future research. First, the greater utilization of temporal and strategically framed information was found to significantly influence the magnitude of the strategic decisions. Although within the current research the information statements of the competitive analysis specifically focused on equivalently framed temporal and strategic actions, further examining the depth of the temporal framing (e.g., long vs. short) and the strength of the strategic framing (e.g., weak vs. strong) could identify clearer distinctions in the utilization of competitive information. In addition to how the depth and strength of framing influences the utilization of competitive information within marketing strategy decision making, future research could focus more on the interplay of specific competitors (e.g., new vs. established, minor vs. major). This future direction would build upon the current research's examination of the general competitive events within the industry to gain insight on the possibility of marketing managers to not only strategize based upon the past, present, or future, but in relation to certain identified competitors (Clark and Montgomery 1999).

Second, the findings of this research demonstrate the important influence that time orientations have on marketing strategy decision making. For instance, the dominant time orientation of the marketing manager influences the utilization of competitive information and differences between the dominant time orientation of the marketing manager and their organization causes marketing managers to evaluate the quality of their strategic decisions to be lower. Yet, as only the effect of the time

orientation of the organization was examined relative to the individual time orientation and only the general differences between the time orientations were examined within this research, any direct influence of the organization's time orientation or of the specific differences were neglected. Future research could extend to examine the role that the time orientation of the organization has on as well as the differential effects that specific differences between the time orientation of the individual and organization have on the development of marketing strategy (Bluedorn 2000). Further, as the time orientation of the organization potentially develops as a result of the individuals involved in its formation, future research could examine the process by which temporal preferences of both organizations and individuals become entrained. This stream of potential future research would extend the extant research on marketing strategy by examining the process by which temporal factors become norms.

Third, the unintended consequences that can result when marketing managers attempt to incorporate the complexities of time within their marketing strategy decision making was demonstrated by the findings of this research. Unintended consequences caused by the multidimensional and multilevel characteristics of time may result in other areas as time influences more than just strategic decisions focused on the external competitive environment and more than just marketing managers. For instance, as time has been shown to influence the decision making of marketing managers with respect to the competitive external environment (e.g., Jayachandran and Varadarajan 2006; Montgomery, Moore, and Urbany 2005), how does the interpretation of time influence the decision making of marketing managers or other marketing professionals with respect to the competitive internal environment? This stream of potential future research would

extend to examine the influence of time on the development of a firm's internal strategy and/or the individual's personal strategy pertaining to the performance of specific intra-company behaviors or accumulating specific marketing human capital. Moreover, insight on the dispositional dimensions of time could be further uncovered by not only expanding the type of the strategic decisions examined, but by also including situational time factors within the decision making context. For instance, how would the interpretation of time in relation to the connection of the entity to time as well as events to time interact with the objective time available to influence decision making behavior?

CONCLUSION

Unintended consequences in marketing strategy decision making occur when marketing managers incorporate their unique interpretation of time with respect to their own connection to time as well as how competitive information connects to the past, the present, and the future when developing their own marketing strategies. The results of this research demonstrate that the strategic decisions of marketing managers and the subsequent evaluation of these decisions are influenced, varying by culture, by their utilization of specifically temporal and/or strategic framed competitive information as well as their dominant time orientation and the differences between the individual and organizational time orientation. For marketing academics, this research presents marketing managers as decision makers subjectively influenced by the interpretation of time operating at the individual, organizational, and societal level opening avenues for future research on how time-based decision biases influence marketing strategy making. For marketing managers, this research exposes the limitation in their marketing strategy

decision making when it comes to understanding the pervasive impact of culture and time.

APPENDIX 1.1

STAGE 1: COMPETITIVE RUMOR MANIPULATIONS

Scenario 1: High Credibility; Makes Sense; Major Competitor
In a recently published research report, an industry research analyst claims that Lazzard Incorporated, a major competitor of Barrington Corporation, will be introducing a new netbook model to the market next year for the purpose of improving general computing functionality and accessing web-based applications. The new netbook will retain the Intel Atom Processor, the 10-inch screen and a keyboard 85% the size of standard laptops. However, the new netbook will weigh only 2.5 pounds, have an increased battery life to 9 hours, and run the newest Windows 7 operating system. The price is speculated to be around $300.

Scenario 2: High Credibility; Makes Sense; Minor Competitor
In a recently published research report, an industry research analyst claims that Lazzard Incorporated, a minor competitor of Barrington Corporation, will be introducing a new netbook model to the market next year for the purpose of improving general computing functionality and accessing web-based applications. The new netbook will retain the Intel Atom Processor, the 10-inch screen and a keyboard 85% the size of standard laptops. However, the new netbook will weigh only 2.5 pounds, have an increased battery life to 9 hours, and run the newest Windows 7 operating system. The price is speculated to be around $300.

Scenario 3: High Credibility; Does Not Make Sense; Major Competitor
In a recently published research report, an industry research analyst claims that Lazzard Incorporated, a major competitor of Barrington Corporation, will be introducing a new netbook model to the market next year for the purpose of improving general computing functionality and accessing web-based applications. The new netbook will retain the Intel Atom Processor, the 10-inch screen and a keyboard 85% the size of standard laptops. However, the new netbook will weigh only 1 pound, have an increased battery life to 14 hours, and run a brand new operating system. The price is speculated to be around $100.

Scenario 4: High Credibility; Does Not Make Sense; Minor Competitor
In a recently published research report, an industry research analyst claims that Lazzard Incorporated, a minor competitor of Barrington Corporation, will be introducing a new netbook model to the market next year for the purpose of improving general computing functionality and accessing web-based applications. The new netbook will retain the Intel Atom Processor, the 10-inch screen and a keyboard 85% the size of standard laptops. However, the new netbook will weigh only 1 pound, have an increased battery life to 14 hours, and run a brand new operating system. The price is speculated to be around $100.

Scenario 5: Low Credibility; Makes Sense; Major Competitor
In a recently published online posting, an industry blogger claims that Lazzard Incorporated, a major competitor of Barrington Corporation, will be introducing a new netbook model to the market next year for the purpose of improving general computing functionality and accessing web-based applications. The new netbook will retain the Intel Atom Processor, the 10-inch screen and a keyboard 85% the size of standard laptops. However, the new netbook will weigh only 2.5 pounds, have an increased battery life to 9 hours, and run the newest Windows 7 operating system. The price is speculated to be around $300.

Scenario 6: Low Credibility; Makes Sense; Minor Competitor
In a recently published online posting, an industry blogger claims that Lazzard Incorporated, a minor competitor of Barrington Corporation, will be introducing a new netbook model to the market next year for the purpose of improving general computing functionality and accessing web-based applications. The new netbook will retain the Intel Atom Processor, the 10-inch screen and a keyboard 85% the size of standard laptops. However, the new netbook will weigh only 2.5 pounds, have an increased battery life to 9 hours, and run the newest Windows 7 operating system. The price is speculated to be around $300.

Scenario 7: Low Credibility; Does Not Make Sense; Major Competitor
In a recently published online posting, an industry blogger claims that Lazzard Incorporated, a major competitor of Barrington Corporation, will be introducing a new netbook model to the market next year for the purpose of improving general computing functionality and accessing web-based applications. The new netbook will retain the Intel Atom Processor, the 10-inch screen and a keyboard 85% the size of standard laptops. However, the new netbook will weigh only 1 pound, have an increased battery life to 14 hours, and run a brand new operating system. The price is speculated to be around $100.

Scenario 8: Low Credibility; Does Not Make Sense; Minor Competitor
In a recently published online posting, an industry blogger claims that Lazzard Incorporated, a minor competitor of Barrington Corporation, will be introducing a new netbook model to the market next year for the purpose of improving general computing functionality and accessing web-based applications. The new netbook will retain the Intel Atom Processor, the 10-inch screen and a keyboard 85% the size of standard laptops. However, the new netbook will weigh only 1 pound, have an increased battery life to 14 hours, and run a brand new operating system. The price is speculated to be around $100.

STAGE 2: CONFIRMATION MANIPULATIONS

Scenario 1: Confirmed to be False (Denied)
The Vice President of Marketing for Lazzard Incorporated released an official statement denying the competitive rumor that has been spreading for the last six months indicating that they will be introducing a new netbook to the market.

Scenario 2: Confirmed to be True (Confirmed)
The Vice President of Marketing for Lazzard Incorporated released an official statement confirming the competitive rumor that has been spreading for the last six months indicating that they will be introducing a new netbook to the market.

APPENDIX 1.2

PRETEST 1

Credibility of Potential Sources

Individuals use different sources from which to acquire information on events, trends, and developments within the business environment. Each of these sources vary in terms of their credibility, where credibility refers to the extent to which the information they provide on events, trends, and developments within the business environment is worthy of belief. Rate each of the following sources listed below on a scale from 1 to 7, where a score of 1 indicates "a very low level of credibility" and a score of 7 indicates "a very high level of credibility".

Table A1.21: Credibility of Potential Sources

Potential Source	Mean	S.D.
Industry Research Analyst	6.08	0.772
Business focused newspaper (e.g., WSJ)	5.92	0.877
Business focused magazine (e.g., BusinessWeek)	5.63	0.963
Industry insider	5.31	1.004
General focused newspaper (e.g., USA Today)	4.83	1.262
Employee of your own company	4.46	1.104
Organizational grapevine	3.81	0.982
Industry blogger	3.69	1.380
Employee of your competitor	3.24	1.331

Marketing Actions That Make Sense of Uncertainty

Uncertainty exists within the business environment pertaining to what general trends and events will likely occur in the future. Sometimes the actions of competing firms serve to provide some insight into the uncertainty occurring in the environment. The industry within which your company operates is characterized by high uncertainty. Specifically, there is a high degree of instability and unpredictability pertaining to the technological environment as there has been many major technological developments leading the technology in the industry to change quite rapidly. Please rate each of the following actions listed below on their ability to provide insight into the uncertainty present within the industry on a scale from 1 to 7, where a score of 1 indicates "a very low level of insight" and a score of 7 indicates "a very high level of insight".

Table A1.22: Marketing Actions That Make Sense of Uncertainty

Potential Marketing Action	Mean	S.D.
Entering a new market	5.25	1.504
New product to the market	5.12	1.487
Rebranding product line	5.05	1.157
New advertising campaign	4.75	1.139
Open owned retail stores	4.67	1.330
Increase spending on advertising	4.41	1.146
New retailer added	4.34	1.334
Decrease price	4.15	1.324
Increase price	4.05	1.292

Competitor Distinctions

Firms of various sizes and of various strategies compete within the business environment, where they can be identified as a major or a minor competitor. Please rate each of the following descriptions of a competing firm listed below on a scale from 1 to 7, where a score of 1 indicates "a minor competitor" and a score of 7 indicates "a major competitor".

Table A1.23: Competitor Distinctions

Potential Competitor Description	Mean	S.D.
Direct		
Company B is a major competitor of your firm.	6.66	0.921
Company B is a minor competitor of your firm.	1.59	1.176
Supply-Based & Demand-Based		
Company B operates in many of the same product and geographic markets and serves the same customer market as your firm.	6.20	0.846
Company B operates in very few of the same product and geographic markets and serves a different customer market as your firm.	1.88	0.966
Supply-Based: Markets		
Company B operates in many of the same product and geographic markets as your firm.	6.07	0.944
Company B operates in very few of the same product and geographic markets as your firm.	2.61	1.365
Absolute Size: Market Share		
Company B has a large share of the total market.	6.14	0.888
Company B has a small share of the total market.	2.90	1.227
Relative Size: Sales		
Company B has annual sales of $15 million greater than your firm.	5.68	1.370
Company B has annual sales of $15 million less than your firm.	3.19	1.152
Relative Size: Market Share		
Company B has a larger market share than your firm.	5.90	1.078
Company B has a smaller market share than your firm.	3.54	1.056
Supply Based: Strategy		
Company B employs a very similar strategy than your firm.	5.46	1.023
Company B employs a very different strategy than your firm.	3.57	1.299
Absolute Size: Sales		
Company B has annual sales of $50 million.	5.12	1.233
Company B has annual sales of $5 million.	3.86	1.279

APPENDIX 1.3

EXPERIMENTAL PROCEDURE

Imagine that you are the Vice President of Marketing for Barrington Corporation, and it is your responsibility to develop and implement Barrington's marketing strategy. You have complete authority over all marketing decisions.

Barrington Corporation develops, manufactures and sells personal computers for the consumer market. Barrington has operated in the personal computing industry for over ten years, where their product strategy focuses on marketing high quality industry standard models.

The personal computing industry has changed with the emergence of netbooks. Netbooks are a rapidly evolving category of small and inexpensive laptop computers designed for the purpose of general computing and accessing web-based applications. Netbooks, for the industry standard, are small (10-inch screen; weigh 3 lbs; 8 hour battery life; keyboards that are 85% the size of a laptops), inexpensive ($350), less powerful (Intel Atom CPU running at 1.6-GHz; 160GB hard drive), and run an earlier operating system version (Windows XP).

However, the future of the netbook market is highly uncertain. The characteristics and functionality that the next generation of netbooks will provide is becoming increasingly unclear as rapidly developing new technologies for improving personal computing has created a high degree of unpredictability of what will come next.

To take advantage of this growing market, consistent with their product strategy, Barrington Corporation plans to develop and introduce an industry standard netbook to the market one year from now to augment its current product line.

In the process of conducting a competitive analysis in preparation to finalize Barrington's marketing strategy for the upcoming year, you become aware of the following information:

[*Insert Stage 1 Manipulation; Followed by Stage 1 Dependent Variables*]

For a moment, take a step away from the Barrington Corporation scenario.

[*Insert Filler Task Here*]

Referring back to the Barrington Corporation scenario, consider the following:
Six months have now passed. Over this time period, Barrington Corporation has begun to implement the strategic marketing decisions that you have made. Now, you are made aware of the following information:

[*Insert Stage 2 Manipulation; Followed by Stage 2 Dependent Variables*]

[*Insert Manipulation Checks*]

APPENDIX 1.4

MEASURES

Table A1.41: Measures

Stage 1: Dependent Measures
Likelihood to Respond to Information (r = .650)
How likely are you to use to this new competitive information in developing your marketing strategy?
How likely are you to respond to this new competitive information?
Very Unlikely (1) to Very Likely (7)
General Changes to Strategy
Regarding the introduction of the netbook, which of the following actions are you most likely to pursue?
(1) Continue the introduction of the netbook as originally planned
(2) Introduce the netbook with minor modifications
(3) Introduce the netbook with major modifications
(4) Delay the introduction of the netbook until more information is available;
(5) Drop the introduction of the netbook
Stage 2: Dependent Measures
General Changes to Strategy
Regarding the introduction of the netbook, which of the following actions are you most likely to pursue?
(1) Continue the introduction of the netbook as originally planned
(2) Continue the introduction of the netbook as recommended six months ago
(3) Introduce the netbook with minor modifications
(4) Introduce the netbook with major modifications
(5) Delay the introduction of the netbook until more information is available
(6) Drop the introduction of the netbook
Control Variables
Gender
What is your gender?
(1) Male
(2) Female

Table A1.41: Measures (continued)

Highest Degree Achieved
What is your highest degree achieved?
(1) No Degree
(2) High School
(3) Associates
(4) Bachelors
(5) Masters
(6) Doctorate
Decision Authority
In your position, would you have the authority to make decisions similar to those addressed within the scenarios?
(1) Yes
(2) No
Years Experience
How many years of experience do you have?
Amount
Manipulation Checks
Stage 1 Manipulations
Credibility of the Source of the Competitive Rumor
The level of credibility for the source of the initial competitive information.
Very Unlikely (1) to Very Likely (7)
The Ability of the Charge to Make Sense of Uncertainty
The level of plausibility of the product description of the initial competitive information.
Very Unlikely (1) to Very Likely (7)
The Degree to which the Target is Described as a Competitor
The initial competitive information was about a _____ competitor.
Minor (1) to Major (7)
Stage 2 Manipulations
Verification of the Competitive Rumor
The initial competitive information was ____ by the competitor.
Confirmed (1) to Denied (7)

APPENDIX 2.1

CASE SCENARIO

Imagine that you are the new Vice President of Marketing for PhotoMax Incorporated, and it is your job to make recommendations regarding the development and introduction of new products. At PhotoMax, the organizational culture is virtually identical to the culture at your last organization, and so you have a good sense of the shared values and vision of this organization.

PhotoMax Incorporated develops, manufactures and sells digital cameras for the consumer photography market. The transition from film to digital cameras created instability in the technological environment through the development of innovative new products and in the competitive environment through the demise of traditionally dominant firms and the introduction of many new firms competing for a share of the market. Of the five major firms that compete within the digit camera market, PhotoMax is currently the third largest with a 12% market share.

The digital camera market has been experiencing double digit growth for the past few years and is expected to continue to grow for the next few years, primarily due to users upgrading to more technologically advanced models. As such, the development and introduction of a new digital camera is a priority for the continued success of PhotoMax Incorporated. PhotoMax invests approximately $2 million in the development of each new digital camera, where the development cycle for a digital camera (i.e., from idea generation to introduction) takes 12 months on average. The success of each new digital camera in the marketplace is evaluated after an average of 9 months. However, there have been numerous changes within the competitive environment that suggest a possible need to change aspects of PhotoMax's new product development process.

Please read the following competitive analysis. Questions that relate to this competitive analysis will follow.

Competitive Analysis for the Digital Camera Market:

The competitive landscape within the digital camera market over the past year regarding the development of new products has experienced many changes. First, an article last year in the business press proclaimed that "The Next Big Thing in Digital Cameras is Here," as it detailed the patents pending for several technological processes developed by competitors which promised to change digital cameras. For instance, one process promised to create a digital camera with the ability to instantaneously eliminate red eye from digital images. Second, last year a series of manufacturing errors and production problems hindered the launch of several competitors' digital camera models. For instance, one competitor was forced to issue a product recall due to faulty LCD display screens, whereas a warehouse fire destroyed another competitor's primary inventory of digital cameras.

The current competitive landscape within the digital camera market regarding the development of new products continues to experience many changes. A national consumer opinion marketing firm evaluated the current product portfolios of the firms competing in the digital camera market in a recent report. The report indicates that the excitement elicited by the features of the digital camera was a critical factor for digital camera users. The report indicates that consumers are not excited by the current features offered by the products of competitors on the market. On the other hand, in the competition to recruit the best talent, several competitors just announced hiring a new product development manager. Each of these new product managers has a successful track record in high tech consumer products and would immediately be in charge of all aspects of the development and introduction of new digital cameras.

The competitive landscape within the digital camera market over the next year regarding the development of new products will likely continue to experience many changes. The digital camera market will likely continue to be fiercely competitive as market research indicates that competitors may be increasing their research and development capabilities through creating many new engineering positions to focus on improving product technology and design over the course of the next year. Although it has been suggested that changes to the new product development process may be necessary to remain competitive, it has also been speculated in variety of sources (e.g., industry research reports, digital camera blogs and popular press articles) that a series of highly anticipated new product introductions slated for next year by competitors are likely to be delayed and/or ultimately dropped due to problems in the manufacturing process and an underwhelming consumer response in market pretesting.

APPENDIX 2.2

PRETEST 1

Evaluation of Information Statements

For each of the information statements listed below, indicate whether you would consider it to be an opportunity or a threat, if a competing firm were to take the action described. Further, please rate the strength of each statement, with a score of 1 indicating a weak statement and a score of 7 indicated a strong statement.

Table A2.21: Evaluation of Information Statements

Information Statement	Evaluation		Strength	
	Opp.	Threat	Mean	S.D.
Developed brand new technology	17 (29%)	42 (71%)	5.712	1.068
High quality product reputation	16 (27%)	43 (73%)	5.407	1.176
New product design does not develop excitement among consumers	46 (78%)	13 (22%)	4.525	1.513
Patent license expired	47 (80%)	12 (20%)	5.051	1.357
Eliminating engineering positions	44 (75%)	15 (25%)	3.864	1.319
Problems in product launch	14 (24%)	45 (76%)	5.695	1.055
Reducing manufacturing capacity	46 (78%)	13 (22%)	3.672	1.276
Dropped the release of a new product	40 (69%)	12 (31%)	3.983	1.516
Increasing R&D capabilities	12 (20%)	47 (80%)	4.339	1.458
Unsuccessful launch of a new product	46 (78%)	13 (22%)	4.559	1.465
Delay in building flagship manufacturing plant	46 (79%)	12 (21%)	3.086	1.274
Product line was not adopted by consumers	46 (78%)	13 (22%)	4.407	1.452
Low quality product reputation	44 (75%)	15 (25%)	4.847	1.483
Slow new product development process	44 (75%)	15 (25%)	4.356	1.573
Hire new talented product development manager	12 (20%)	47 (80%)	4.695	1.393

Table A2.21: Evaluation of Information Statements (continued)

Patent license received	13 (22%)	46 (78%)	5.085	1.500
New product design does develop excitement among consumers	25 (42%)	34 (58%)	4.746	1.397
Creating engineering positions	14 (24%)	45 (76%)	3.897	1.165
Releasing a new product	13 (22%)	46 (78%)	4.797	1.215
Talented product development manager left firm	46 (78%)	13 (22%)	4.458	1.291
Fast new product development process	12 (20%)	47 (80%)	5.103	1.360
Building a new manufacturing plant	12 (20%)	47 (80%)	4.254	1.421
Decreased spending on R&D	45 (76%)	14 (24%)	3.508	1.278

APPENDIX 2.3

MEASURES

Table A2.31: Measures

Strategic Decisions
Magnitude
Recall that, on average, Photomax Incorporated spends $2,000,000 (2 million) on each new product.
How much would your recommend changing the amount of money invested in Photomax's new product development budget?
Substantial Decrease (1) to Substantial Increase (9)
Please provide a specific estimate of the amount of money you would recommend to be invested in the new product development budget.
Amount ($)
Timing
Recall that, on average, Photomax Incorporated new product development cycle (i.e., the time to introduction) takes 12 months.
How much would you recommend changing the timing of Photomax's new product introduction?
Substantial Decrease (1) to Substantial Increase (9)
Please provide a specific estimate of when you would recommend the new product to be introduced.
Amount (Months)
Time Horizon
Recall that, on average, Photomax Incorporated evaluates the success of new products 9 months after introduction.
How much would you recommend changing the time frame designated for evaluating Photomax's new product introduction?
Substantial Decrease (1) to Substantial Increase (9)
Please provide a specific estimate of the amount of time you would recommend in order to appropriately evaluate the success of the new product introduction.
Amount (Months)
Decisions Evaluations
Decision Commitment
I am proud to tell others that I was involved in making this decision. (DCO1)
I am willing to put in a great deal of effort to see this decision as successful. (DCO2)
I am willing to talk this decision up as being good for the firm. (DCO3)
I really care about seeing this decision be successful. (DCO4)
Strongly Disagree (1) to Strongly Agree (7)

Table A2.31: Measures (continued)

Decision Quality
This decision helps the firm achieve its objectives. (DQ1)
This decision makes sense in light of the firm's current financial situation. (DQ2)
This decision is consistent with the firm's current strategy. (DQ3)
This decision contributes to the overall effectiveness of this firm. (DQ4)
Strongly Disagree (1) to Strongly Agree (7)
Time Orientations
Individual Time Orientation
Rank order the following three descriptions depending on how similar the description is to your beliefs.
(Past) I tend to think about what has happened in the past and base my decisions upon similar decisions I have previously made.
(Present) I tend to think about what is happening no and base my decisions upon what is happening in the moment.
(Future) I tend to think about what will happen in the future and base my decisions upon my plan for the future.
Organizational Time Orientation
Rank order the following three descriptions depending on how similar the description is to your organization.
(Past) My organization keeps its policies and procedures the same as they have been in the past, trains employees to follow the methods that have traditionally been used, and makes decisions based upon the decisions that have been made previously.
(Present) My organization adjusts its policies and procedures to accept some changes as they develop, trains employees to adopt any methods that will help them perform today, and makes decisions based upon what is happening in the moment.
(Future) My organization actively changes its policies and procedures to keep everything moving along, trains employees to actively find new methods to replace the old methods, and makes decisions based upon their plan for the future.

Table A2.31: Measures (continued)

Information Use
Please rate the extent to which you used each of the following pieces of competitive information to make your decisions.
Competitors had patents pending for new technological processes a year ago. (IUPT)
Manufacturing errors and production problems hindered the launch of several competitors' digital camera models a year ago. (IUPO)
The digital cameras currently offered by competitors do not create excitement among consumers. (IURO)
Competitors hired successful new product development managers to starts now. (IURT)
Most competitors in the market may be increasing their research and development capabilities a year from now. (IUFT)
A series of highly anticipated new product introductions by a few competitors slated for next year are likely to be delayed and/or ultimately dropped. (IUFO)
Small Extent (1) to Great Extent (7)
Control Variables
Individual Characteristics
Experience: How many years experience do you have?
Amount (Years)
Education: What is your highest degree achieved?
(1) No degree
(2) High school
(3) Associates
(4) Bachelors
(5) Masters
(6) Doctorate
Organizational Characteristics
Size: Approximately, how many people are employed by your organization
51 – 100 employees
101 – 500 employees
501 – 1,000 employees
1,001 – 5,000 employees
5001 – 10,000 employees
10,001+ employees

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