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The Effects of Emotions on Strategic Decision-Making: A China-U.S. Cross-Cultural Experimental Study

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**THE EFFECTS OF EMOTIONS ON STRATEGIC DECISION-MAKING: A
CHINA-U.S. CROSS-CULTURAL EXPERIMENTAL STUDY**

by

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ABSTRACT

THE EFFECTS OF EMOTIONS ON STRATEGIC DECISION-MAKING: A CHINA-US CROSS-CULTURAL EXPERIMENTAL STUDY

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Old Dominion University, 2010

Co-Directors: Dr. Anil Nair

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This dissertation examines how two different emotions — pride and guilt — experienced by managers influence their strategic decision-making. Four different aspects of strategic decisions are investigated: risk, comprehensiveness, speed, and resource commitment. The dissertation also investigates how culture moderates the relationship between emotions and different aspects of the strategic decision-making process.

The hypotheses of this study were tested using a 2 x 2 experimental design with two emotions (guilt and pride) and two cultures (U.S. and China). The experimental design used scenarios to elicit these two emotions. Next, PANAS-X scale was used to check the effectiveness of emotion manipulation. Finally, respondents were asked to make a strategic decision about international market entry.

The results show that higher levels of guilt lead to higher levels of comprehensiveness and resource commitment but lower levels of risk and speed in strategic decision-making, while higher levels of pride lead to higher levels of risk and speed but lower levels of resource commitment in strategic decision-making. In addition, the empirical results support the interaction effects of emotions and culture on strategic decision-making. Managers from a high collectivistic culture take lower levels of risk, and more comprehensive, slower strategic decisions at high levels of guilt, while managers from a high individualistic culture will take similar risk, and have similar levels of

comprehensiveness, and speed at low and high levels of guilt. However, managers from a high individualistic culture take higher risks and make quicker strategic decisions at high levels of pride, while managers from a high collectivistic culture will take similar risks and time in making strategic decisions at either low or high levels of pride.

The findings not only provide evidence that emotions play an important role in managers' strategic decision-making process but also illustrate that culture interacts with emotions to influence this process. The last part of this dissertation discusses the limitations of this study and offers suggestions for future research.

This dissertation is dedicated to my parents, Chunjin Xu and Qiumei Cai

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Before I began work on this dissertation, I assumed it would be a very rational process. However, as I reach the conclusion of this work and look back, I realize that I had experienced different emotions such as anxiety, frustration, happiness, and pride at different stages of the dissertation. I had experimental results that were sometimes as expected and joyful, but other times unexpected and sad. This project has been really an unforgettable and wonderful emotional experience for me. I discovered that writing a dissertation is not only a very rational process, but also an emotional experience.

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Remember Dr. William Q. Judge always gave me timely and helpful feedbacks from his professional knowledge. He is a strict teacher and inspired me to set high standards on my research. I have received a lot of advice and help from him in writing this dissertation.

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CHAPTER 1

INTRODUCTION

1.1 RESEARCH QUESTIONS

A firm's strategy is a series of important decisions and resultant actions, and comprises elements by which the firm can be distinguished from other firms (Mintzberg & Waters, 1985). Strategic decisions are the most important decisions that are related to a firm's strategy and are mostly made by top management. Research in strategic decision-making has often been classified into two different categories: content research and process research. Content research focuses on the issues of strategy such as strategic positioning, business portfolio management, new product development, international or product diversification, and mergers and acquisitions. Process research focuses on issues such as, how strategic decisions are formulated and implemented, and how some internal and external factors affect the processes of strategy formulation and implementation. The strategic decision-making process (SDMP) is one of the most important processes that top management is intensively involved in to gain competitive advantages over other firms (Huff & Reger, 1987).

Content research and process research are complementary to each other. They can significantly influence the direction of each other (Mintzberg & Waters, 1985; Shrivastava & Grant, 1985). There are two different types of research in SDMP. One examines specific characteristics of the SDMP. For example, this type of research seeks to explore how different factors have affected SDMP constituent dimensions (Brouthers, Brouthers, & Werner, 2000; Judge & Miller, 1991; Papadakis, 1998),¹ and how changes in these constituent dimensions have affected organizational outcomes (Dean & Sharfman, 1996a; Dean & Sharfman, 1996b; Goll & Rasheed, 1997a; Hough & White, 2003; Johannes & Donald, 2003). The second type of research aims to model the SDMP and to identify the major components of strategic decision processes (Hart, 1992; Hitt & Tyler, 1991).

Different models or perspectives have been adopted to analyze and understand the strategic decisions process in organizations, such as rational normative model, external control model, strategic choice model, organizational perspective, cognitive perspective

¹ This dissertation follows the citation and reference formatting of the *Academy of Management Journal*.

and political perspectives models (Hitt & Tyler, 1991; Schoemaker, 1993; Schwenk, 1995). Each model or perspective captures part of the complex nature of strategic decision-making. However, they compete with each other in explaining certain aspects of the strategic decision-making process, based on different assumptions. All of the models or perspectives are supported in one way or another in empirical research. The rational actor perspective has occupied a central place in the literature on strategic decision-making (Elbanna, 2006; Miller, Hickson, & Wilson, 1996; Said & John, 2007).

Traditional strategic decision-making process models have minimized or ignored the influence of emotions on CEOs' strategic decision-making process (Eisenhardt & Zbaracki, 1992; 1991; Judge & Miller, 1991; Schwenk, 1988). However, in recent years this trend has been challenged. For example, Naqvi, Shiv, and Bechare (2006) conducted neurological brains scans in order to understand the biological foundation of emotion, and reported that there is neurological evidence indicating that emotions play an important and active role in the human decision-making process. Earlier, Velásquez (1998) presented a computational approach to simulate emotions, using artificial intelligence to control robots. In general, emotions are believed to have negative effects on rational decision-making (O'Donoghue & Rabin, 2000; Rottenstreich & Hsee, 2001). Emotions usually alter the decision maker's objectivity and influence rational decisions. As such, the normal prescription is for decision makers to refrain from the emotional effects in order that they can become more rational and "objective" (Frank, 1988; Mellers, Schwartz, & Ritov, 1999). Recently, an increasing number of intellectual works have challenged this traditional opinion.

Researchers working in such disciplines as behavioral economics, behavioral finance and consumers' behavior have investigated how emotions affect the business side of decision-making. Sanfey, Rilling, Aronson, Nystrom, and Cohen (2003) provided empirical support for the influence of emotions in economic decision-making behavior. Some behavioral economists have identified additional psychological and emotional factors that play an important role in CEOs' investment decision-making (Rayna & Neal, 2007; Ulrike & Geoffrey, 2005). Other behavioral finance researchers revealed that investors experiencing more intense feelings achieved higher decision-making performance (Seo & Barrett, 2007). They argued that emotion actually plays a positive role to improve the quality of rational decisions. This view suggests that humans will be less

rational if they lack emotion in decision-making, other conditions being equal.

This view of emotions argues that humans justify their actions not by rational decision, but by their emotions alone. Emotions first assign a subjective utility to people's desires without any rational help, and then reasons come to calculate the expected utility for a number of actions and finally select the action with the highest expected utility. In this selection process, rationality is only for computation and cannot explain the desires.

Emotions help people feel what is the right thing to do, whereas reasoning helps people do the right thing in a more efficient and effective way.

In contrast, the other view of rationality argues that a human's actions or decisions can be interpreted with the underlying logic. It is believed that everything happens out of reason.

These two views are incompatible and contradict each other. However, the idea that people need to combine these two views together in decision-making is supported by recent findings in neuroscience (Damasio, 1994). Damasio (1994) argued that both emotion and rationality play an important role in the human's decision-making process based on his findings on several of his patients. One of his patients named Elliot changed dramatically in his behaviors and personality after he had a brain tumor removed in surgery. The consequences of this surgery were his loss of emotions or feelings, or his own subjective sense of emotion, because of the removal of part of his brain. Even with a high IQ, Elliot could no longer make rational decisions, but he could discuss the pros and cons of different scenarios. It seemed that Elliot's rational ability and IQ remained the same and intact. Yet, without emotions or feelings, he could not weigh the various options and could no longer make his own choice among different options. This vivid example shows the important role emotions play in the rational decision-making process. Evans (2002) argued that emotions help people solve the searching problem in making decisions when they try to find the best solution. In his research, he found that emotions provide people with appropriate search strategies, and as a result, prevent people from getting lost in endless explorations of potentially infinite solutions for problems. He explained that emotions play a positive role in enhancing reason and people make good decisions because of the connection between emotions and reason. Emotions influence decision-making. This argument contradicts the rational normal model that is used for strategic decision making.

Therefore, the first part of this dissertation investigates the impact of emotions on strategic decision-making.

The other important question under investigation in this dissertation is to understand how cultural differences moderate the relations between emotions and the strategic decision-making process. This topic is also very important especially for the contemporary interrelated global economies. Recent trends in international business and trade are beginning to integrate individual countries into a single global economy. In the past, multinational companies mostly originated from western countries and dominated by western culture. Recently, companies from non-western cultures have emerged as powerful players on the international arena. In addition, culture is believed to be one of the important factors which influence the strategic decision process and outcomes (Carr & Tomkins, 1998b; Papadakis, Lioukas, & Chambers, 1998). Emotions commonly exist in managers or executives (Brundin & Nordqvist, 2008). Therefore, it is important to understand how executives from companies with different cultural background behave differently when making business decisions while under the influence of different emotions.

The knowledge of the moderating function of culture on strategic decisions is not only important to understand the internal conduct of multi-national companies but also to gain a competitive advantage over global rivals. Such knowledge not only facilitates the cooperation of the colleagues in different cultures but also helps to understand the strategic moves and responses from global competitors in different countries. How to coordinate the different branches of multi-national companies requires responses from managers or executives from different cultural backgrounds. However, these multi-national companies have well-designed internal-standard operating procedures. The response or execution of these procedures, or decision-making process, may vary among managers or executives with different emotions from different cultures. To understand the cultural impacts on the relationship between emotions and strategic decision-making can enable multi-national companies to design more effective strategies in obtaining better cooperation among different subsidiaries, and adapting to such different influences. The knowledge can also reduce the conflicts and misunderstandings that arise among managers or executives who are from different cultural backgrounds when they use different decision-making processes.

Further, by studying the moderate function of cultures between emotions and strategic decisions, companies can better understand their rivals' behaviors and thereby, more effectively design company strategies when coping with global competitors from different cultural backgrounds.

Numerous academic papers have studied the relationship between culture and strategic decision-making (Carr & Tomkins, 1998a; Papadakis et al., 1998; Tse, Lee, Vertinsky, & Wehrung, 1988). However, no research has investigated the cultural influence on the relationship between managerial emotions and strategic decision-making. The current lack of studies that address the connections between cultures, emotions and strategic decision-making processes limits our understanding of how we can determine the most effective methods for making strategic decisions. Therefore, the study of these connections is imperative. Thus, in this dissertation, the second research question examines the moderating effect that cultures have upon the relationship between emotions and strategic decision-making.

In sum, this dissertation addresses two critical questions. First, it examines how two emotions (guilt and pride) influence four different aspects of strategic decision-making process: risk, comprehensiveness, speed and resource commitments. Next, it explores how culture interacts with the relationship between emotions and the strategic decision-making process.

1.2 THE OUTLINE OF DISSERTATION

This dissertation consists of five chapters. The order and content of each chapter are as follows:

Chapter 2 presents a thorough literature review of the theories of the strategic decision-making process and theories of emotions. Several theories about emotional influences on decision-making are discussed. Based on this literature review and discussion, several hypotheses about the relationships between two emotions (guilt and pride) and four dimensions of strategic decision-making (risk taking, comprehensiveness, resource commitment and speed) are proposed. At the same time, hypotheses about the moderate function that culture plays in these relationships are presented.

Chapter 3 describes in detail the experimental design conducted in this dissertation. An online survey is used as an instrument to collect data to investigate how different emotions

affect the different dimensions in the strategic decision-making process. In the survey, the self-report method is used as the checkpoint for emotional manipulation.

Chapter 4 analyzes the data from experimental design, and discusses the results. This chapter presents how the relationships of two different emotions affect the four different dimensions of the strategic decision-making process. In addition, this research project also investigates how culture influences the relationship between two emotions and the strategic decision-making process.

Chapter 5 discusses the contribution and limitations of my dissertation, and suggests direction for future research. The academic contributions and managerial implications of this project are addressed, followed by a discussion of the limitations. Finally some suggestions for future research direction on this topic are given.

CHAPTER 2

LITERATURE REVIEW AND HYPOTHESES

2.1 STRATEGIC DECISION-MAKING

2.1.1 Strategic Decision-Making Process

Strategy is a term that originates from the Greek word “strategos,” which means “the art of the general” (Snow & Hambrick, 1980). The strategic decisions include two parts that are strategy formulation and strategy implementation. There are some attributes that are unique to strategic decision making and which are different from ordinary decision making. Mintzberg, Raisinghani, and Théorêt (1976) pointed out that strategic decisions are novel, complex and open ended. Strategic decisions are not decisions made under uncertainty, but rather within a continuous state of ambiguity, where almost nothing is given or easily determined.

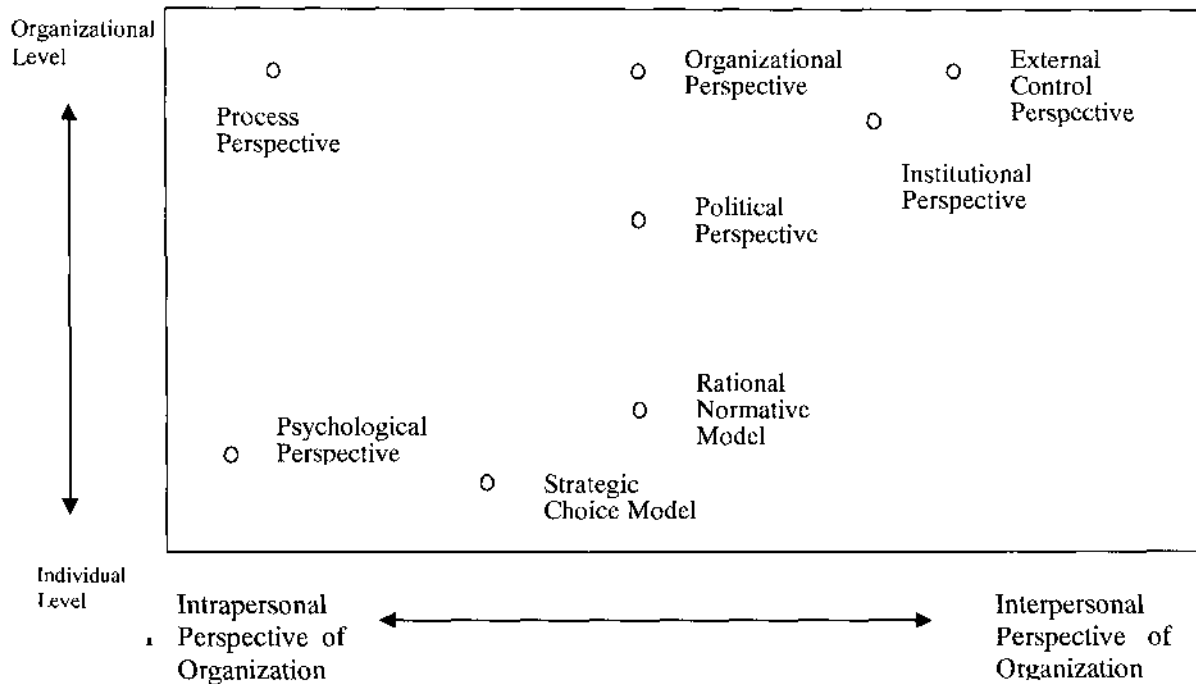
Schwenk (1988) pointed out that three major characteristics of strategic decision-making distinguish them from other types of decisions. The first characteristic of strategic decisions is that they are ill-structured or non-routine. Each strategic decision is unique and has no clear boundary. The second characteristic of strategic decisions is that they are extremely important to an organization, given that it not only involves substantial resource commitments but also because the results of such decisions depend upon the possible survival or death of an organization. Third, strategic decisions are very complex. These decision characteristics suggest that the decision-making process must be sufficiently robust to handle such non-routine, important and highly complex decisions.

Wilson (2003) discussed some features of strategic decisions. According to Wilson, strategic decisions are difficult to define or to assess by performance measurement and they are associated with different trade-offs and high risks. He believed that strategic decisions set precedents for subsequent tactical decisions. In addition, he argued that strategic decisions are political and carry high levels of uncertainty; more importantly, they rarely have one best solution, and, once a decision is made, it is difficult to reverse.

Scholars have distinguished between two types of research in strategic decision-making: content research and process research. This dissertation focuses on the strategic decision-making process (SDMP). The SDMP is considered as the most important managerial activity in all types of business organizations. Managers need to cope

with difficult and complex situations in which they must make strategic decisions, such as entering new foreign markets, developing new products, merging or acquiring and divesting or downsizing businesses. In order to understand this complicated strategic decision-making process, it has been argued that only one theoretical perspective is not enough. Bourgeois (1984) proposed that external factors, strategic decisions, and internal organizational factors need to be combined together to explain the strategic decision-making process. Hitt and Tyler (1991) argued that an integration of the factors identified by the different perspectives on strategic decision-making would contribute to a better understanding of the SDMP. They examined SDMP by integrating three decision-making perspectives – the rational-normative perspective, the external control perspective, and the strategic choice perspective. They found that the rational-normative perspective received the strongest empirical support. A review of the literature thus suggests different perspectives have been used to analyze strategic decisions, including rational normative model, external control model, strategic choice model, organizational perspective, political perspective, cognitive perspective, psychological perspective, process perspective and institutional perspective. Overall, there are two dimensions underlying these perspectives. One is the level of analysis (e.g., individual level to organizational level), and the other is the primary source of influence (e.g., from the inner and outer workings of an organization). Figure 2-1 illustrates how the different perspectives fit into the two dimensions. In this dissertation, the first five theoretical perspectives that are mostly used in analyzing SDMP are discussed in order to give a comprehensive picture about the complex nature of SDMP (Bourgeois, 1984; Hitt & Tyler, 1991; Said & John, 2007). These five perspectives are: rational normative model, external control model, strategic choice model, organizational perspective and political perspective.

Figure 2-1. The position of different SDMP perspective on two dimensions



2.1.2 Rational normative model of SDMP

Schwenk (1988) argued that the rational normative model assumes that organizations behave as rational individuals. It follows that organizations are objectively rational and have complete knowledge of the consequences arising from all possible alternatives. This view is equivalent to the view in economics that an organization makes decisions to maximize its utility. Though economists have a number of different views of rationality, they mainly focus on a particularly stringent assumption that individuals seek the maximization of their expected utility. Though there are other competitive models, the rational normative model is a dominant approach in the research on SDMP. This model suggests that managers should analyze external opportunities, threats and internal strengths and weaknesses. Based on this analysis, managers can formulate the organizational strategy by optimizing the organizations' goals. The rational normative model indicates that managers need a series of sequential, rational, and analytical processes to evaluate a set of objective criteria, so as to choose the strategic alternatives in the SDMP (Ansoff, 1986; Huff & Reger, 1987). Leontiades (1980) showed that most of the Fortune 1000 firms used this rational normal model in strategic planning.

Andrews (1971) and Hofer and Schendel (1978) were among the early researchers to develop the rational normative model of strategic choice. In academic research on management education, or real world practice, the rational normative model is the main stream in SDMP. The rationality involved in strategic decision-making has long been recognized as one of the important subjects with considerable theoretical and empirical investigations in the strategic management (Eisenhardt & Zbaracki, 1992; Elbanna, 2006; Fredrickson, 1984; Hart, 1992; Wilson, 2003).

Scholars have developed several different constructs of rationality in the SDMP. For mergers and acquisition process research, the rational normative model is adopted to analyze the fit between different strategies or organizations (Jemison & Sitkin, 1986). For example, merger and acquisition decisions represent, in most instances, a type of strategic decision that can be expected to follow a rational normative model. Before mergers and acquisitions, firms should carefully analyze both their external environment and internal operations. After the environment scan, firms should use a number of objective dimensions to evaluate potential acquisition candidates. However, given the limits of human information processing capabilities, the rational normative model simplifies the strategic decision-making process by limiting the criteria used in decision making. March and Simon (1958) argued that the limitations of human intellectual capacities caused individuals and organizations to adopt simplified models in order to capture the main features of a problem as a means to avoid dealing with all of the complications. Cyert and March (1963) argued that institutional and cognitive constraints have an impact on economic and organizational behavior. Gigerenzer and Todd (1999) argued that the rational normative model is not one that managers actually use in strategic decision-making. They argued that managers have evolved to achieve a certain degree of rationality but rationality did not pay off in the environments where managers worked. Most current advocates of the rational normative perspective realize that strategic decisions need to take into consideration other factors such as environmental context or individual differences.

Snyman and Drew (2003) argued that bounded rationality shows that strategic decision-making process is limited by cognitive and political realities. Papadakis (1998) adopted integrative models of the rational normative strategic decision process by

considering other perspectives. They investigated the direct relationships between individual contextual variables and SDMP rationality. Schwenk (1995) recommends that the study should integrate other perspectives or contexts on SDMP rationality. Said, et al (2007) examined the influence of decision, environmental and firm characteristics on the rational normative model of strategic decision-making. They studied the relevance of three different factors – decision specific, environmental, and firm characteristics - on SDMP rationality. They found that all three different characteristics had an impact on the rationality of strategic decision-making processes.

2.1.3 External Control Model of SDMP

This perspective suggests that the strategic decision- making process is largely determined by characteristics of the external environment in which the organization is located (Hitt & Tyler, 1991). This perspective is developed based on two disparate but largely supportive research streams: organization theory and industrial organization economics.

Duncan (1972) argued that environmental turbulence and uncertainty should have a major effect on organizational performance. This approach suggests that the design and choices of organizations are based on the complexity of the environment (Bourgeois, 1984). For example, Keats and Hitt (1988) noted that resource scarcity in a firm's existing markets increases the firm's risk, which suggests the need to expand into new markets. Thus, resource scarcity may drive strategic choices and, in turn, firm performance.

Industrial organization economists argued that an industry's structure is a major determinant of the profitability in the industry and thus serves as a powerful influence on strategic decisions (Barney & Ouchi, 1986). The attributes of industry structure such as concentration, heterogeneity, and existence and the height of entry barriers are believed to have the most important influence on strategic choices (Hirshleifer, 1988; Porter, 1980). Porter (1980) argued that a major aspect of the environment is the industry in which a firm competes. The industry structure exerts a significant influence on the competitive rules in the industry, and therefore, on firms' strategies. There is interdependence between industry and strategic decisions (Bourgeois, 1984). Strategic decisions determine the industries in which a company participates, but the industry affects the objective criteria relevant in strategic decisions. Finkelstein (1988) found that industry moderates the managerial

orientation-strategy relationship.

Other researchers too have argued that environmental factors significantly influence the SDMP (Hart, 1992; Miller, Droge, & Toulouse, 1988; Rajagopalan, Rasheed, Datta, & Spreitzer, 1997). Miller and Friesen (1983) showed that environmental hostility is highly related to the degree of analysis in the SDMP. Kukalls (1991) proved in his analysis of 115 large manufacturing firms that the greater the environmental complexity is, then so too is the level of extensive planning. Schneider (1989) argued that different cultural assumptions about the environment give rise to different approaches in formulating strategy. The overall relationship between environmental dimensions and decision making across the range of studies tends to be significant (Bourgeois & Eisenhardt, 1988; Fredrickson & Iaquinto, 1989).

Two main constructs are used to measure environmental factors. One is environmental uncertainty. Most theoretical interest and empirical effort has focused on uncertainty among the environmental variables (Goll & Rasheed, 1997b). These environmental variables not only can be uncertainties from political or macro-economic factors but also can be uncertainties from technological inputs, market demand or responses from competitors. The other is environmental hostility or munificence. Although environments can be conceptualized in many ways, environmental munificence is regarded as one of the most important attributes for explaining strategic behavior (Castrogiovanni, 1991; Goll & Rasheed, 1997b).

Jones, Jacobs, and Spijker (1992) argued that external environment has long been recognized as an important variable in explaining many organizational phenomena. A national context is one of these important variables. Many researchers have addressed the influence of national context on the SDMP (Child & Tsai, 2005; Elbanna, 2006; Hitt, Dacin, Tyler, & Park, 1997; Kogut, 2002).

In their investigation on the relationship between corporate diversification strategies and firm performance Wan and Hoskisson (2003) found that these relationships are related to national culture environments. Carr (1997) argued that national culture can have a strong effect on the SDMP. He found that British motor component firms had a strong financial orientation while German firms in the same industry were more strategically focused, proactive and thorough in their strategic debates.

2.1.4 Strategic Choice Model of SDMP

This model takes the position that firm strategy is influenced by top management's choices. Child (1972) proposed a strategic choice model, arguing that business strategies are affected by the forces and variables in the external environment. Hrebiniak and Joyce (1985) further developed a strategic choice model and argued that it is possible to design the organization to maximize its choice and adaptation to an external environment. This model also suggested that top managers play an important role in the strategic decision-making process. It points out that SDMP has a behavioral component that reflects the idiosyncrasies of decision-makers. To advance the knowledge of the role of the CEO and the top management team (TMT), it is very necessary to have a better understanding of their impact on SDMPs and/or their underlying characteristics (Rajagopalan et al., 1997).

Some studies showed that the role of 'upper echelons' or 'top managers' or 'strategic leadership' is important enough to determine strategy content and process (Hambrick & Mason, 1984). Research has mainly focused on the influence of top management such as CEO or TMT on corporate strategies and on planning formality.

The characteristics of top managers affect the strategic decision-making process (Hitt & Tyler, 1991). Some researchers examined the link between top management characteristics and perceptions, objective decision criteria and strategic choices (Hambrick & Mason, 1984).

Behavioral decision theorists and strategists (Hambrick and Mason, 1984; Schwenk, 1984, 1988; Walsh, 1989) suggest that managers do not follow the rational model in making strategic decisions. This introduces human choice into strategic decisions. The theoretical arguments proposed are based on an extensive literature in the area of behavioral decision theory (Sebora, Crant, & Shank., 1990). Behavioral decision research indicated that people do not follow the rational normative utility-maximizing model (Sebora et al., 1990). Slovic, Fischhoff and Lichtenstein (1977) argued that when people are faced with uncertain, complex or ill-structured problems, such those that arise during the strategic decision-making process, individuals develop and adopt heuristics to make the decision process simple. Most recent research has demonstrated that human cognitive processes attempt to reduce cognitive effort through the use of heuristics which may create systematic biases (Schwenk, 1988).

Hambrick and Mason (1984) proposed upper echelons theory and argued that strategic choices have a large behavioral component and reflect the idiosyncrasies of top managers' cognitive biases and values. They argued that observable demographic characteristics of top managers could be used as a proxy to measure psychological cognitive bases and values. These characteristics include several personal characteristics such as age, level of education, educational background, total years of work experience, career experiences, socio-economic roots, functional experience, level in the firm, cognitive complexity, and risk propensity.

Hitt and Barr (1989) found that managers approach ill-structured decisions with complex and differentiated cognitive models. That is, the criteria and their consequences may vary with the different cognitive model used. Hambrick and Mason (1984) proposed several personal characteristics of upper echelon managers that are likely to affect strategic choices. In addition, the interactions between environmental and demographic variables should be examined to understand their effects on SDMP. It has been suggested that the age and experience of managers have an affect upon SDMP. Hitt and Barr (1989) found that managers' ages played an important role in compensation decisions. For example, younger managers were more willing to pay higher salaries to managers. Ireland, Hitt, Bettis, and dePorras (1987) suggested that individuals of similar ages have similar life experiences and potentially similar values and beliefs stored as schemas. Schuman and Scott (1989) showed that the generational character created by the events experienced by a person during his/her youth exerts an important influence on later personal attitudes.

2.1.5 Organizational Perspective of SDMP

This model argues that many organizational decisions are the result of standard operating procedures and programs. The organizational perspective has its roots in organizational processes (Cyert & March, 1963; March & Simon, 1958). It is argued that organizational processes, programs and structures will influence -- even determine -- the outcomes of strategic decisions (Schwenk, 1988). This perspective focuses on the internal factors, such as internal systems, company performance, size and corporate control system, and argues that the existing organizational arrangements, structures, systems, processes, and resources will constrain and channel the strategic decision-making process.

It has been found that strategic decision-making processes is affected by a variety of

organizational factors such as firm structure, power distribution, reward systems, firm size, corporate control system and past performance (Rajagopalan, Rasheed, & Datta, 1993). For example, Papadakis et al. (1998) found that internal firm characteristics such as planning formality, performance, firm size and type of ownership all have more significant effects on SDMP than do environmental variables.

Firm structure is another important factor that affects SDMP. Mechanistic structures are characterized by such attributes as centralized decision-making, strict adherence to formally prescribed rules and procedures, tight control of information flows, and carefully constructed reporting and workflow relationships. Conversely, decentralized decision-making, organizational flexibility, open communication, and a de-emphasis on formal rules and procedures are typical of organic structures. Organizational structure effects on the strategic decision-making process are operated by the measurement of the mechanistic-to-organic dimension of firm structure. Miller et al (1988) reported a positive relationship between rationality and both formal integration and centralization in strategic decision processes. Covin and Slevin (1988) showed that firm structure is associated with different top management style. Shrivastava and Grant (1985) suggested that formal structures and the centralization of power are related to strategic decision-making processes.

Firm size is usually considered to be important in the context of SDMP. Many researchers have argued that company size can affect SDMP. Hsu, Marsh and Mannari (1983) showed that larger organizational size is positively associated with greater organizational formalization and the degree of SDMP rationality. Fredrickson et al.(1989) reported that larger size is associated with comprehensiveness in strategic decision-making. Papadakis et al.(1998) showed that larger firms employ more formal and rational processes. Said et al. (2007) investigated how a firm's size effects the framework of SDMP.

Internal systems of an organization might not only exert a significant influence on the flow of information between the layers of hierarchy, but also may determine the nature and context of human interactions, which influences SDMP (Langley, 1989). Several studies have provided evidence on the important implications of corporate control in SDMP (Lioukas, Bourantas, & Papadakis, 1993). The type of ownership or control type is a variable that has attracted much attention, especially in recent literature on markets for

corporate control and privatization. If, hypothetically, nationally owned enterprises display a national style of management and illustrate a cultural influence in their decision-making, while multi-national subsidiaries display an implanted decision-making style, then it is necessary to test whether any important differences exist, if any. Lioukas, Bourantas and Papadakis (1993) showed that different ownership structures either public or private may affect decision-making practices and processes.

Prior firm performance is the first factor that attracts much attention on how it affects the SDMP (Eisenhardt, 1989; Miller & Friesen, 1983). Performance is defined as how a firm performs in comparison with other companies of similar size and industry over the period of making the strategic decision, not only by financial indicators of performance, but also by non-financial indicators. A number of studies have found a significant relationship between past performance and the use of a rational approach in decision-making (Eisenhardt, 1989; Jones et al., 1992; Smith, Gannon, Grimm, & Mitchell, 1988).

2.1.6 Political Perspective of SDMP

This perspective treats decisions as the outcomes of a political game of bargaining among the individuals (Schwenk, 1988). The assumption under this perspective is that decisions are the result of a process in which decision-makers have different goals, form alliances to achieve their goals, and that the preferences of the most powerful prevail. This political perspective views the organization as a political system, in which top managers may be individually rational, but the SDMP is not necessary rational because of the compromises that occur as a result of conflicting goals.

This perspective applies when individual or departmental goals supersede the overarching organizational ones. The political model explicitly acknowledges the existence of a fine balance between individual and organizational goals, and focuses on "partisan behavior" in understanding organizational decision-making. The view reflects the preferences of powerful individuals with conflicting preferences to engage in politics in order to advance decisions that they find favorable (Pfeffer, 1981). The adoption of a political perspective to strategic decision-making can be traced to the political science literature in the 1950s. Some authors developed this perspective about how the conflicting goals and interests of people affect decision-making in government (Eisenhardt &

Zbaracki, 1992). Politics might be a particularly relevant determinant of a non-CEO executive decision-making authority. The political acumen of a non-CEO executive is particularly important for him/her to create discretion when working with other individual top managers of the organization. As a group, especially for TMT group, managers may share some objectives, such as the welfare of the organization, but they have conflicting preferences and interests that arise from different expectations of the future and different positions inside the organization and clashes.

Politics plays an important role in the strategic decision-making process. Decision processes involving politics are divisive, complicated and very time-consuming. During this process, the right decision time may be delayed thus causing the loss of opportunities and profits (Pfeffer, 1992). This problem will be more prominent in competitive and rapidly changing environments when decisions should be made quickly (Eisenhardt, 1989).

Political tactics is different from the straightforward influential tactics of open discussions and sharing of information among decision-makers (Eisenhardt & Bourgeois, 1988). Different points of view will bring some subjective opinions which will lead to a distortion of information (Pfeffer, 1992). With incomplete and distorted information, managers may make decisions with disappointing outcomes (Dean & Sharfman, 1996a).

In addition, political behavior may lead to an incomplete understanding of the environmental constraints, resulting in the undermining of strategic decision effectiveness. First, political tactics are directed towards the interests, power bases and positions inside the organization rather than towards what is feasible, given the present environmental forces. Hence, decisions that result from such processes are less likely to consider environmental constraints. Second, political processes may exclude some feasible alternatives because they are in conflict with powerful individuals' interests, thus undermining the likely success of strategic decisions.

There are many research studies investigating the role of political behavior in the SDMP and its effect on organizational outcomes. Hickson, Butler, Cray, Mallory, and Wilson (1986) argue that not every executive or unit within the organization essentially affects the decision-making processes where they are influenced only by a specified set of interest units or managers. Those with a specific set of interests bring political tactics into

play by exerting influences upon the decision processes in order to ensure that their objectives are embedded in the decision.

Dean et al (1996a) argued that most previous researchers have supported a negative relationship between political behavior and organizational outcomes. Papadakis, Lioukas, and Chambers (1998) indicated that different motives lead to different processes of decision-making when facing a crisis. Child et al. (2005) found that multi-national companies usually bring political initiatives into their strategic decisions such as in international market entry by public relations, co-optation and collective lobbying.

2.2 EMOTIONS AND EMOTION THEORIES

This part of the dissertation discusses the following issues: definitions of emotion, classification of emotions, attributes of emotions, and different perspectives on study of emotions.

2.2.1 Emotion and Its Definition

There are several different affective states such as emotion, mood, affect or attitude. Emotion is defined as an individual's specific, general disposition or temporary feeling, such as anger, sadness, joy, fear, shame, pride, elation, and desperation (Whissel, 1989). Mood is defined as more general but still temporary feelings, such as cheerfulness, gloom, irritability, listlessness, depression, and happiness (Fiske & Taylor, 1991). Mood has two dimensions: a degree of pleasantness and a level of arousal (Russell, Weiss, & Mendelsohn, 1989). Affects are defined as more stable, temperamental, emotional states e.g., liking, loving, hating, valuing, and desiring (Staw & Barsade, 1993).

In recent years, interest in the topic of emotions rather than affects or moods has grown tremendously among academic researchers and among practitioners (Daniels, 1998; Elfenbein, 2007; Naqvi et al., 2006; Rayna & Neal, 2007; Rick & Loewenstein, 2008). Individuals are more easily influenced by the effects of transient emotions than they are by the effects of more stable and long-term affects and moods. The more profound and persistent influence of affects and moods are easy to recognize and most of the time can be under rational control. Sometimes the effects of affects and moods even can be canceled out over time. Compared with affects and moods, emotions have attracted increasing interests that has spread from psychology to related applied domains like consumer behavior, behavioral economics, behavioral finance and strategic decision-making

(Daniels, 1999; Hodgkinson & Sparrow, 2002; Nair, Gopinath, & Xu, 2009; Seo & Barrett, 2007; Ulrike & Geoffrey, 2005). In this dissertation, emotions, instead of moods and affects, are the focus of this research.

People feel emotions while they feel physical reactions such as tingles, hot spots and muscular tension. There are not only physical sensations but also cognitive aspects as well. Emotions are seen as occurring as a consequence of a situation or event appraised and regarded as highly relevant by an individual. The crucial aspect of emotions, as compared with other psychological states, is that other affective states can hardly be considered as full-fledged emotions. The three psychological states are different in following three aspects. First response characteristics are different, such as intensity and duration or the degree of synchronization of different reaction modalities. Second antecedents are different, such as whether these psychological states are elicited by a particular event based on cognitive appraisal, and third, the consequences are different, such as the stability and impact on behavior choices.

In the emotion literature, emotions can be defined in terms of action tendency. Action tendency is the urge to perform a particular form of action (Frijda, 1986; Lazarus, 1991). According to this definition, the subject's relation with the environment plays an essential role. Frijda (1986) argued the way to use action tendency is to define emotion:

Emotions, then, can be defined as modes of relational action readiness, either in the form of tendencies to establish, maintain, or disrupt a relationship with the environment or in the form of relational readiness as such.

One of the most important characteristics of changes in action readiness is control precedence. Frijda (1986) explained the action tendencies as follows:

Action tendencies have the character of urges or impulses. Action tendencies - and action readiness changes generally - clamor for attention and for execution. Evidently, then, action tendencies are programs that have a place of precedence in the control of action and of information processing. We therefore say, action tendencies - action readiness changes generally - have the feature of control precedence.

This definition of emotions can be linked to different emotions with different following actions. When people feel different emotions, they are urged to perform a particular form of action.

2.2.2 Classification of Emotions

There are many different ways to classify emotion. In this section, three different ways to classify emotions are discussed. Ortony et al. (1988) distinguished six emotional types, with two or more individual emotions within each type. Scherer (1985) argued that there are 6 or 7 universal basic emotions and more complex emotions are derived from simple ones. Ortony and Turner, (1990) proposed that there are more than seven emotions. Roseman (1982) presented a theoretical model of the cognitive structure of discrete emotions with 13 qualitatively different emotions: joy, relief, hope, affection, pride, distress, sorrow, fear, frustration, dislike, anger, regret, and guilt. These emotions are differentiated from one another by combinations of values on five cognitive dimensions: motivational state (desirable/undesirable goal), situational State (goal present/absent), probability (outcome certain/uncertain), legitimacy (positive/negative outcome deserved), and agency (circumstances-/other person-/self-caused outcome).

Another approach is to classify emotions into five categories and 17 kinds of emotions (Frijda, 1986). The first category is wanting, such as greed, hope, envy, desire, and love. The second category is not wanting, such as fear, shame, repulsion and contentment. The third category is having, such as happiness, pride, guilt and jealousy. The fourth category is not having, such as anger, sadness and distress. The last category has only one emotion and that is surprise.

The third way is to classify emotions as lower-order and higher-order emotions. Emotions that occur automatically are referred to as lower-order emotions (LeDoux, 1996). These are spontaneous and uncontrollable emotional reactions. These types of emotions mainly involve reactions to pleasure and arousal that do not require to be labeled under a specific emotion. Emotions that depend on deeper cognitive processing of the situation are referred to as higher-order emotions (Lazarus, 1991). These types of emotions are more complex than lower order emotions in the sense that higher order emotions need to be consciously labeled as a specific emotion. Some basic emotions, such as fear, anger and happiness, are situated somewhere in between lower- and higher-order emotions.

2.2.3 Attributes of Emotions

In general, there are two different attributes of emotions. One attribute is the intensity of emotion, and the other attribute is the duration of emotion. The determinants of emotional intensity can be divided into two categories. The first is the so-called global

variables that influence the intensity of all emotions. The global variables of intensity are those variables that are relevant concerns or goals. The more that is at stake, the higher is the emotional intensity (Frijda, 1986). Another global variable is unexpectedness (Frijda, 1986; Ortony et al., 1988). The less an emotion eliciting event is expected, the higher is the emotional intensity. The second global variable is the level of arousal of the central nervous system prior to the emotion-eliciting event. Sense of reality and proximity are considered as the relevant global variables of emotional intensity (Ortony et al., 1988). The second category of determinants of emotional intensity is the so-called 'local variables' which are only relevant for a particular emotion or subset of emotions (Ortony et al., 1988). Other local variables are the degree of judged blameworthiness, expended mental or physical effort, and familiarity.

The second attribute of emotion is the duration of emotion. It is agreed that emotions are relatively of brief duration; however, there are different definitions of "brief" duration. Frijda (1986) argued that emotional responses are typically phrasal responses. Emotions have a more or less well-defined onset and termination. Frijda, Mesquita, Sonnemans, and Goozen (1991) proposed that emotions can last between 5 seconds and several hours. But Ekman (1992) showed that emotions are typically a matter of seconds not minutes or hours. He believed motor behavior is a better index to measure while Frijda et al (1991) recommended self-reports of experienced emotion as a measurement.

2.2.4 Neurobiological Research on Emotions

There is a neurobiological base for the origin of emotion. Damasio (1994) demonstrated that patients with prefrontal lobe damage experienced loss of emotions and which in turn impaired their decision-making capabilities. Other neuroscience research showed that emotional memory, a form of unconscious memory, can play a critical role in the human decision-making process (EL-Nasr, Yen, & Loerger, 2000). Neuroscientists believe two components-the prefrontal cortex and older brain structures are related to the emotions.

Evolution plays a very important role in the brain change. When human evolution began 6 million years ago, the brain evolved with the ability to deal with broader human actions based on primitive brain systems. These new capabilities primarily happened in the prefrontal cortex. Gazzaniga and LeDoux (1978) reported that cognitive processing, which

is used to identify a stimulus and occurs in the right hemisphere, could not be transferred to the left hemisphere, but the feeling used to evaluate the stimulus as being good or bad could be transferred. They assumed that the transfer happened through the lower-brain structures. This region of the brain has expanded most dramatically in the process of human evolution (Manuck, Flory, Muldoon, & Ferrell, 2003). At the same time, the more primitive brain systems, which evolved to promote survival and reproduction has changed little during this period. The unique human ability of focusing on broader goals appears to rely heavily on the prefrontal cortex.

The earliest neurobiological evidences showing that the prefrontal cortex plays a role in emotion were from studies of people with damages to the prefrontal cortex (Damasio, 1994). Patients with damage to the ventromedial section of the prefrontal cortex showed impaired decision-making abilities but demonstrated no overt limitations in their intellectual abilities. They had no problem in predicting and verbally describing the future outcomes of different behaviors. However, they could not assess the importance of those future consequences. Furthermore, they could make plans or take jobs but they would easily lose their focus and failed to implement those plans.

There is also considerable evidence showing how responses to stimuli are influenced by activity in both the neo cortex and lower brain structures. LeDoux (1996) has demonstrated that both the cortex and the lower brain structures play a role in fear responses. Two different routines have different response patterns. Another source of evidence on the different activities of the neo cortex and lower brain structures comes from split-brain patients.

Ernst and Paulus (2005) proposed that a distributed network of both cognitive and affective brain processes are different in three different phases in the decision-making process. Decision-making process is divided into three phases: 1) the assessment and formation of preferences among possible options, 2) the selection and execution of an action, and 3) the experience or evaluation of an outcome. They showed how different basic processes and brain areas are involved in the different stages of decision-making in Table 2-1.

Table 2-1. Different cognitive and affective processes functions in decision-making process

Process	Areas in Brain	Assessment	Execution	Outcome processing
Cognitive	DLPFC	+++	++	+++
	Dacc	+++	++	+
	S/IPL	+++	+	+++
	STG	+++	+	++
Affective	VL/MPFC	++	+	+++
	vACC	++	+	+++
	Ant. Insula	+++	++	+
	Amygdala	++	+	+++
	vStriatum	+	+++	+
Other	dStriatum	+	+++	+
	preSMA	+	+++	+

Note: The degree of their involvement is reflected by the number of signs. Ant Insula, anterior insula; dACC, dorsal anterior cingulate cortex; DLPFC, dorsolateral prefrontal cortex; dStriatum, dorsal striatum; preSMA, presupplementary motor area; S/IPL, superior/intraparietal lobule; STG, superior temporal gyrus; vACC, ventral anterior cingulate; VL/MPFC, ventral lateral/medial prefrontal cortex; vStriatum, ventral striatum.

Source: Ernst et al.(2005)

Perceptual Theory of Emotions

Perceptual theory of emotion can be found in the work of James (1890). This theory argues that emotions function as other faculties such as vision or touch. Emotions provide information about the relation between the subject and the world in different ways.

James (1890) argued that emotional experience is largely due to the experience of bodily changes. Perceptual theory, also known as the James-Lange theory, explains the origin and nature of emotions. This theory states that the autonomic nervous system in humans can create physiological events such as muscular tension, a rise in heart rate, perspiration, and dryness of the mouth as a response to experiences in the world. As the result of these physiological changes, emotions, rather than being their cause, are feelings that come with these physiological changes. This theory and its derivative theories state that a changed situation leads to a changed bodily state. This changed bodily state causes emotion.

Perceptual theories are partially supported by empirical research relating to the role of expressive behaviors in emotion activation and regulation (Izard, 1989; Zajonc, Murphy, & Inglehart, 1989). Some experiments, which were conducted to manipulate the bodily state in order to induce a desired emotion, also support perceptual theories (Laird, 2007).

Perceptual theories of emotion are different from cognitive theories of emotion. Cognitive theories argue that emotions give rise to emotion-specific actions. Perceptual theories assert that people react to a situation even before people feel the emotion. When an event causes people to have physiological reactions, people interpret these aroused physiological reactions, which lead to their experiences of emotions. It is assumed that people will not experience any emotion based on this event if they do not pay attention to or think about this event. Suppose you are walking in the dark and you hear footsteps approaching you, your heart beats faster and you breathe more heavily, and you then know that you are experiencing fear. This example shows that people associate these actions with emotional responses after the action's occurrence.

2.2.5 Cognitive-Motivational-Relational Model

There are several different cognitive theories of emotion including Schachter and Singer's theory of emotion (Schachter & Singer, 1962) and Frijda's (1986) theory and cognitive-motivational-relational theory of emotion (Lazarus, 1991). These theories argue that cognitive activity in the form of judgments, evaluations, or thoughts is necessary for an emotion to occur.

This section discusses one of the cognitive theories that is known as the cognitive-motivational-relational theory. This dissertation uses the cognitive-motivational-relational theory to frame its experimental design and study. Lazarus (1991) argued that emotion results from two sets of different cognitive appraisals. One is primary appraisals and the other is secondary appraisals. Primary appraisal emphasizes the stakes that people have in the outcome of an encounter. Secondary appraisal is related to one's options and prospects for coping. Secondary appraisals include three appraisals: blame or credit combined with self or other direction, coping potential and future expectations. Primary appraisal is related to goal relevance, goal congruence or incongruence, and goal content. Goal relevance refers to what is relevant to a particular person, environment situation or encounter. Goal congruence distinguishes between encounters that are appraised as involving either harms or threats of future harms and those that are appraised as involving benefits. This appraisal determines whether negative emotions or positive emotions are generated by an encounter. Goal content is a classification of the type of ego involvement, or equivalently, a classification of the specific goal that is at stake. This appraisal is

distinguished among related emotions. For example, Lazarus (1991) argued that guilt results from threats to the goals of attaining moral values, while shame results from threats to the goal of living up to an ego ideal.

Roseman (1991) proposed a comprehensive appraisal framework that showed that particular emotional responses depend on a combination of appraisals of events or experiences from five different categories. The first category is whether an experience is consistent or inconsistent with a person's motives (termed, goal congruence/incongruence). The second category is whether one's motives are relative to an experience that is appetitive (reward is present or absent) or aversive (punishment is present or absent). The third category is whether the occurrence of an experience is uncertain or certain. The fourth category is whether a person is in a position of weakness or strength in responding to an experience (termed, responsibility and control). The fifth category is whether the cause of the experience is the self, another person, or impersonal circumstances. Roseman (1991) proved that qualitatively distinct emotions could be produced by experimentally manipulating combinations of the five above-mentioned appraisal categories.

In this dissertation, cognitive-motivational-relational theory is used to arouse two different emotions: guilt and pride from respondents, and it is observed how those emotions effect the strategic decision-making process. The following section explores several theories that can be used to explain how different emotions influence decision-making.

2.3 EFFECTS OF EMOTIONS IN DECISION-MAKING

2.3.1 Emotions in Decision-making Process

In general, people view emotions as harmful and uncontrollable in the decision-making process. As a result, people often avoid or suppress emotions when they make important decisions. Nonetheless, research suggests that human beings cannot avoid and/or stop feeling emotions. Furthermore, research suggests that the quality of people's decisions is limited when people limit the emotional effects on their decision-making process (Damasio, 1994).

Simon (1997) observes that there is no intrinsic conflict between rationality and emotion, and that emotion can be conducive to making good decisions. Elster (1996) claimed that emotions, in fact, contribute to rationality, and therefore, should be taken

seriously. Wilson (1998) argued that if people did not use emotions in their decision-making process, then the purely rational decision process would slow down.

Individuals vary in their reaction to emotional stimuli. Some people are affected more by positive stimuli, while others are affected more by negative stimuli in their economic decisions (Isen, 2008; Rick & Loewenstein, 2008; Seymour & Dolan, 2008). These effects are likely to work on chief executive officers (CEOs) and other top managers, just as on any other ordinary individuals (Rayna & Neal, 2007; Ulrike & Geoffrey, 2005, 2008). For example, it is speculated that some managers might be likely to become overconfident after getting good news but not react as much to bad news. Other managers might react more to bad news than to good news. These effects may have a significant impact on the decision-making process of managers.

Several different hypotheses and theories try to explain how emotions play a role in decision-making. In this dissertation, somatic marker hypothesis, a broaden-and-build theory, functional framework of emotions, and appraisal-tendency framework are discussed.

2.3.2 Somatic Marker Hypothesis

Damasio (1994) proposed that somatic marker hypothesis is based on the evidence he gained by studying his patients. He found that cognitive functions in some of his brain-damaged patients were intact with respect to intellectual tasks, such as their mathematics ability. Nevertheless, brain damage made those patients demonstrate cool, dispassionate and flat emotional reactions. Subsequent to the brain injury, those patients could not learn from disastrous mistakes, and their life just became a mess. The findings led Damasio (1994) to propose somatic marker hypothesis which argues that emotions aid in the decision-making process. This hypothesis proposes that somatic marker—the negative or positive emotional response—guides people’s attention towards an alternative and motivates them to respond quickly and accordingly. . The plain explanation is that an individual’s bodily state and emotions become associated with certain previous outcomes that influence their future decisions. When people arouse a negative somatic marker with a negative outcome, this negative somatic marker serves as an automated alarm signal. This alarm signal leads to an immediate rejection of that alternative, thereby protecting people from potential loss. Nevertheless, a positive somatic marker combined with a possible

positive outcome, serves as an incentive to induce action. Both reactions then enable the people to quickly eliminate some options but retain others. This leads them to choose their final decision from fewer alternatives. Damasio (1994) proved that the processes of emotions and feelings are vital elements of the neural brain for biological regulation. This biological regulation is essential to the proper personal and social behavior.

Hastie (2001) believed that these good–bad reactions can help to winnow down larger choice sets into smaller numbers of options for a more thorough and thoughtful evaluation. Somatic markers – emotional responses –increase the accuracy and efficiency of the decision process. These concepts illustrate the essential and beneficial role emotions play in rapid decision-making. This function is very valuable for people making decisions in a highly dynamic, uncertain environment for the sake of time and energy. Loewenstein (1996) showed that emotions and feelings are essential for decisions that provide the best chance for survival in social contexts.

This hypothesis has been supported by other research findings from patients with similar brain damage. Though these patients had intact mental capacities, their ability to choose advantageously was lost. All of them showed a combination of decision-making defect, flat emotion and feeling reaction. Recent empirical research in neuroscience continues to bolster this hypothesis. Bechara, Damasio, Tranel, and Damasio (1997) compared patients with brain damage with people without brain damage and found that the patients suffering from brain damage did not exhibit emotional responses, and they continued to choose disadvantageously even after they learned the correct strategy in a gambling task. Even with their rationality intact, but without the spectrum of emotional responses, these patients were unable to learn from their mistakes and thus repeatedly made poor decisions.

These studies showed that emotions allow people to learn from past mistakes, even when people did not realize it consciously during the current moment of decision making. Without emotional signals, people's thinking processes are rigid, stuck in the present and unable to learn from the past. Watling (1998) argued that the memory caused by emotional reactions, like gut feelings, guide people to choose an optimal choice in situations that need quick decisions. People experience an event and the attendant emotion at that time. Then, in later years, when people are faced with a similar situation, people do not need to recall

the past situation, but remember their emotional response.

2.3.3 The Broaden-and-Build Theory

Fredrickson (2001) proposed the broaden-and-build theory to explain the effects of positive emotions in decision-making. The broaden-and-build theory describes the form and function of a subset of positive emotions, such as joy, interest, contentment and love.

According to broaden-and-build theory, positive emotions broaden the scopes of attention, cognition, and action, and widen the array of perceptions, thoughts, and actions presently in mind. A corollary hypothesis states that negative emotions act as a reverse function to shrinking the scope of attention. Fredrickson (2001) also showed how these positive emotions broaden an individual's momentary thought–action repertoire. For example, joy sparks the urge to play, interest sparks the urge to explore, contentment sparks the urge to savor and integrate, and love sparks a recurring cycle of each of these urges within safe, close relationships. The broadened mindsets arising from these positive emotions are contrasted with the narrowed mindsets sparked by many negative emotions.

The other hypothesis is the consequences of these broadened mindsets. If an individual broadens his momentary thought–action repertoire—by way of play, exploration or similar activities, he can try novel and creative actions, ideas and social relationships. These actions help to build his personal resources. These resources can range from physical and intellectual resources, to social and psychological resources. These resources function as reserves that can be used in the future to make an individual feel secure. The narrowed thought-action repertoires of negative emotions can help people react to specific threatening instances quickly.

Evidence from empirical studies support the broaden hypothesis. Kahn and Isen (1993) showed that people experiencing positive affects report increased preference for variety and accept a broader array of behavioral options. With evidence showing that positive affect broadens cognition, Isen (1990) argued that positive effects can produce a broad, flexible cognitive organization and ability to integrate diverse material. Basso, Schefft, Ris, and Dember (1996) proved that personality traits associated with negative emotions correlate with a local bias consistent with a narrowed focus, and personality traits associated with positive emotions correlate with a global bias consistent with a broadened attentional focus. Gasper and Clore (2002) showed that sad individuals tend to focus

attention on narrow or local features but happy individuals tend to focus attention on broader features. The findings all support the broaden hypothesis.

2.3.4 A Framework of Emotional Functions in the Decision-Making Process

Peters (2006) proposed a way to classify four different roles played by affects in the decision-making process. The first role is when emotion serves as a type of information which affects people to take action (Schwarz & Clore, 1988). These affects or emotions act as good-versus-bad information to guide future choices. The second role is when emotion functions as a spotlight that focuses the decision maker's attention on certain kinds of new information and makes certain kinds of knowledge more accessible for further information processing. The third role is when emotion functions as a motivator to influence approach-avoidance tendencies and the efforts to process information (Zeelenberg & Pieters, 2006; Zeelenberg, van Dijk, Manstead, & van der Pligt, 2000). The last role functions as a common currency in judgments and decisions (Cabanac, 1992). Peters argued that affective reactions enable people to use a common dimension to compare disparate events and complex arguments. Pfister and Böhm (2008) developed a framework of emotional functions in decision-making based on Peter's classification. This functional approach identifies four different functions of emotion in the decision process. These four functions will influence information, speed, relevance, and commitment in decision-making. Table 2-2 illustrates the four emotional functions in decision-making.

Table 2-2. Four emotional functions in decision-making

Function	Emotional type	Prototypes	Mechanisms
Information	Reducible emotion	Joy disliking	Integration, trade-offs
Speed	Affect-programs, drives	Fear, disgust	Sexual lust stimulus-specific response
Relevance	Complex discrete emotions	Regret, disappointment, envy	Selective attention, appraisal
Commitment	Moral sentiment	Guilt, love, anger	Social coordination, perseverance

Source: Pfister et al.(2008)

The first function provides information that is useful for evaluation in the

decision-making process. Some particular classes of emotions serve that purpose. Information in any decision can be used to promote the well-being of the decision maker and this information is also relevant to the decision maker.

The second function is concerned with speed, enabling the decision maker to make rapid decisions under strict time constraints. When a decision maker is under the constraints of tight deadlines, he needs to act within a certain time, and certain emotions will help to speed up this process.

The third function focuses on the decision maker's attention to a situation's relevant aspects. A decision maker selects a subset of particular aspects of the situation when he considers making a decision. This selection mechanism is controlled by relevant aspects of an appraised situation.

The last function generates commitment in decision-making, especially in an ethical, social and strategic decision-making process. It is very important for decision makers to adhere to decisions already made, sometimes even to persist in the implementation of decisions in the long run, even though the outcomes from these decisions are not favorable at the beginning stage.

2.3.5 The Appraisal-Tendency Framework

Lerner and Keltner (2000) proposed the Appraisal-Tendency Framework (ATF) to explain the emotion-specific influences on judgment and decision-making. In ATF, each emotion is defined by a tendency to identify new events and objects that are consistent with the cognitive-appraisal component of each emotion. Lerner and Keltner (2001) suggested that different emotions with the same valence can have different effects on judgment and decision-making but different emotions with a different valence can have similar effects. ATF is proposed as a basis for distinguishing the effects of specific emotions on judgment and decision-making. The ATF assumes that specific emotions give rise to specific cognitive and motivational properties, each expressed at the biological and behavioral levels.

ATF has two broad theoretical assumptions. The first assumption is that a discrete set of cognitive dimensions differentiates emotional experiences from effects. Cognitive-appraisal theories argued that a range of cognitive dimensions such as valence or pleasantness differentiates emotional experiences from emotional effects. Smith and

Ellsworth (1985) identified six cognitive dimensions: certainty, pleasantness, attention, control, anticipated effort, and responsibility. They used these six dimensions to define the patterns of appraisal underlying different emotions. They showed four different emotions with these six cognitive dimensions in Table 2-3.

Table 2-3. Illustrations of the appraisal-tendency approach

	Illustration with negative emotions		Illustration with positive emotions	
	Anger	fear	pride	surprise
Certainty	High	Low	medium	Low
Pleasantness	Low	Low	High	High
Attention	Medium	Medium	Medium	Medium
Anticipated effort	Medium	High	Medium	Medium
Control	High	Low	Medium	Medium
Responsibility	high	medium	Low	High
Appraisal tendency	Perceive negative events as predictable, under human control, or brought about by others	Perceive negative events as unpredictable or under situational control	Perceive positive events as brought about by self	Perceive positive events as unpredictable or brought about by others
	Influence on risk perception		Influence on attribution	
Influence on relevant outcome	Perceive low risk	Perceive low risk	Perceive self as responsible	Perceive others as responsible

Source: Lerner et al.(2000)

As illustrated in Table 2-4, Smith et al. (1985) showed that pride and guilt are associated with six cognitive dimensions.

Table 2-4. The location of emotion means along the PCA components for guilt and pride

	Emotion		Emotion	
Components	Pride		Guilt	
Certainty	-0.32	Medium	-0.15	Medium
Pleasantness	-1.25	High	0.6	Low
Attention	0.02	Medium	-0.36	Medium
Anticipated Effort	-0.31	Medium	0	Medium
Control	-0.46	Medium	-0.29	Medium
Responsibility	0.81	Low	1.31	Low

Note: Pleasantness: High scores indicate increased unpleasantness

Responsibility/Control: High scores indicate increased self-responsibility/Control

Certainty: High scores indicate increased uncertainty

Attentional activity: High scores indicate increased attentional activity

Effort: High score indicates increased anticipated effort

Situational control: High scores indicate increased situational control

Source: Smith et al.(1985)

The second assumption is that emotions serve as a motivational trigger to a set of concomitant responses. These responses enable the individual to deal quickly with encountered problems or opportunities. Based on these two assumptions, ATF predicts that each emotion carries with it motivational properties that fuel a regression towards subsequent judgments and decisions.

According to the ATF, emotions not only can arise from, but also give rise to, an implicit cognitive predisposition to appraise future events via a tendency that is based upon the central appraisal dimension that is characterized by a dominant emotion. Emotions can exert effects on judgment and decision-making by appraisal tendencies to solve the problems caused by emotions. This appraisal tendency can help the individual to respond to the event that aroused the emotion, even to interpret subsequent or future judgments and decisions.

Combining two different cognitive and motivational processes with different emotions, ATF can be used to study specific emotional effects in judgment and decision. The appraisal tendency approach can provide a flexible and specific framework for developing some testable hypotheses on different emotions' effects in decision-making. The motivational theories can help to explain why emotions carry over to judgment and subsequent decisions. These two ways to study emotion in judgment and decisions make

the ATF a particularly powerful tool in research.

Lerner and Tiedens (2006) argued that appraisal tendencies associated with specific emotions are goal-directed processes that affect future judgments and choices. They proposed that emotional change could cause changes in cognition, physiology and action. These emotion-related processes can guide behavior and cognition. There is some empirical evidence that appraisal tendencies can affect the content and depth of processing (Lerner & Tiedens, 2006).

In this dissertation, three theories about how emotions influence decision-making are combined to explain the relationship between emotions and strategic decision-making. They are Broaden-and-Build Theory, Emotional Functions Framework and Appraisal-Tendency Framework.

2.4 HYPOTHESES DEVELOPMENT

2.4.1 Four Dimensions in SDMP

In this section, after a discussion of the different dimensions of SDMP in previous studies, four selected dimensions are discussed in detail. Much research on SDMP focuses on its different dimensions (Bourgeois & Eisenhardt, 1988; Hickson et al., 1986; Stein, 1980). For example, strategic decisions are regarded as “strategic” when they have a long-term effect, require the commitment of a huge amount of resources, involve comprehensiveness as well as complex information and covers a large scope of organization and uncertainty (Johnson & Scholes, 1997). Dean and Sharfman (1996a) described strategic decisions with the following characteristics: committing substantial resources, setting precedents, and creating waves of long-term decisions. Schwenk, (1988) argued that most strategic decision-making needs to deal with complexity, ambiguity and uncertainty.

Papadakais, Lioukas, and Chambers (1998) mentioned that several different attributes or dimensions of strategic decision-making processes have been discussed in the literature. These dimensions include comprehensiveness (Dean & Sharfman, 1996a; Miller et al., 1988), formalization/standardization of the process (Bourgeois & Eisenhardt, 1988; Hickson et al., 1986; Stein, 1980), and political/problem-solving dissension (Dean & Sharfman, 1996a; Hickson et al., 1986).

Butler (2002) showed that strategic decisions involve high uncertainty, which is a

specific uncertainty about decisions themselves but not the general environmental uncertainty. Empirical evidence is found to support the influence of specific decision uncertainty on the decision making process (Dean & Sharfman, 1996a; Papadakis, 1998). A number of researchers found that decision importance is among the strongest explanations of strategic decisions (Papadakis, 1998). Managers treat different decisions in different ways because of their perception of importance on different decisions (Papadakis, 1998; Stein, 1980).

Said et al (2007) argued that the research on SDMP should consider these different dimensions: decision uncertainty, decision importance, decision motive. Pool and Koopman (1992) proposed that four central dimensions should be considered during the decision-making process. The first dimension is centrality: the extent to which top management involves lower levels in the decision-making process. The second dimension is formalization: the extent to which the decision-making process is formalized (following standard procedures) or more informal and ad hoc. The third dimension is information: the extent to which decisions are based on the collection of information and a consideration of pros and cons derived from this information. The fourth dimension is confrontation: the extent to which decisions are the result of a political process in which a manager has to confront other parties that have opposing interests.

Bateman and Zeithaml (1989b) used a strategic decision model when considering the influence of psychological factors. They assumed that three issues - perceived past, present and future considerations - will exist in the decision maker's psychological field and will influence the strategic decision maker's behavior. To investigate these effects, they adopted three constructs: escalation of commitment, organizational slack and decision framing (Kahneman & Tyersky, 1984). They presented four reasons to choose those three constructs. First, each construct helps to understand the process of strategic decision-making. Second, their influence is well discussed in the literature. Third, those constructs show that strategic decision-making process is incremental. Finally, each construct represents the past, present and future effects on strategic decision-making. Fredrickson and Mitchell (1984) used the construct of comprehensiveness to study strategic decision-making. Fredrickson and Mitchell (1984) argued that people could consider comprehensiveness in four stages in an organization's decision process: situation

diagnosis, generation of alternatives, evaluation of alternatives, and decision integration.

Bourgeois (1985) argued that two characteristics are important dimensions of strategic decisions: ambiguous information and high levels of uncertainty. Those two dimensions are related to volatile environments. Since volatility increases risk, firms may face a higher risk in making a strategic decision than in making a routine decision. Keats (1991) found evidence to support their argument that only some restricted range of variables is used in the decision process, though top managers face high uncertainty and ambiguous information. So far, several constructs have been used to measure the different dimensions of strategic decision-making. These constructs are complexity, uncertainty, risk, comprehensiveness, escalation of commitment, organizational slack, resource commitment and decision framing.

It is clear from discussion above that some dimensions of the strategic decision-making process have received more attention in the previous research. In this dissertation, four dimensions of strategic decision-making: risk taking, comprehensiveness, resource commitment and speed are selected because they are important in the strategic decision-making process, and many studies focus on these four dimensions. This dissertation focuses on these four dimensions and examines how emotions affect people's decisions to choose different levels of these four dimensions in the strategic decision-making process.

One dimension of strategic decisions that is included in this study is risk. In classical decision theory, risk is defined as different variations in the distribution of possible decision outcomes, their likelihoods, and their subjective values (March & Shapira, 1987). Pratt (1964) used the measurement of risk by utility function with monetary value or by the possible gains and losses associated with function of certain probability distribution. Sitkin and Pablo (1992) argued that there are three dimensions of risk which include outcome uncertainty, outcome expectations and outcome potential. March and Shapira (1987) showed that managers see risk in a way that is different from a decision theory. They found that there are three differences between managerial and academic conceptualizations of risk. The first is that managers are insensitive to estimates of the probabilities of possible outcomes. The second difference is that managers make decisions more focused on critical performance targets. The last difference is that managers make a sharp distinction between

taking risks and gambling. In strategic management risk is defined as the uncertainty about the nature of outcomes of a choice (Williams & Wong, 1999). Bourgeois (1985) argued the strategic decision is risky because of ambiguous information and high levels of uncertainty in the environment. Lovallo and Kahneman (2000) proved that the assumptions of the rational model do not apply when individuals make decisions associated with high uncertainty.

A second dimension of strategic decision-making included in this dissertation is decision comprehensiveness. Decision comprehensiveness is defined as the extent to which a manager searches for information with a wide scope and considers multiple choices, multiple courses of action, and multiple decision criteria in evaluating different actions (Fredrickson, 1984; Miller, Burke, & Glick, 1998a). The quality of the strategic decision is largely determined by the extent to which decision makers are exhaustive or inclusive in considering alternatives (Atuahene-Gima & Li, 2004).

In general, strategic decision comprehensiveness is believed to enhance performance because decision makers can gather more information and become more effective in their assessments of the environment, which can lead to more decision-making. However, empirical tests have shown this relationship is moderated by environmental uncertainty. Fredrickson (1984) and Fredrickson and Mitchell (1984) found that strategic decision comprehensiveness improves firm performance in stable industries but decrease the performance in highly dynamic, uncertain industries. Contrast to this finding, Goll and Rasheed (1997a) showed that strategic decision comprehensiveness enhances performance in dynamic environments but diminished performance in stable environments. Further, the cognitive limitations and bounded rationality of decision makers make it nearly impossible for them to account for every relevant problem.

The third dimension of strategic decision-making included here is resource commitment. Strategic decisions often involve a large investment of different kinds of resources (Brouthers et al., 2000; Eisenhardt & Zbaracki, 1992). These resources include financial resources, organizational resources, human resources and technology resources (Kraatz & Zajac, 2001). Ghemawat (1991) defined resource commitment as the tendency of a company to persist with one strategy over a long period of time. Resource commitment or investment has a significant impact on strategic change and firm performance

(Ghemawat, 1991; Zajac & Bresser, 2000).

Selznick (1957) argued that organizations accumulate the resources that provide them with distinctive competence by making commitments to specific goals, practices, structures, and standards. When organizations make a large resource commitment to a target, they lack the flexibility and are limited to a restricted range of strategic options. Ghemawat (1991) found that resource commitment is one of the important factors that can affect firm performance in an industry over time. Hofer and Schendel (1978) showed that exceptional resources can help a firm deter the actions from competitors and easily adopt strategic changes. Zajac and Bresser (2000) proved that organizational commitments of different resources is associated with higher strategic changes and performances among U.S. savings and loan institutions. Kraatz and Zajac (2001) showed the effect that resources had on strategic change. Teplensky, Kimberly, Hillman, and Schwartz (1993) argued that the entry strategies of domestic manufacturers represent the trade-offs between the resource commitment and competitive preemption.

The fourth dimension of strategic decision-making is decision speed. The process for making speedy, effective decisions, hereafter referred to as “decision speed” has received substantial attention in the literature (Hambrick, Cho, & Chen, 1996; Watson, Kumar, & Michaelsen, 1993). Decision speed is defined as “how quickly organizations execute all of the aspects of the decision-making process, spanning from the initial consideration of alternative courses of action to the time at which a commitment to act is made . . .” (Forbes, 2005). With intensive competition and rapid change environment, the ability to make a quick decision is very important, even when making strategic decisions (Flood et al., 1997). Research on the determinants of strategic decision-making speed has focused on different aspects of firms, which can have a big impact on the speed of a strategic decision.

Hambrick, Cho, and Chen (1996) showed that diversity in a top management team could impede quick decisions because of friction and communication problems. Watson, Kumar and Michaelsen (1993) found that heterogeneous groups make consensus difficult and thus, take a long time in making consensus decisions. Sherman and Chaganti (1998) proved that organizations with successful past performances and organizational slack could be slow in making strategic changes. Wally and Baum (1994) examined the impact of a firm’s organization structure and the characteristics of individual top managers

on the speed of strategic decision-making. Talaulicar, Grundei, and Werder (2005) examined how the characteristics of the top management team and its processes have an affect on the speed of strategic decision-making in technology-based start-ups in high-velocity environments. Baum and Wally (2003) showed that fast strategic decision-making is associated with higher firm growth and higher profits under different environments.

Other studies have reaffirmed the critical role that strategic decision-making speed has on a firm's performance in different environments (Judge & Miller, 1991). It seems impossible to combine comprehensiveness and speed in strategic decision-making (Fredrickson & Mitchell, 1984). However, Bourgeois and Eisenhardt (1988) proved that in high velocity environments, a decision maker can combine both comprehensiveness and speed which then lead to high performance.

2.4.2 The Effects of Guilt and Pride on Risk in SDMP

It has been argued that different emotions have different effects on the decision-making process. This dissertation focuses on two different emotions, pride and guilt, because these two emotions play an important role in the managers' work style (Ashforth & Humphrey, 1995). Most managers have the experience of making decision under the influence of pride and guilt (Kisfalvi & Pitcher, 2003). The *New York Times* reported that managers from financial firms sought increasing help from mental health professionals due to emotional problems brought about by current financial meltdown (Friedman, 2008). For instance, managers may have felt guilty when they made a wrong decision that led to a company's huge loss and thus, caused many employees to lose their jobs. The executives in AIG returned their bonuses and one of the managers mentioned that he felt shameful and guilty (Press, 2009). More recently, when senior executives from BP testified about the leakage accident in the Gulf of Mexico, they said they were sorry and felt guilty. In China, Terry Guo, the chairman of the world's largest outsourcing manufacturer Foxconn, admitted in an interview that he felt guilty after 11 Foxconn employees committed suicide in 2010 (Balfour & Culpan, 2010).

Guilt is a emotion that people experience when they feel a sense of regret, remorse, tension, and anxiety about being culpable and punishable for an offense, a failure of duty, or conscience (Ferguson, 1999). This may be a violation of a criminal law, a social norm or,

in particular, an internal value. Guilty feelings are results from the cognitive dissonance that arises from the gap between people's self-image as a law-abiding, good citizen and the evidence of their actions. Guilt is also related to expected punishment. Thus, guilt is an emotion that happens in negative situations when people feel they are personally responsible for what happens (Roseman, Spindel, & Jose, 1990; Roseman, Wiest, & Swartz, 1994). Guilt is different from shame, which focuses on the possible evaluation by other people. Guilt is also different from regret that need not knowingly violate a standard. However, guilt is often associated with other negative emotions such as shame, regret or sadness because people may react to their own feeling of guilt with other negative emotions.

Gangemi and Mancini (2007) examined the impact of guilt on decision-making in three laboratory experiments. In their first experiment, they found that guilt-ridden respondents prefer unspecified options (i.e. to do something else) to the positive option (i.e. to buy a new car) that has predominantly positive characteristics. In their second experiment, they also found that guilt-ridden respondents tend to choose a stated option that has predominantly negative features (i.e. spending money on repairing a very old car) rather than choosing other unspecified options, (i.e. spending money thoughtlessly on other things). In their third experiment, when guilt-ridden respondents are presented with two different options (one negative and one positive) which have different degrees of explicitness, it is found that the guilt-ridden respondents prefer the negative option (i.e. diagnosis of Leukemia which is dangerous and implicit) over the positive option (i.e. diagnosis of Influenza which is safe and explicit).

According to ATF, emotions make people focus their attention on aspects of the situation that are congruent with their emotions. Gangemi and Mancini (2007) concluded that individuals experiencing a negative emotion are more likely to acquire more negative information than positive information (Bower & Cohen, 1982). People in a negative emotional state were found to be more likely to think about negative possibilities and be pessimistic in their decisions (Isen, Daubman, & Nowicki, 1987). Johnson and Tversky (1983) proposed the affective generalization hypothesis which claims that people who think about negative outcomes also think more frequently about the perceived occurrence of that outcome. This increases the estimation of subjective probabilities about that

outcome. Therefore, people will overestimate the risk when they are in a negative emotional state. Even though the risk is usually acceptable to managers when make decisions, the risk will be overestimated if managers function under the influence of guilt. In this vein, managers with feelings of guilt will take a lower risk that is estimated as a normal risk.

Using the framework of multiplicity of emotions, guilt is one type of moral sentiment and serves as a device to cause people to stick to long-term commitments (Pfister & Böhm, 2008). If managers focus on the long-term commitment, they tend to avoid short-term gain. Managers will take too high a risk if they only focus on the short-term horizon. Therefore, managers with guilty feelings are not likely to take a risk to pursue their own short-term interests.

Based on the above discussion, both the ATF and the framework of multiplicity of emotions suggest that managers with a higher level of guilt will overestimate risk and pursue goals with lower amounts of risk. Thus, the following hypothesis about the relationship between guilt and risk dimension of strategic decision-making is tested:

Hypothesis 1a: In strategic settings, higher levels of managerial guilt lead to lower levels of risk when making a decision.

Another emotion commonly found in managers or executives is pride. Some CEOs or top management members are likely to be proud of their successful work and contributions to companies. For example, Burgelman's (2002) study suggests that Andy Grove was proud of his accomplishments at Intel. Executives like him are likely to experience pride when they succeed in their position for a long period of time and make the right strategic decisions for companies (Schindler, 1998).

Pride is an emotion that occurs when people experienced a positive evaluation of their competence or effort in achieving a goal (Weiner, 1986). Pride is greater when people have to work hard for something, as this makes the achievement more worthwhile. It is a pleasant feeling associated with self-achievement, autonomy, and disengagement from others (Rodriguez Mosquera, Manstead, & Fischer, 2000). When people achieve a goal, they feel good about themselves. In this way, people's sense of identity increases. The valence approach has found that positive emotions generally increase satisfaction, leading to subsequent favorable behavioral intentions, whereas negative emotions have the

opposite effect (Szymanski & Henard, 2001). As such, based on the valence approach, pride can be a positive emotion that encourages one to take higher risks.

Pride arouses a sense of autonomy and allows individuals to focus on their own role in attaining desired ends (Rodriguez Mosquera et al., 2000). The effect of pride from previous successes on future decisions depends on the type of goals that people have. If people have promotional goal to pursue desirable outcomes, they will likely take the risk, and thus, achieve higher performance and face more challenges. But if people have prevention goals to avoid undesirable outcomes, they choose more secure results and avoid risks (Higgins, 2002). A top manager with successful past experiences, is more likely to pursue the promotion goal.

According to ATF, emotions make people focus their attention on aspects of the situation that are congruent with their emotions. Subjects in a negative emotion are more likely to acquire more negative information than positive information (Bower & Cohen, 1982).

People in a positive emotional state were more likely to think about positive possibilities and be optimistic in their decisions (Isen et al., 1987). Wright and Bower(1992) found that happy people are optimistic, in the sense that they report higher probabilities for positive events and lower probabilities for negative events. From ATF, the level of pride is high in the certainty dimension that can influence risk perception. If people feel certainty, they are more easy to take risk (McDaniels, Axelrod, Cavanagh, & Slovic, 1997). Mellers, Schwartz, and Cooke (1998) argued that people will overestimate the likelihood of positive events and underestimate the likelihood of negative events when they experience positive emotions. In sum, people tend to be optimistic with the outcome and take higher risks when they feel proud.

From the Broaden-and-Build theory perspective, when people experience positive emotions such as pride, positive emotions broaden people's mindset. They are more willing to take novel actions or try creative ideas. In this way, they are more likely to take higher risks by adopting new ideas associated with high uncertainty instead of resorting to the traditional ways with low uncertainty.

Based on the above discussion, ATF and Broaden-and-Build theory predict that managers with higher pride take higher risk. The hypothesis about the relationship between

pride and risk in strategic decision-making is proposed as follows:

Hypothesis 1b: In strategic settings, higher levels of managerial pride lead to higher levels of risk when making a decision.

2.4.3 The Effects of Guilt and Pride on Comprehensiveness in SDMP

Belavkin (2001) demonstrated that negative emotions correspond to a decrease in motivation and confidence. He also showed that people with low motivation engage in breadth-first search, while people with high motivation conducts depth-first search. When an individual is in a negative emotion, he or she is more likely to be associated with negative outcomes. In order to prevent the negative outcome from happening, individuals may engage in more elaborate cognitive processing to find a way to overcome the negative results. Other studies suggested that individuals in a negative mood are more likely to use detailed, analytical processing strategies than those in a neutral or positive mood states (Schwarz, Bless, & Bohner, 1991). Edwards and Weary (1993) showed that individuals with negative feelings engage in more systematic, piecemeal information processing.

Forgas (2001) found that individuals experiencing negative emotions will favor more elaborate and careful process strategies. It is argued that negative emotions will increase the motivation to engage in a more comprehensive and substantive decision-making strategy (Schwarz et al., 1991). Fiedler (2001) proved that negative affects prompt careful, error-avoiding, and conservative behavior and decisions. Considering the high stakes associated with strategic decisions, managers in a negative affective state would expect to engage in a more comprehensive search process to make extremely important decisions.

Based on the discussion above, the hypothesis about the relationship between guilt and comprehensiveness dimensions of strategic decision-making is proposed as follows:

Hypothesis 2a: In strategic settings, higher levels of managerial guilt lead to higher levels of comprehensiveness when making a decision.

It is argued that subjects in a positive affective state, compared with subjects in a negative affective state, tend to reduce the complexity of the decision task through the choice of a simpler process of information retrieval (Isen, 2008). They disregard irrelevant information, consider fewer dimensions, recheck less information and took significantly less time to make their choice (Isen, 2008). This kind of processing could either facilitate or impair an individual's performance, depending on the circumstances. Belavkin (2001)

proved that positive emotions, experienced on successes during problem solving, are accompanied by increase of motivation and confidence. Forgas (2001) found that positive emotions lead to more simplified, less comprehensiveness and more creative strategies. Schwarz et al (1991) argued that positive affects limit the individual's cognitive capacity to prevent an individual from thinking in a more elaborate way, leaving the person to rely on a simplified decision-making strategy. Fiedler (2001) showed that people like to use processing strategies that are simple and intuitive, favoring creativity in the positive emotion conditions.

Based on the above findings and discussion, it can be argued that managers experiencing pride do less research, consider simple solutions and avoid a comprehensive process in making a decision. The hypothesis about the relationship between pride and comprehensiveness dimensions of strategic decision-making is proposed as follows:

Hypothesis 2b: In strategic settings, higher levels of managerial pride lead to lower levels of comprehensiveness when making a decision.

2.4.4 The Effects of Guilt and Pride on Resource Commitment in SDMP

According to ATF, emotions can encourage decision makers to focus their attention on aspects of the situation that are congruent with their emotions. Individuals in a negative emotional state are more likely to acquire more negative information than positive information (Bower & Cohen, 1982). Notably, people in a negative emotional state were found to be more likely to think about negative possibilities and be more pessimistic in their decisions (Isen et al., 1987). Therefore, managers in the negative emotional state are more likely to be pessimistic about the outcomes. To compensate for the pessimistic feeling about the outcomes, managers are more likely to overinvest resources to a particular course of action.

From the ATF perspective, guilt is associated with a low score in the control dimension. If people do not feel in control, they are more likely to feel insecure. Gasper et al (2002) found that people with negative emotions lower their estimates of their degree of control, so they feel less secure. When people psychologically feel insecure, they tend to commit to more resources. In this way, people use resources to compensate for the insecure feelings to make themselves feel more secure in decisions and to regain their feeling of control. In strategic decisions associated with high stakes, when managers experience negative

emotions, they choose to overinvest more resource in the strategic decision process to regain control and security. According to the framework of emotional functions, guilt is associated with a high commitment in decision-making. So when managers feel guilt, they try to adhere to decisions that were made and even persist in implementing those decisions to the very end even if the results were not favorable in the beginning. That is, managers experiencing guilt will overinvest to show their commitment to the strategic decision.

Based on the above discussion, ATF and the framework of emotional functions predict that managers with higher feelings of guilt need to feel more secure. Therefore, they over-commit resources when making their decisions. The hypothesis about the relationship between guilt and resource commitment dimensions of strategic decision-making is proposed as follows:

Hypothesis 3a: In strategic settings, higher levels of managerial guilt lead to higher levels of resource commitment when making a decision.

Fredrickson (2001) proposed that broadened thought-actions can help to build a variety of resources such as physical resources, social resources and psychological resources. These resources can function as a reserve to cope with future odds. Using this argument, managers experiencing positive emotions have a more secure feeling and tend to commit less resources when making their decisions.

Previous research showed that people in positive affective states try to maintain their positive state and attempt to avoid substantial losses (Isen, Nygren, & Ashby, 1988). When people need to make strategic decisions involving high stakes, people in a positive state are more averse to risks and try to avoid large losses and so, they commit less resources (Isen & Geva, 1987). In contrast, if the stakes are low, people take more risks in order to benefit from the gain without using too many resources (Mano, 1994). In a strategic setting where a stake tends to be high, managers with a sense of pride fear the failure of the strategic decision's outcome if it challenges their previous achievement and fame.

Based on the above discussion, it can be argued that managers with a higher sense of pride feel more control and security, so they invest fewer resources to support their decisions. The hypothesis about the relationship between pride and resource dimensions of strategic decision-making is proposed as follows:

Hypothesis 3b: In strategic settings, higher levels of managerial pride lead to

lower levels of resource commitment when making a decision.

2.4.5 The Effects of Guilt and Pride on Speed in SDMP

In general, the somatic marker hypothesis, the framework of multiplicity function of emotions and ATP, all argue that emotions help people to take quicker action in order to escape negative consequences.

According to the somatic marker hypothesis (Damasio, 1994), negative or positive emotions can guide an individual's attention to an alternative and allow him or her to take quick action. These quick reactions then enable individuals to quickly eliminate some options but retain others. This leads to fewer alternatives for the final decision. Based on the framework of multiplicity function of emotions (Peters, 2006), one function of emotion is to focus the decision maker's attention on certain kinds of new information and make certain kinds of knowledge more accessible for further information processing. This function enables the decision maker to make rapid decisions under tight time constraints.

From the ATP (Lerner & Keltner, 2000), emotions serve as a motivational trigger for a set of concomitant responses. These responses enable the individual to deal quickly with encountered problems or opportunities. When an individual experiences a negative emotion, he or she tends to expect a negative outcome. In order to prevent the negative outcome from happening, individuals may engage in a more elaborate cognitive processing to find a way to overcome the negative results. Other studies suggest that individuals in a negative mood are more likely to use detailed, analytical processing strategies than those in a neutral or positive mood (Schwarz et al., 1991). Edwards and Weary (1993) showed that individuals with negative feelings engage in more systematic, piecemeal information processing. Forgas (2001) found that negative emotions favor more elaborate and careful process strategies. Fiedler (2001) proved that negative affects prompt careful, error avoiding, and conservative behavior and decisions. Individuals experiencing negative emotions are likely to make slower decisions because they are more cautious about the uncertainty in outcomes (Raghunathan & Pham, 1999), especially those strategic decisions involving high stakes. High stakes make people more careful so that people tend to make slower decisions.

Based on the above discussion, it can be argued that managers with a high level of guilt are more cautious and slow in making decisions. Thus, the hypothesis about the

relationship between guilt and speed of strategic decision-making is proposed as follows:

Hypothesis 4a: In strategic settings, higher levels of managerial guilt lead to lower levels of speed when making a decision.

Using the framework of emotional functions in decision-making, Tiedens and Linton (2001) argued that individuals who are experiencing positive emotion are more likely to be certain about outcomes and prone to make decisions faster than are individuals who are experiencing negative emotions. Isen, Daubman and Naubicki (1987) found that individuals experiencing positive affects were more efficient at information processing. Opposed to the effects of negative emotion, individuals experiencing positive emotional states are likely to make faster decisions.

According to the framework of multiplicity function of emotions and ATF, positive emotions such as pride help individuals to take quick advantage of the benefits. From ATF, pride comes with certainty and control; thus, managers with pride tend to make quicker decisions. Gasper et al (2002) found that positive emotions allow people to integrate information and promote variety which help them to make quicker decisions.

Based on the above discussion, managers with a higher sense of pride will make quicker decisions. Thus, the hypothesis about the relationship between pride and speed of strategic decision-making is proposed as follows:

Hypothesis 4b: In strategic settings, higher levels of managerial pride lead to higher levels of speed when making a decision.

2.4.6 The Moderating Function of Culture

Culture consists of beliefs, values, and norms in one specific social group. Hofstede (1980) defined culture as: "... the interactive aggregate of common characteristics that influence a group's response to its environment..." Culture helps individuals in a group to interpret the meaning about what happened around them (Shore, 1996). Culture is reflected in general tendencies of persistent preference for particular states of affairs over others, and persistent preferences for specific social behaviors over others. It is generally known that culture may provide detailed norms for specific classes of situations. Different national and ethnic cultures vary in their degree of regulation of behavior, attitudes, values, and tolerance of other culture.

Culture provides individuals with an interpretive framework to form certain social impressions, judgments and behavior. Culture is a vital and essential element in individuals' surrounding environments, and has subtle influences on individuals' thoughts, feelings, and actions (Boesch & Tomasello, 1998; Fiske, 2000). It is agreed that individuals often rely on cultural paradigm to solve complex social problems (Cohen, 2001; Fiske, 2000). Cultural influence is manifested in the shared cognitions, thoughts, behaviors and normative practices (Kim & Markus, 1999; Peng & Nisbett, 1999).

Hofstede (1980) captured such cultural influences using four value dimensions (from the data collected from a survey within IBM in different countries). Hofstede's (1980) proposed that four major dimensions explained much of the variances in national cultures within IBM. These four dimensions are power distance, individualism, masculinity and uncertainty avoidance. Power distance is defined as a society's level of inequality. It is the societal desire for hierarchy or egalitarianism with the extent to which the less powerful members of society can accept the unequally distributed power. Individualism is defined as the degree to which individuals in society relate to each other. In societies with an individualistic culture, every individual tends to look after himself/herself and his/her immediate family. By contrast, in societies with a collectivistic culture, every individual is integrated into strong groups to protect each other in exchange for loyalty to the groups. Masculinity is defined as the differentiation role of gender in society. Men's values of assertiveness and competitiveness are emphasized in a masculine culture, while women's values of modesty and caring are emphasized in a feminine culture. Uncertainty avoidance is defined as the degree of the society's tolerance for uncertainty and ambiguity. This dimension is used to indicate if people in certain cultures feel uncomfortable or comfortable in uncertain circumstances. People from uncertainty-avoiding cultures try to adopt more formal laws and rules to reduce the certainty. People from uncertainty-accepting cultures tend to tolerate ambiguity or uncertainty. There are few rules in uncertainty accepting cultures.

Hofstede and Bond (1984) identified a fifth dimension, long-term dimension in their following study with an additional Chinese value survey in 23 nations. Long-term dimension is associated with thrift and perseverance while short-term dimension is associated with tradition, fulfilling social obligations, and saving 'face'. Hofstede's

framework has been tested and validated in different cross-cultural research in a variety of areas such as sociology, psychology, management and marketing (An & Kim, 2007; Dorfman & Howell, 1988; Kashima et al., 1995). It is the most empirically based and complete theory of cultural differences and has the most potential for explaining power in cross-cultural areas.

In this dissertation, Hofstede's framework is used to investigate how culture plays a moderating function between emotions and the strategic decision-making process. It focuses on an individualistic dimension because this dimension plays an important role in an individual's thoughts, feelings and actions in decision-making (Kashima et al., 1995; Triandis, 1995).

2.4.7 Culture and Guilt and Pride

In cross-cultural studies, individualism or collectivism is usually associated with the concept of self-construal. Self-construal is defined as how individuals construe themselves in relation to others (Markus & Kitayama, 1991). Markus et al. (1991) argued that different cultures have different construals of the self, of others, and of the relationships between the self and others. It is shown that individuals reared in an individualistic society have an independent view of the self by which individual self-concepts are independent of any social relationships. They tend to endorse independent self-construal, such that their thoughts and behaviors are organized and made meaningful primarily by reference to their own thoughts, feelings, and actions (Markus & Kitayama, 1991). People believe that a desirable goal of the self is to assume an independence from others.

Unique attributes, autonomy and independence have a higher value in an individualistic culture such as the U.S. (Hofstede, 2001). In contrast, individuals growing up in collectivistic societies tend to accept interdependent view of self-construal where the individual's self-concept is intertwined with the group to which one is the member. In such a culture, a fundamental notion is connectedness among human beings and a normative imperative is to maintain interdependence among individuals. Markus and Kitayama (1991) argued that individuals with interdependent selves are motivated to maintain harmony with others, to fulfill and create social obligations and to deeply respect interpersonal relationships.

These two different views of the self in two different cultures can have a systematic impact on various aspects of cognition, emotion, motivation and action (Norasakkunkit & Kalick, 2002). Guilt focuses on other people and reflects the social frictions that could occur due to the causes of harm or discomfort to others (Tangney, 1999; Tangney & Dearing, 2002). Guilt relates to interdependence because it involves a sensitivity towards others and takes the perspectives of others into consideration. Guilt may prevent individuals with a strong independent self to express their own internal feelings. A focus on others may be viewed as negative in an individualistic culture, but this function is viewed as helpful to promote interdependence in a collectivistic culture.

Pride is one of the ego-focused emotions that more often refers to individuals' internal needs, goals, desires, or abilities. Therefore, pride is likely to be more prevalent among people with independent selves in an individualistic culture. In the U.S., people are encouraged to fulfill their own personal ambitions and feel proud of their achievements. Pride sometimes seriously threatens an interdependent self because it indicates oneself is above others and creates an uncomfortable interpersonal situation. When the creation and maintenance of a good relationship with others is the primary target, more other-focused emotions are the norm within a society (Markus & Kitayama, 1991). People in a collectivistic culture that prefer interdependence of self-construal learn to hide their pride or avoid overt expression of pride. Expressions of pride are therefore rare in a collectivistic culture. In China, people cherish the virtue of humility and prevent to show any pride in public or in social situations. In this way, the demonstration of pride is more pronounced in individualistic cultures; in contrast, guilt tends to be more dominant in a collectivistic culture (Triandis, 1995). Therefore, it may be argued that pride is unacceptable in a collectivistic culture, but consistent with the norms of an individualistic culture. In contrast, guilt is unacceptable in an individualistic culture but consistent with the norms of a collectivistic culture. The expression of emotions that are acceptable in a certain culture is expected to be viewed positively and to be enhanced, whereas the expression of norm-discordant emotions is expected to be suppressed. For example, individuals expressing stronger guilt in a collectivistic culture are likely to be influenced by guilt than individuals expressing weaker guilt in an individualistic culture. Thus, it is expected that managers in different cultural settings that are faced with similar situations, experience

differences in the intensity with which they experience pride and guilt. These differences in emotional experiences may, in turn, influence their strategic decision processes.

2.4.8 Culture and Risk

Bagozzi, Verbeke, and Gavino (2003) found, in their study of salespeople from two different countries, that culture played a role in the effects of shame on job performance. The Netherlands represented an individualistic culture and the Philippine Islands represented a collectivistic culture. They proved that while shame negatively affected the performance of Dutch salespersons, it had positive effects on the performance of Filipino salespersons. The function of shame is similar to guilt because both shame and guilt are associated with the core self (Tangney, 1999).

Hsee and Weber (1998) proposed in their cushion hypothesis that in a collectivistic culture like China, individuals receive help from family or other group members if they suffer a huge loss after they make highly risky decisions; while in an individualistic culture like the U.S., an individual suffers the full consequences of his risky decisions. As such, collectivistic cultures serve like a cushion against huge losses that are made by risky behaviors. This argument suggests that managers from collectivistic cultures would take higher risks because of the security offered by their affiliation within a group. For instance, Weber and Hsee (1998) found that American respondents were significantly more risk-averse in their pricing of financial options than Chinese respondents.

However, another argument can be made that individualistic cultures encourages risk taking. Individualistic culture values behaviors that promote a propensity to develop and introduce radical innovation, promote risk taking and independent thinking, whereas a collectivistic culture rewards behaviors that reinforce conformity, seek group interests, and prefer certainty in the future (Herbig, 1994; Hofstede, 1980a). McGrath, MacMillan, and Scheinberg (1992) found that entrepreneurs in a high individualistic culture could tolerate high risk and ambiguity. Therefore, it is argued that managers from high individualistic cultures take higher risks in their behaviors than do managers from high collectivistic cultures.

The above discussion offers competing hypotheses about the relation between culture and risk. However, it can be argued that when managers feel guilty, they usually experience a negative situation. Cushion hypothesis suggests that managers from a high collectivistic

culture obtain support from family, friends or other group members in such a situation. However, guilt may be one instance where seeking family support may be impossible, as it may cause the person to lose face. Thus, such managers may choose to take lower risks, in order to avoid making transgressions that would shame their family and friends. In contrast, managers from high individualistic cultures may not find support, and believe that there is no need to save face. Based on the discussion above the following hypothesis about the moderating function of culture in the relationship between guilt and risk is proposed:

Hypothesis 5a: National social culture moderates the relationship between guilt and risk. Managers from a high collectivistic culture will take lower risks at higher levels of guilt while managers from a high individualistic culture will take similar risks at low and high levels of guilt.

When managers experience pride, they are in a positive situation. When experiencing pride, manager from an individualistic culture are more likely take higher risks than will managers from a collectivistic culture because managers from a high individualistic culture like the U.S. are encouraged to achieve more and be the best. Based on their past successes, they are more confident with their abilities to achieve more success. When they feel a higher sense of pride, they tend to take higher risks because they feel overly confident and thereby over-estimate their abilities. However managers from a collectivistic culture like China are taught to be more cautious in successful situations that are usually associated with positive emotions like pride. As one Chinese proverb goes, fame portends trouble for men just as fattening does for pigs. Under this traditional cultural influence, Chinese managers try to avoid risks that are too high after a recent success to prevent subsequent failure. Elliot, Chirkov, Kim, and Sheldon (2001) showed that East Asians pursue more avoidance goals than do North Americans because East Asians believe that avoiding failure is more important for the sake of ‘face saving.’ When managers from a higher collectivistic culture like China feel pride, they take extra cautions to not take aggressive risks in order to avoid failure in their future actions. They make almost similar risky decisions whether they are feel low or high levels of pride.

Based on the above discussion, the following hypothesis about the moderating function of culture in the relationship between pride and risk is proposed:

Hypothesis 5b: National social culture moderates the relationship between pride

and risk. Managers from a high individualistic culture will take higher risk at higher levels of pride while managers from a high collectivistic culture will take similar risk at low and high levels of pride.

2.4.9 Culture and Comprehensiveness

Chiu, Morris, Hong, and Menon (2000) argued that North Americans prefer to use a personal agency, but East Asians prefer to use a group agency. In this vein, Americans are expected to prefer personal agencies in decision-making and Chinese to prefer collective or group agencies. In an individualistic culture, individuals with an independent self are likely to choose a personal agency that is different or separate from the actions of others.

Americans can exercise their personal agency by seeking their self-chosen actions. So American managers are not likely to consult with others, rather they depend on their own abilities in making decisions. However, individuals from a high collectivistic culture with an interdependent self are likely to engage in a group agency. That is, managers from a collectivistic culture will exercise a group agency and are more likely to consult with other management members or group members before making important decisions.

For situations arousing guilt, it can be argued that when managers from a high collectivistic culture face decision-making, they are more likely to protect the welfare of the group over their personal interests. When they feel stronger negative emotion like guilt, which is usually associated with negative outcomes, they feel stronger responsibility for the group. They will try to find all alternative options for the sake of themselves and the group. At the same time, they will consult with other group member to seek the what is best for the whole group. This will significantly increase the comprehensiveness of a decision when they consider both their and their group's interests in experiencing higher levels of guilt. Managers from a high individualistic culture like the U.S., will mostly consider their own interests instead of the group's interests. This will not change the comprehensiveness of the decision for managers from the U.S. in experiencing both low and high levels of guilt.

Based on the above discussion, the following hypothesis about the moderating function of culture in the relationship between guilt and comprehensiveness is proposed:

Hypothesis 6a: National social culture moderates the relationship between guilt and comprehensiveness. Managers from a high collectivistic culture will make more

comprehensive decisions at higher levels of guilt while managers from a high individualistic culture will make decisions with the same level of comprehensiveness at low and high levels of guilt.

In situations motivating pride, managers from a high individualistic culture like the U.S. are encouraged to be more competitive. Based on their past successes, they are more confident of their abilities to make greater successes in the future. When they feel a higher sense of pride, they tend to make less comprehensive decisions because they over-estimate their abilities and believe everything is under control. As another Chinese proverb says, it will be much easier for you to make big mistakes after you always succeed in the past. It is more important for Chinese managers to prevent future failure to save face. Therefore, managers from a collectivistic culture like China are taught to be more humble and more cautious in successful situations that are usually associated with positive emotions like pride. When managers from a higher collectivistic culture like China feel pride, they take extra cautions to prevent making any careless errors in their actions. They make almost the same comprehensive decision either at low or high levels of pride.

Based on the above discussion, the following hypothesis about the moderating function of culture in the relationship between pride and decision speed is proposed as follows:

Hypothesis 6b: National social culture moderates the relationship between pride and comprehensiveness. Managers from a high individualistic culture will make less comprehensive decisions at high levels of pride, while managers from a high collectivistic culture will make decisions with the same level of comprehensiveness at low and high levels of pride.

2.4.10 Culture and Speed

Individuals in a collectivistic culture pay more attention to the relational context than do those from an individualistic culture. In a collectivistic culture compared with personal interests, group opinions and preferences, concerns for in-group benefits, and group harmony are appreciated and respected by most members. East Asians are more likely to make choices that enhance in-group benefits so that they will be more easily accepted in the group. However, this situation is very different for North Americans (Kashima et al., 1995) who are more likely to make competitive choices, and choices with personal distinctiveness and preferences (Aaker & Schmitt, 2001). When facing conflicts of

interests between individuals and groups, East Asians prefer solutions that increase interpersonal harmony. In contrast, North Americans prefer direct and confrontational solutions (Derlega, Cukur, Kuang, & Forsyth, 2002).

For the guilt situation, it can be concluded that when managers from a high collectivistic culture face decision-making, they are more likely to consult with the people around them to reduce the negative effects within the group than are managers from a high individualistic culture. Particularly, when they feel stronger negative emotion like guilt that is usually associated with negative outcomes, they try hard to find best options or consult with other group members to minimize the negative effects on the group. This will significantly increase the amount of time it takes for them to reach a final decision when they are influenced by higher levels of guilt. For managers from a high individualistic culture like the U.S., they will usually think about themselves and make decisions from their own point of views without seeking the opinion from others either in low or high levels of guilt.

Based on the above discussion, the following hypothesis about the moderating function of culture in the relationship between guilt and decision speed is proposed as follows:

Hypothesis 7a: National social culture moderates the relationship between guilt and speed. Managers from a high collectivistic culture will make slower decisions at higher levels of guilt, while managers from a high individualistic culture will make decisions with the similar speed at low and high levels of guilt.

For the pride situation, the result is different from guilt situation. Managers from a high collectivistic culture like China are taught to be more humble and cautious especially in the successful situations that are usually associated with positive emotions like pride. As one Chinese proverb argues more haste less speed, which means you will slow down your actions if you make hasty decisions. Chinese managers know that you should not be hasty to make a decision because you will make more mistakes that slow you down if you make the wrong decisions. Therefore, when managers from a higher collectivistic culture like China feel pride, even if they want to speed up decision, they will deliberately slowdown in their strategic decision-making process. This argument leads to the conclusion that Chinese managers will make almost the same speedy decisions in both low and high levels of pride. However, for managers from an higher individualistic culture like the U.S.,

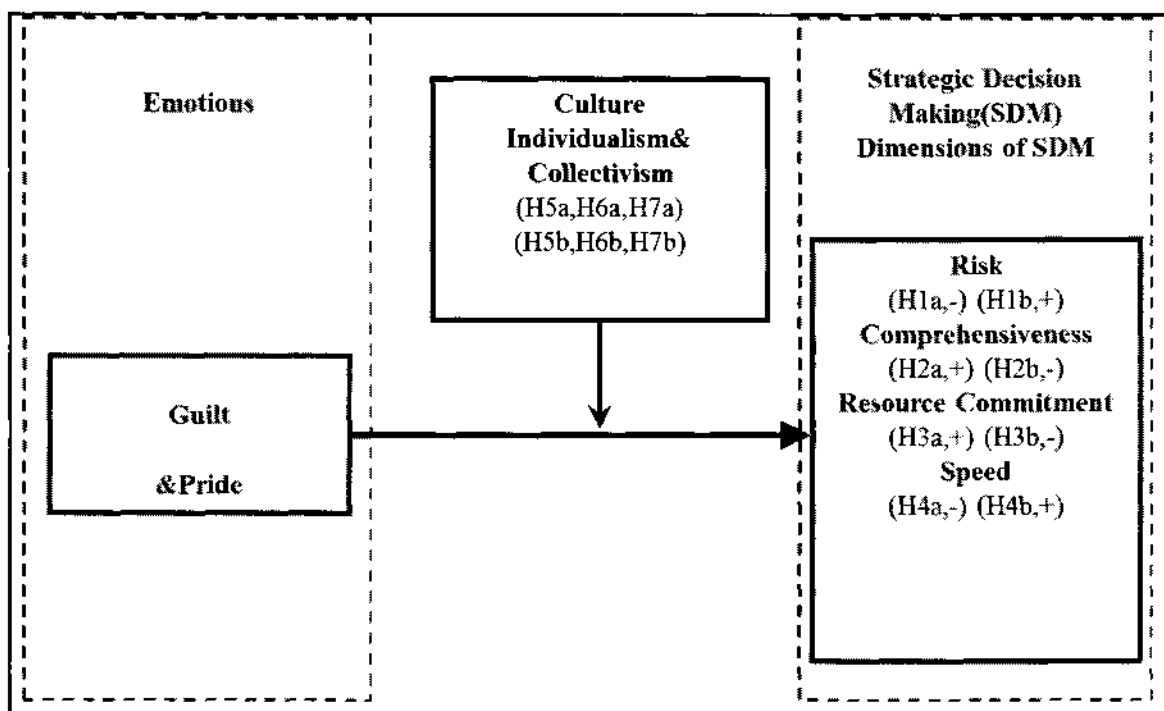
managers are encouraged by the winner- take-all mindset and timing is of the utmost importance. When they are successful, they feel a higher sense of pride. This will lead them to make rash decisions in order to achieve greater success.

Based on the above discussion, the following hypothesis about the moderating function of culture in the relationship between pride and decision speed is proposed as follows:

Hypothesis 7b: National social culture moderates the relationship between pride and speed. Managers from a high individualistic culture will make quicker decisions at higher levels of pride while managers from a high collectivistic culture will make decisions with the similar speed at low and high levels of pride.

In sum, the conceptual model is illustrated in Figure 2-2. The hypotheses are based on the discussions about the relationship among two different emotions, culture and four dimensions in the SDMP.

Figure 2-2. The conceptual model of culture and emotion's impact on the SMDP.



In this conceptual model the effects of two different emotions (pride and guilt) on four dimensions of strategic decision-making: risk, comprehensiveness, resource commitment

and speed are investigated. In addition, the moderating functions of culture in the relationship between emotions and SDMP are examined.

CHAPTER 3

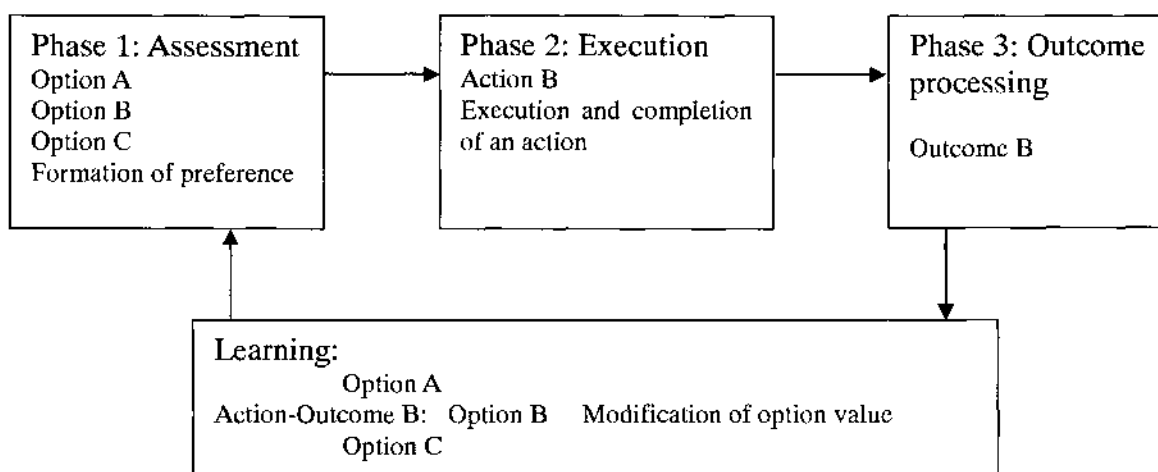
DATA AND METHODS

In this chapter, the research design is described to show how the experiment design and data collection are conducted. Experimental designs have been recommended in the strategic literature due to the difficulty of capturing and evaluating the survey results (Bateman & Zeithaml, 1989a).

The major advantage of experimental design is to demonstrate causality relationship instead of correlation relationship between the independent variables and dependent variables. In this dissertation, the research question is to understand whether managers who experience one emotion differ in their behaviors in managerial strategic decision-making (say, in terms of risk, comprehensiveness, speed and resource commitment) from managers who experience another emotion. These differences may be the reason why managers differ in how they behave in the managerial strategic decision-making process. In experimental design, this problem can be solved via two steps. The first step is to arouse one emotion in each manager. The second step is to eliminate the possibility that managers who are aroused with one emotion may differ in some other aspects from those who are not (such as age, gender, tenure, organization size, functional area, international business experience, job responsibility). Managers are randomly assigned to each of the two different emotions in the experiment (guilt or pride). After the experimental manipulation, managers can be observed in the decision process during which they could behave differently. If managers with one kind of emotion behave differently when compared to managers with another kind of emotion, then all other confounding or controlling variables are eliminated as possible explanations for these different behaviors. It can be concluded that different behaviors are exclusively caused by different emotions. The two most important features in experimental design, manipulation of the independent variables (guilt and pride) and random assignment of respondents to two independent variables (guilt or pride) can help to investigate this causality relationship. There are three different phases in the decision-making process. The first phase is the preference phase in which available options are identified. The second phase is to execute or implement the selected option, and the last phase is to experience or process the outcomes of the actions (Loewenstein & Lerner, 2003). Ernst et al. (2005) showed these three phases of decision-making schema

which are associated with different emotions. From Figure 3-1, in phase 1, there are three available options (A, B, and C) for the decision maker to choose based on an individual's preference. In phase 2, the decision maker implements or executes the selected option B from phase 1. In phase 3, the decision maker experiences or processes the outcome of option B. The feedback cycle shows the learning process that modifies the value associated with the three available options in phase 1 when next time the similar situation is encountered and the same options are available. The outcome from option B not only influences the value of option B, but also determines the non-selected options.

Figure 3-1. Decision-making schema



Source: Ernst et al.(2005)

There are two different emotions in these three phases: One is the anticipated emotions and the other is immediate emotions. Anticipated emotions are people's future emotional states that might be associated with the outcomes. Immediate emotions are experienced while making a decision. Immediate emotions are classified into two different emotions: incidental emotions and anticipatory emotions (Loewenstein & Lerner, 2003). Immediate emotions interact with incidental emotions that are caused by factors not related to the decision problem, or as anticipatory or integral emotions which are caused by the decision problem itself.

In the experiment design of this dissertation, a decision scenario that leads to appraisals to elicit discrete integral emotions: pride or guilt- both are the immediate emotions. In one

scenario, two different appraisals are manipulated to arouse two different emotions. Two appraisals are either desirable (positive: new drug saving hundreds of people) or undesirable (negative: poison chemical leakage accident which kills hundreds of people) outcomes and the decision maker's agency caused the outcomes (self: yourself or other: outside environment). The experimental manipulation for this study was a 2 (outcomes: positive / negative) X 2 (agencies: self / other) design. PANSA-X scale is used as a self-report method to check the effectiveness of these two emotions: pride and guilt.

After eliciting the specific emotion, two different samples of respondents: one group is U.S. managers and the other group is Chinese managers and both groups are asked to finish a strategic decision about the internationalization of a foreign country.

3.1 MEASURING EMOTIONS

Three different measurements can be used to measure emotion: self-report, autonomic measures and neuroimaging measures. Self-report measures focus on introspective reflections about the emotions felt from a stimulus. However, autonomic measurements concentrate on continuous emotional reactions that are not distorted by higher cognitive processes. The neuroimaging is the technology that uses functional structural magnetic resonance imaging (fMRI) or positron emission tomography (PET)

The most difficult issues in emotion research is how to arouse and measure emotions (Lazarus, 1991). In general, there are three aspects of emotions which can be measured: behavioral changes, physiological arousal, and subjective feelings. While there is debate over the order of these emotional responses, each element can be used to measure emotions. Though emotions can be measured in terms of behavioral changes, physiological arousal, or subjective emotional experience, there are limitations and assessment associated with different methods. The most commonly used method is self-report which measures cognitive appraisals and subjective feelings.

Self-report measurements have been extensively used to measure subjective emotional feeling in many investigations about the emotion effects. Subjective feeling is defined as the consciously felt experience of emotions as expressed by the respondents (Stout & Leckenby, 1986). There are three types of self-report methods: verbal self-report, visual self-report and moment-to-moment rating.

In verbal self-report, individuals are asked to express their emotions verbally by means

of open-ended questions or to rate their emotions on a list of emotional items by using semantic differential or Likert scales. There are two major approaches to the study of emotions: the dimensional approach and the basic emotional approach.

In the dimensional approach, the full range of human emotions is described by three independent dimensions: Pleasure, Arousal, and Dominance (PAD) (Mehrabian & Russell, 1974). Mehrabian et al (1974) developed a scale with multiple emotion adjectives representing the three PAD dimensions to measure these emotions. PAD is called Semantic Differential Measure of Emotional State scale that consists of 18 items measuring three sub-scales. In the basic emotional approach, the full range of human emotions is described as a mixture of a limited set of basic emotions. Basic emotions are happiness, surprise, sadness, fear, anger, and disgust, etc. The most extensively used scales measuring specific emotions are Emotion Profile Index (Plutchik, 1980) and Differential Emotion Scale (Izard, 1977)

Havlena and Holbrook (1986) found the PAD dimensions to capture more information about the emotional character of a respondent experience than Plutchik's eight basic emotions. In verbal self-report measurement, the dimensional approach seems to be a better measurement over the basic emotional approach because immediate emotional reactions typically involve lower-order pleasure and arousal reactions as outlined in the dimensional approach.

The most extensively used scale is the Positive and Negative Affect Schedule-Expanded Form (PANAS-X) Scales (Watson, Clark, & Tellegen, 1988b). This scale has been used to measure state affect (momentary mood), trait affect (dispositional mood) and positive and negative emotion as two independent reactions. The PANAS-X scale consists of 30 positive and 30 negative adjectives that an individual rates on a Likert scale, from not at all to the extremes. Because two scales demonstrate a consistently low inter-correlation, they can be used to measure independent effects of each emotion.

Verbal self-report has several advantages. It is a simple, cheap, and relatively quick method to investigate large-scale emotional responses to a set of stimuli. However, there are some limitations concerning the reliability and validity of this method. First, limitation is about reliability. Most researchers reported the reliability of verbal emotional scales used in measurement. Because emotional scales consist of a long list of emotional adjectives, it is

easy to tire respondents. So rating a long list of emotion adjectives may be inaccurate.

The second limitation is the validity of this method. The validity may be compromised because of an inevitable amount of cognitive processing that is required in a verbal self-report and, as a result, may distort the original emotional reaction. Respondents may also be unable to report their emotions because they are not completely aware of how they feel, or respondents may be unwilling to report their emotions because of personal concerns. Another limitation is the retrospective nature of a verbal self-report. It measures the emotional reactions only after the stimulus is shown, not while it is presented.

After the discussion of a verbal self-report method, the visual self-report method is presented. The visual self-report measurement is based on some visual tools to represent different emotions or feelings. Two visual self-report instruments are most frequently used. One is Self-Assessment Manikin (SAM), and other is PrEmo.

Lang (1980) developed Self-Assessment Manikin (SAM) which is a visual self-report instrument that relies on PAD-dimensions. Lang (1980) created a set of five figures for every dimension in PAD. Respondents need to choose which figure best represents their emotional state in every dimension in PAD after emotional manipulation. The other instrument is PrEmo which was developed by Desmet (2002). PrEmo consist of 14 animations that are shown for 1-2 seconds before a selection is made. Each animation represents a specific emotion. PrEmo has seven positive emotions (desire, pleasant surprise, inspiration, amusement, admiration, satisfaction, and fascination) and seven negative emotions (indignation, contempt, disgust, unpleasant surprise, dissatisfaction, disappointment, and boredom).

Visual self-report instruments have some advantages over verbal self-report instruments. The visual self-report is quick and has user-friendly tools for measuring emotional responses. In addition, the visual self-report is less boring than a verbal self-report. At the same time, visual instruments are suitable for cross-cultural research and research with children. For example, SAM helps to eliminate the cognitive processing associated with verbal measures and reduces introspection and cognitive processing when compared to a verbal self-report. PrEmo has already proven to be a valid tool for cross-cultural emotional research (Desmet, 2002)

Self-report measurements share the advantage of being user friendly and quick in

measuring emotional responses. No complex instruments or programs are required and it is possible to administer emotional reactions to a relatively large set of stimuli. This makes the self-report a cheap method that is very suitable for large-scale research. Using a self-report method to assess the subjective experience is the most widely accepted method and is generally considered valuable and useful. Due to these advantages, the self-report has always been a very popular method for practitioners.

However, the self-report measures have some limitations. Some research shows that people are not fully cognizant of their reactions to emotional stimuli in daily life, but rather they process information automatically and behave spontaneously on many occasions (Chartrand, 2005). More recent research provides evidence for the existence of emotions that influence an individual's behavior without their being fully conscious of these emotions (Winkielman, Berridge, & Wilbarger, 2005). Taking these findings into consideration, self-report measures of subjective feelings may not always be able to capture some emotions accurately even these emotions may play an important influence on decisions. King and Bruner (2000) argued that a self-report can be distorted by other factors such as social desirability. During self-report meetings, discussions about sensitive topics, such as erotica, racial issues, gender issues, age issues, etc., respondents may be unwilling to report their actual feelings.

In this dissertation, the verbal self-report is used as a main measurement instead of using other measurements to test the proposed hypotheses during the process when managers make strategic decisions. These neuroimaging techniques are very promising and possess the ability to shed a new exciting light on how the brain works when people need to make complicated strategic decisions. It is important for future studies to combine a traditional self-report method with modern brain imaging techniques such as fMRI or PET to study emotional effect on the manager's decision-making process.

3.2 METHODOLOGY

3.2.1 Data Collection from US and China

In this dissertation, managers from the U.S. and China were randomly chosen as the respondents for a survey. Large differences between China and the U.S. in all dimensions of cross cultural differences make it important to study these two cultures in terms of effect of emotions on managerial decision-making (Carr & Tomkins, 1998b; Schneider, 1989).

The different score for five different dimensions in the U.S. and China are in accordance to Hofstede's framework and are illustrated in Table 3-1 and Figure 3-2.

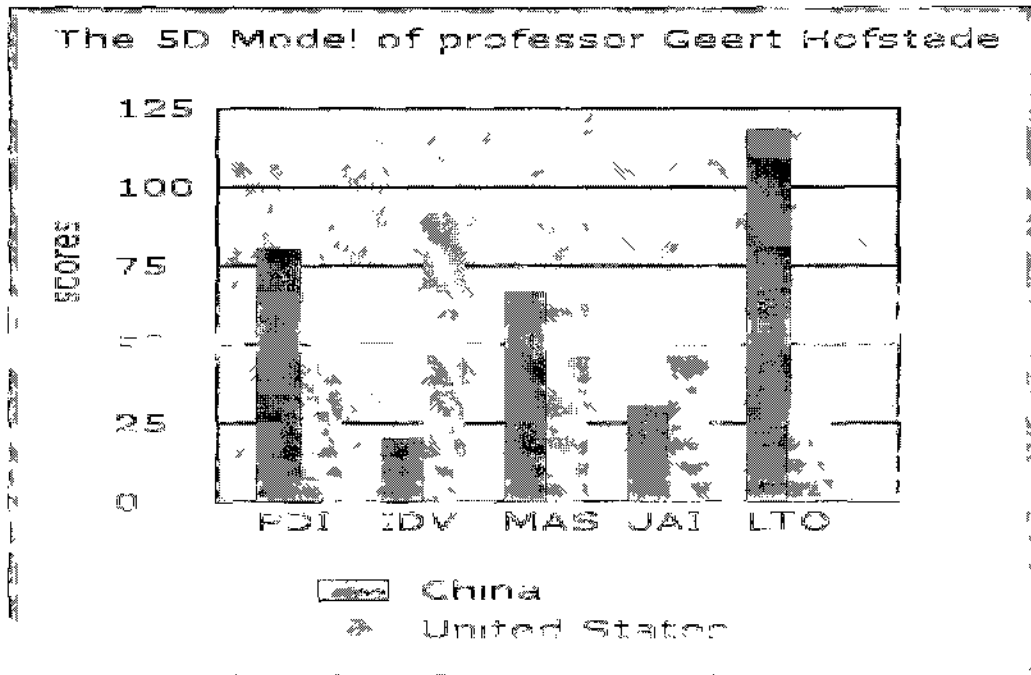
Table 3-1. Five different Hofstede score for US and China

Country	PDI	IDV	MAS	UAI	LTO
China	80	20	66	30	118
US	40	91	62	46	29

PDI: Power Distance Index,
 IDV: Individualism,
 MAS: Masculinity,
 UAI: Uncertainty Avoidance Index,
 LTO: Long-Term Orientation

Source: Hofstede (2001)

Figure 3-2. The five different Hofstede's score for US and China



Source: Hofstede (2001)

From the Table 3-1, two dimensions, individualism or collectivism, have the largest differences between the U.S. and China. In addition, cultural dimension of individualism plays an important role in an individual's thoughts, feelings and action (Kashima et al., 1995; Triandis, 1995). In this dissertation, how individualism and collectivism affect the relationship between pride (guilt) and managers' strategic decision-making is examined.

3.2.2 Pilot Test

Pilot testing was conducted using two online surveys with ten managers: five from the U.S. and five from China. Participation was anonymous and voluntary. Respondents were randomly assigned to one of two different emotion scenarios. Respondents were selected based on their level of managerial experience (age = 32 years; average work experience = 7 years, N = 10).

There were three stages in the pretest. The first stage was designed to test how respondents reacted to the two different emotional elicitations. The second stage was designed to show whether the decision situations were perceived as appropriate for Chinese and American respondents. The third stage was designed to assess whether the situations were realistic. The Chinese language version was presented to Chinese managers and the English language version was given to American managers.

The survey's results were reviewed independently by two bilingual translators at several stages of its development. The instruments for the Chinese business leaders were translated into Chinese and then back-translated into English by two bilingual translators (Earley, 1989). Discrepancies between the Chinese translation and the original English versions were resolved through discussions between the translators and revisions of the Chinese translation (Earley, 1989). After the pretests, surveys were modified based on the respondents' feedback.

3.2.3 Data Collection

Subjects for data collection were managers from the U.S. and China. The subjects were screened to include managers with strategic decision experience in international business.

Data was collected from 1100 American managers with international experience. The subjects were drawn from MBA and EMBA alumni networks of two Universities. The sample for managers in the United States consisted of 800 MBA or EMBA alumni from a mid-western university and 300 MBA or EMBA alumni from a southeastern university.

Aside from the geographical differences, these two American samples were similar.

The sample of managers from China was from three different sources. The respondents were drawn from MBA and EMBA alumni networks of three universities. Data was collected from 550 MBA or EMBA alumni from a northern Chinese university, 300 MBA or EMBA alumni from an eastern Chinese university and 250 MBA or EMBA alumni from a southern Chinese university. These three Chinese samples were demographically similar.

3.3 EXPERIMENTAL PROCEDURE AND DATA COLLECTION

3.3.1 Self-report (PANAS-X scale) as the Manipulation Check of Emotions

In this dissertation, the self-report using a PANAS-X scale was used to check the emotional manipulation of two emotions, pride and guilt. These two self-conscious emotions are typically assessed by either a self-report or coding of nonverbal behavior (Robins, Nofhle, & Tracy, 2007).

Watson, Clark and Tellegen (1988a) showed that the PANAS scales are highly internally consistent, largely uncorrelated, and stable at appropriate levels over a 2-month time period. They also proved that the scale is associated with good convergent and discriminative validity. Watson and Clark (1997) showed that the self-rated affect is not subject to any particular type of error or distortion. Furthermore, Watson and Vaidya (2003) argued that the self-report measurements showed good construct validity in terms of their temporal stability, associations with personality and relations with non-self-report data. Emotion theorists accept this as a valuable method of emotional measurement (Ortony & Turner, 1990).

Some potentially important sources of error have been reported in the measurement of emotions by PANAS-X scale (Barsade, Ward, Turner, & Sonnenfeld, 2000; Gray & Watson, 2007). After considering all advantages and disadvantages of self-report measurement, PANAS-X scale was used to check the emotional manipulation.

3.3.2 Survey

In this dissertation, two different scenarios were used to serve as the experimental manipulation to elicit two different emotions: guilt and pride.

In this dissertation, two types of emotions, guilt and pride, were investigated. The decision scenarios with self-directed (your responsibility) and goal congruent (new drug saving hundreds of people) information were used to generate positive emotions such as

pride whereas self-directed (your responsibility) and goal incongruent (negative: poison chemical leakage accident that kills hundreds of people) information was used to generate negative emotions such as guilt. These two emotions, pride and guilt, were used as desired emotions to be tested in experiments.

These two emotions were measured with Positive and Negative Affect Schedule (PANAS) Scales (Watson et al., 1988b). Respondents are given a list of emotions and ask them to report the intensity of each emotion on a scale ranging from 1 (no emotion) to 7 (high intensity). Chinese version of this scale has been used in literature for emotions measurement (Huang, Yang, & Ji, 2003; Wang, Li, Liu, & Du, 2007). The scale is composed of twenty-eight items. Fourteen items—interested, excited, strong, enthusiastic, proud, alert, inspired, determined, attentive, confident, bold, daring, fearless and active—are used to measure positive emotions. Six items—proud, strong, confident, bold, daring, fearless—are used to measure pride. The other fourteen items—distressed, upset, guilty, scared, hostile, irritable, ashamed, nervous, jittery, blameworthy, anger at self, disgusted with self, dissatisfied with self and afraid—are used to measure negative effects. Six items—guilty, ashamed, blameworthy, anger at self, disgusted with self, dissatisfied with self—are used to measure guilt. Prior research demonstrated the reliability, validity, and test-retest reliability of PANAS (Simons, Pelled, & Smith, 1999; Watson et al., 1988a).

Some of the concerns of self-reports, such as error of memory and social desirability, are measured anonymously and immediately after the emotion inducing event. Besides self-reports are cost effective, efficient, and easy to implement in experiments where 20 to 30 subjects participate simultaneously.

Data was collected through two online surveys. Respondents were screened to include only those who had experience in both strategic decision-making and international business.

The scenarios describe a Fortune 500 company that manufactures medicines in several countries. The protagonist in the scenario is a senior manager who needs to make a decision to enter one country based on what happened in another country. Two versions of a sample scenario with motive consistent and self-caused appraisal manipulations are given as Appendix 1 and Appendix 2.

After reading the scenario, the respondents were asked to complete a standardized

survey. The first part of the survey included a manipulation check, the second part had PANAS-X Scales (Watson et al., 1988b). The PANAS-X scale consists of 28 items on which respondents indicated the emotions they felt on a 1-7 scale. Six items are used to measure guilt and the other six items are used to measure pride.

The third part of the survey required subjects to make a strategic decision about entering another country. The four dependent variables measured were decision comprehensiveness, speed, risk and resource commitment.

The first dependent variable is decision comprehensiveness that is measured by four items (Atuahene-Gima & Li, 2004; Fredrickson & Mitchell, 1984). These four items were: 1) many alternative courses of action were developed to achieve the intended objectives; 2) many different criteria were considered before one decided on which course of action to take; 3) multiple explanations were thoroughly examined to understand what problems existed and what opportunities were available; and 4) multiple examinations of suggested courses of action were conducted.

The second dependent variable is the decision speed of the SDMP. Decision speed is measured by three items that are adopted from Baum and Wally (2003). Baum and Wally (2003) measured speed using scenarios where respondents recorded the time their firm would most likely take to make decision. Three items were used to measure decision speed are: 1) time to make the decision (act immediately, 1 week, 2 weeks, 1 month, 3 months, 6 months, then proceed slowly and make decision after making sure that all issues are evaluated); 2) the likelihood of discussing the issue with experts before making the final decision; and 3) their feeling about the amount of time it took for them to make the decision.

The third dependent variable measured is the risk of making a decision. Though it is difficult to measure risk, several theories have proposed their way to measure risk with elements such as the perceptual assessment of uncertainty, gains or losses, outcome expectation and other factors (Yates & Stone, 1992). There is no consensus about how to measure risk in strategic decision literature. Williams and Wong (1999) recognized this problem and measured risk using scenarios that described different levels of uncertainty and desirability of outcomes. In this dissertation, three different items are used to measure the risk of making a decision. Each respondent will choose one option from five options

with different scenarios in each item. Five different scenarios are associated with different levels of risk. In each item, each respondent's willingness to take a risk was measured by the level of risk associated with the option that the respondents had chosen. The first item is to measure the level of risk for different entry modes to another country. The five options for the project were listed according to the level of risk from low to high : 1) stop the project, 2) halt the project temporarily for re-evaluation, 3) execute the project without making any changes, 4) execute the project but use the manufacturing system at higher capacity, and 5) execute the project but produce more kinds of medicine. The second item is to measure the risk associated with five different entry mode to enter another country with the order from low to high risk: export, licensing and franchising, strategic alliance, joint venture, and wholly owned subsidiary. The third item presented was the way to form the wholly owned subsidiary. The level of risk measured was from low to high for five methods to form a subsidiary. The first method was to rent the land and invest a portion of the money to build a small-scale operation. The second method was to rent the land and invest all of the money to begin a full-scale operation. The third method was to purchase land and invest part of the money to build a small-scale operation. The fourth method was to purchase land and invest all of the money to start a full-scale operation. The fifth method was to purchase land and invest more money to build the most advanced factory. Respondent selected the levels of risk they were willing to take.

The fourth dependent variable measured is the level of resource commitment to a decision. Three items were used to measure resource commitment (Kraatz & Zajac, 2001). These three items were how much money to spend, how many people to involve and how much time they committed for this decision.

The fourth part of survey measured cultural difference dimension of individualism. Items from Triandis and Gelfand's study (1998) were used to measure in Hofstede's (1984) framework. The 16 items used to measure individualism and collectivism dimensions were from Triandis and Gelfand's study (1998). Respondents were asked to rate their agreement on a 7-point Likert scale (1 = strongly disagree and 7 = strongly agree). Fernandez, Carlson, Stepina, and Nicholson (1997) showed that these items were theoretically equivalent and psychometrically more reliable than were Hofstede's (1984) scales.

Demographic information such as age, gender, and business expertise areas, size of

organization, industry and experience in international business were also recorded. See appendix 1 and appendix 2 for the two surveys.

3.3.3 Experimental Procedures

A total population of 1100 MBA and EMBA alumni in two American universities was contacted by email. After explained the nature of the study to them, they were invited to participate in the study. MBA or EMBA alumni at three Chinese universities were contacted to request participation in this study.

The data collection was through online surveys. Emails with a link to the survey were sent out to all of the members of the alumni club. Reminder emails were sent out 3 weeks after the first email. This was followed by a third email reminder. See the appendix 3, 4, and 5 for the three emails. Subjects were randomly assigned to two emotion conditions (pride and guilt).

3.3.4 Data Collection

The first stage of data collection lasted approximately two months. A total of 381 surveys were completed in response to 4400 email requests with an initial response rate of 8.66 percent. Of these, 194 were collected for emotion of guilt and 185 for pride. Out of the 381 completed surveys, 323 were usable. Total 58 surveys that were incomplete were excluded from further analysis. Analysis was done on 171 completed surveys for the guilt version and 152 for the pride version. The final 323 usable surveys represent a final effective response rate of 7.34 percent. Table 3-2 shows more information on response rate.

Table 3-2. The data collection information for total sample

	Number of people contacted	Actual response number	Actual response rate	Actual effective response number	Actual effective response rate
Guilt Version	1100	101	9.18%	89	8.09%
Pride Version	1100	93	8.45%	82	7.45%
US Sample Total	2200	194	8.82%	171	7.77%
Guilt Version	1100	95	8.64%	80	7.27%
Pride Version	1100	92	8.36%	72	6.55%
China Sample Total	2200	187	8.50%	152	6.90%
Total Sample	4400	381	8.66%	323	7.34%

For the guilt version, a total of 89 completed surveys from American participants and 80 completed surveys from Chinese participants were collected.. The detail information about the sample size and response rate for guilt version is shown in Table 3-3.

Table 3-3.The data collection information for guilt scenario

	Number of People	Expected Response Rate	Expected Number of Completed Survey	Actual Response Number	Actual Response Rate	Missing Value Response	Actual Effective Response Number	Actual Effective Response Rate
One Middle US University	800	10%	80	75	9.38%	8	67	8.38%
One Southeast US University	300	10%	30	26	8.67%	5	21	7.00%
Total US number	1100	10%	110	101	9.18%	12	89	8.09%
One North Chinese University	550	10%	55	52	9.45%	8	44	8.00%
One Middle Chinese University	250	10%	25	13	5.20%	2	11	4.40%
One South Chinese University	300	10%	30	28	9.33%	3	25	8.33%
Total China number	1100	10%	110	93	8.64%	13	80	7.27%

For pride version, a total 82 completed surveys from American participants and 72 completed surveys from Chinese participants were collected. The detail information about the sample size and response rate for pride version is shown in Table 3-4.

Table 3-4. The data collection information for pride scenario

	Number of People	Expected Response Rate	Expected Number of Completed Survey	Actual Response Number	Actual Response Rate	Missing Value Response	Actual Effective Response Number	Actual Effective Response Rate
One Middle US University	800	10%	80	71	8.88%	9	62	7.75%
One Southeastern US University	300	10%	30	24	8.00%	4	20	6.67%
Total US Number	1100	10%	110	95	8.64%	13	82	7.45%
One Northern Chinese University	550	10%	55	49	8.91%	5	44	8.00%
One Middle Chinese University	250	10%	25	16	6.40%	3	13	5.20%
One Southern Chinese University	300	10%	30	27	9.00%	2	25	8.33%
Total China Number	1100	10%	110	92	8.36%	20	72	6.55%

The 7 percent to 8 percent response rate for this study is consistent with rates for online data collection (Hamilton, 2009). Given that subjects for this study included top management and included questions about managerial strategic decision-making processes, this response rate is acceptable and consistent with similar result from other research studies (Miller, Burke, & Glick, 1998b; Simons et al., 1999).

Snedecor and Cochran (1989) discussed the acceptable sample size N in one cell of 2×2 experimental design using formula:

$$N = 1 + 2 \times C \times (S/D) \times (S/D)$$

Here α is significance level, $1 - \beta$ is desired power, S is the estimation of the population standard deviation of the variable, and D is the magnitude of the difference to detect.

In this study we assumed that $\alpha=0.05$, $1 - \beta=0.8$, $C=7.85$, $S=0.9$, $D=0.5$, so the minimum size for one cell in this 2×2 experimental design is $N=1+2 \times 7.85 \times 1.8 \times 1.8=50.8$. Therefore, the minimum cell size is 50.

The cell sizes for four cells in this 2×2 experimental design are 89, 80, 82 and 72, which satisfied with the minimum requirement for the sample size. Our sample size is more

than five times the number of dependent variables meeting the most conservative criteria for factor analysis (Kim & Lim, 1988).

CHAPTER 4

ANALYSES AND RESULTS

This chapter begins with a presentation of the descriptive statistics of the sample. ANOVA is conducted to check manipulation effectiveness. Principal factor analysis is used to check the validity and reliability of the four different constructs: risk, comprehensiveness, speed and resource commitment. Next one factor ANOVA is used to test H1 to H4. Finally, interaction effects of the two emotions and two cultures are tested by two factors ANOVA for H5 to H7.

4.1 ANALYSES AND RESULTS

4.1.1 Description of Data

The sample included 213 men and 110 women (mean age =34.74 years, SD =6.362, range = 24–53; mean year in overseas work experience =1.17 years, SD =0.37, range = 1-2; mean year in international business experience =7.15 years, SD =7.15, range = 1–25). The detailed statistics for the total sample can be found in Table 4-1.

Table 4-1.Descriptive statistics for the total sample

Personal information	N	Minimum	Maximum	Mean	Std. Deviation	Variance
Age	323	24	53	34.74	6.36	40.48
Year in oversea work experience	323	1	2	1.17	0.37	0.14
Year in international business experience	323	1	25	7.15	4.44	19.71

The sample for guilt scenario included 117 men and 52 women (mean age = 35 years, SD =6.468, range = 24–53). The sample for pride scenario included 97 men and 57 women (mean age = 34.45 years, SD = 6.253, range = 24–53).

From the descriptive statistics about the respondents' ages, it is shown that most respondents are at the age between 31 and 40. The detailed information about respondents' age is presented in Table 4-2.

Table 4-2. Information about respondents' age

Age	Frequency	Percent	Cumulative Percent
24-30	98	30.30	30.30
31-40	169	52.40	82.70
41-50	47	10.50	92.20
50-53	9	7.80	100.00
Total	323	100.00	

From the descriptive statistics of respondents' job responsibility, it is evident that most respondents are in the job title with managers, directors and top management within the branch. The percentage of respondents with a job title of manager is 32.8%. The percentage of respondents with a job title of director is 23.2% while top management for the branch is 22.3%. The total percentage for these three different job titles is 78.3%. Job title statistics of the respondents are in Table 4-3.

Table 4-3. Information about the respondents' job responsibility

Job responsibility	Frequency	Percent	Cumulative Percent
Ordinary employee	23	7.10	7.10
Managers	106	32.80	39.90
Director	75	23.20	63.20
Top management position for branch	72	22.30	85.40
Top management position for headquarter	24	7.40	92.90
Business owner	15	4.60	97.50
Others	8	2.50	100.00
Total	323	100.0	

From the descriptive statistics of respondents' overseas work experience, it is evident that the overwhelming majority of respondents (83 percent) have no overseas working experience. This verifies that the respondents' individualism or collectivism is not influenced by their work experience in some other countries with a different culture. For example, if an American manager spent a lot of time in China, this long time overseas work experience would have had an impact on his individualistic orientation. Detailed

information of participants' overseas experiences is are in Table 4-4.

Table 4-4.Information for the respondents' overseas work experience

Oversea working experience	Frequency	Percent	Cumulative Percent
No oversea work experience	269	83.30	83.30
With oversea work experience	54	16.70	100.00
Total	323	100.00	

From the descriptive statistics of respondents' international business experiences, it is evident that about 90 percent of respondents have about 2 to 12 years of experience and only 3.7 percent have one-year of experience in international business. This verifies that all respondents have some knowledge about international business and can effectively complete the online survey.

From the descriptive statistics of respondents' functional area, it can be observed that respondents are from all nine different functional areas and do not concentrate on a single functional area. The three highest percentage of respondents are from functional areas of marketing, strategic management and finance. There is total 54 percent of respondents who work at these three functional areas, Table 4-5.

Table 4-5.Information for the respondents' functional area

Functional areas	Frequency	Percent	Cumulative Percent
General management	34	10.50	10.50
Marketing	49	15.20	25.70
Strategic management	65	20.10	45.80
Finance	59	18.30	64.10
Accounting	19	5.90	70.00
Human Resource	29	9.00	78.90
Information Technology	21	6.50	85.40
Operation	35	10.80	96.30
Other	12	3.70	100.00
Total	323	100.00	

From the descriptive statistics of the respondents' country of origin, it is evident that 171 managers were from the U.S. and 152 managers were from China. For more

information, refer to Table 4-6.

Table 4-6. Information in detail for the respondents' country origin

Country	Frequency	Percent	Cumulative Percent
China	152	47.10	47.10
US	171	52.90	100.00
Total	323	100.00	

From the descriptive statistics of the respondents' organizational size, it is clear that 34 percent of respondents are from organizations that have 501 to 10,000 employees, Table 4-7.

Table 4-7. Detailed information for the respondents' organization size

Organization Size	Frequency	Percent	Cumulative Percent
Less than 100	15	4.60	4.60
Between 101 to 500	47	14.60	19.20
Between 501 to 2000	112	34.70	53.90
Between 2001 to 10000	92	28.50	82.40
More than 10000	57	17.60	100.00
Total	323	100.00	

From the descriptive statistics of the respondents' workplace, the two main industry types of the organizations where the respondents work are manufacturing and retail industry, Table 4-8.

Table 4-8. Information for the respondents' industry

	Frequency	Percent	Cumulative Percent
Agriculture	13	4.00	4.00
Raw material	17	5.30	9.30
Manufacturing	124	38.40	47.70
Retail	127	39.30	87.00
Service	30	9.30	96.30
Other	12	3.70	100.00
Total	323	100.00	

External validity is the degree to which the study's conclusions are applicable to other situations. Internal validity eliminates confounding or controlling variables within the experimental design. Many different factors can affect the external validity and internal validity of an experimental design. The sample and experimental condition have an impact on external validity while non-response bias, reliability of measurements, power or order effect have an impact on internal validity.

Respondents from two cultures are not significantly different in terms of demographics (age, overseas working experience, job responsibility, international business experience, functional area, gender, organizational size and industry). Experimental manipulation of the managerial strategic decision-making could be different from the real world experience. This could pose a threat to the external validity.

For the confidentiality reason, the information about non-respondents is not available. Analyses for non-response bias were carried out by comparing early and late respondents, with late respondents being used as a proxy for non-respondents (Armstrong & Overton, 1977). There is no significant difference between the early and late respondents.

The minimum sample size calculated was 50 with a power of about 80%. Therefore, sample sizes collected have sufficient weight to detect a real effect, if the effect is present. Respondents took 10 to 15 minutes to complete the online survey. In sum, it can be argued that the external validity and internal validity are acceptable in this experimental design.

4.1.2 Manipulation check

Analyses of variables show that the manipulations checks for causal agency (responsibility) is not significant with $F=2.27$ ($p<.165$). Table 4-9 reports the results about causal agency (responsibility) from the analysis of manipulation checks. There is no significant difference between the managers' feelings of responsibility for the outcomes in both scenarios.

Table 4-9.The causal agency manipulation check of two emotions

		Sum of Squares	df	Mean Square	F	Sig.
Your Responsibility	Between Groups	9.73	1	9.73	2.27	0.13
	Within Groups	1373.37	321	4.27		
	Total	1383.10	322			

Analyses of variables show that the manipulations checks for motive consistency is significant with $F=248.82$ ($p<.00$). Table 4-10 reports the results about motive consistency (desirability of outcome like negative outcomes or positive outcomes) from analysis of manipulation checks. There is a significant difference between the desirability of outcomes for managers in both scenarios.

Table 4-10.The motive consistency manipulation check of two emotions

	Sum of Squares	df	Mean Square	F	Sig.
Desirability Between Groups	2311.15	1	2311.15	248.82	0.00
of Within Groups	2981.61	321	9.29		
outcomes Total	529	322			
	2.76				

From the results of manipulation check, it is shown that manipulations worked. Also the results show that managers think they are responsible for the decision outcomes that happened in the scenario with 8.44 for death accident and 8.12 for saving lives. It is interesting to note that managers' self-responsibility score is higher for death accident than for saving lives from Table 4-11 although not at a significant level. In addition, there is a significant difference between managers who think the death accident is undesirable but the saving lives result is desirable. This is reasonable and normal emotional reaction for people who experience negative and positive outcomes.

Table 4-11.The effectiveness of manipulation check

Questions	Self or others (n = 323)		
	Self response (guilt n = 169)	Self response (pride n = 154)	F/P-value
Who was responsible for the outcomes	8.43	8.08	0.13
	Desirability (n = 323)		
	No (n = 169)	Yes (n = 154)	F/P-value
The desirability of outcomes	2.38	7.74	0.00

Further analyses show discriminative validity and reliability for the manipulations. A principal axis factor analysis of PANAS scale items with a varimax rotation was used to identify the factors from 28 PANAS scale items. Varimax rotation in this paper is appropriate because it maximizes the sum of variance of squared structure elements in the columns of the factor structured matrix (Gorsuch, 1983; Winer, Brown, & Michels, 1991). The varimax rotation distributes variance away from the general factor produced via principal components analysis (Nunnally & Bernstein, 1994; Winer et al., 1991). An orthogonal rotation is used because there are theoretical reasons that support all components are independent from each other, such as a positive emotion being different from a negative emotion, and there is no overlap between these positive and negative emotions. In addition, risk, comprehensiveness, speed and resource commitment are constructs that are independent to, and not related to each other. The varimax rotation was used because all of the extracted factors are assumed to be orthogonal to each other. Factor analysis for guilt scenario extracted a 5 factors solution and a pride scenario extracted a 5 factors solution by criteria of eigenvalue >1.

The first factor is labeled guilt with six loadings; and the second factor is labeled pride with six loadings. These two groups of emotions are pride, which is self-directed and has positive outcomes, and guilt, which is self-directed and has negative outcomes. The results are shown in appendices 6 and 7.

Further analysis was conducted to test the reliability of the composite measures of these two emotions. Both emotions were found to have high levels of reliability. Six items were used to measure guilt and pride. The Cronbach's α for guilt scale is 0.95 and for pride scale is 0.93. All internal consistency reliabilities with Cronbach's α were above the 0.7 cutoff.

The results show that respondents encountering a scenario with negative outcomes and self-responsibility could arouse significantly higher scores on negative self-directed emotions such as guilt. While respondents encountering a scenario with positive outcomes and self-responsibility could arouse significantly higher scores on positive self-directed emotions such as pride.

It can be inferred that scenarios elicit pride and guilt and their measurements have high levels of discriminative validity and reliability.

4.1.3 Reliability and validity of dependent variables and culture dimension

Comprehensiveness, speed and resource commitment were measured using seven-point Likert scales for which respondents rated these questions from 1 (least likely) to 7 (mostly likely). While risk was measured using five-point Likert scales for which respondents rated these questions from 1 (least risky) to 5 (most risky). All items used to measure the four dependent variables are shown in Appendix 8.

The first dependent variable – comprehensiveness - is measured with a four-item scale. These four questions are whether respondents develop many alternative courses of action to achieve intended objectives, consider different criteria before deciding on which courses of action to take, thoroughly examine multiple explanations for problems and opportunities or conducted multiple examinations of suggested courses of action. The Cronbach's α for this scale was 0.90 for the guilt scenario and 0.87 for the pride scenario.

The second dependent variable - decision speed - is measured with a three-item scale. These three items asked respondents to choose 1 out of 7 options about: 1) the time it takes to make a decision, 2) the likelihood that the respondents would discuss the issue with other experts before he/she made a final decision, and 3) the respondent's feelings about the amount of time they made in making their final decision. The Cronbach's α for this three-item scale was 0.62 for the guilt scenario and 0.38 for the pride scenario. The Cronbach's α of this three-item measurement is lower than the normally acceptable 0.7. All respondents gave a high score on one item, which asks if respondents will consult with some other experts before making a final decision in both the guilt and pride scenarios. The results show that managers are very likely to consult with experts when experiencing both emotions. To improve the Cronbach's α , one item was excluded from a three-item scale. The Cronbach's α for this two-item scale was 0.83 for the guilt scenario and 0.72 for the pride scenario. This action greatly increases the reliability of the measurement in decision speed. Cronbach's α exceeding the value of 0.7 is acceptable (Sapienza & Grimm, 1997).

The third dependent variable - resource commitment - is measured with a three-item scale. These three items ask how much money, how many people and how much time respondents want to invest in this internationalization project. The Cronbach's α for this scale was 0.94 for the guilt scenario and 0.93 for the pride scenario.

The fourth dependent variable – risk - is measured by a three-item scale. These three

items present options for entry mode chosen to enter another country and the ways to form the wholly-owned subsidiary. The Cronbach's α for this scale was 0.73 for the guilt scenario and 0.77 for the pride scenario.

The original Cronbach's α for reliability of four dependent variables are show in Table 4-12. All Cronbach's α for reliability of four dependent variables (DV) are higher than 0.7, which is acceptable except Cronbach's α for speed. In this Table 4-12, the three-item scale was used to measure the decision speed.

Table 4-12.The reliability of the dependent variables scale

Guilt scenario				
DV	Risk	Comprehensiveness	Speed	Resource commitment
Cronbach's α	0.73	0.90	0.62	0.94
Pride scenario				
DV	Risk	Comprehensiveness	Speed	Resource commitment
Cronbach's α	0.77	0.87	0.38	0.93

The modified Cronbach's α for reliability of four dependent variables are show in Table 4-13. All Cronbach's α for reliability of four dependent variables are higher than 0.7 hence the results are acceptable.

Table 4-13.The reliability of the dependent variables scale

Guilt scenario				
DV	Risk	Comprehensiveness	Speed	Resource commitment
Cronbach's α	0.73	0.90	0.83	0.94
Pride scenario				
DV	Risk	Comprehensiveness	Speed	Resource commitment
Cronbach's α	0.77	0.87	0.72	0.93

Principal component analysis was conducted on the 13 items for risk, comprehensiveness, and speed and resource commitment to check the discriminative validity of these four constructs. The Bartlett test for sphericity and anti-images, and the

Kaiser–Meyer–Olkin measure for sampling adequacy were checked to verify that the data are appropriate for principal component analysis.

The number of factors extracted was determined by the number of components with eigenvalue greater than one. To enhance clarity, the factor solution was rotated using varimax rotation.

Principal component analysis shows that risk, comprehensiveness and resource commitment form distinct factors. The pattern matrix of this factor analysis with a cut-off value of 0.7 for the guilt scenario after varimax rotation is shown in Appendix 8. The pattern matrix of this factor analysis with a cut-off value of 0.6 for the pride scenario after varimax rotation is shown in Appendix 9.

From Appendix 8 and Appendix 9, it can be found that for one item from a three-item measurement of speed (if they consult with experts before making their final decision) have negative loadings that are different from the other two items. This item was excluded from further analysis.

Principal component analysis was conducted on the rest of the 12 items for risk for comprehensiveness, speed, and resource commitment. As expected, all these twelve items loaded appropriately on four factors with eigenvalue over 1.0. The pattern matrix of this factor analysis with a cut-off value of 0.7 for the guilt scenario after varimax rotation is shown in Appendix 10. Four factors together explain more than 77% of variance.

For the pride scenario, all twelve items loaded appropriately on four factors with eigenvalue over 1.0. The pattern matrix of this factor analysis with a cut-off value of 0.6 for the pride scenario after varimax rotation is shown in Appendix 11. Four factors together explain more than 63% of variance.

From the principal component analysis results, four items are formed for the comprehensiveness factor. Two items are formed for the speed factor. Three items are formed for the risk factor and the other three items are formed for the resource commitment factor. Information about the relationship of items and factors are in Table 4-14.

Table 4-14. Results of principal component analysis on four constructs for pride scenario

Items	Factor		
Developed many alternative courses of action to achieve intended objectives Considered different criteria before deciding on which courses of action to take Thoroughly examined multiple explanations for problems and opportunities Conducted multiple examinations of suggested course of action		Comprehensiveness	
Choose one option from seven options about time to make decision Ask respondent about their feeling about the speed of making final decision			Speed
The option about project The entry mode chosen to enter another country The way to form the wholly owned subsidiary			Risk
How much money to invest in project How many people to form the team How long time need to wait for the project to finish	Resource		

After the principal component analysis, the average scores were calculated for each of these four scales to measure four constructs. Composite scores were developed for the four dependent variables.

Next, principal component analysis was conducted on the 16 items used to measure individualism and collectivism to confirm the discriminative validity of these two constructs. The Bartlett test for sphericity and anti-images, and the Kaiser–Meyer–Olkin measure for sampling adequacy were checked to verify that the data are appropriate for principal component analysis. Principal component analysis showed the result with two factors. One factor is individualism and the other factor is collectivism. The result of principal component analysis shows discriminative validity for individualism and collectivism. The pattern matrix of these two factors analysis, with a cut-off value of 0.6 for all of the samples after the varimax rotation, is shown in Appendix 12.

The Cronbach's α for reliability of individualism and collectivism are shown in Table 4-15.

Table 4-15. The reliability of the individualism and collectivism constructs

	Individualism	Collectivism
Cronbach's α	0.89	0.92

The results of the means for individualism and collectivism for the guilt scenario are shown in Table 4-16. The mean individualism score for American managers ($M=5.34$) was higher than the mean score for Chinese managers ($M=4.42$) with $P<0.00$, while the collectivism score for American managers ($M=4.56$) was lower than the mean score for Chinese managers ($M=5.41$) with $P<0.00$.

Table 4-16. Means of individualism and collectivism for managers from China and US in guilt scenario

Culture		US managers	Chinese managers
Individualism	Mean	5.34	4.42
	Number	89	80
Collectivism	Mean	4.56	5.41
	Number	89	80

In addition, the one-way ANOVA test supported the conclusion that there is a significant difference between the individualism score and the collectivism score for managers from two different countries. The one-way ANOVA results were shown in Table 4-17.

Table 4-17. Results of one-way ANOVA test for individualism and collectivism for managers from China and US in guilt scenario

		Sum of Squares	df	Mean Square	F	Sig.
Individualism	Between Groups (US managers vs. Chinese managers)	36.08	1	36.08	25.34	0.00
	Within Groups	237.79	167	1.42		
	Total	273.87	168			
Collectivism	Between Groups (US managers vs. Chinese managers)	30.08	1	30.08	20.70	0.00
	Within Groups	242.70	167	1.45		
	Total	272.78	168			

In the pride scenario, the means of individualism and collectivism scores for managers from China and the U.S. were calculated and compared. The results of the means are shown in Table 4-18. It can be seen that the mean individualism score for American managers (M=5.50) was higher than the mean score for Chinese managers (M=4.50) with $P<0.00$, while the collectivism score for American managers (M=4.36) was lower than the mean score for Chinese managers (M=5.40) with $P<0.00$.

Table 4-18. Means of individualism and collectivism for managers from China and US in pride scenario

Culture		US managers	Chinese managers
Individualism	Mean	5.50	4.50
	Number	82	72
Collectivism	Mean	4.36	5.40
	Number	82	72

In addition, the one-way ANOVA test supported the conclusion that there is a significant difference of the individualism score and the collectivism score for the two different groups of managers. The one-way ANOVA test results are shown in Table 4-19.

Table 4-19. Results of one-way ANOVA test for individualism and collectivism for manager from China and US in pride scenario

		Sum of Squares	df	Mean Square	F	Sig.
Individualism	Between Groups(US managers vs. Chinese managers)	38.29	1	38.29	31.43	0.00
	Within Groups	185.18	152	1.22		
	Total	223.47	153			
Collectivism	Between Groups (US managers vs. Chinese managers)	41.07	1	41.07	29.24	0.00
	Within Groups	213.46	152	1.40		
	Total	254.53	153			

The results show that American managers and Chinese managers are significantly different in their individualism and collectivism approaches. The national factor, such as

citizens from U.S. and China, are used as the cultural factors in the following analyses.

In conclusion, the measurements used in this study can show a satisfactory degree of validity and reliability of dependent variables and culture measurement.

4.1.4 Hypotheses Test

In this section, H1a to H4b were tested by a general linear model (GLM). To test H1a, ANOVA test with guilt as a factor was conducted on a risk scale. Guilt is an original continuous variable in survey measurements with a range from 1 to 7. To transform guilt from a continuous variable to a categorized variable, the first median of guilt was found with a value of 5.67. Then guilt was split into two categorized variables: low and high guilt. When a respondent's guilt is larger than the median, his guilt was categorized as high guilt. When a respondent's guilt is less than the median, his guilt was categorized as low guilt. If a respondent's guilt is the same as the median, this respondent was deleted and excluded from the following ANOVA analysis because it had no impact on the analysis. For the guilt sample, the sample size was reduced from 169 to 165 because four respondents' guilt value is same as the value of median.

From this one factor (guilt: Low versus High) ANOVA analysis, there is a significant guilt effect on risk with $F = 7.70$, $p < 0.01$, which shows high guilt managers tend to take lower risk ($M = 2.59$) than do low guilt managers ($M = 2.92$). Thus, H1a is supported that higher levels of managerial guilt lead to lower levels of risk when making a strategic decision.

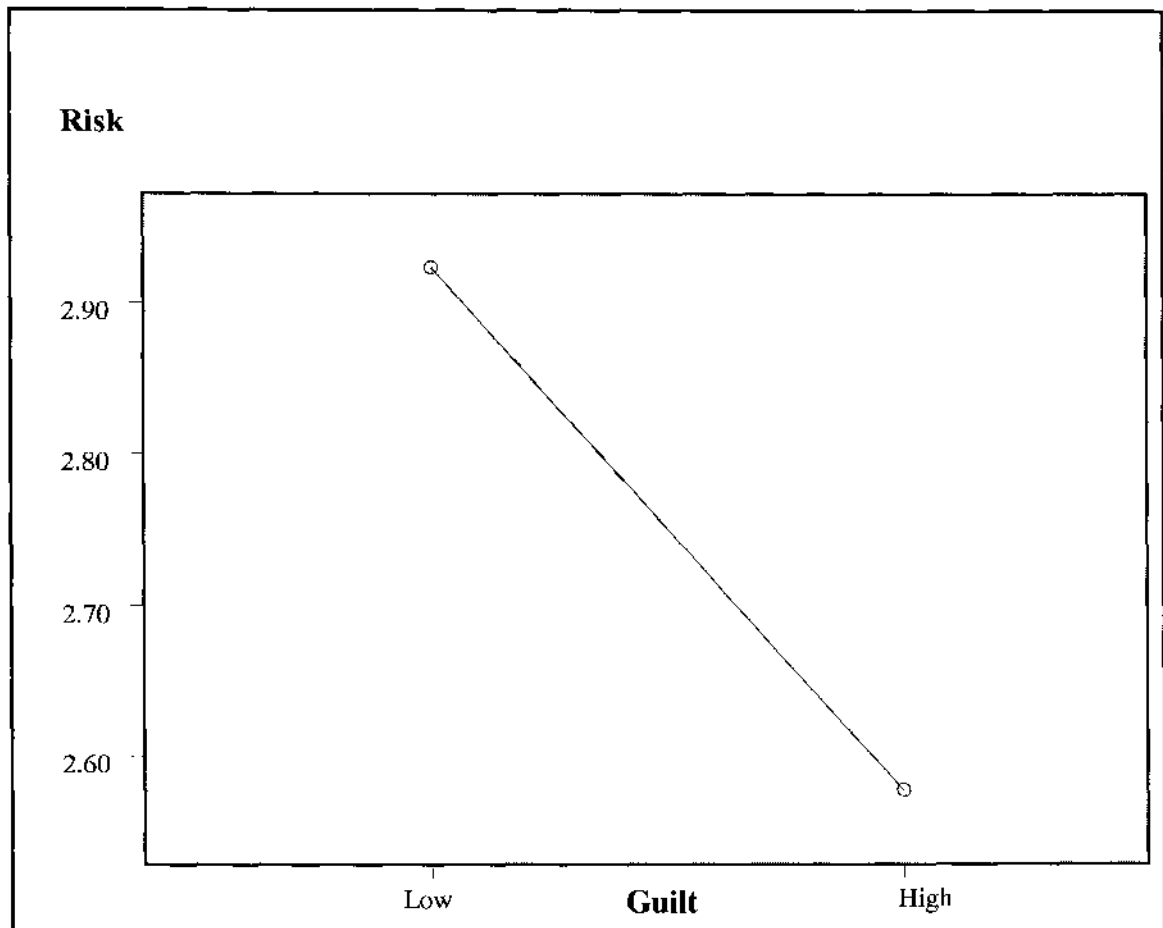
The results of ANOVA analysis are shown in Table 4-20. The illustration of this relationship between guilt and risk is shown in Figure 4-1.

Table 4-20. The ANOVA results for guilt and risk

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	4.95(a)	1	4.95	7.70	0.01
Intercept	1248.18	1	1248.18	1942.29	0.00
Guilt	4.95	1	4.95	7.70	0.01
Error	104.75	163	0.64		
Total	1358.88	165			
Corrected Total	109.70	164			

a R Squared = .045 (Adjusted R Squared = .039)

Figure 4-1. The relationship between guilt and risk



To test H2a, the ANOVA test with guilt as a factor was conducted on comprehensiveness. From this one factor (guilt: Low versus High) ANOVA analysis, there is a significant guilt effect on comprehensiveness with $F = 7.86$, $p < .01$, which shows managers with high guilt tend to make decisions with higher comprehensive ($M = 6.03$) than do managers with low guilt ($M = 5.50$). Thus, H2a supports the theory that higher levels of managerial guilt lead to higher levels of comprehensiveness when managers make a strategic decision.

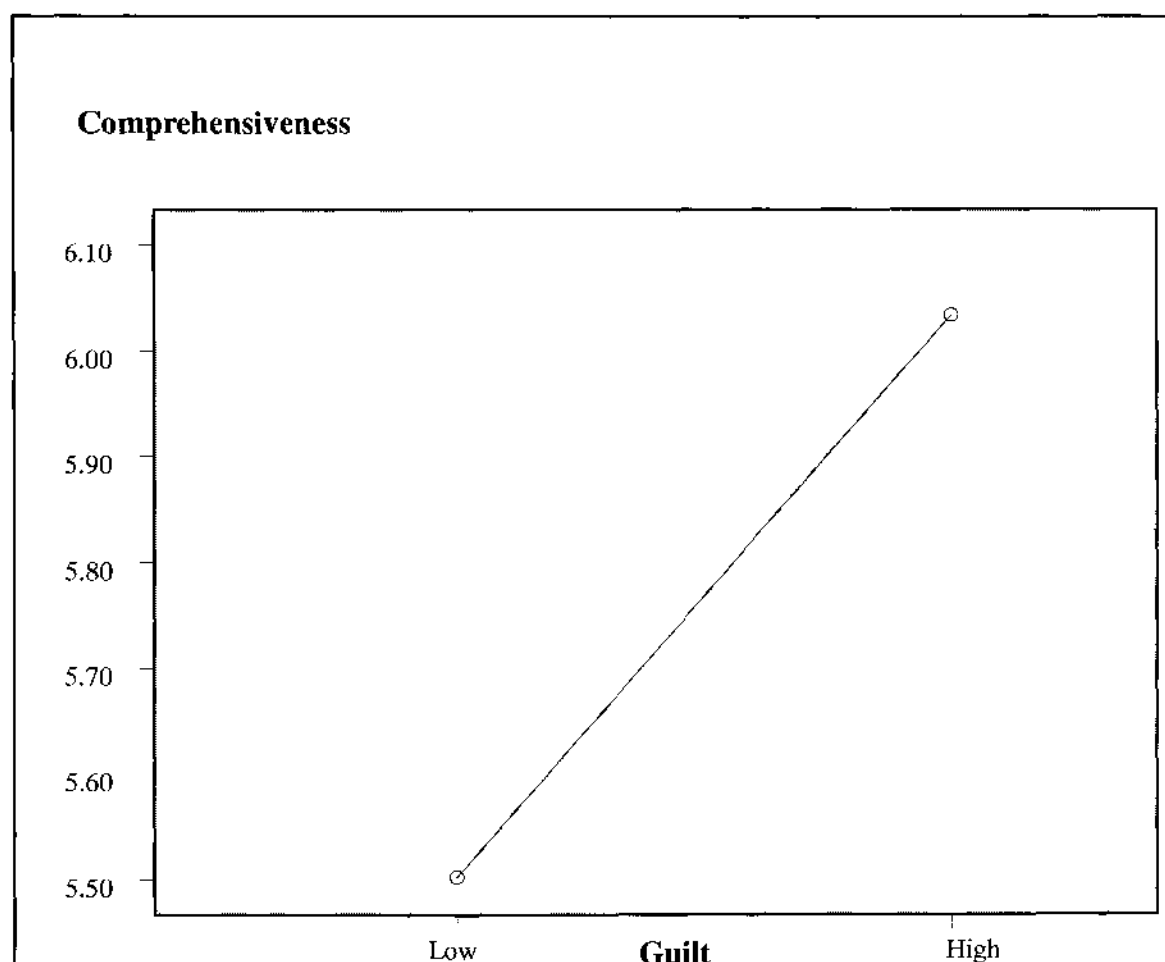
The results of the ANOVA analysis are shown in Table 4-21. The illustration of this relationship between guilt and comprehensiveness is shown in Figure 4-2.

Table 4-21. The ANOVA results for guilt and comprehensiveness

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	11.61(a)	1	11.61	7.86	0.01
Intercept	5489.84	1	5489.84	3718.33	0.00
Guilt	11.61	1	11.61	7.86	0.01
Error	240.65	163	1.47		
Total	5739.25	165			
Corrected Total	252.26	164			

a. R Squared = .046 (Adjusted R Squared = .040)

Figure 4-2. The relationship between guilt and comprehensiveness



To test H3a, the ANOVA test with guilt as a factor was conducted on resource commitment. From this one factor (guilt: Low versus High) of the ANOVA analysis, there

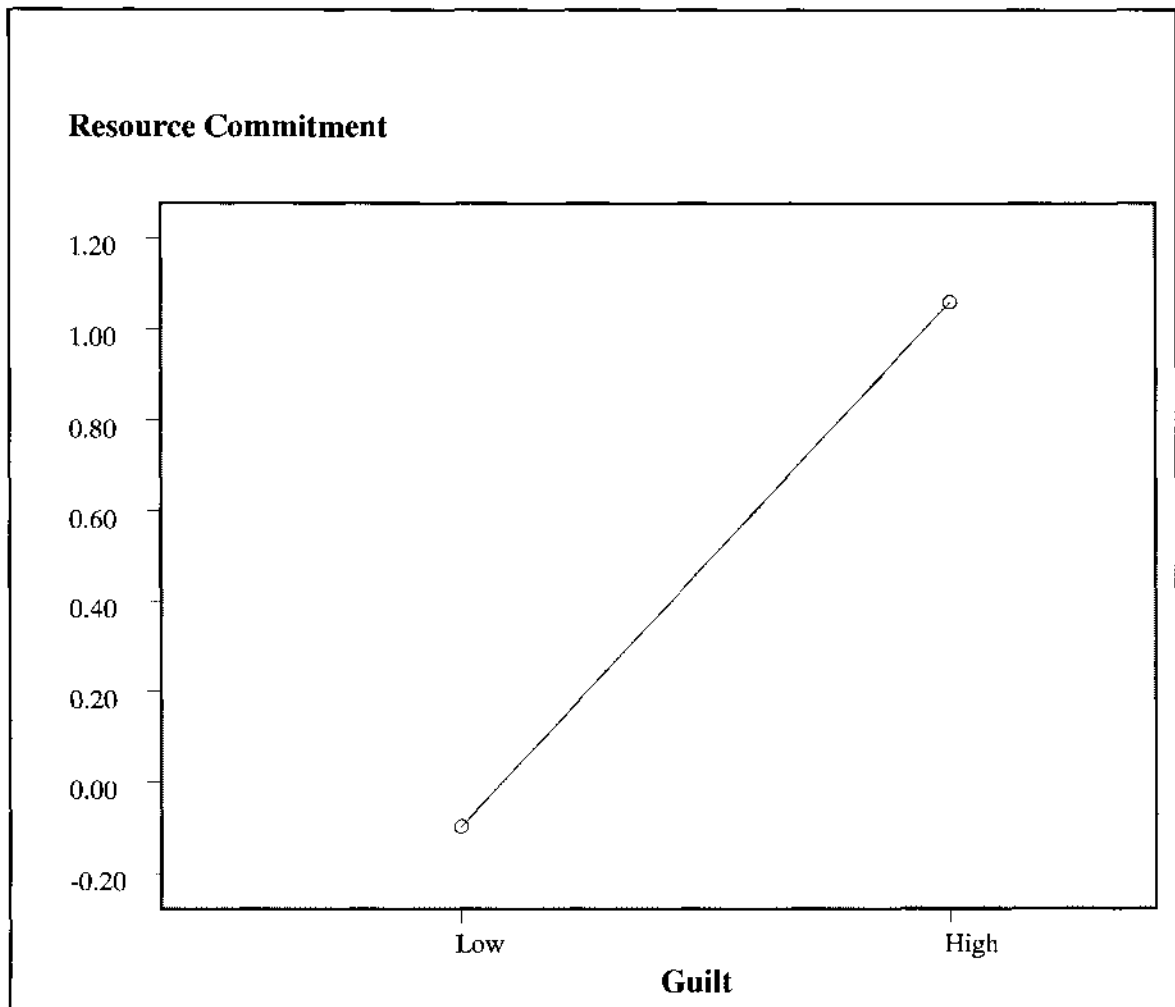
is a significant guilt effect on resource commitment with $F = 7.60$, $p < 0.01$, which shows managers with high guilt tend to commit more resources when they make a decision ($M = 1.04$) than do managers with low guilt ($M = -0.11$). Thus, H3a supports the theory that higher levels of managerial guilt lead to higher levels of resource commitment when managers make a strategic decision. The results of the ANOVA analysis are shown in Table 4-22. The illustration of this relationship between guilt and resource commitment is shown in Figure 4-3.

Table 4-22. The ANOVA results for guilt and resource commitment

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	55.25(a)	1	55.25	7.60	0.01
Intercept	38.37	1	38.37	5.28	0.02
Guilt	55.25	1	55.25	7.60	0.01
Error	1183.92	163	7.26		
Total	1277.00	165			
Corrected Total	1239.17	164			

a R Squared = .045 (Adjusted R Squared = .039)

Figure 4-3. The relationship between guilt and resource commitment



To test H4a, the ANOVA test with guilt as a factor was conducted on speed. From this one factor (guilt: Low versus High) of the ANOVA analysis, there is a significant guilt effect on speed with $F = 34.78$, $p < .00$, which shows managers with high guilt tend to make slower decisions ($M = 2.00$) than do managers with low guilt ($M = 3.50$). Thus, H4a supports the theory that higher levels of managerial guilt lead to lower levels of speed when managers make a strategic decision.

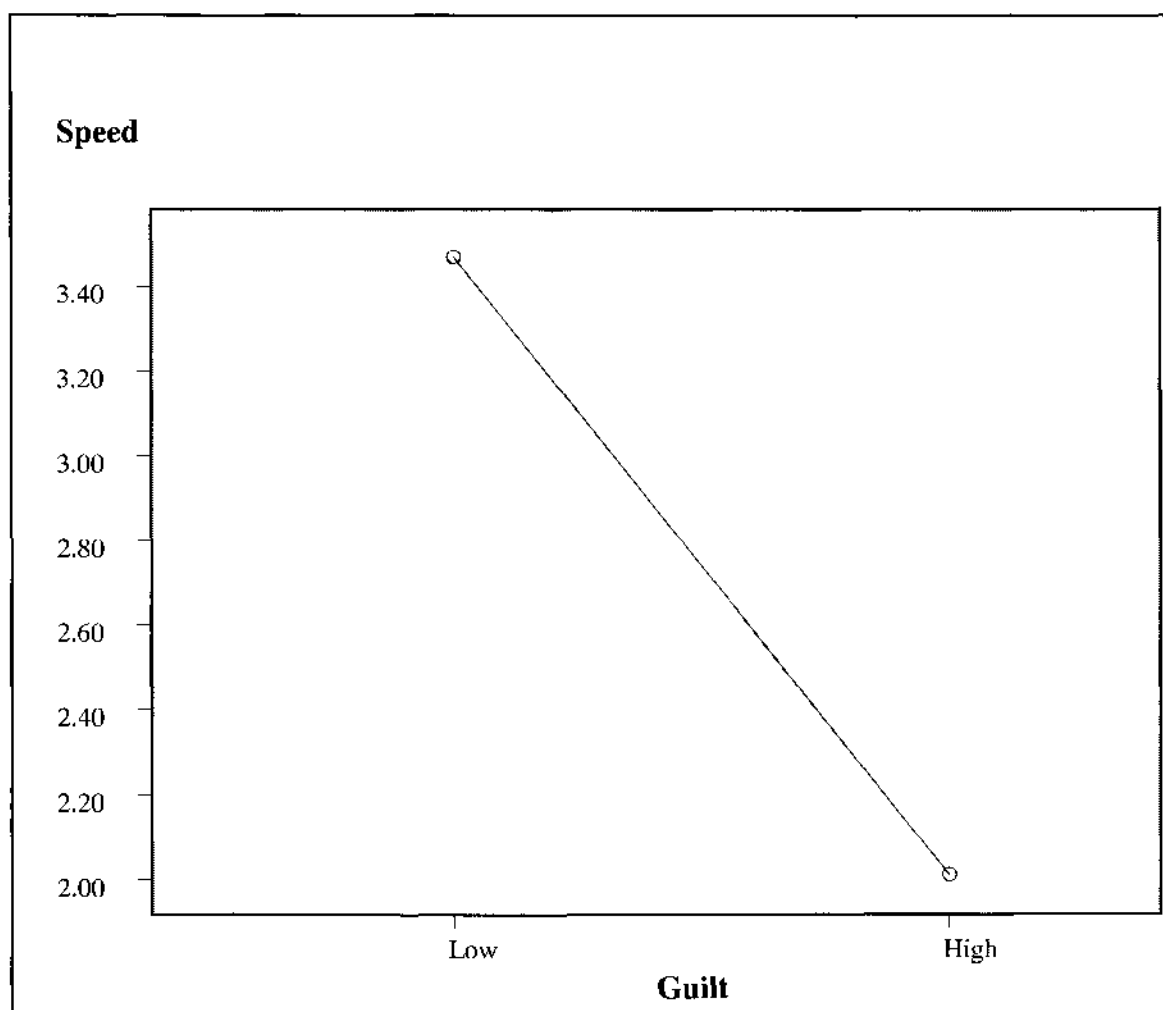
The results of ANOVA analysis are shown in Table 4-23. The illustration of this relationship between guilt and speed is shown in Figure 4-4.

Table 4-23. The ANOVA results for guilt and speed

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	87.64(a)	1	87.64	34.78	0.00
Intercept	1239.64	1	1239.64	492.04	0.00
Guilt	87.64	1	87.64	34.78	0.00
Error	410.66	163	2.51		
Total	1742.00	165			
Corrected Total	498.30	164			

a. R Squared = .176 (Adjusted R Squared = .171)

Figure 4-4. The relationship between guilt and speed



Next, the relationships between manipulation variables and the four dependent variables were investigated to verify that causal agency and negative outcomes have no

partial or direct impact on dependent variables. In the survey, the agency and the outcome are original continuous variables with range from zero to ten. To transform the agency and the outcome from a continuous variable to a categorized variable, the medians of the agency and outcome were found. Then the agency and outcome were split into two categorized variables: low or high causal agency and low or high negative outcome. For the guilt sample, the sample size was reduced from 189 to 82 because 107 respondents were excluded. The ANOVA analyses were applied to test this relationship. The results show no significant or partial relationship existed between the two manipulations variables- causal agency or negative outcomes and comprehensiveness. These findings confirm that the two manipulation variables do not have a partial nor direct effect on comprehensiveness, and guilt does not play a mediating function between the manipulation variables and comprehensiveness. The ANOVA result for causal agency and negative outcomes that affect comprehensiveness is shown in Table 4-24.

Table 4-24. Association between two guilt manipulation variables and comprehensiveness

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	11.58(a)	3	3.86	2.63	0.05
Intercept	1845.73	1	1845.73	1257.90	0.00
Agency	5.92	1	5.92	4.03	0.05
Outcome	1.46	1	1.46	0.99	0.32
Agency *Outcome	0.52	1	0.52	0.35	0.55
Error	114.45	78	1.46		
Total	2717.75	82			
Corrected Total	126.03	81			

a R Squared = .09 (Adjusted R Squared = .06)

The ANOVA result for causal agency and negative outcomes, which affect speed, is shown in Table 4-25.

Table 4-25. Association between two guilt manipulation variables and speed

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	2.12(a)	3	0.70	0.23	0.87
Intercept	364.34	1	364.34	118.89	0.00
Agency	1.53	1	1.53	0.50	0.48
Outcome	0.03	1	0.03	0.01	0.92
Agency *Outcome	0.00	1	0.00	0.00	0.98
Error	239.02	78	3.06		
Total	802.25	82			
Corrected Total	241.14	81			

a R Squared = .01 (Adjusted R Squared = -.03)

The ANOVA result for causal agency and negative outcomes with impact on risk is shown in Table 4-26.

Table 4-26. Association between two guilt manipulation variables and risk

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	3.71(a)	3	1.23	1.87	0.14
Intercept	435.61	1	435.61	658.35	0.00
Agency	0.58	1	0.58	0.88	0.35
Outcome	0.35	1	0.35	0.53	0.46
Agency *Outcome	1.45	1	1.45	2.19	0.14
Error	51.61	78	0.66		
Total	700.44	82			
Corrected Total	55.32	81			

a R Squared = .07 (Adjusted R Squared = .03)

The ANOVA result for causal agency and negative outcomes with impact on resource commitment is shown in Table 4-27.

Table 4-27. Association between two guilt manipulation variables and resource commitment

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	48.61(a)	3	16.20	2.60	0.05
Intercept	48.42	1	48.42	7.77	0.00
Agency	2.96	1	2.96	0.47	0.49
Outcome	16.37	1	16.37	2.62	0.11
Agency *Outcome	21.46	1	21.46	3.44	0.07
Error	486.08	78	6.23		
Total	627.00	82			
Corrected Total	534.69	81			

a R Squared = .09 (Adjusted R Squared = .06)

The ANOVA results from Table 4-24, Table 4-25, Table 4-26 and Table 4-27 all show that there are no significant partial relationships between the two manipulations variables- causal agency or negative outcomes and the four different dependent variables. These results support the argument that guilt has a direct impact on the four dependent variables in the strategic decision-making.

Next, the relationships between pride and the four dependent variables in strategic decision-making were investigated. To test H1b, the ANOVA test with pride as a factor was conducted on a risk scale. In survey, the pride is a continuous variable with a range from one to seven. To transform pride from a continuous variable to a categorized variable, the first median of pride was found with a value of 4.67. Then the pride variable was split into two categorized variables: low and high sense of pride. When the respondent's pride is larger than the median, his pride was categorized as a high pride. When the respondent's pride is less than the median, his pride was categorized as a low pride. If the respondent's pride is the same as the median, this respondent was deleted and excluded from the following ANOVA analysis because it had no impact on the analysis. For the pride sample, the sample size was reduced from 154 to 138 because 16 respondents' pride value is same as the value of median.

From this one factor (pride: Low versus High) of the ANOVA analysis, there is a significant pride effect on risk with $F = 29.83$, $p < 0.00$, which shows managers with a high sense of pride tend to take higher risk ($M = 3.75$) than do managers with a low sense of pride ($M = 3.05$). Thus, H1b supports the theory that higher levels of managerial pride lead

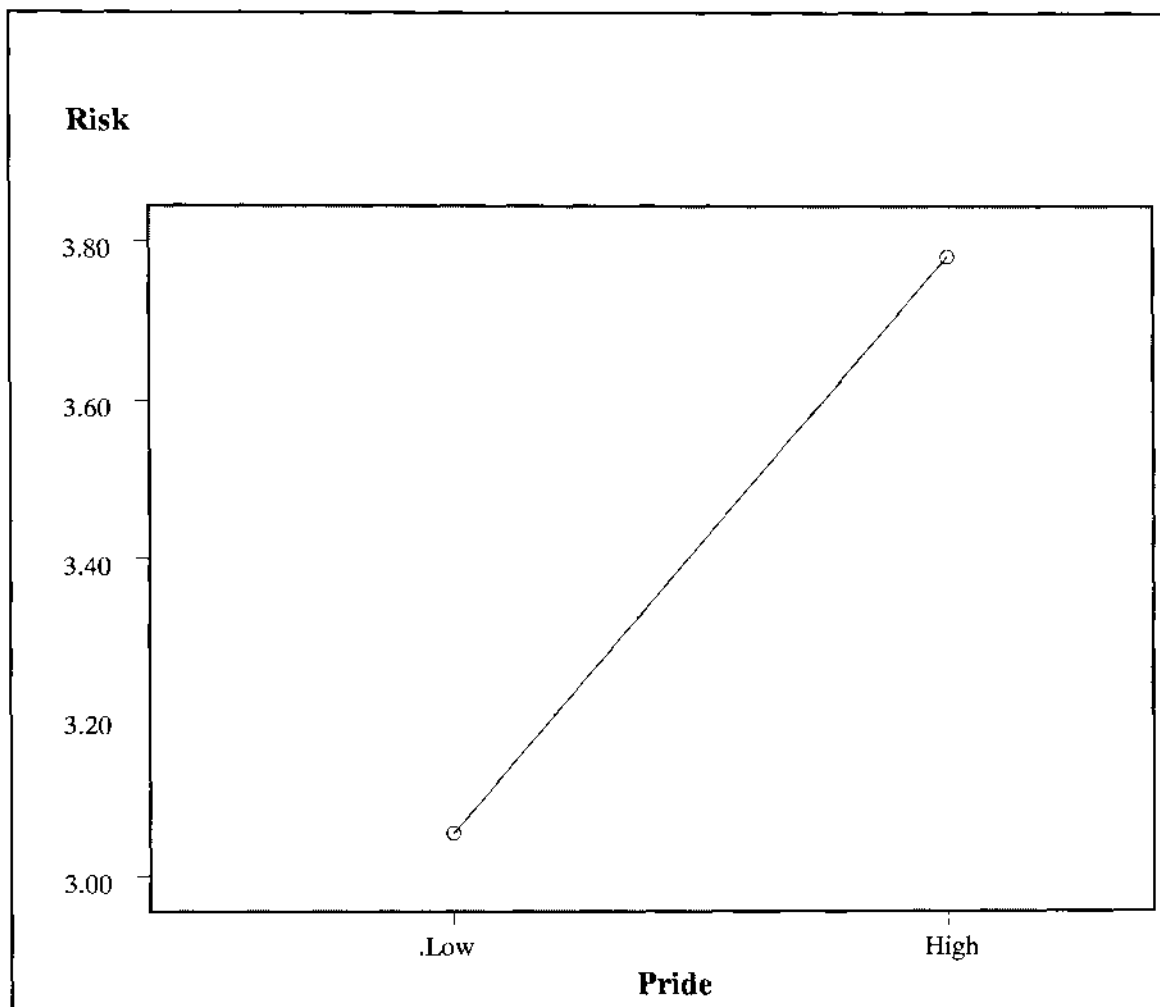
to higher levels of risk when making a strategic decision. The results of the ANOVA analysis are shown in Table 4-28. The illustration of this relationship between pride and risk is shown in Figure 4-5.

Table 4-28. The ANOVA results for pride and risk

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	18.14(a)	1	18.14	29.83	0.00
Intercept	1603.42	1	1603.42	2636.14	0.00
Pride	18.14	1	18.14	29.83	0.00
Error	82.72	136	0.60		
Total	1688.00	138			
Corrected Total	100.87	137			

a R Squared = .18 (Adjusted R Squared = .17)

Figure 4-5. The relationship between pride and risk



To test H2b, the ANOVA test with pride as a factor was conducted on comprehensiveness. From this one factor (pride: Low versus High) of the ANOVA analysis, there is no significant pride effect on comprehensiveness with $F = 2.13$, $p < 0.15$, which shows managers with a high sense of pride and managers with a low sense of pride are not different in their decision comprehensiveness when they make a strategic decision. Thus, H2b does not support the theory that higher levels of managerial pride lead to higher levels of risk when making a strategic decision.

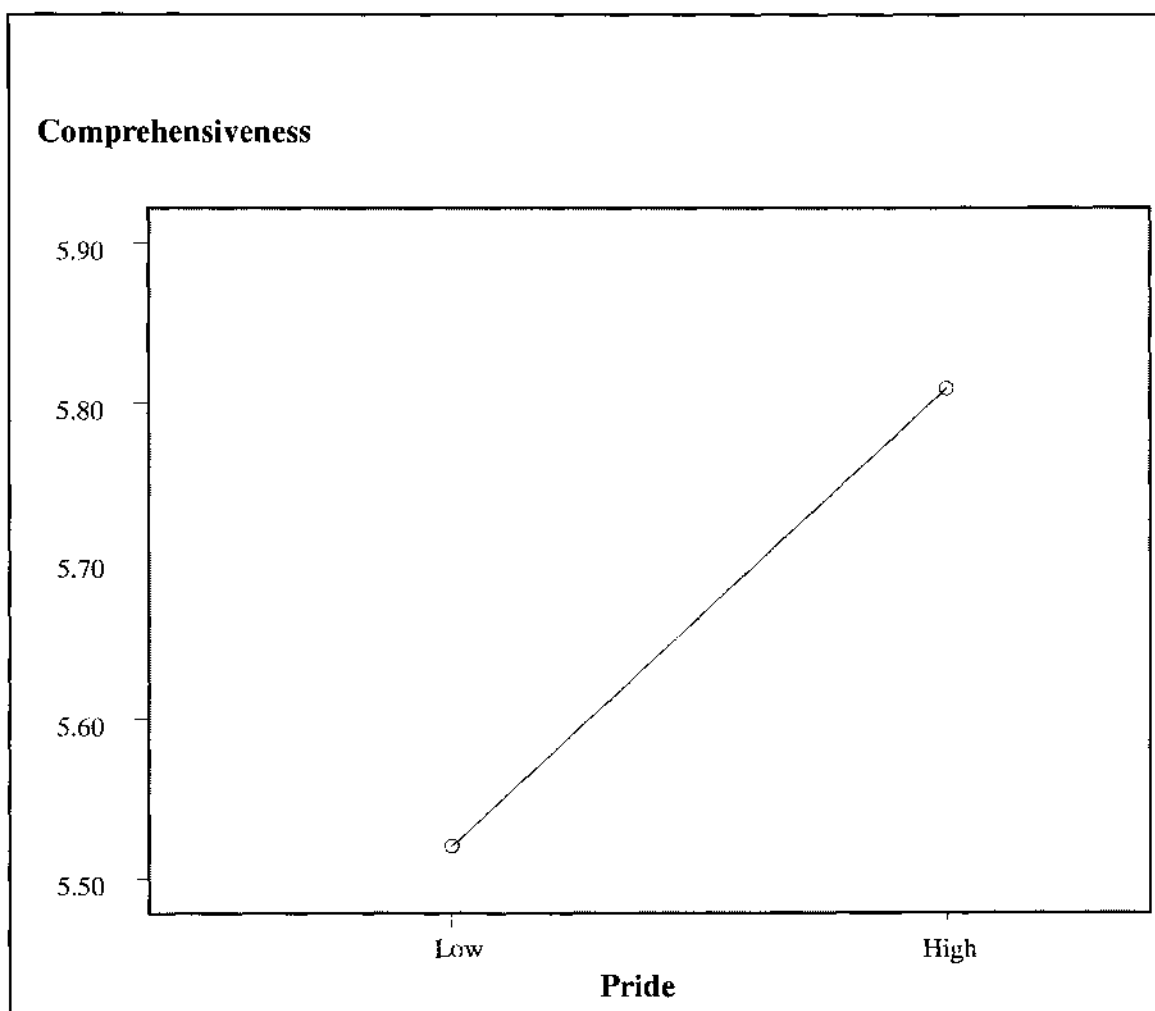
The results of the ANOVA analysis are shown in Table 4-29. The illustration of this relationship between pride and risk is shown in Figure 4-6.

Table 4-29. The ANOVA results for pride and comprehensiveness

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	2.85(a)	1	2.85	2.13	0.15
Intercept	4404.58	1	4404.58	3287.95	0.00
Pride	2.85	1	2.85	2.13	0.15
Error	182.18	136	1.34		
Total	4596.56	138			
Corrected Total	185.04	137			

a R Squared = .02 (Adjusted R Squared = .01).

Figure 4-6. The relationship between pride and comprehensiveness



To test H3b, the ANOVA test with pride as a factor was conducted on resource

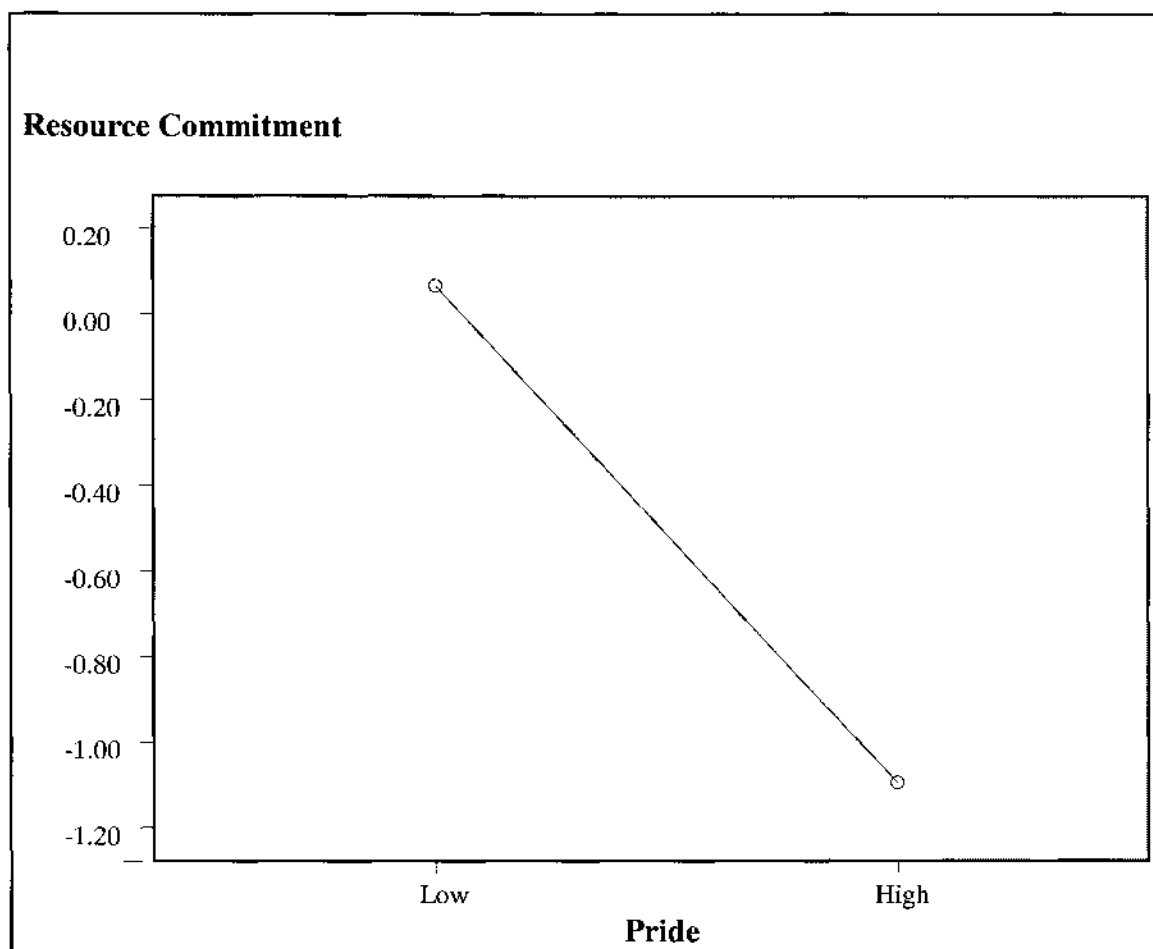
commitment. From this one factor (pride: Low versus High) ANOVA analysis, there is a significant pride effect on resource commitment with $F = 6.59$, $p < 0.01$, which shows managers with a high sense of pride tend to make less resource commitment ($M = -1.10$) than do managers with a low sense of pride ($M = 0.10$). Thus, H3b supports the theory that higher levels of managerial pride lead to lower levels of resource commitment when making a strategic decision. The results of the ANOVA analysis are shown in Table 4-30. The illustration of this relationship between pride and risk is shown in Figure 4-7.

Table 4-30. The ANOVA results for pride and resource commitment

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	46.28(a)	1	46.28	6.59	0.01
Intercept	36.13	1	36.13	5.15	0.03
Pride	46.28	1	46.28	6.59	0.01
Error	954.10	136	7.01		
Total	1031.00	138			
Corrected Total	1000.38	137			

a R Squared = .05 (Adjusted R Squared = .04)

Figure 4-7. The relationship between pride and resource commitment



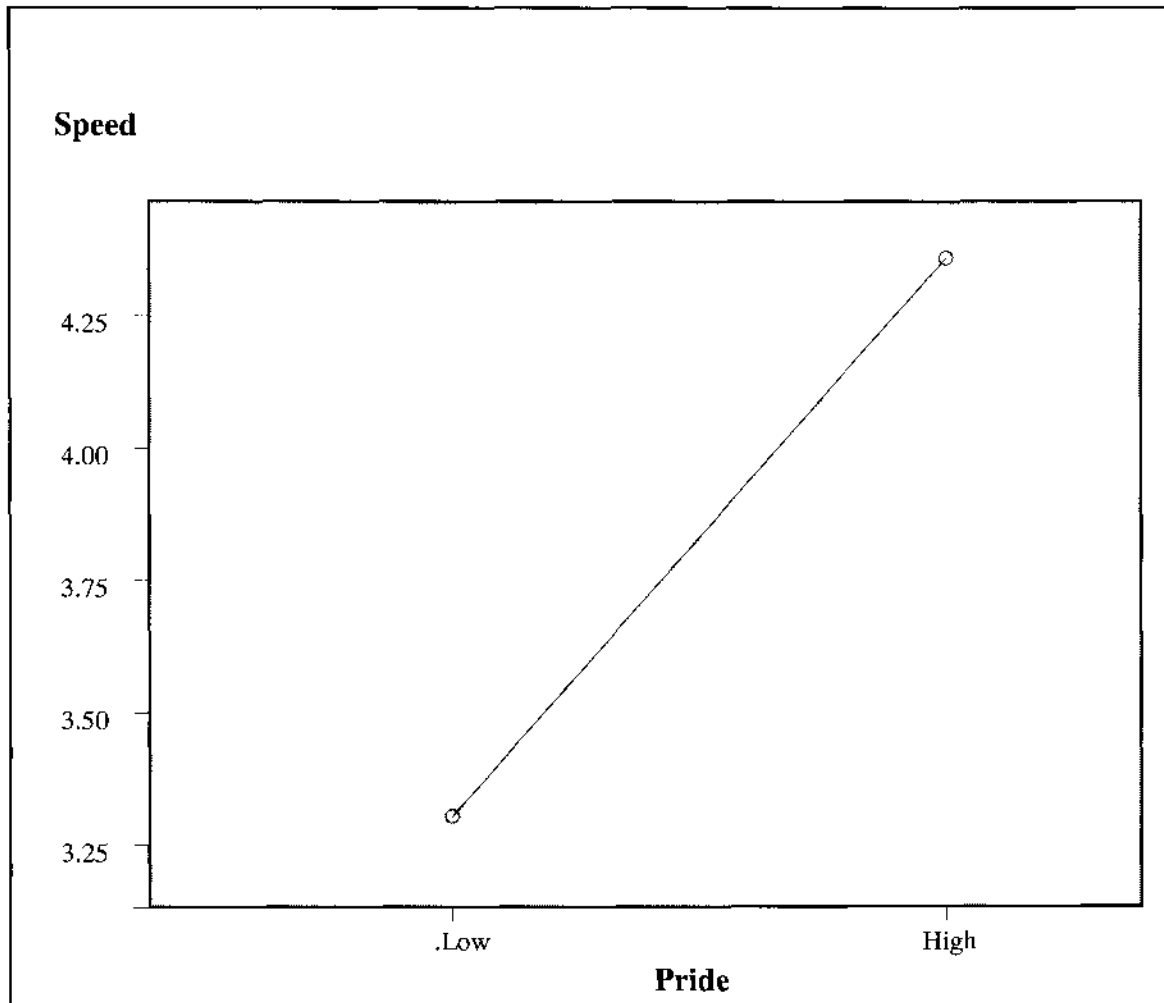
To test H4b, the ANOVA test with pride as a factor was conducted on speed. From this one factor (pride: Low versus High) of the ANOVA analysis, pride has a significant effect on speed with $F = 28.00$, $p < 0.00$, which shows that managers with a high sense of pride tend to make quicker decisions ($M = 4.43$) than do managers with a low sense of pride ($M = 3.30$). Thus, H4b supports the theory that higher levels of managerial pride lead to higher levels of speed when making a strategic decision. The results of the ANOVA analysis are shown in Table 4-31. The illustration of this relationship between pride and speed is shown in Figure 4-8.

Table 4-31. The relationship between Pride and Speed

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	38.22(a)	1	38.22	28.00	0.00
Intercept	2015.48	1	2015.48	1476.51	0.00
Pride	38.22	1	38.22	28.00	0.00
Error	185.64	136	1.36		
Total	2209.75	138			
Corrected Total	223.86	137			

a R Squared = .171 (Adjusted R Squared = .165)

Figure 4-8. The relationship between pride and speed



Next, the relationships between the manipulation variables and the four dependent variables were investigated to make sure that causal agency and positive outcomes have

neither partial nor direct impact on dependent variables. ANOVA analyses were applied to test this relationship.

In survey, the agency and outcome are original continuous variables with a range from zero to ten. To transform the causal agency and positive outcome from a continuous variable to a categorized variable, first the median of the agency and outcome were found. Then, the agency and outcome were split into two categorized variables: low or high causal agency and low or high positive outcome. For the pride sample, the sample size was reduced from 169 to 106 because 63 respondents were excluded. The ANOVA results for causal agency and positive outcomes, which affect comprehensiveness, are shown in Table 4-32.

Table 4-32. Association between two pride manipulation variables and comprehensiveness

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	3.33(a)	3	1.11	0.77	0.51
Intercept	3002.77	1	3002.77	2087.90	0.00
Agency	2.02E-00	1	2.02E-00	0.00	0.99
Outcome	0.34	1	0.34	0.23	0.62
Agency *Outcome	2.79	1	2.79	1.94	0.16
Error	146.69	102	1.43		
Total	3503.93	106			
Corrected Total	150.03	105			

a R Squared = .02 (Adjusted R Squared = -.01)

The ANOVA result for causal agency and positive outcomes with an impact on speed is shown in Table 4-33.

Table 4-33. Association between two pride manipulation variables and speed

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	16.18(a)	3	5.39	3.10	0.03
Intercept	1296.11	1	1296.11	747.18	0.00
Agency	5.47	1	5.47	3.15	0.08
Outcome	4.32	1	4.32	2.49	0.12
Agency *Outcome	1.73	1	1.73	1.00	0.32
Error	176.93	102	1.73		
Total	1676.25	106			
Corrected Total	193.11	105			

a R Squared = .08 (Adjusted R Squared = .06)

The ANOVA result for causal agency and positive outcomes with an impact on risk is shown in Table 4-34.

Table 4-34. Association between two pride manipulation variables and risk

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	4.39(a)	3	1.46	2.06	0.11
Intercept	1076.12	1	1076.12	1512.65	0.00
Agency	1.99	1	1.99	2.79	0.10
Outcome	0.95	1	0.95	1.34	0.24
Agency *Outcome	0.20	1	0.20	0.28	0.59
Error	72.56	102	0.71		
Total	1281.55	106			
Corrected Total	76.96	105			

a R Squared = .06 (Adjusted R Squared = .03)

The ANOVA result for causal agency and positive outcomes with an impact on resource commitment is shown in Table 4-35.

Table 4-35. Association between two pride manipulation variables and resource

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	28.70(a)	3	9.56	1.20	0.31
Intercept	8.22	1	8.22	1.03	0.31
Agency	0.28	1	0.28	0.03	0.85
Outcome	5.35	1	5.35	0.67	0.41
Agency *Outcome	21.90	1	21.90	2.74	0.10
Error	813.45	102	7.97		
Total	863.00	106			
Corrected Total	842.16	105			

a R Squared = .03 (Adjusted R Squared = .01)

The ANOVA results from Table 4-32, Table 4-33, Table 4-34 and Table 4-35 all show that there are no significant or partial relationships between the two manipulations variables- causal agency and positive outcomes and four different dependent variables. This finding confirms that pride does not play a mediating function between the manipulation variables and the four decisions dimensions. These results support the argument that pride has a direct impact on the four dependent variables in the strategic decision-making.

Except for H3b, all of the hypotheses are supported by empirical results. Table 4-36 is a summary of the results and indicates support for eight hypotheses from H1a to H4b.

Table 4-36. Summary of findings on relationship between emotions and decision-making

Hypotheses	Independent Variables	Dependent Variables	Significant Level	Hypotheses Support
H1a	Guilt	Risk	P<0.01 Supported	In strategic settings, higher levels of managerial guilt lead to lower levels of risk when making a decision
H2a	Guilt	Comprehensiveness	P<0.01 Supported	In strategic settings, higher levels of managerial guilt lead to higher levels of comprehensiveness when making a decision
H3a	Guilt	Resource commitment	P<0.01 Supported	In strategic settings, higher levels of managerial guilt lead to higher levels of resource commitment when making a decision
H4a	Guilt	Speed	P<0.00 Supported	In strategic settings, higher levels of managerial guilt lead to lower levels of speed when making a decision
H1b	Pride	Risk	P<0.00 Supported	In strategic settings, higher levels of managerial pride lead to higher levels of risk when making a decision
<i>H2b</i>	<i>Pride</i>	<i>Comprehensiveness</i>	<i>P<0.15 Not supported</i>	<i>In strategic settings, levels of managerial pride would have no impact on levels of comprehensiveness when making a decision</i>
H3b	Pride	Resource commitment	P<0.01 Supported	In strategic settings, higher levels of managerial pride lead to lower levels of resource commitment when making a decision
H4b	Pride	Speed	P<0.00 Supported	In strategic settings, higher levels of managerial pride lead to higher levels of speed when making a decision

Lastly, the hypotheses about the interaction between the emotions and culture with the decision-making are tested.

Based on results of the related research, it is argued that some control variables, such as, firm size, industry, and functional area, international business experience that might influence risk, comprehensiveness, speed and resource commitment may possibly impact strategic decision-making. To eliminate this possibility, all managers from different cultural dimensions are randomly assigned to each of the two scenarios in the experiment

(guilt and pride). Because the experimental design can randomize these controlled variables and eliminate the influence of these control variables, the control variables will not be considered in the analysis.

The interaction effect of two emotions and two countries as independent variables on three dependent variables- risk, comprehensiveness and speed are analyzed mainly by a two-factor general linear model (GLM).

To test H5a, guilt X country ANOVA is conducted on a risk scale. From this 2 (guilt: Low versus High) \times 2 (country: US versus China) ANOVA analysis, guilt plays a significant effect with $F = 7.62$, $p < 0.01$, which shows managers with a high sense of guilt tend to take lower risks ($M = 2.57$) than do managers with a low sense of guilt ($M = 2.92$). The significance of a cultural effect is presented with $F = 4.36$, $p < .04$, indicating that managers from China from a highly collectivistic culture tended to take higher risks ($M = 2.91$) than did American managers from a high individualistic culture ($M = 2.62$). In addition, the results show a significant two-way interaction on risk with $F = 3.12$, $p < .08$. Thus, H5a supports the theory that these two main effects work together to produce a significant national culture \times guilt interaction effect, which indicates that managers from a high collectivistic culture, like China, take lower risks at higher levels of guilt while managers from a high individualistic culture, like the U.S. take same risks at low and high levels of guilt.

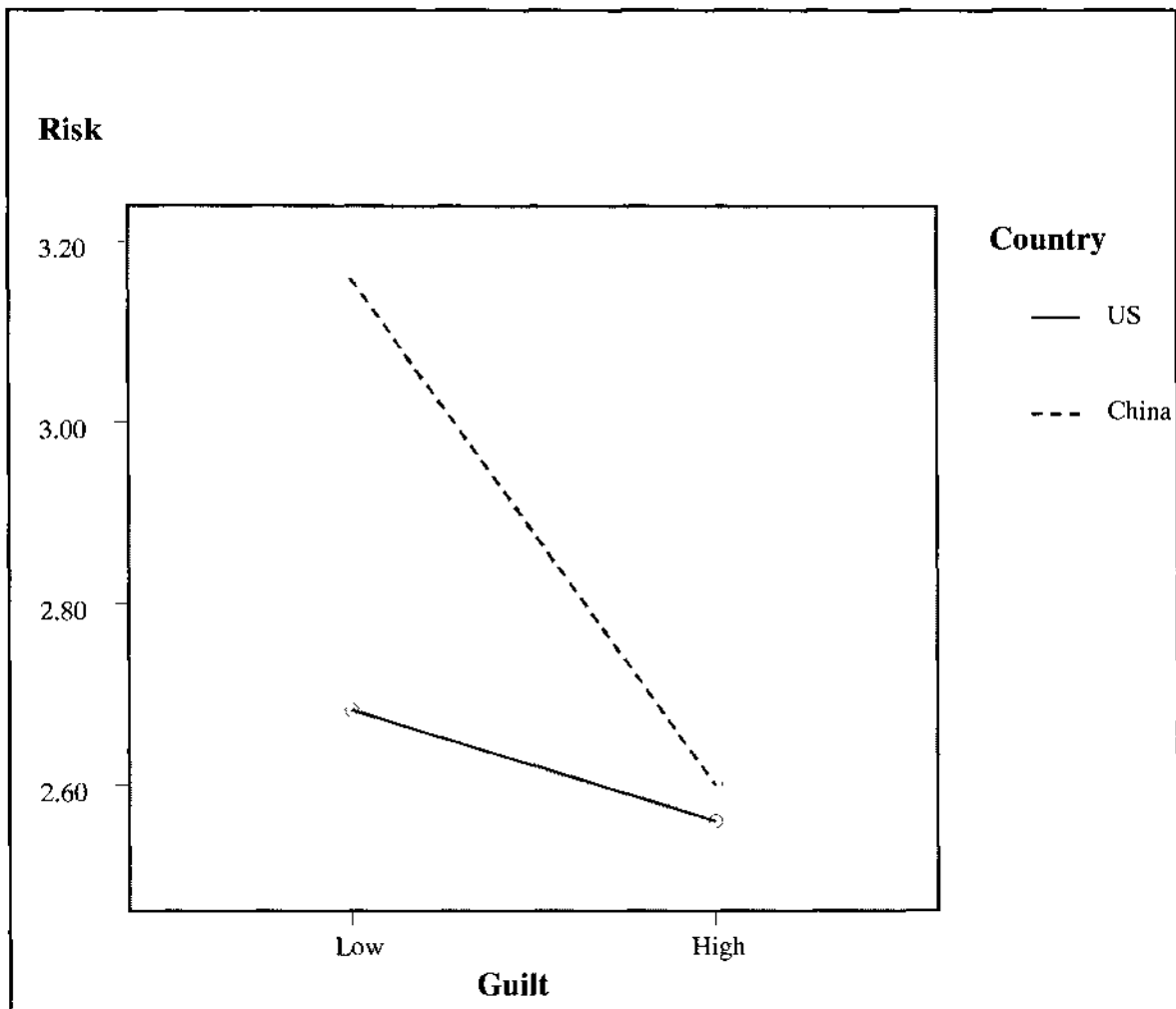
The results of the ANOVA analysis are shown on Table 4-37. The illustration of the interaction effect of guilt and culture is shown on Figure 4-9.

Table 4-37. Interaction effect of guilt and country culture on risk

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	9.68(a)	3	3.22	5.19	0.00
Intercept	1234.52	1	1234.52	1987.16	0.00
Guilt	4.73	1	4.73	7.62	0.01
Country	2.71	1	2.71	4.36	0.04
Guilt * Country	1.94	1	1.94	3.12	0.08
Error	100.02	161	0.62		
Total	1358.88	165			
Corrected Total	109.701	164			

a R Squared = .09 (Adjusted R Squared = .07)

Figure 4-9. Interaction effect of guilt and country culture on risk



To test H5b, the pride X country ANOVA was conducted on a risk scale. From this 2 (pride: Low versus High) \times 2 (country: US versus China) ANOVA analysis, pride shows a significant effect with $F = 29.38$, $p < 0.00$, which shows managers with a high sense of pride tend to take higher risk ($M = 3.78$) than do managers with a low sense of guilt ($M = 3.05$). National culture showed a major effect and appeared with $F = 3.12$, $p < .08$, indicating that American managers from a high individualistic culture tended to take higher risks ($M = 3.49$) than did Chinese managers from a high collectivistic culture ($M = 3.27$). At the same time, there is a significant two-way interaction on risk with $F = 2.23$, $p < .05$. Thus, H5b supports the theory that these two main effects work together to produce a significant national culture \times pride interaction, which indicates that managers from a high individualistic culture like the U.S. take higher risks at higher levels of pride while

managers from a high collectivistic culture like Chins take same risks at low and high levels of pride.

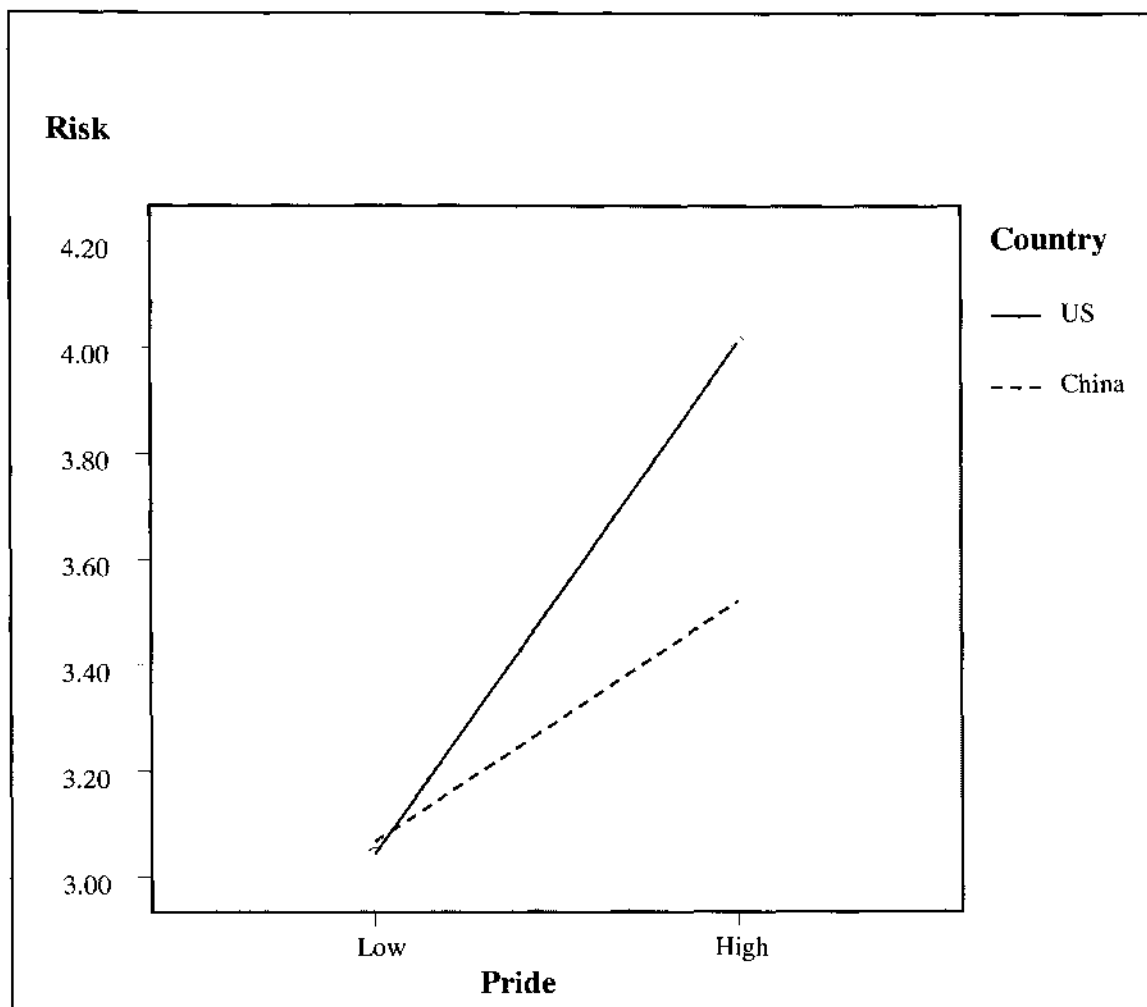
The results of the ANOVA analysis are shown on Table 4-38. The illustration of the interaction effect of guilt and pride is shown on Figure 4-10.

Table 4-38. Interaction effect of pride and country culture on risk

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	21.94(a)	3	7.31	12.42	0.00
Intercept	1591.07	1	1591.07	2701.46	0.00
Pride	17.30	1	17.30	29.38	0.00
Country	1.83	1	1.83	3.12	0.08
Pride * Country	2.23	1	2.23	3.79	0.05
Error	78.92	134	0.58		
Total	1688.00	138			
Corrected Total	100.87	137			

a R Squared = .218 (Adjusted R Squared = .200)

Figure 4-10. Interaction effect of pride and country culture on risk



To test H6a, the guilt X culture ANOVA was conducted on comprehensiveness. From this 2 (guilt: Low versus High) \times 2 (country: US versus China) ANOVA analysis, guilt has a significant effect with $F=10.15$, $p<0.00$, which shows that managers with a high sense of guilt tend to take higher comprehensiveness ($M =6.03$) than do managers with a low sense of guilt ($M =5.50$). National culture had a significant effect and appeared with $F = 6.74$, $p< 0.01$, indicating that American managers from a high individualistic culture tended to take lower comprehensiveness ($M =5.56$) than did Chinese managers from a high collectivistic culture ($M =6.00$). In addition, there is a significant two-way interaction on risk with $F =3.42$, $p< 0.07$. Thus, H6a supports the theory that these two main effects work together to produce a significant national culture \times guilt interaction, which indicates that managers

from a high collectivistic culture like China make a more comprehensive decision at higher levels of guilt while managers from a high individualistic culture like U.S. make the same comprehensive decision at low and high levels of guilt.

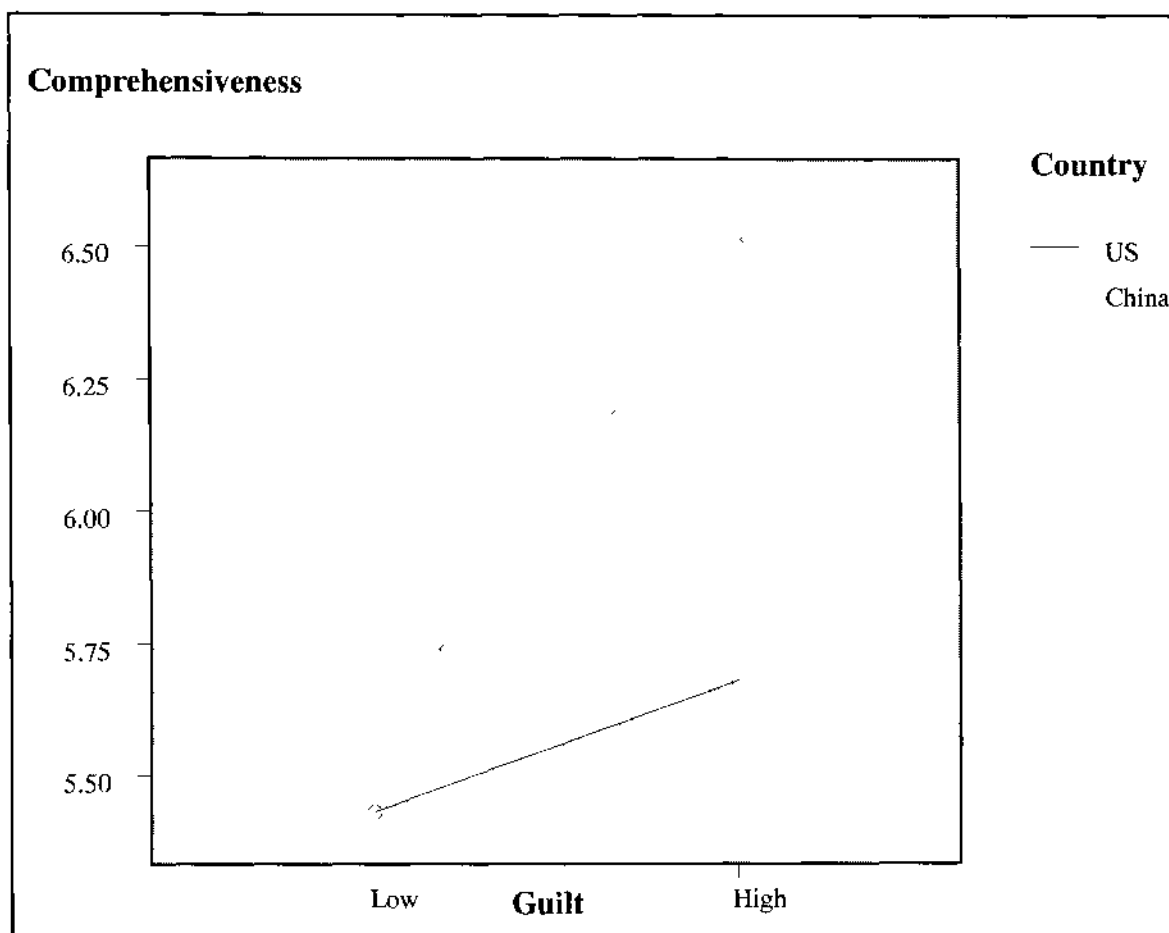
The results of the ANOVA analysis are shown on Table 4-39. The illustration of the interaction effect of guilt and culture is presented on Figure 4-11.

Table 4-39. Interaction effect of guilt and country culture on comprehensiveness

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	25.70(a)	3	8.56	6.08	0.00
Intercept	5485.94	1	5485.94	3898.43	0.00
Guilt	14.28	1	14.28	10.15	0.00
Country	9.49	1	9.49	6.74	0.01
Guilt * Country	4.82	1	4.82	3.42	0.07
Error	226.56	161	1.40		
Total	5739.25	165			
Corrected Total	252.26	164			

a R Squared = .102 (Adjusted R Squared = .085)

Figure 4-11. Interaction effect of guilt and country culture on comprehensiveness



To test H6b, the pride X culture ANOVA was conducted on comprehensiveness. From this 2 (pride: Low versus High) \times 2 (country: US versus China) ANOVA analysis, pride does not have a significant effect with $F = 2.24, p < .13$. The national culture does not have a significant effect with $F = 0.24, p < .61$. These two main effects work together but do not produce a significant culture \times guilt interaction with $F = 0.57, p < 0.44$. Therefore, H6b does not support the theory by empirical results. The results of the ANOVA analysis are shown on Table 4-40.

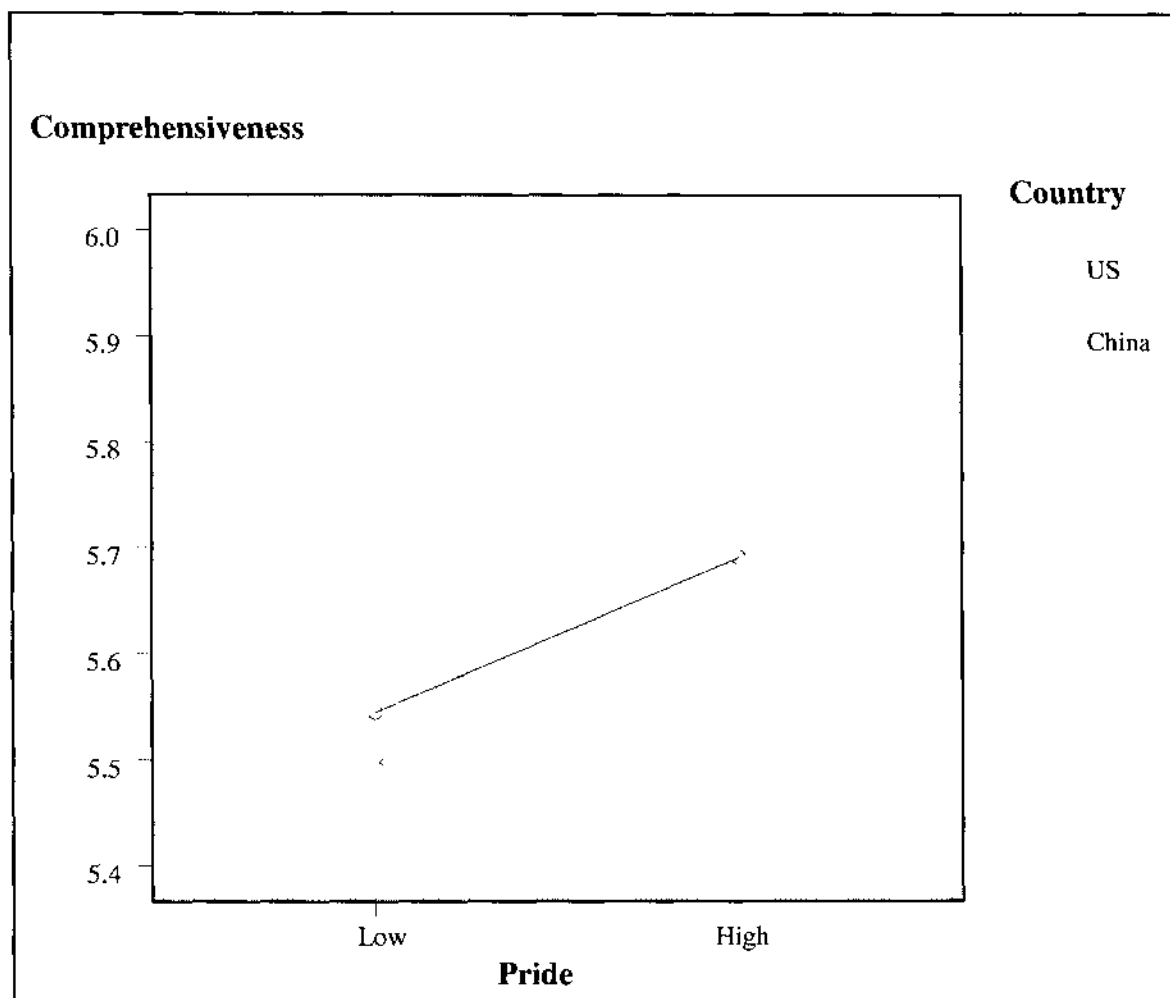
Table 4-40. Interaction effect of pride and country culture on comprehensiveness

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	3.90(a)	3	1.30	0.96	0.41
Intercept	4394.37	1	4394.37	3250.82	0.00
Pride	3.02	1	3.02	2.24	0.13
Country	0.33	1	0.33	0.24	0.61
Pride * Country	0.78	1	0.78	0.57	0.44
Error	181.13	134	1.35		
Total	4596.56	138			
Corrected Total	185.04	137			

a R Squared = .021 (Adjusted R Squared = -.001)

The illustration of the interaction effect of guilt and country on comprehensiveness is presented on Figure 4-12.

Figure 4-12. Interaction effect of pride and country culture on comprehensiveness



It is shown that for managers from two different cultures, higher levels of managerial pride lead to higher levels of comprehensiveness. This result is contradicted to H2b which predicts higher levels of pride should lead to low levels of comprehensiveness. Pride and national culture do not have a significant effect on comprehensiveness. Even the interaction effect of pride and culture does not yield at least of 0.1 which is the minimum acceptable significant level.

To test H7a, the guilt X country ANOVA was conducted on the speed in which a decision was made. From this 2 (guilt: Low versus High) \times 2 (country: US versus China) ANOVA analysis, the sense of guilt has a significant effect with $F = 46.11$, $p < .00$, which shows that managers with a high sense of guilt tend to make slower decisions ($M = 2.01$)

than do managers with a low sense of guilt ($M = 3.46$). Culture has a significant effect with $F = 16.573$, $p < .00$, indicating that American managers from an individualistic culture tend to make quicker decisions ($M = 3.13$) than do Chinese managers from a collectivistic culture ($M = 2.31$). In the same time, it is evident that there is a significant two-way interaction on risk with $F = 8.92$, $p < .00$. Thus, H7a supports the theory that these two main effects work together to produce a significant national culture \times guilt interaction, which indicates that managers from a high collectivistic culture like China make slower decisions at higher levels of guilt than do managers from a high individualistic culture like the U.S. who make decisions with the same amount of speed at low and high levels of guilt.

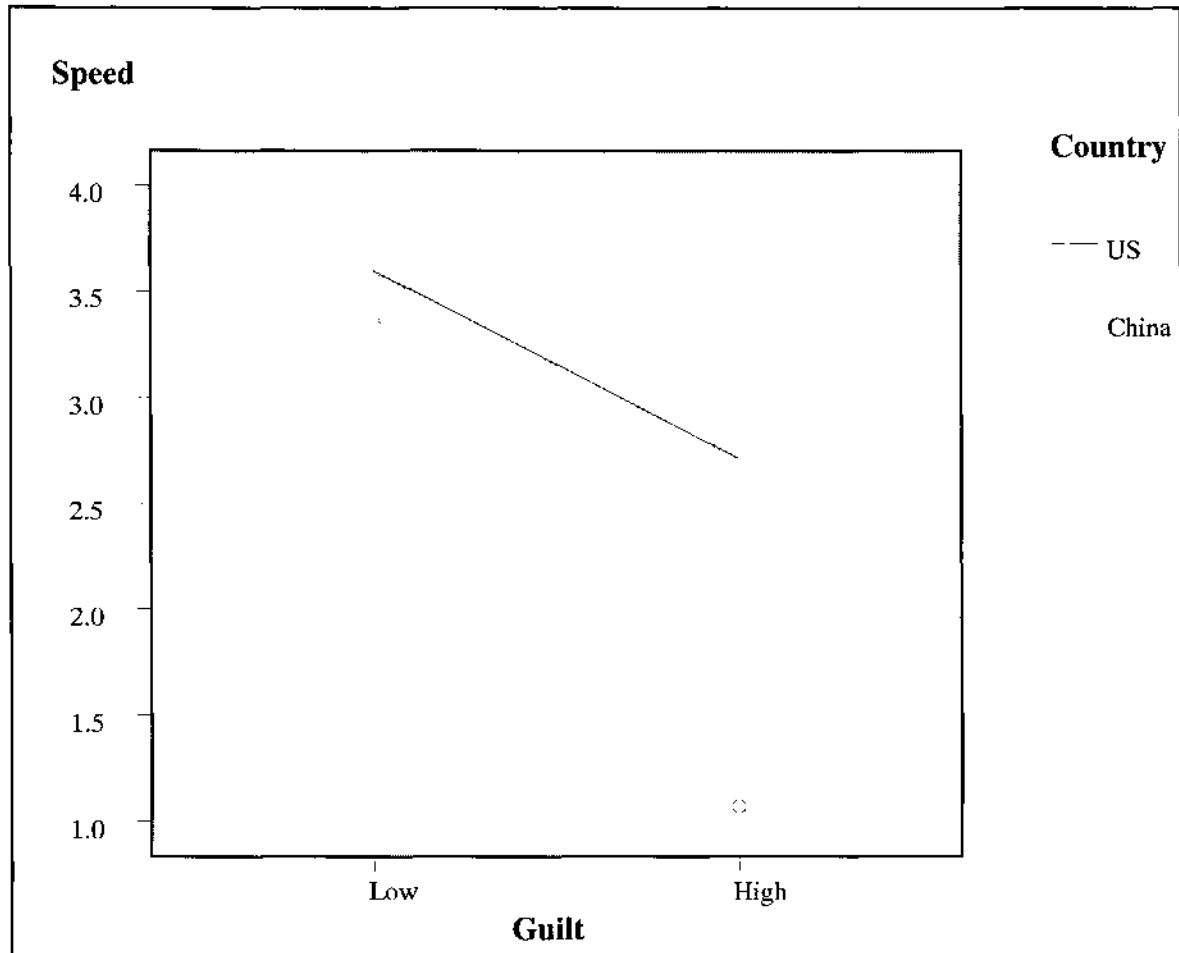
The results of the ANOVA analysis are shown on Table 4-42. The illustration of the interaction effect of guilt and national culture is presented on Figure 4-13.

Table 4-42. ANOVA Result for interaction effect of guilt and country culture on speed

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	143.01(a)	3	47.67	21.60	0.00
Intercept	1173.59	1	1173.59	531.80	0.00
Guilt	101.75	1	101.75	46.10	0.00
Country	36.57	1	36.57	16.57	0.00
Guilt * Country	19.67	1	19.67	8.91	0.00
Error	355.29	161	2.20		
Total	1742.00	165			
Corrected Total	498.30	164			

a R Squared = .287 (Adjusted R Squared = .274)

Figure 4-13. Interaction effect of guilt and country culture on speed



To test H7b, the pride X country culture ANOVA analysis is conducted on the amount of speed managers use to make a decision. From this 2 (pride: Low versus High) × 2 (country: US versus China) ANOVA analysis, pride has a significant effect with $F = 27.92$, $p < 0.00$, which shows that managers with a high sense of pride tend to make quicker decisions ($M = 4.36$) than do managers with a low sense of pride ($M = 3.30$). Culture emerged as a significant factor also, $F = 4.79$, $p < 0.04$, indicating that American managers from a high individualistic culture tend to make quicker decisions ($M = 3.98$) than do Chinese managers from a high collectivistic culture ($M = 3.58$). There is a significant two-way interaction on the risk scale with $F = 5.89$, $p < 0.02$. Therefore, H7b supports the theory that these two main effects work together to produce a significant national culture × pride interaction, which indicates that managers from a high individualistic culture like the

U.S. make quicker decisions at higher levels of pride while managers from a high collectivistic culture like China make decisions with the same amount of speed at low and high levels of pride.

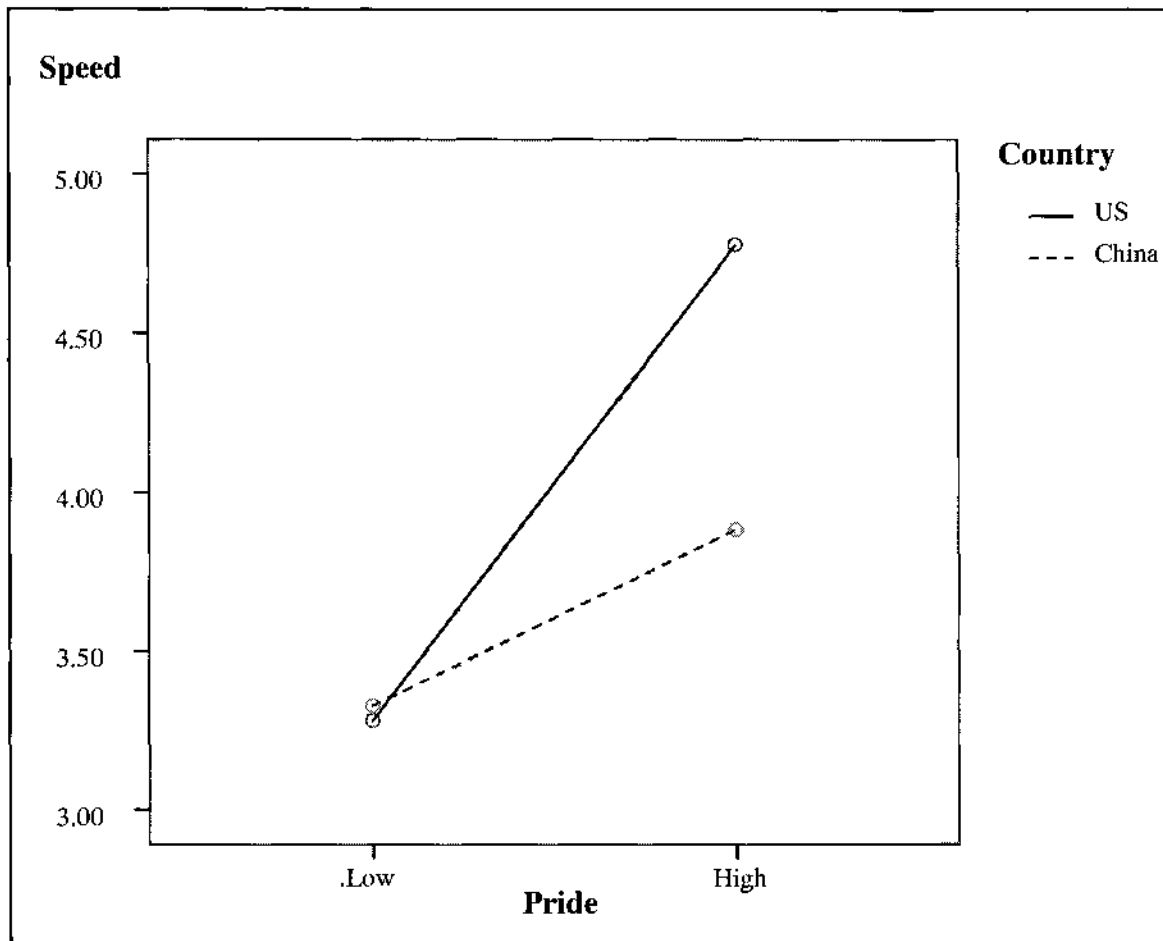
The results of the ANOVA analysis are shown on Table 4-43. The illustration of the interaction effect of pride and culture is presented on Figure 4-14.

Table 4-43. Interaction effect of pride and country culture on speed

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	51.06(a)	3	17.02	13.19	0.00
Intercept	1994.53	1	1994.53	1546.63	0.00
Pride	36.01	1	36.01	27.92	0.00
Country	6.17	1	6.17	4.78	0.03
Pride * Country	7.60	1	7.59	5.89	0.02
Error	172.81	134	1.29		
Total	2209.75	138			
Corrected Total	223.86	137			

a R Squared = .228 (Adjusted R Squared = .211)

Figure 4-14. Interaction effect of pride and country culture on speed



In sum, except for H6b, all of the hypotheses are supported by empirical results. Table 4-44 is the summaries of the empirical results and indicates support for five hypotheses from H5a to H7b.

Table 4-44. Summaries of findings on interaction of emotion and country culture

Hypotheses	Independent Variables	Independent Variables	Dependent variables	Significant level	Hypotheses content
H5a	Guilt	Country Culture	Risk	P<0.08 Marginal supported	<i>Managers from high collectivistic culture will take lower risk at higher levels of guilt while managers from high individualistic culture will take same risk at low and high levels of guilt.</i>
H6a	Guilt	Country Culture	Comprehensiveness	P<0.07 Marginal supported	<i>Managers from high collectivistic culture will make more comprehensive decision at higher levels of guilt while managers from high individualistic culture will make same comprehensive decision at low and high levels of guilt.</i>
H7a	Guilt	Country Culture	Speed	P<0.00 Supported	<i>Managers from high collectivistic culture will make slower decision at higher levels of guilt while managers from high individualistic culture will make decision with same speed at low and high levels of guilt.</i>
H5b	Pride	Country Culture	Risk	P<0.05 Supported	<i>Managers from high individualistic culture will take higher risk at higher levels of pride while managers from high collectivistic culture will take same risk at low and high levels of pride.</i>
H6b	Pride	Country Culture	Comprehensiveness	P<0.44 Not Supported	
H7b	Pride	Country Culture	Speed	P<0.02 Supported	<i>Managers from high individualistic culture will make quicker at higher levels of pride while managers from high collectivistic culture will make decision with same speed at low and high levels of pride.</i>

4.2 DISCUSSIONS AND LIMITATIONS

Two research questions were investigated in this dissertation. First, how do guilt and pride influence the four different dimensions of managerial strategic decision-making? Second, how does culture play a moderating function between these two emotions and the four different dimensions of managerial strategic decision-making?

The data analyses and results provide the answers to these two research questions in general. The results give some insights about the role of emotions and national culture as determinants of risk, comprehensiveness, resource commitment and speed in managerial strategic decision-making.

The findings from the empirical test show that higher levels of guilt lead to higher levels of comprehensiveness and resource commitment but also lead to lower levels of risk and speed in managerial strategic decision-making, while higher levels of pride lead to higher levels of risk, and speed but lead to lower levels of resource commitment. Except for H2b, all of the hypotheses from H1a to H4b are supported.

It is interesting to observe that hypothesis 2b was not supported. This hypothesis predicts higher levels of pride should lead to lower levels of decision comprehensiveness. However, the empirical results indicate that higher levels of pride actually lead to higher levels of decision comprehensiveness instead of lower levels of decision comprehensiveness. The explanation is that people behave differently when they face different decisions. For the ordinary economical decision which has lower stakes, people with high sense of pride take quicker action and pay less attention to the comprehensiveness of the decision. When people face important or strategic decisions that are at high stakes, they behave differently from the ordinary economical decision. When managers face an important managerial strategic decision that has high stakes, they approach the decision seriously, carefully and thoughtfully even when they have higher levels of pride. Managers are taught to be rational and think of all the possible options before making important strategic decisions. This is the reason why managers with higher levels of pride lead to higher levels of decision comprehensiveness instead of leading to lower levels of decision comprehensiveness.

In addition, the empirical results support the hypotheses about the interaction effects of the emotions and culture on three different dimensions of strategic decision-making.

Managers from a high collectivistic culture are less risky, more comprehensiveness and approach strategic decisions at a slower rate at high levels of guilt, while managers from a high individualistic culture take an equal amount of risk, the same amount of comprehensiveness and approach the strategic decisions with the same amount of speed either at low or high levels of guilt. However, managers from a high individualistic culture make more risky decisions and approach the strategic decision more quickly at high levels of pride while managers from a high collectivistic culture make similar risky decisions at the same amount of speed at either low or high levels of pride. Only hypothesis 6b does not support in this dissertation. This hypothesis predicts managers from a high collectivistic culture seek more comprehensive decisions than do manager from a high individualistic culture experiencing the same level of pride.

One significant finding of the study is that managers and executives are influenced by emotions when engaging in strategic decisions. These two emotions: guilt and pride can impact the risk, comprehensiveness, speed and resource commitment of decision-making. Though managers or executives are educated to make decisions without the influence from emotions, most of them admit that emotions play an unconscious role in their decision-making process especially in the case that some strategic decisions can arouse certain emotions. It is hard for managers or executives to be objective in making strategic decisions. Therefore, it is important for managers or executives to realize the affects from emotions and combine a rational model with emotional feelings in their decision-making process.

The other important finding of this dissertation is that culture interacts with emotions in the strategic decision-making process. The results show individualism oriented managers behave differently from managers from a collectivistic culture when making decisions based on risk, comprehensiveness and speed. This finding suggests that a top management team would agree with high risky decisions under the influence of pride if most of its members were from high individualistic cultures. For example, according to the findings from this dissertation, it is recommended that a mixture of members with different cultural dimensions of individualism and collectivism will help to reduce the influence of emotions.

These findings are supported by the previous research. The results support the

influence of emotions in economic decision-making behavior (Sanfey et al., 2003). The results from this simulated strategic decision such as international market entrance show the similar influential role that emotions play in CEOs' investment decision-making (Rayna & Neal, 2007; Ulrike & Geoffrey, 2005). This dissertation is the extension of the previous studies to focus on two specific emotions and shows similar results (Delgado-García & De la Fuentesabat, 2009; Nair et al., 2009). Also the cultural influence on the relationship between emotions and strategic decision making is enhanced the results from previous papers which studied the relationship between culture and strategic decision-making (Carr & Tomkins, 1998a; Papadakis et al., 1998; Tse et al., 1988).

In this dissertation, causality of results is solved by experimental design. It is possible to argue that the results of managerial strategic decision-making may provoke different emotional experiences in managers or executives as found in previous studies. For example, Weiss and Cropanzano (1996) indicate that the different work conditions and events at work can induce different positive and negative affective states in their affective events theory. In this dissertation, emotions were evoked first, and then a decision was made under the influence of different emotions. This experimental design eliminates the problem of reverse causality or reciprocal causality.

However, the findings have to be interpreted with caution because of some limitations in this dissertation. In particular, experimental design problem, data source or randomization problem, methodology and measurements have potential effects on the generalizations of the findings in this dissertation. A key limitation of the study is the online survey design. The survey about internationalization decision questions is a forced-choice simulation, which is not a realistic situation just to simulate real-life situations. The forced-choice response format has some potential problems in which individuals have not much time to consider the possible trade-offs about different options.

The second limitation is to use only one type of decision to simulate the managerial strategic decision-making process, which may present potential generalization problems. Moreover, vignettes highlighted one factor –one emotion, such as anger, is confronted by guilt when multiple factors are involved and are considered within the context of an internationalization decision. In this regard, the premise of this study may have been oversimplified since only one factor of emotions was considered.

The third limitation is the randomization of the sample. The sample of managers as respondents only focuses on two countries: the U.S. and China. In addition, the assumption of the randomization of other controlled variables in the experimental design process may pose a problem to the generalization of the conclusions. A multinational sample from different levels of management will be a good solution. In fact, several limitations of the study warrant mention. Some controlled variables such as firm size, educational level, expertise and industry may have influence on the results if they are not really randomized. To assure the more conclusive evidence, future study can focus on a larger sample and draw data from more diverse contexts.

The fourth limitation is the following decision in the survey is related to the first decision in the scenario. Although it shows that the mediating function of the emotion is not significant, it is argued that the dimensions of the second decision are under the influence of both the emotion and the result of the first decision. To reduce the influence of the previous decision, the future research should use an unrelated scenario to arouse the emotion to reduce the effects of the first decision on the following decision. In this way, the influence of the dimensions of the following decision can be contributed totally to the emotions.

The fifth limitation of this study is to adopt collectivism and individualism as one dimension of culture to moderate the effect of emotions on the strategic decision-making process. There are other four different dimensions of culture, such as long-term dimension which may play an important role in this moderating function. The other dimensions need to be investigated in the future research to consider all of the cultural influences on the relationship between emotions and strategic decision-making process for future research.

The sixth limitation is associated with the self-report method used in this dissertation. The self-report method is a very convenient method when it is compared to other behavioral or physiological measurement methods in assessing the effects of an emotion induction. The self-report method may be disadvantageous in several aspects. First, the self-report method may not produce veridical reports of experience, for example, because the respondent may be unaware or unable to report an emotional experience, or they may give false responses. Moreover, completion of the self-report survey of emotional experiences can bias later behavior and cognition (Berkowitz, Jaffee, Jo, & Troccoli, 2000).

Self-report measurements may not truly record the emotions of interest because of different personal bias, values, and misperceptions. The completion of an emotion survey immediately after an emotion induction (and prior to collection of cognitive or behavioral measures of interest) might make respondents aware of the hypotheses and/or cause heightened awareness of their feelings, which might alter their subsequent reactions. For example, Berkowitz et al. (2000) argued that the simple completion of an emotion survey immediately following a negative affect induction can reduce hostile reactions, as the individuals become more aware of their negative affect and attempt to prevent it from biasing later cognition and behavior. In addition, respondents may not respond honestly to questions, because of a need to respond in a socially desirable way or because they want to respond in a manner consistent with what they expect the experimenter might want. Disguising the fact that a particular measure is the critical dependent measure can prevent these problems. One way to disguise the measure is to collect it in a setting that seems completely removed from the experiment. This can be accomplished by telling respondents that they are participating in multiple studies; in this case, the dependent variable can be collected in a “different” study from the one in which the independent variable was manipulated. Another way of disguising the measurement of the dependent variable is to use measures over which respondents have relatively less cognitive control measures of recognition, reaction time, and accuracy of recall can also be used as relatively less controllable measures. In future fMRI can be a good complementary measurement to use with a self-report method. This way, the researcher can reduce the measure error with only one measurement.

The seventh limitation is the methodology problem. While excellent field studies on strategic decisions have been done in the past, asking managers to recall the emotional conditions they went through while making the decision would likely produce biased reports. Experimental studies have their own advantages and disadvantages. One big advantage is experimental field design can help to gain the first handful of data instead of archival data. This will help to design a more robust study. The accumulated evidence from experimental studies also can help persuade executives to permit scholars to do more in-depth studies in their organizations on sensitive topics in the future.

The eighth limitation is the constructs used in this dissertation to measure dependent

variables. However, the measurements used in this study appear to be robust and with good reliabilities and validities. A further test of external validity is necessary which should test these measurements on data sets from the context of different countries. In addition, the use of other sets of additional measurement and further examination of these measurements are important for future study. For example, resource is one of the important factors, which managers need to face in their strategic decision-making. The measurement of resource commitment is not a commonly used construct in the mainstream of strategic management research; still it may be a good try in this field.

The last limitation of this study is the assumption of one emotion. It is common that mixed emotions occur more easily most of the time. It is important to distinguish different emotions in one time and know how different emotions interact with each other to impact strategic decision-making. In this dissertation, only two emotions are investigated separately. This is an oversimplified ideal situation. The other different kind of individual emotion and mixed emotions will be an important area for the more realistic situation for future research.

Though there are many limitations in this study, it still provides some interesting findings for the relationship among emotions, culture and managerial strategic decision-making. These above-mentioned limitations provide unique opportunities for the future study.

CHAPTER 5

CONCLUSIONS AND DISCUSSIONS

This chapter focuses on the implications of findings from this dissertation to researchers and practitioners, and puts forward some suggestions for future research.

This dissertation examines the impact that emotions and culture have on the managerial strategic decision-making processes. The findings show that guilt and pride play important roles in strategic decision-making. Guilt is positively associated with comprehensiveness and resource commitment, but is negatively associated with risk and speed during the strategic decision-making process. On the other hand, pride is positively associated with risk, comprehensiveness and speed, while negatively associated with resource commitment during the strategic decision-making process.

The results support the notion that national culture interacts with emotions on strategic decision-making. Managers from a high collectivistic culture make strategic decisions at lower risk, more comprehensiveness and within a slower timeframe at high levels of guilt, whereas managers from a high individualistic culture make the same strategic decisions with more risk, the same comprehensive and at the same amount of speed either at low or high levels of guilt. However, managers from a high individualistic culture make strategic decisions with higher risks and in a quicker amount of time at high levels of pride, while managers from a high collectivistic culture make the same strategic decisions with similar risks and at the same amount of speed at either low or high levels of pride.

This study expands the scope of the strategic management study to include emotions as one of the factors which impact the strategic decision-making process. The first question investigated in this dissertation focuses on the effects of emotion on the managerial strategic decision-making process. My exploration provides some new insights for answering some questions related to the strategic decision-making process for the individual manager or executive. Are managers or executives rational in their strategic decision making? How can personal experiences or feelings play a role in the decision-making process? Is it worthwhile to pay disproportionately high salaries for high-ranking executives? The results from this study show that managers or executives are under the influence of emotions during their strategic decision-making process. When making decisions, executives are not only rational but are also emotional. Because

emotions are closely associated with personal experiences, different people have different emotional reactions derived from their different experiences. How to combine rationality and emotions together to make a better decision for firms is a difficult task. This reason partly explains why companies pay high salaries to executives because their personal experiences in their management career are unique and different from others.

By integrating the factors of culture and motions in its theoretical framework, this study also helps to understand a more realistic picture of the strategic decision-making process. The exploration of how different cultures moderate the relationship between emotions and the strategic decision-making process also helps to get a deeper understanding about the role of culture in the managers' or executives strategic decision-making process. The results from this study show how managers or executives with different cultural backgrounds behave differently under the emotional influence in the strategic decision-making process. The existing studies only focus on the direct impact of cultures on decision-making. My research extends the intellectual scope of the moderating function of culture between emotions and decision-making as well as the direct impact of culture on decision-making. In this regard, it is a complementary study to the previous studies.

Though this study only focuses on the individual level of manager or executive decision-making, it provides a good start for future study on the group and organizational levels.

Additionally, this study can help companies and decision makers understand emotions, culture and their interaction in the strategic decision-making process. Companies may need to be aware of the consequences of emotions upon their managers and develop a proper systems or institution within an organization to prevent the negative effects of emotions in the workplace. For example, a diversified top management team from different cultural backgrounds may help to make a more balanced decision in an emotional situation. Decision makers can also learn from this study to understand themselves and other colleagues who are experiencing different emotions and come from different cultural backgrounds, in order to achieve a more effective cooperative relationship and thus make better decisions.

In the next section of this chapter, the implications for academia and practitioners from

the findings of this study are discussed in detail.

5.1 ACADEMIC CONTRIBUTIONS

The effects of emotions on the decision-making process have been the topic of interest to disciplines such as psychology, economics, finance, and marketing (Damasio, 1994; Rayna & Neal, 2007; Seo & Barrett, 2007; Szymanski & Henard, 2001; Ulrike & Geoffrey, 2005). However, this topic is still an unexplored field in management. The results from this dissertation support the conclusions that not only emotions but also the interaction of emotions and cultural background should be considered within the managers' or executives' decision-making process.

This study extends previous research in several different directions. This dissertation initiates the study on the effects of emotions and social culture on managerial strategic decision-making. It has been argued that people make decision under the combined effects of rational, emotional and intuitive perspectives (Anders, 2008; Frank, 1988; Parikh, 1994; Rajagopalan et al., 1997; Simon, 1987). Previous studies mainly focused on the rational perspective (Goll & Rasheed, 1997a; Priem, Rasheed, & Kotulic, 1995; Said & John, 2007; Schoemaker, 1993). Some scholars within management research have recently started to pay attention to emotional perspective (Rayna & Neal, 2007; Seo & Barrett, 2007). Built on an earlier research project on emotions (Nair et al., 2009), this dissertation adopts the experimental design as the primary method to test the effect of emotions and culture on managerial strategic decision-making. This method helps to overcome the causality problem in management research. Finally, this study goes beyond previous studies that focus either on emotions or culture to explain the impact that either one or the other has upon managerial strategic decision-making and instead branches out to state that the combination of emotions and culture impacts the managerial strategic decision-making process.

The main implication of this dissertation is its contributions to academic studies on the impact of emotions and the interaction between emotions and cultures within the strategic decision-making process. The results show that different emotions and cultural backgrounds should be considered in executives' strategic choices process. Though these results were drawn from a simulated decision making process, the results should be extended to other settings with cautions. For example, it can be examined if such emotions

affect real decisions of, for example, mergers and acquisitions or strategic changes. This dissertation also extends upper echelons research (Chris, 2006; Hambrick & Mason, 1984) by suggesting the possibility of adding emotional constructs to the traditional variables, such as demographic and psychological characteristics of executives. To integrate new constructs such as emotions into the strategic decision-making process can help to draw a complete picture about all relevant factors and can impact managers' or executives' strategic decision making process.

Another implication of this study is that scholars should examine how globalization generates situations that could be emotionally stimulating and/or constraining to managers. While this dissertation focuses on two specific emotions: guilt and pride, these two emotions commonly exist in the work place of managers or executives. This dissertation extends the previous studies, which only focus on the effects of general positive and negative emotions instead of on a specific emotion (Delgado-García & De la Fuentesabat, 2009; Nair et al., 2009). The focus on the two more specific emotions can help to better understand the unique influences that individual emotions have upon the strategic decision-making process.

The third implication is the effects of culture on strategic decision-making. Only one dimension of the culture is explored in this dissertation. The hypotheses and findings about individualism and collectivism are well testified in managers' or executives' internationalization decision-making. The influences from cultures are evident in their strategic decision process. It is interesting that the risk-taking behavior is different for managers or executives under the influence of different emotions. In this vein, future studies should examine how the other different cultural dimensions, such as short-term orientation, have an impact on emotions and decision-making. At the same time future studies should also pay attention to whether different national cultures impact emotional responsiveness of managers when different national cultures change due to recent globalization.

Last but not least, the results drawn from the study show some significant interactions between emotion and culture on the strategic decision making process. Though only one specific strategic decision- internationalization decision- was examined, this simulation on one strategic decision is the very first step for providing some new insights on how these

two important factors—emotions and cultures—can influence the strategic decision-making process. In order to gain a deeper understanding of whether these effects of emotions and cultures on the decision-making process still hold true for other decision contexts, it is necessary to further test the effects of emotions and cultures on other different types of strategic decision-making processes, such as new product development, mergers and acquisitions or strategic investment.

In global economics, traditional cultures in developing countries are influenced by different cultures and are exposed to different values as well as by the increase usage of new communication technology. For example, managers or executives from China are influenced more by their interaction with western business practices than they are by traditional Chinese values. It is argued that some deep-rooted values are implanted in their early childhood development by family or social influences. It is shown that the process of globalization has an uneven influence on different cultural norms. Managers from an Eastern culture are under more of an influence of Western culture than vice versa. The different influence of culture on the decisions of managers or executive is still currently significant. It is expected that in a global world, with an increase of influence and interaction between different cultures and values, cultural differences tend to diminish in the future.

5.2 MANAGERIAL IMPLICATIONS

The findings from this dissertation help to explain whether managers or executives need to take some measures to exclude or control the emotions in their strategic decision-making, or just include emotions in their rational judgment while making strategic decisions. In addition, results indicate that managers or executives need to be aware that counterparts from different cultural backgrounds may respond differently to emotions.

The main implication of this dissertation is that managers or executives should note that pride and guilt play a very important role in managerial decisions, but that the relationship may vary among different cultures. The findings are very helpful for managers or executives because emotions are often seen at the workplace and there are plenty of opportunities that managers from different cultural backgrounds will work together in a global business context.

The other implication of this dissertation is that the understanding of emotions and culture on the processes of the strategic decision-making process will finally improve the outcomes of the decision. Managers or executives are more interested in the outcomes of their decisions and their impacts on their firms' performance. It is important for managers or executives to recognize that the strategic decision process is as critical as the outcomes of their decisions.

The third implication for managers or executive is to remember that different cultures do matter in managerial strategic decision-making. The findings from this dissertation can help managers or executives to predict the responses from their competitors and understand the behaviors from colleagues who are from different cultural backgrounds when they are involved with the joint decision-making process. Cultures do matter to the managers' or executives' different preferences on how much speed, comprehensiveness and risk managers undertake during the whole strategic decision-making process. Failure to understand these differences may cause misunderstanding, even conflict, in the decision process.

The fourth implication of this finding is highly relevant to decision processes such as the selection or promotion process in an organization. The findings suggest that affective traits should be considered in the selection or promotion of a manager or executive in a company. Though most organizations try to avoid emotions because emotions are treated as irrational and harmful to decisions, it is important to recognize their specific consequences in an organization. The results from this dissertation can help managers or executives to be aware of the impact that their emotions or cultural backgrounds have upon their decision-making, and therefore, to improve the effectiveness of their strategic decision-making process. Furthermore, to mix managers or executive with different affective characteristics or cultural backgrounds will lead to better decisions and make the strategic decision process more effective.

The last implication is that this dissertation compares the behavior of managers or executives from two of the most important economies in the world—the U.S. and China. The findings can help managers from these two countries and managers from other countries to have a better understanding of the decision process from their counterparts in different cultural backgrounds. It can further lead to a better cooperative relationship

between the Chinese branches and the U.S. branches among multinational companies, and help to promote business between companies in China, the U.S. and around the world.

5.3 DIRECTIONS FOR FUTURE RESEARCH

In chapter 4, several limitations of this dissertation are discussed. These limitations are described in a previous chapter and have opened a venue to a vast future research agenda. Future research can develop different strategic decision scenarios involving different emotions. In this dissertation, only two specific emotions are investigated with one internationalization strategic decision. For future study, other emotions or mixed emotions should receive more attention. An analysis of more specific emotions or mixed emotions on different types of the strategic decision will complement the current research.

One interesting direction for future study will be the focus on a different industry such as a computer or biotechnology industry with an unstable environment, and other industries with a stable industrial environment. In this dissertation, the industry as a controlled variable is randomized to reduce its effects. Since an industry environment plays an important role in the managers or executives' perception of risk, it would be interesting to see how managers behave differently to risk from their different industrial backgrounds. Firm size is another interesting variable, which is related to the resource commitment. Therefore, it is important for future research to probe these controlled variables in research design.

How the individual level decision-making process is different from the group level decision-making process is one of the important areas for future study. Future study focuses on the group level of top management decision-making process, which is not identical as an individual decision. Therefore, future analyses of the influence of the emotions of the whole TMT would benefit by considering how diversity and the levels of emotion within the TMT can influence the group processes and group performance. How do the emotional and cultural diversity within the top management team influence attitudes, group processes, and performance is also worth studying in future.

In this dissertation, the results show that managers' emotions and culture influence their strategic decisions. The important question that follows is how the different strategic choices in turn impact the outcomes of their decisions and on the firms' financial performances. In particular, addressing how different emotions are tied with risk and

resource commitments, which then lead to a firm's performance, is a worthy topic. Nevertheless, analyzing the influence of firm outcomes on managers or executives emotions should be an interesting angle for future research. So far, a few studies have examined the relationship of affective traits and performance. Several researchers have shown that top executives are influenced by general negative or positive emotions in their strategic decision-making process (Delgado-García & De la Fuentesabat, 2009; Kisfalvi & Pitcher, 2003; Rayna & Neal, 2007; Ulrike & Geoffrey, 2005). Though some of these studies explicitly examine whether these negative or positive affects impact firm performance (Delgado-García, De La Fuente-Sabaté, & Quevedo-Puente, 2010; Delgado-García & De la Fuentesabat, 2009), there is no research to explore whether a specific emotion has any impact on a firm's performance.

Also, some literature argues that the relationship between emotions or cultures on decision-making can be explained by the context or the working environment where individuals are located (George & Zhou, 2007). This is also an interesting topic for future research. Future research should also consider how managers or executives' personal characteristics moderate the relationship between managers or executives' emotions and their strategic decisions.

Further, it would be very interesting to observe the actual strategic decision-making process of managers or executives when they are under the real emotional influences of their daily working lives. To analyze the emotions of top management teams and the implications for their functioning is also a potential agenda.

In future studies, it is also necessary to examine how other cultural dimensions different from individualism influence emotions and the decision-making process. Furthermore, future studies should also investigate whether the impacts of different national cultures on emotional responsiveness of managers change as national cultures change due to globalization. .

In sum, the findings from this dissertation can help to open a new field for the future studies on the relationship among emotions, culture and managerial strategic decision-making.

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APPENDICES

Appendix 1. Guilt Version of Survey

This online survey is about the managerial strategic decision-making under international business context. Do you have experience in managerial strategic decision and in international business? If NO, please stop here. If YES, please continue.

A study on Managerial Decision-making

Instructions

Please carefully read through the following story and answer the questions. Read as slowly and thoroughly as it takes to both understand the content and feel the reaction of the main character in response to the events that happened in the story. Put yourself in place of the main character in the story. You will be asked questions at the end about your reactions to the events in the story.

Please note, the scenario below is based on true story:

You are a senior executive at a large well-known Fortune 500 company in the pharmaceutical industry. Your firm produces medicines that cure different types of diseases all over the world. You have more than 30 years' experience in making strategic level decisions for the company.

You were a key player in helping your company finish a business feasibility plan about entering Country A in Asia. Your research, analysis and expertise led you to recommend that a joint venture was the best mode to enter into this market. You played the crucial role in making the decision to enter this market. After the venture in Country A was started, you were assigned as CEO to operate it.

As CEO, when you became aware of the weak environmental protection laws, you decide to skip some environmental protection systems and technologies to save money and time. A little after a year of production in Country A the factory experienced an accidental leakage of toxic chemicals which polluted the local environment. This leakage could have been prevented if you had established your normal environmental protection measures taken at all other facilities in developed countries. This leakage caused thousands of local inhabitants of Country A to become sick and fouled the water supply for over 8 months. More than one hundred people died, many of them children, as a direct result of this environmental disaster.

To what extent do you think each of the following should take responsibility for the outcome that affected the people? (Circle the number of your answer)

	Not at all Responsible	Completely Responsible
Yourself alone	0 1 2 3 4 5 6 7 8 9 10	
Local factory as a whole	0 1 2 3 4 5 6 7 8 9 10	
Management at Company headquarters	0 1 2 3 4 5 6 7 8 9 10	
Circumstances beyond control)	0 1 2 3 4 5 6 7 8 9 10	

How desirable to you was the outcome? (Circle the number of your answer)

	Not at all	Very much
	0 1 2 3 4 5 6 7 8 9 10	

Please answer the following questions dealing with the scenario you just read. How intensely were you feeling each of the following emotions at the end of the story? It is ok to refer back to the story and think

about your answers if you desire. (Circle the number of your answer for each emotion, your response could vary from 1 till 7)

Emotion	<i>Not at all intensely</i>			<i>Moderately</i>			<i>Very intensely</i>	
Interested	1	2	3	4	5	6	7	
Alert	1	2	3	4	5	6	7	
Attentive	1	2	3	4	5	6	7	
Excited	1	2	3	4	5	6	7	
Enthusiastic	1	2	3	4	5	6	7	
Inspired	1	2	3	4	5	6	7	
Proud	1	2	3	4	5	6	7	
Confident	1	2	3	4	5	6	7	
Bold	1	2	3	4	5	6	7	
Daring	1	2	3	4	5	6	7	
Fearless	1	2	3	4	5	6	7	
Strong	1	2	3	4	5	6	7	
Determined	1	2	3	4	5	6	7	
Active	1	2	3	4	5	6	7	
Distressed	1	2	3	4	5	6	7	
Upset	1	2	3	4	5	6	7	
Guilty	1	2	3	4	5	6	7	
Blameworthy	1	2	3	4	5	6	7	
Anger at self	1	2	3	4	5	6	7	
Disgusted with self	1	2	3	4	5	6	7	
Dissatisfied with self	1	2	3	4	5	6	7	
Ashamed	1	2	3	4	5	6	7	
Hostile	1	2	3	4	5	6	7	
Irritable	1	2	3	4	5	6	7	
Nervous	1	2	3	4	5	6	7	
Jittery	1	2	3	4	5	6	7	
Scared	1	2	3	4	5	6	7	
Afraid	1	2	3	4	5	6	7	

Image now you are faced with the following decision:

Your competitor recently built and is now operating a factory in another country B in Asia. If your firm does not respond quickly and enter Country B, it is expected that investors will dump your company's stock, causing the stock price to fall. Moreover, your rival will have established a lead in market share in Country B that may be hard to wipe out.. You have to decide whether your firm should enter Country B and whether it should enter using a joint venture or wholly owned subsidiary.

Before making the above decision, please check which of the following information you would need:

Information about the general environment of Country B market, such as demographics, economics, legal, cultural attitudes etc. You need to **pay USD10,000 and wait 2 days** to get this information. Would you like to get this information? *Yes /No* _____

Would you like more information: Yes/No _____, *if No go to Question 2*

If, **yes:**

Information about the pharmaceutical industry in Country B, such as new domestic and multinational entrants, rivalries, buyers, suppliers, etc. You need to **pay USD20,000 and wait 4 days** to get this information. Would you like to get this information? *Yes /No* _____

Would you like more information: Yes/No _____, *if No go to Question 2*

If, **yes:**

Information and detailed trend analysis about regulations and attitudes about environment protection. You need to **pay USD50,000 and wait 7 days** to get this information. Do you like to get this information? *Yes /No* _____

Would you like more information: Yes/No _____, *if No go to Question 2*

If, **yes**, please write what additional information you need to make your decision. _____

Considering your reaction to the outcome in country A (scenario 1); please identify which choice fits your decision-making process about entering country B:

	Not at all intensely			Moderately			Very intensely		
Several options were considered	1	2	3	4	5	6	7		
Examined the pros and cons of every options	1	2	3	4	5	6	7		
Used multiple criteria for eliminating possible courses of action	1	2	3	4	5	6	7		
Compared different options and evaluated extensively before make decision	1	2	3	4	5	6	7		

Assume you have all information you need. Consider your reaction to outcome in Country A (Scenario 1), please identify, how fast you would prefer to make the final decision about entering country B (in Asia):

- 1) Act immediately
- 2) 1 week
- 3) 2 weeks
- 4) 1 month
- 5) 3 months
- 6) 6 months
- 7) Proceed slowly and make decision after making sure that all issues are evaluated

Please choose the answer that fits your action:

	Least likely				Mostly likely			
Will you consult with some other people (experts/other executives) before making final decision	1	2	3	4	5	6	7	

Please choose the answer that fits your feel about your decision about entering country B (in Asia):

	Quick		Moderate			Slow	
Your assessment about your speed of making this final decision	1	2	3	4	5	6	7

Please choose the answer that fits your action:

	Least likely					Mostly likely	
Will you consult with some other people (friends and family) before making final decision	1	2	3	4	5	6	7

What is your final choice about your company's decision to enter Country B (in Asia) market:

- 1) Stop the project (Least risky)
- 2) Halt the project temporarily and do evaluation again (between least and medium risky)
- 3) Execute the project without any change (medium risky)
- 4) Execute the project but use manufacturing system with higher capacity (between medium and most risky)
- 5) Execute the project but produce more kinds of medicine in Country B (most risky)

Assume you decide to enter Country B (in Asia) Market, what entry mode would you recommend:

- 1) Export (least risky)
- 2) Liccensing & franchising (between least and medium risky)
- 3) Strategic alliancc (medium risky)
- 4) Joint-Venture (between medium and most risky)
- 5) Wholly owned subsidiary (most risky)

Assume you decide to enter Country B (in Asia) Market with a wholly owned subsidiary, what is your preferred option:

- 1) Rent the land and invest portion of money to build small-scale operation first (least risky)
- 2) Rent the land and invest all money to begin full scale operation (between least and medium risky)
- 3) Purchase land and invest portion of money to build small-scale operation (medium risky)
- 4) Purchase land and invest all money to begin full-scale operation (between medium and most risky)
- 5) Purchase land and invest more money to build the most advance factory at once (most risky)

Before you got involved with the project, there was a plan to enter Country B using a special project team with about 30 people and invest \$100 million to build a factory that would take 12 months to complete. Considering your reaction to above-mentioned outcome in Country A, will you make any change to the original plan? Yes/No _____

If yes, please choose the capital, people and time required for investing in Country B (in Asia) market?

	Small				Large		
Money (Millions)	10	20	50	100 million (Original Plan)	150	300	500
Human resource (Number of people)	8	15	20	30 people (Original Plan)	40	60	90
Time needed (months)	3	5	8	12 months (Original Plan)	16	20	24

After you have made the final decision about entering country B (in Asia) market. Choose the number that is closest to how you feel. (Choose one)

	Unsatisfied		moderate			Satisfied	
Are you satisfied with the whole process of making the final decision	1	2	3	4	5	6	7
Do you feel comfortable with making this decision under this circumstance	1	2	3	4	5	6	7

Do you think you are an emotional person: (Choose one)

Not at all emotional	Moderately emotional				Very emotional		
1	2	3	4	5	6	7	

How do people who know you well think about you as an emotional person: (Choose one)

Not at all emotional	Moderately emotional				Very emotional		
1	2	3	4	5	6	7	

What do you think is your attitude towards risk taking: (Choose one)

Like low risk		Like moderate risk			Like high risk	
1	2	3	4	5	6	7

How do people who know you well think about your attitude to risk taking: (Choose one)

Like low risk		Like moderate risk			Like high risk	
1	2	3	4	5	6	7

Choose the number that is closest to how you feel. (Choose one)

	Strongly disagree							Strongly agree						
I'd rather depend on myself than others.	1	2	3	4	5	6	7	1	2	3	4	5	6	7
I rely on myself most of the time; I rarely rely on others.	1	2	3	4	5	6	7	1	2	3	4	5	6	7
I often do "my own thing."	1	2	3	4	5	6	7	1	2	3	4	5	6	7
My personal identity, independent of others, is very important to me.	1	2	3	4	5	6	7	1	2	3	4	5	6	7
It is important that I do my job better than others.	1	2	3	4	5	6	7	1	2	3	4	5	6	7
Winning is everything.	1	2	3	4	5	6	7	1	2	3	4	5	6	7
Competition is the law of nature.	1	2	3	4	5	6	7	1	2	3	4	5	6	7
When another person does better than I do, I get tense and aroused.	1	2	3	4	5	6	7	1	2	3	4	5	6	7
If a coworker gets a prize, I would feel proud.	1	2	3	4	5	6	7	1	2	3	4	5	6	7
The well-being of my coworkers is important to me.	1	2	3	4	5	6	7	1	2	3	4	5	6	7
To me, pleasure is spending time with others.	1	2	3	4	5	6	7	1	2	3	4	5	6	7
I feel good when I cooperate with others.	1	2	3	4	5	6	7	1	2	3	4	5	6	7
Parents and children must stay together as much as possible.	1	2	3	4	5	6	7	1	2	3	4	5	6	7
It is my duty to take care of my family, even when I have to sacrifice what I want.	1	2	3	4	5	6	7	1	2	3	4	5	6	7
Family members should stick together, no matter what sacrifices are required.	1	2	3	4	5	6	7	1	2	3	4	5	6	7
It is important to me that I respect the decisions made by my groups.	1	2	3	4	5	6	7	1	2	3	4	5	6	7

Please answer the following questions about yourself:

Please write down your age in years: _____

Have you lived all your life in this country? Yes ___ No ___

If No, how long did you live outside this country? (in years) _____

Please choose the closest description of your highest job responsibility:

() Front line worker or ordinary employee, () Managerial position in single department, () Director position, () Top management position (CEO, CFO, COO, CIO, etc.) for one subsidiary or branch, () Top management position (CEO, CFO, COO, CIO, Board members, etc.) in company headquarter, () Business owner, () others

Please describe the number of years that you have experience with international business:

What is your functional area? (Choose one)

() General Management () Marketing () Strategic Management () Finance () Accounting () Human Resource () Information Technology () Operation () Other

Gender: (Choose one)

() Male () Female

What is the size of organization that you work with? (Choose one)

() less than 100 () between 101 to 500 () between 501 to 2000 () between 2001 to 10000 () more than 10000

Which industry does your organization belong to? (Choose one)

() Agriculture () Raw materials () Manufacturing () Retail () Services () Other

Thank for your participation.

Appendix 2.Pride Version of Survey

This online survey is about the managerial strategic decision-making under international business context. Do you have experience in managerial strategic decision and in international business? If NO, please stop here. If YES, please continue.

A Study on Managerial Decision-making

Instructions

Please carefully read through the following story and answer the questions given. Read as slowly and thoroughly as it takes to both understand the content and feel the reaction of the main character in response to the events that happened in the story. Put yourself in place of the main character in the story. You will be asked questions at the end about your reactions to the events in the story.

Please note the scenario below is based on true story:

You are a senior executive at a large well-known Fortune 500 company in the pharmaceutical industry. Your firm produces medicines that cure different types of diseases all over the world. You have more than 30 years' experience in making strategic level decisions for the company.

You were a key player in helping your company finish a business feasibility plan about entering Country A in Asia. Your research, analysis and expertise led you to recommend that a joint venture was the best mode to enter into this market. You played the crucial role in making the decision to enter this market. After the venture in Country A was started, you were assigned as CEO to operate it.

A little after a year of starting production in Country A, because of your leadership, your factory developed capabilities to manufacture a special medicine that cures a deadly disease. This medical breakthrough would not have happened if not for your leadership. In eight months of its launch, this new drug helped cure thousands of local inhabitants of Country A of the deadly disease. More than one hundred people were saved, many of them children, as a direct result of this medical breakthrough.

To what extent do you think each of the following should take responsibility for the outcome that affected the people? (Circle the number of your answer)

	Not at all Responsible	Completely Responsible
Yourself alone	0 1 2 3 4 5 6 7 8 9 10	
Local factory as a whole	0 1 2 3 4 5 6 7 8 9 10	
Management at Company headquarters	0 1 2 3 4 5 6 7 8 9 10	
Circumstances beyond control)	0 1 2 3 4 5 6 7 8 9 10	

How desirable to you was the outcome? (Circle the number of your answer)

	Not at all	Very much
	0 1 2 3 4 5 6 7 8 9 10	

Please answer the following questions dealing with the scenario you just read. How intensely were you feeling each of the following emotions at the end of the story? It is ok to refer back to the story and think about your answers if you desire. (Circle the number of your answer for each emotion, your response could vary from 1 till 7)

Emotion	Not at all intensely			Moderately		Very intensely	
Interested	1	2	3	4	5	6	7
Alert	1	2	3	4	5	6	7
Attentive	1	2	3	4	5	6	7
Excited	1	2	3	4	5	6	7
Enthusiastic	1	2	3	4	5	6	7
Inspired	1	2	3	4	5	6	7
Proud	1	2	3	4	5	6	7
Confident	1	2	3	4	5	6	7
Bold	1	2	3	4	5	6	7
Daring	1	2	3	4	5	6	7
Fearless	1	2	3	4	5	6	7
Strong	1	2	3	4	5	6	7
Determined	1	2	3	4	5	6	7
Active	1	2	3	4	5	6	7
Distressed	1	2	3	4	5	6	7
Upset	1	2	3	4	5	6	7
Guilty	1	2	3	4	5	6	7
Blameworthy	1	2	3	4	5	6	7
Anger at self	1	2	3	4	5	6	7
Disgusted with self	1	2	3	4	5	6	7
Dissatisfied with self	1	2	3	4	5	6	7
Ashamed	1	2	3	4	5	6	7
Hostile	1	2	3	4	5	6	7
Irritable	1	2	3	4	5	6	7
Nervous	1	2	3	4	5	6	7
Jittery	1	2	3	4	5	6	7
Scared	1	2	3	4	5	6	7
Afraid	1	2	3	4	5	6	7

Imagine now you are faced with the following decision:

Your competitor recently built and is now operating a factory in another country B in Asia. If your firm does not respond quickly and enter Country B, it is expected that investors will dump your company's stock, causing the stock price to fall. Moreover, your rival will have established a lead in market share in Country B that may be hard to wipe out.. You have to decide whether your firm should enter Country B and whether it should enter using a joint venture or wholly owned subsidiary.

Before making the above decision, please check which of the following information you would need:

Information about the general environment of Country B market, such as demographics, economics, legal, cultural attitudes etc. You need to **pay USD10,000 and wait 2 days** to get this information. Would you like to get this information? *Yes/No* _____

Would you like more information: *Yes/No* _____, *if No go to Question 2*

If, **yes**:

Information about the pharmaceutical industry in Country B, such as new domestic and multinational entrants, rivalries, buyers, suppliers, etc. You need to **pay USD20,000 and wait 4 days** to get this information. Would you like to get this information? *Yes/No* _____

Would you like more information: *Yes/No* _____, *if No go to Question 2*

If, **yes**:

Information and detailed trend analysis about regulations and attitudes about environment protection. You need to **pay USD50,000 and wait 7 days** to get this information. Do you like to get this information? *Yes/No* _____

Would you like more information: *Yes/No* _____, *if No go to Question 2*

If, **yes**, please write what additional information you need to make your decision. _____

Considering your reaction to the outcome in country A (scenario 1); please identify which choice fits your decision-making process about entering country B:

	Not at all intensely			Moderately		Very intensely	
Several options were considered	1	2	3	4	5	6	7
Examined the pros and cons of every options	1	2	3	4	5	6	7
Used multiple criteria for eliminating possible courses of action	1	2	3	4	5	6	7
Compared different options and evaluated extensively before make decision	1	2	3	4	5	6	7

Assume you have all information you need. Consider your reaction to outcome in Country A (Scenario 1), please identify, how fast you would prefer to make the final decision about entering country B (in Asia):

- 1) Act immediately
- 2) 1 week
- 3) 2 weeks
- 4) 1 month
- 5) 3 months
- 6) 6 months
- 7) Proceed slowly and make decision after making sure that all issues are evaluated;

Please choose the answer that fits your action:

	Least likely				Mostly likely		
Will you consult with some other people (experts/other executives) before making final decision	1	2	3	4	5	6	7

Please choose the answer that fits your feel about your decision about entering country B (in Asia):

	Quick		Moderate			Slow	
Your assessment about your speed of making this final decision	1	2	3	4	5	6	7

Please choose the answer that fits your action:

	Least likely					Mostly likely	
Will you consult with some other people (friends and family) before making final decision	1	2	3	4	5	6	7

What is your final choice about your company's decision to enter Country B (in Asia) market:

- 1) Stop the project (Least risky)
- 2) Halt the project temporally and do evaluation again (between least and medium risky)
- 3) Execute the project without any change (medium risky)
- 4) Execute the project but use manufacturing system with higher capacity (between medium and most risky)
- 5) Execute the project but produce more kinds of medicine in Country B (most risky)

Assume you decide to enter Country B (in Asia) Market, what entry mode would you recommend:

- 1) Export (least risky)
- 2) Licensing & franchising (between least and medium risky)
- 3) Strategic alliance (medium risky)
- 4) Joint-Venture (between medium and most risky)
- 5) Wholly owned subsidiary (most risky)

Assume you decide to enter Country B (in Asia) Market with a wholly owned subsidiary, what is your preferred option:

- 1) Rent the land and invest portion of money to build small-scale operation first (least risky)
- 2) Rent the land and invest all money to begin full scale operation (between least and medium risky)
- 3) Purchase land and invest portion of money to build small-scale operation (medium risky)
- 4) Purchase land and invest all money to begin full-scale operation (between medium and most risky)
- 5) Purchase land and invest more money to build the most advance factory at once (most risky)

Before you got involved with the project, there was a plan to enter Country B using a special project team with about 30 people and invest \$100 million to build a factory that would take 12 months to complete. Considering your reaction to above-mentioned outcome in Country A (Scenario1), will you make any change to the original plan? Yes/No _____

If yes, please choose the capital, people and time required for investing in Country B (in Asia) market?

	Small				Large		
Money (Millions)	10	20	50	100 million (Original Plan)	150	300	500
Human resource (Number of people)	8	15	20	30 people (Original Plan)	40	60	90
Time needed (months)	3	5	8	12 months (Original Plan)	16	20	24

After you have made the final decision about entering country B (in Asia) market. Choose the number that is closest to how you feel. (Choose one)

	Unsatisfied		moderate			Satisfied	
Are you satisfied with the whole process of making the final decision	1	2	3	4	5	6	7
Do you feel comfortable with making this decision under this circumstance	1	2	3	4	5	6	7

Do you think you are an emotional person: (Choose one)

Not at all emotional		Moderately emotional			Very emotional	
1	2	3	4	5	6	7

How do people who know you well think about you as an emotional person: (Choose one)

Not at all emotional		Moderately emotional			Very emotional	
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1	2	3	4	5	6	7
What do you think is your attitude towards risk taking: (Choose one)						
Like low risk		Like moderate risk			Like high risk	
1	2	3	4	5	6	7
How do people who know you well think about your attitude to risk taking: (Choose one)						
Like low risk		Like moderate risk			Like high risk	
1	2	3	4	5	6	7

Choose the number that is closest to how you feel. (Choose one)

	Strongly disagree						Strongly agree
I'd rather depend on myself than others.	1	2	3	4	5	6	7
I rely on myself most of the time; I rarely rely on others.	1	2	3	4	5	6	7
I often do "my own thing."	1	2	3	4	5	6	7
My personal identity, independent of others, is very important to me.	1	2	3	4	5	6	7
It is important that I do my job better than others.	1	2	3	4	5	6	7
Winning is everything.	1	2	3	4	5	6	7
Competition is the law of nature.	1	2	3	4	5	6	7
When another person does better than I do, I get tense and aroused.	1	2	3	4	5	6	7
If a coworker gets a prize, I would feel proud.	1	2	3	4	5	6	7
The well-being of my coworkers is important to me.	1	2	3	4	5	6	7
To me, pleasure is spending time with others.	1	2	3	4	5	6	7
I feel good when I cooperate with others.	1	2	3	4	5	6	7
Parents and children must stay together as much as possible.	1	2	3	4	5	6	7
It is my duty to take care of my family, even when I have to sacrifice what I want.	1	2	3	4	5	6	7
Family members should stick together, no matter what sacrifices are required.	1	2	3	4	5	6	7
It is important to me that I respect the decisions made by my groups.	1	2	3	4	5	6	7

Please answer the following questions about yourself:

Please write down your age in years: _____

Have you lived all your life in this country? Yes ___ No ___

If No, how long did you live outside this country? (in years) _____

Please choose the closest description of your highest job responsibility:

Front line worker or ordinary employee, Managerial position in single department, Director position, Top management position (CEO, CFO, COO, CIO, etc.) for one subsidiary or branch, Top management position (CEO, CFO, COO, CIO, Board members, etc.) in company headquarter, Business owner, others

Please describe the number of years that you have experience with international business:

What is your functional area? (Choose one)

General Management Marketing Strategic Management Finance Accounting Human Resource Information Technology Operation Other

Gender: (Choose one)

Male Female

What is the size of organization that you work with? (Choose one)

less than 100 between 101 to 500 between 501 to 2000 between 2001 to 10000 more than 10000

Which industry does your organization belong to? (Choose one)

Agriculture Raw materials Manufacturing Retail Services Other

Thank for your participation.

Appendix 3. First Inviting Email

Dear Alumni,

My name is Weichu Xu. Now I am pursuing my PhD study in US. I wonder if you can spend some time to help me to finish one survey (two versions) for my dissertation. Your time and help will be much appreciated.

This study is a cross-cultural experimental design on managers' strategic decision-making process. The purpose is to see how different cultures and emotions impact US and Chinese managers in their strategic decision-making process. I will share the findings with you after I finish my study.

There are two different versions of survey. You can click on the link and finish the survey. The whole process is anonymous and it will take you about 10-15 minutes to finish. There are two ways for you to finish this survey. The ideal way is you can finish the first version of survey and then wait several days or at least one week to finish the second survey. This will help to reduce the interaction between your responses to two surveys. The second approach is for busy people. You can finish first survey then continue to finish the second survey. However, the result from second way will be not as good as the result from first way. The link for first version is http://qtrial.qualtrics.com/SE?SID=SV_7NSIYJ5k006S7kg . The link for second version is http://qtrial.qualtrics.com/SE?SID=SV_8qzKsaaEXqzuG1e .

Thank you so much for your help and time. Please let me know if you have any questions.

Appendix 4. Second Reminding Email

Dear Alumni,

Thank you so much for your time and help in my survey.

My name is Weichu Xu. Now I am pursuing my PhD study in US. I wonder if you can spend some time to help me to finish one survey (two versions) for my dissertation. Your time and help will be much appreciated.

For alumni who had finished the first version of survey, hope you remember to finish the second version. For alumni who missed my previous email, I hope you can spend 10-15 minutes to help me to finish two surveys.

This study is a cross-cultural experimental design on managers' strategic decision-making process. The purpose is to see how different cultures and emotions impact US and Chinese managers in their strategic decision-making process. I will share the findings with you after I finish my study. You can click on the link and finish the survey. The whole process is anonymous and it will take you about 10-15 minutes to finish. You can finish first survey then continue to finish the second survey.

The link for first version is http://qtrial.qualtrics.com/SE?SID=SV_7NSIYJ5k006S7kg .
The link for second version is
http://qtrial.qualtrics.com/SE?SID=SV_8qzKsaaEXqzuG1e .

Thank you so much for your help and time. Please let me know if you have any questions.

Appendix 5. Third Last Call Email

Dear Alumni,

Thank you so much for your time and help in my survey.

My name is Weichu Xu. Now I am pursuing my PhD study in US. I wonder if you can spend some time to help me to finish one survey (two versions) for my dissertation. Your time and help will be much appreciated.

Thank for those alumni who had finished the two versions of the survey. For alumni who missed my previous two email, I hope you can spend 10-15 minutes to help me to complete these two surveys.

This study is one cross-cultural experimental design on managers' strategic decision-making process. The purpose is to see how different cultures and emotions impact US and Chinese managers in their strategic decision-making process. I will share the findings with you after I finish my study. You can click on the link and finish the survey. The whole process is anonymous and it will take you about 10-15 minutes to finish. You can finish the first survey then continue to finish the second survey.

The link for first version is http://qtrial.qualtrics.com/SE?SID=SV_7NSIYJ5k006S7kg .
The link for second version is
http://qtrial.qualtrics.com/SE?SID=SV_8qzKsaaEXqzuG1e .

Thank you so much for your help and time. Please let me know if you have any questions.

Appendix 6. Table: The Rotated Factor Matrix in guilt scenario

	Factor				
	Guilt	Pride	Fear	Alert	Enthusiastic
Interested					
Alert				0.73	
Attentive				0.85	
Excited					
Enthusiastic					0.80
Inspired					
Proud		0.75			
Confident		0.71			
Bold		0.78			
Daring		0.90			
Fearless		0.88			
Strong		0.82			
Determined					
Active					
Distressed					
Upset					
Guilty	0.79				
Blameworthy	0.77				
Anger at self	0.89				
Disgusted with self	0.90				
Dissatisfied with self	0.91				
Ashamed	0.82				
Hostile					
Irritable					
Nervous			0.82		
Jittery			0.82		
Scared			0.85		
Afraid			0.92		

Extraction Method: Principal Axis Factoring.

Rotation Method: Varimax with Kaiser Normalization.

a Rotation converged in 7 iterations.

Appendix 7. Table: The Rotated Factor Matrix in pride scenario

	Factor				
	Guilt	Pride	Fear	Alert	Enthusiastic
Interested				0.71	
Alert				0.73	
Attentive				0.79	
Excited					0.78
Enthusiastic					0.75
Inspired					
Proud		0.77			
Confident		0.82			
Bold		0.86			
Daring		0.88			
Fearless		0.85			
Strong		0.81			
Determined					
Active					
Distressed					
Upset					
Guilty	0.80				
Blameworthy	0.88				
Anger at self	0.92				
Disgusted with self	0.92				
Dissatisfied with self	0.91				
Ashamed	0.88				
Hostile					
Irritable					
Nervous			0.81		
Jittery			0.87		
Scared			0.83		
Afraid			0.78		

Extraction Method: Principal Axis Factoring.

Rotation Method: Varimax with Kaiser Normalization.

a Rotation converged in 7 iterations.

Appendix 8. Table: Results of principal component analysis on four constructs for guilt scenario

Items	Component			
	Comprehensiveness	Resource	Risk	Speed
Developed many alternative courses of action to achieve intended objectives	0.82			
Considered different criteria before deciding on which courses of action to take	0.87			
Thoroughly examined multiple explanations for problems and opportunities	0.80			
Conducted multiple examinations of suggested course of action	0.87			
Choose one option from seven options about time to make decision				0.87
The likelihood of respondents to discuss with some experts before making final decision				-0.16
Ask respondent about their feeling about the speed of making final decision				0.91
The option about project			0.81	
The entry mode chosen to enter another country			0.80	
The way to form the wholly owned subsidiary			0.78	
How much money to invest in project		0.94		
How many people to form the team		0.95		
How long time need to wait for the project to finish		0.92		
Eigenvalue	3.89	2.53	1.98	1.35
Percentage of variance explained	29.95	19.47	15.24	10.38
Cumulative percentage of variance explained	29.95	49.42	64.66	75.05

Extraction Method: Principal Component Analysis.
 Rotation Method: Varimax with Kaiser Normalization.
 a. Rotation converged in 5 iterations.

Appendix 9. Table: Results of principal component analysis on four constructs for pride scenario

Items	Factor			
	Comprehensiveness	Resource	Risk	Speed
Developed many alternative courses of action to achieve intended objectives	0.70			
Considered different criteria before deciding on which courses of action to take;	0.85			
Thoroughly examined multiple explanations for problems and opportunities	0.75			
Conducted multiple examinations of suggested course of action	0.82			
Choose one option from seven options about time to make decision				0.66
Likelihood of respondents to discuss with some experts before making final decision.				-0.17
Ask respondent about their feeling about the speed of making final decision				0.73
The option about project			0.66	
The entry mode chosen to enter another country			0.68	
The way to form the wholly owned subsidiary			0.71	
How much money to invest in project		0.91		
How many people to form the team		0.99		
How long time need to wait for the project to finish		0.83		
Eigenvalue	3.11	2.92	2.39	1.10
Percentage of variance explained	23.97	22.47	18.41	8.48
Cumulative percentage of variance explained	23.97	46.45	64.86	73.33

Extraction Method: Principal Axis Factoring.

Rotation Method: Varimax with Kaiser Normalization.

a. Rotation converged in 5 iterations.

Appendix 10. Table: Results of principal component analysis on four constructs for guilt scenario

Items	Factor			
	Comprehensiveness	Resource	Risk	Speed
Developed many alternative courses of action to achieve intended objectives	0.87			
Considered different criteria before deciding on which courses of action to take	0.90			
Thoroughly examined multiple explanations for problems and opportunities	0.82			
Conducted multiple examinations of suggested course of action	0.87			
Choose one option from seven options about time to make decision				0.89
Ask respondent about their feeling about the speed of making final decision				0.91
The option about project			0.82	
The entry mode chosen to enter another country			0.81	
The way to form the wholly owned subsidiary			0.78	
How much money to invest in project		0.94		
How many people to form the team		0.95		
How long time need to wait for the project to finish		0.92		
Eigenvalue	3.81	2.45	1.97	1.26
Percentage of variance explained	31.80	20.41	16.45	10.54
Cumulative percentage of variance explained	31.80	52.22	68.67	79.21

Extraction Method: Principal Component Factoring.
 Rotation Method: Varimax with Kaiser Normalization.
 a. Rotation converged in 5 iterations.

Appendix 11. Table: Results of principal component analysis on four constructs for pride scenario

Items	Component			
	Comprehensiveness	Resource	Risk	Speed
Developed many alternative courses of action to achieve intended objectives	0.77			
Considered different criteria before deciding on which courses of action to take	0.88			
Thoroughly examined multiple explanations for problems and opportunities	0.83			
Conducted multiple examinations of suggested course of action	0.87			
Choose one option from seven options about time to make decision				0.83
Ask respondent about their feeling about the speed of making final decision				0.83
The option about project			0.77	
The entry mode chosen to enter another country			0.82	
The way to form the wholly owned subsidiary			0.84	
How much money to invest in project		0.94		
How many people to form the team		0.97		
How long time need to wait for the project to finish		0.90		
Eigenvalue	3.11	2.86	2.35	0.93
Percentage of variance explained	25.90	23.79	19.58	7.78
Cumulative percentage of variance explained	25.90	49.70	69.28	77.06

Extraction Method: Principal Component Analysis.

Rotation Method: Varimax with Kaiser Normalization.

a. Rotation converged in 5 iterations.

Appendix 12. Table: Results of principal component analysis individualism and collectivism constructs

	Factor	
	Collectivism	Individualism
I'd rather depend on myself than others.		0.70
I rely on myself most of the time; I rarely rely on others.		0.79
I often do "my own thing."		0.79
My personal identity, independent of others, is very important to me.		0.80
It is important that I do my job better than others.		0.74
Winning is everything.		0.61
Competition is the law of nature.		0.66
When another person does better than I do, I get tense and aroused.		0.57
If a coworker gets a prize, I would feel proud.	0.73	
The well-being of my coworkers is important to me.	0.76	
To me, pleasure is spending time with others.	0.82	
I feel good when I cooperate with others.	0.86	
Parents and children must stay together as much as possible.	0.66	
It is my duty to take care of my family, even when I have to sacrifice what I want.	0.81	
Family members should stick together, no matter what sacrifices are required.	0.73	
It is important to me that I respect the decisions made by my groups.	0.76	

Extraction Method: Principal Axis Factoring.

Rotation Method: Varimax with Kaiser Normalization.

a Rotation converged in 3 iterations.

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