



# Decision magnitude of impact and strategic decision-making process output

## The mediating impact of rationality of the decision-making process

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Mahmood Nooraie

*School of Management, Islamic Azad University of Abhar, Tehran, Iran*

### Abstract

**Purpose** – The purpose of this paper is to identify the role of the rationality of the strategic decision-making process between decision magnitude of impact and the quality of the decision process output.

**Design/methodology/approach** – From analysis of alternative research approaches, a field survey seems to be the most appropriate methodological choice. This is a field study of real strategic decision-making process rather than an artificial setting. The questionnaire consists of items measuring the variables of primary interest; namely the independent, mediator, and dependent variables. The study was conducted in Pinang, Malaysia, involving small, medium, and large-sized private manufacturing firms. To test and eliminate ambiguous or biased items and to improve the format, both for ease of understanding and to facilitate data analysis, a pilot study was conducted by computing Cronbach's reliability alpha.

**Findings** – The results of regression analysis indicate that the decision magnitude of impact is significantly associated with the level of rationality in the decision-making process. The results of hierarchical regression analyses indicate that the extent of rationality in the decision-making process is able to significantly change the total variations in the decision-making quality explained by magnitude of impact.

**Research limitations/implications** – The complex nature of strategic decision-making process as a research topic places limitations on this study, particularly in the area of sample selection and data availability and collection. The major sample selection at the manufacturing firms is difficult because a firm's perception in terms of strategic decisions may not be the same, thus it is not easy to ascertain relevant sample characteristics.

**Practical implications** – Findings of this study indicate that a better quality decision is achieved through a rational process. Thus, organizations should encourage greater use of rationality in the decision-making process, especially when the decision that is going to be made has more impact on the various parts of the organization or it is a strategic decision.

**Originality/value** – This study is believed to be the first to test the mediating impact of rationality of the strategic decision-making process. This study was carried out among Malaysian manufacturing firms, and therefore comparison of its results to the findings in other countries may suggest the influence of other factors such as ideology, belief, and culture on strategic decision-making processes. This in turn may open up a promising avenue for future research.

**Keywords** Decision making, Strategic leadership, Small to medium-sized enterprises

**Paper type** Research paper

### Introduction

The recent years have witnessed rapid changes in information technology, the New World economic order, the coming of the new regional power and many others



(Ossama and Muhittin, 1998). All these changes have presented on the one hand a very dynamic world of increased population, inflation, social consumption, and on the other hand limited, scarce resources.

In such a complex and fast-changing business environment, managers are faced with a multitude of problems every day. In order to solve these problems they have to make decisions. To make too many decisions, too fast, about too many strange and unfamiliar problems introduce a new element into management, forcing executives already nervous in an unpredictable environment to make more and more decisions and at an increasingly quicker pace (Toffler, 1980).

Mark (1997) concluded that for many reasons, the hardest part of managing an organization today is making the appropriate decision. Once a manager chooses an alternative and knows how to implement it, he can allocate the resources necessary to achieve the defined goal; but getting to that point can often be a long, complex, and challenging process. The difficulty arises when the most preferred alternatives are unfeasible (Nutt, 1998).

Since strategic decision not only affects the organization in which they are taken but also the society (Colignon and Cray, 1980), it is not surprising that strategic decision-making process has been heavily researched (Amason, 1996). However, past research on strategic decision process has been anecdotal, primarily case analyses with little generalizable conclusions. Empirical studies in terms of factors that influence the strategic decision process are either limited or have produced contradictory results. According to Papadakis *et al.* (1998, p. 115). "In spite of the crucial role of strategic decisions the strategy process research has not departed significantly from a stage of being based on", "mature paradigms and incomplete assumptions" (Eisenhardt and Zbaracki, 1992, p.17). Thus, research on strategic decision-making process and factors affecting the process remains of paramount importance in the field of organizational theories and management (Astley *et al.*, 1982), and much more empirical research is required before any definitive conclusion can be reached (Rajagopalan *et al.*, 1993).

It is evident from my literature review that:

- Most of the research in this area has been in the form of case studies (e.g. Astley *et al.*, 1982), prototypes (assessed by response to a scenario, e.g. Fredrickson, 1984), or laboratory experiments (e.g. Van Bruggen *et al.*, 1998). While these procedures may produce satisfactory results, there are differences between real-life and artificial settings. This study focused on real strategic decision rather than artificial settings.
- This study is of benefit to both executives and top management teams for a better understanding of the nature of the gap between studies that have produced contradictory results.
- The findings of this study will enrich the discussion on the relationship between strategic decision processes and contextual factors.
- This study was carried out among Malaysian manufacturing firms, and therefore comparison of its results to the findings in other countries may suggest the influence of other factors such as ideology, belief, and culture on strategic decision-making processes. This in turn may open up a promising avenue for future research
- This study is believed to be the first to test the mediating impact of rationality of the strategic decision-making process.

Derived from the above or similar discussions in my literature review, the research questions presented in this study are:

*RQ1.* To what extent does the decision magnitude of impact, influence the rationality of the strategic decision-making process?

*RQ2.* To what extent does rationality of the strategic decision-making process influence quality of the decision process output?

The choice to focus on strategic decisions is due to their nature and significance. Strategic decisions are long-term, highly unstructured, complex, inherently risky, and have a great impact on the future of the organization. Strategic decisions are those important decisions that typically require a large amount of organizational resources. These decisions influence organizational direction, administration, and structure (Christensen *et al.*, 1982).

This investigation is limited to private manufacturing firms and focuses on only strategic decisions made from 2004 to 2006.

#### *Objective of the study*

The objective of this study is to identify the role of the rationality of the strategic decision-making process between decision magnitude of impact and the quality of the decision process output.

#### *Key terms*

- Strategic decisions.
- Decision-making process.
- Decision magnitude of impact.
- Decision process output.
- Rational model of decision-making.

#### **Literature review**

Decision-making is an important part of managerial function of any organization. In reality, managers must make decisions while performing managerial functions; planning, organizing, leading, and controlling. Therefore to be a good planner, organizer, leader and controller, a manager must first be a good decision maker (Rue and Bayrs, 1986). Thus the primary duty of managers is decision-making. These decisions may be related to planning, organizing, staffing, leading or controlling can be straight forward or complex (Main and Lambert, 1998), short-range or long-range (Pearce and Robinson, 1985), flexible or inflexible (Sharfman and Dean, 1997) and even crisis decisions (Mintzberg *et al.*, 1976). In other words, managers must make decisions even if they are not willing to do so. Pearce and Robinson (1989) indicated that decision-making is inevitable, because to explicitly avoid making a decision is in itself to make a decision.

Among managers' decisions strategic decisions are the most important ones. A strategy is a pattern in the organization's important decisions and actions, and consists of a few key areas or things by which the firm is distinguished from others (Digman, 1986). Thompson and Strickland(2003) indicated that "among all the things managers do, nothing affects a company's ultimate success or failure more fundamentally than

how well its management team makes strategic decisions". Research in strategic management can be classified into two broad categories: research which deals with the "content" of strategies and research on the "process" which investigates the strategic decision process and factors that affect it Schwenk (1995). Content research has been the primary focus while process issues have received relatively less attention (Rajagopalan *et al.*, 1993).

Strategic decisions are ill structured, non-routine, and important to the firm, in which top management usually plays an important role. Strategic decision making is incremental and interdependent, shaped by a variety of contextual influences arising from past events, present circumstances, and perspectives of the future (Quinn, 1980; Das, 1986; Neustadt and May, 1986).

This study will focus on strategic decision-making process and for the purposes of this study, strategic decisions are ones that involve strategic issues and require top-management team consideration. (Hereafter, strategic decision and decision will be used interchangeably.)

#### *Decision-making process*

Different researchers have developed numerous models of strategic decision-making process since 1970 (e.g., Mintzberg *et al.*, 1976; Hofer and Schendel, 1978; Dubrin, 1997; Donnelly *et al.*, 1998). These models comprise various numbers of stages and are generally similar to each other. Strategic decision making varies from three steps of problem formulation and objective setting, identification and generation of alternative solutions, and the analysis and choice of a feasible alternative (Cyert and March, 1963; Mintzberg *et al.*, 1976) to the five steps suggested by Fredrickson (1984): situation diagnosis, alternatives generation, alternatives evaluation, selection, and integration.

#### *Decision's magnitude of impact*

Decision's magnitude of impact refers to the extent that the decision will impact various parts of the organization.

Studies relating decision's magnitude of impact to extent of rationality in the decision-making process have produced contradictory results, for example Papadakis *et al.* (1998) and Hickson *et al.* (1986) found that decision's magnitude of impact positively and significantly influences the extent of the rationality in the decision-making process. On the other hand, some literature (e.g. Dean and Sharfman, 1993) claimed that the importance of strategic decision is not related to the rationality of the decision.

Based on the results of our literature review on strategic decision-making processes the following conclusions can be made.

- (1) Decision making is one of the most important functions of the managerial job thus the primary duty of managers is decision-making.
- (2) In terms of the decision-making process it was noted that there are numerous approaches to decision making. In spite of general similarities among them, there are some real differences that result in a lack of conceptual consensus.
- (3) The most important models of decision making are defined as:
  - the rational or classical model, which is based on quantitative disciplines;

- the organizational model, which is based on both behavioral and quantitative analysis; and
  - the political model, which is almost totally behavioral.
- (4) While literature indicate an extensive theoretical and empirical work in the area of strategic decision-making process, to my limited knowledge, existing research has not shown in any detail how executives practice or apply the strategic decision-making processes in reality. However, most empirical studies in terms of factors that affect strategic decisions process either are limited or have produced contradictory results.

In sum, the results of our review indicates that:

- Despite the literature, our knowledge of decision-making process is limited.
- The impact of contextual factors and strategic decision-making process on decision-making process outputs is quite unclear.
- Considerable work has been carried out in the past two decades focusing on factors affecting strategic decision processes. Research in this area has shown progress, however much more empirical research is required before any definitive conclusions can be reached.

### Theoretical framework and hypothesis

#### *Theoretical framework*

Based on the literature review and research questions I have developed a theoretical framework that is presented in Figure 1. The model is descriptive in nature and focuses on the influence of decision specific characteristics (magnitude of impact), on the strategic decision-making process (Rationality). Also it looks at the impact of the strategic decision-making processes on quality of the decision-making process output.

Two guiding assumptions derived from literature serve as the theoretical basis for the model:

- contextual factors influence the choice of process; and
- the process choice influences output quality.

the choice to focus on decision magnitude of impact is based on the following criteria.

- decision magnitude of impact had received limited attention in past studies;
- decision magnitude of impact had produced contradictory results in previous research; and
- decision magnitude of impact I believed would have the most explanatory power

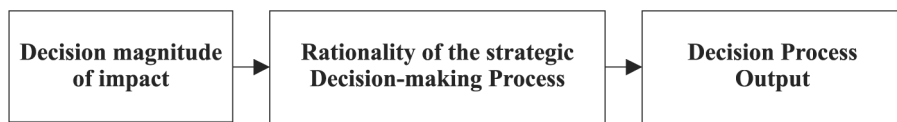


Figure 1.  
Theoretical framework

Rationality of the strategic decision-making process was selected because:

- it is more frequently cited in literature,
- it has clearly played central roles in organization decision-making, and
- it is distinct and is related to the most important and popular models

I selected quality of the decision-making process output because the literature provides conceptual basis for consideration while I am not aware of any studies that focus on process output.

The final decision outcomes is a function of decision process quality and implementation (Trull, 1966),

The final decision outcomes also depends upon the quality of the process in which the decision is made (Steiner, 1972), and

Since good decisions can lead to bad outcomes and vice versa, a strategic decision cannot infallibly be graded either high or low quality in terms of its final outcomes (Brown *et al.*, 1974).

#### *Hypothesis development*

The literature (e.g. Rajagopalan *et al.*, 1993; Dean and Sharfman, 1993) indicated that the nature of the decision to be made will influence the nature of the process to be used. The extent that a manager will be more circumspect and adheres to a more rational decision making process may also be influenced by the degree of decision magnitude of impact.

Papadakis *et al.* (1998) found that the magnitude of impact of the strategic decision is associated with the rationality of the decision process. This would mean that managers tend to be more careful and approach the decision in a more formal and rational manner, if the likely impact of the decision is great. In contrast, Dean and Sharfman (1993) found that the importance of strategic decisions is not related to the rationality of the decision-making process. I expect that managers' tend to be more conservative and adopt a more formal planning process in their decision making in order to reduce risk, if the impact of the decision to be made is likely to be great. Based on these discussions *H1* was developed.

- H1.* There is a positive relationship between decision magnitude of impact and the extent of rationality in the decision-making process.

#### *Decision process output*

I am not aware of any existing empirical study of strategic decision-making that focuses on quality of the decision process output and investigates how well the decision process was carried out. Most of the studies available have studied on one aspect of final decision outcomes namely organizational effectiveness or performance with contradictory finding (e.g. Fredrickson and Mitchell, 1984; Eisenhardt and Zbaracki, 1992; Priem *et al.*, 1995). Brown *et al.* (1974) indicated that a strategic decision cannot be graded either high or low quality decision based on its final outcomes. This is due to the fact that a good decision can lead to a bad outcome if, poorly implemented. Steiner (1972) believed that the decision outcome also depends upon the quality of the process in which the decision is made. Based on these

arguments I believe that the decision outcomes may be investigated in two separate but reciprocal phases:

- (1) decision-making phase; and
- (2) implementing phase.

In decision-making phase the quality of the decision-making process output in terms of timeliness or speed of the decision-making, acceptability to interested units and people, and adaptiveness to change can be evaluated (Rajagopalan *et al.*, 1993). This actually defines how well the decision process is carried out.

Implementation phase determines how well the selected alternative (the decision) is accomplished, the decision goals are achieved, or problems are solved.

The results of these two phases of investigations, which jointly determine the decision outcomes help to differentiate between the quality of the decision-making process and the quality of the implementation process. Thus, this study is concerned only with decision process output.

I believe that in a process in which the problem is well defined, various alternatives are generated, adequate information are used, alternatives are evaluated and the best possible alternative is selected, the output of the decision-making process lead to greater quality. According to Bourgeois and Eisenhardt (1988) rational analysis improves the initial quality of the decision.

Based on these discussions I posit the following hypothesis for testing the quality of the decision process output:

- H2.* There is a positive relationship between the extent of rationality in the decision-making process and quality of the decision process output.

#### *Mediating effect of process choice*

I am not aware of any existing empirical study of strategic decision-making that focuses on the relationship between decision magnitude of impact and quality of the decision-making process output while rationality of the strategic decision-making process function as a mediator between these variables.

According to interactional psychology, contextual variables (decision magnitude of impact) are the major direct influence on manager's adjustment to choose a particular strategic decision-making process (Nelson, 1990). On the other hand decision-making process directly influences the quality of the decision process output thus, contextual factors will have indirect effect, through a decision-making on quality of the decision process output. Based on these discussions the following hypothesis for testing in this study was proposed:

- H3.* The relationship between decision magnitude of impact and quality of the decision process output is mediated by the extent of rationality in the decision-making process.

### **Methodology**

#### *Research approach*

Several different approaches were reviewed and compared in their ability to make the most efficient contribution towards satisfying the proposed research objectives. These



approaches include experimental designs, case studies, survey research, and scenario survey.

According to Dean and Sharfman (1996) laboratory studies are ill suited to assessing the impact of contextual factors on strategic decision process, especially, in complex organizational setting.

Case study has limitations that made it unsuitable for the purposes of this study. For instance consideration of the effect of contextual factors requires a relatively large number of cases while the intensive case study is expensive in terms of the time of both researcher and the subjects of the study (is necessary to repeatedly interview several top managers). Miller and Friesen (1978) indicated that "there are two levels of abstraction involved in the use of the data. . .first the case writer must interpret the situation, then the researcher must interpret the written case each step may cause distortion of data".

From this analysis of alternative research approaches, a field survey seems to be the most appropriate methodological choice. This study is a field study of real strategic decision-making process rather than an artificial setting.

Environmental characteristics are those as perceived by the individual, varying from individual to individual and therefore, making any aggregation (for organization or team level analysis) meaningless. Similarly other variables such as familiarity and perceived impacts of decision also vary from individual to individual. For these reasons, the unit of analysis is the individual level. Further, Hickson *et al.* (1986) have found empirically that individuals and firms use different process when making different types of decisions. This calls for an individual decision as the unit of analysis.

#### *Sampling procedure*

This study was conducted in Pinang, Malaysia, involving small, medium, and large-sized private manufacturing firms. I decided that a geographical area would be exhaustively sampled, rather than choosing samples across the whole nation, because the selected area is one of the most industrialized zones, and given the complex nature of the study this geographical proximity could facilitate follow-up actions. In order to ensure adequate response, an introductory letter was sent to 180 small, medium and large sized firms (sixty each), which were randomly selected from Manufacturing Firms Directory. This initial letter sought to determine the specific strategic decision that has been made within the last 24 months and to identify the managers who were directly involved in the decision-making. The final sample involves 110 manufacturing firms, which agreed to participate in the survey. The subjects we targeted are the Chief Executive Officers (CEOs) and four other members of the top management team, thus making a target sample of 550 respondents. Subsequent to this introductory letter a total of 550 questionnaires with cover letters were posted, including an appropriate instruction, key terms, and stamped, self-addressed return envelopes. Six weeks after the questionnaire was mailed, the first follow up letter was sent to those who had not yet responded. After another six weeks, the second and last follow up letter was distributed. Meanwhile most of the CEOs or their assistants were contacted either by mail or telephone to: answer their questions, if any; encourage their participation; and to emphasize that the data should refer strictly to strategic decision making.



*Questionnaire design, variables and measures*

The questionnaire consists of items measuring the variables of primary interest; namely the independent, mediator, and dependent variables as follows:

- *Magnitude of impact.* As measured by Papadakis *et al.* (1998) this study measured the perceived magnitude of impact of the decision by the extent that the decision is likely to affect various indicators such as quality of goods/services, profits, cost, sales, and productivity. These items were measured on a five-point Likert-like scale with 1 being “no impact” and 5 being “very great impact”.
- *Rationality of the decision-making process.* Refers to the extent of analysis and integration in the decision process. This was measured in the same manner as in Fredrickson (1984). It involves measuring the rationality at five different stages of decision making, namely diagnosis, alternative generation, alternative evaluation, selection/choice and integration. The items involve the use of resources such as human (internal and external), financial, information/data, and specific criteria. The items were adjusted to suit this study. A total of 30 items were used to measure rationality of the decision-making process. These items were measured on a five-point Likert-like scale from 1 to 5.
- *Decision process output.* Refers to outcome of the decision-making process, particularly the quality and satisfaction with the process. The decision process quality refers to how well the different stages of strategic decision-making process were carried out, which was measured by five items adjusted from Schilit and Paine (1987). The decision process satisfaction refers to provision for implementation, contingency plan, speed of decision, and achieving a goal. In order to measure these variables four items was designed. These items were measured on a five-point Likert-like scale from 1 to 5.

*Pilot study*

To test and eliminate ambiguous or biased items and to improve the format, both for ease of understanding and to facilitate data analysis, a pilot study was conducted by computing Cronbach’s reliability alpha. In reviewing the results of the analysis, minor changes were made and the relevant suggestions from respondents were incorporated into the final questionnaire. The results of the pilot study indicate that variables in the study had acceptable reliability with Cronbach’s alpha ranging from 0.7079 to 0.8542.

**Findings***Response rate*

Of 135 questionnaires received from 44 firms, a total of 132 were deemed usable for analysis and three cases were omitted because of incomplete responses. This represents an overall response rate of 24 percent and an effective response rate of 23 percent. The participation rate of 24 percent may be low, but according to the literature (e.g. Miller *et al.*, 1998) it is not inconsistent with many other studies of this nature.

*Sampling profiles*

The sample of 135 individuals was classified into three different groups by managerial and functional levels. The classical categorization for the three levels of authority that

classifies managers into strategic, tactical, and operative levels was modified to three managerial levels:

- (1) top level;
- (2) middle level; and
- (3) operational level.

Within manufacturing firms, top manager or strategic level of authority is represented by Chief Executive Officer, President, and General Manager (Miller *et al.*, 1998). Directors, Deputy Chief Executive, Vice President, and Assistance General manager usually represent middle managers or tactical levels of authorities, and operational managers are those who have functional responsibilities and are usually engaged in accomplishing strategic and tactical actions. A particular combination of managers from three levels of authority in this study is named top management team. The demographic characteristics of responding managers indicated that most of the managers had high levels of education (Bachelor's degree or higher = 79 percent) and moderate and long working experience in the organization (10 years or more = 40 percent). The average age of the managers was nearly 42 years.

It also shows that the highest number of managers is Chinese (51.20 percent); follow by the Malay (34.10 percent) and Indian and others (14.70 percent). This is expected because most of the private manufacturing firms are owned or run by the Chinese in Malaysia. The highest numbers of managers were at the operational level (41 percent), which was followed by middle managers (34 percent) and top-level managers (25 percent). This is not surprising because the number of operational managers in any kind of organization is usually more than the number of middle and top managers. This is also true for the composition of the top management team. Given that the members of the top management team, who are nominated for making strategic decisions in firms, typically include one CEO and several middle and operational managers, thus it is not unusual if the higher proportion of the questionnaires received are from the middle or operational levels of management. On the other hand, the results of the *t*-test between higher level (top and middle) managers and lower level (operational) manager's shows no significant differences between the groups of respondents.

The relative size of the respondent organizations was considered a possible factor of variation in the decision-making process. In order to test the presence of such variation, each organizational size was tested to determine whether it was significantly different with the others in terms of the strategic decision-making process. The results of *post-hoc* test indicates that strategic decision process in large and medium size manufacturing firms seems to be more rational than firms of small sizes

The relative management level was assumed a possible factor of variance in the strategic decision-making process. In order to assess the presence of such variation, each level of management was tested to determine whether it was significantly different from the others in terms of the strategic decision-making process. The results of one-way analysis of variance indicates that the extent of rationality in strategic decision-making in all levels of management do not significantly differ

The manager's race was also considered a possible factor of variance in the strategic decision-making process due to suspicions of cultural inheritance. In order to determine the presence of such variation, the characteristics of the decision-making process were

tested for significant difference across the different races. The results of one-way analysis of variance indicates that the decision-making process do not vary by the manager's race.

And finally when characteristics of the decision process were tested against manager's seniority (age and service) younger managers those with limited experience and fewer years of services seemed to be the most likely managers who practice rationality process less than the others. The managers' field of study does not seem to be a possible factor of variance in strategic decision process.

*Descriptive statistics*

To acquire a feel for the data and to describe the responses for the major variables under study, descriptive statistics such as mean and standard deviation on all the independent, mediator, and dependent variables were obtained. From the results in Table I it can be seen that the mean of all variables fall between 3.01 and 3.2 (about average). This indicates that there is no extreme value for the mean. The standard deviation for all variables is also shown in the table. The size of the standard deviations indicates variations in the data for identifications of patterns of interrelationships among the variables.

*Hypothesis testing*

The results of regression analysis displayed in Table II indicate that the decision magnitude of impact is significantly associated with the level of rationality in the decision-making process.

*Mediating effect of decision process characteristics*

The hypotheses indicate that the extent of rationality in the decision-making process mediates the relationship between the decision magnitude of impact and the quality of the decision process output. As tested by Ho *et al.* (2000) this is examined by using a

**Table I.**  
Descriptive statistics  
of variable

Variables	<i>n</i>	Minimum	Maximum	Mean	SD
Magnitude of impact	135	1.00	5.00	3.2103	1.0102
Rationality	135	1.00	5.00	3.0101	.9550
Decision magnitude of impact	135	1.00	5.00	3.1012	.9860

**Table II.**  
Regression analysis  
(beta coefficient)

Variables	Equation 1 Rationality (Beta)	Equation 2 Decision process output (Beta)	Equation 3 Decision process output and rationality (Beta)	Effect
Magnitude of impact	0.192**	0.564***	0.272***	Partial effect
Rationality		0.697***	0.864***	
$\Delta R^2$			0.202***	

**Notes:** \*Significant at the 0.05 level; \*\*significant at the 0.01 level; \*\*\*significant at the 0.001 level

two stage hierarchical regression. According to Baron and Kenny (1986), in order to test mediation effect, the following conditions should be satisfied:

- (1) The independent variable must affect the mediating variable. The results of the analysis given in Table II show that the decision's magnitude of impact significantly influences the extent of rationality in the decision-making process.
- (2) The independent variable must affect the dependent variable. The results of Table II in this respect indicate that decision magnitude of impact affects the decision process output.
- (3) The mediator must affect the dependent variable. We can see in Table II that rationality of the decision-making process significantly influences the quality of the decision process output.

In addition to these conditions, "establishing mediation requires that the effect of an independent be less when the mediator is included in regression equation than it is when the mediator is not included" (Keller, 2001). As indicated in Table II beta in equation 3 is smaller than beta in equation 2 that mediator was not included.

#### *Determining the mediation effects of rationality process*

The results of Table II indicate that the extent of rationality in the strategic decision-making process significantly changes the amount of variance explained by decision magnitude of impact on quality of the decision process output. This means that the extent of rationality of the decision-making process is able to explain an additional: 20.2 percent ( $R^2 = 0.542 - 0.340 = 0.202$ ,  $P < 0.001$ ) of the variance in quality of the decision process output when it functions as a mediator between decision magnitude of impact and decision process output. The table also shows that when the extent of rationality of the decision-making process is controlled, the value of magnitude of impact is reduced. This indicates that the extent of rationality partially mediates the relationship between decision magnitude of impact and quality of the decision process output.

#### **Discussion and conclusions**

From the results of descriptive analysis and hypothesis tests in proceeding pages several expected and unexpected results emerged. With regard to major demographic variables, I found that strategic decision-making process in large and medium organizations seems to be more rational than smaller sized organization. This can be attributed to the fact that large organization has the necessary resources (human, expertise, financial, etc) to allow for a more thorough and systematic investigation. Furthermore, in large companies managers are paid employee and not owners. As non-owner they act as agents and therefore, need to be accountable to the owners. This constrains their action and decision making and increases the need to be more systematic and rational.

I found that the extent of rationality in the strategic decision-making processes do not vary by the levels of managers or the manager's ethnicity. I also found that the junior managers (35 years or less) with limited years of services (less than five years) are less likely to use rationality process than the others. This seems to be true because young managers are usually lower in the organizational hierarchy and therefore seeks more support from others in their decision-making. Furthermore, being younger, they

are less experience and therefore require collaboration to corroborate their decision. Most of the managers who participated in this study have high level of education (Bachelor degree or higher = 80 percent) and moderate and long working experience in their organization (11 years or more = 51 percent). This indicates that the majority of managers have high potentials in their managerial position and they prefer to use rationality process in their decision making.

#### *Magnitude of impact*

This study found that managers tend to go through the rational process if the impact of decision is likely to be large. This is to say that managers seemed to be more careful and approach the decision in a more formal and rational manner, if the impact of the decision on different areas of organization is likely to be great. While this is in line with Hickson *et al.* (1986) and Papadakis *et al.*'s findings, it is inconsistent with those of Dean and Sharfman (1993) who claimed that the importance of strategic decisions is unrelated to the rationality of the decision-making process. Part of this inconsistency may be due to measurement differences resulting from differences in the types and quantities of items used. I, however, believe that managers tend to be more conservative and adopt a more rational planning process in their decision making in order to reduce risk, if the impact of the decision to be made is likely to be great.

#### *Mediating effects*

This study found that the extent of rationality mediates the impact of decision magnitude of impact on decision process quality. This would mean to say magnitude of impact does not directly lead to better quality decisions; it does so by encouraging managers to be more rational in their decision-making.

The results of hierarchical regression analyses indicate that the extent of rationality in the decision-making process is able to significantly change the total variations in the decision-making quality explained by magnitude of impact. This would mean that the quality of the decision process output is more likely to be improved if the decision process, which managers go through, is more likely to be rational. This can be attributed to the fact that in rational process, managers are expected to look for the optimum alternative, which serve organizational goals. This is partially in line with Bourgeois and Eisenhardt (1988) who found that rationality improves the decision outcomes.

#### **Implication of study**

Findings of this study indicate that a better quality decision is achieved through a rational process. Thus, organization should encourage greater use of rationality in the decision-making process specially when the decision that is going to be made has more impact on the various parts of the organization or it is a strategic decision.

#### **Limitations of the study**

The complex nature of strategic decision-making process as a research topic places limitations on this study, particularly in the area of sample selection and data availability and collection.

The major sample selection at the manufacturing firms is difficult because a firm's perception in terms of strategic decisions may not be the same, thus it is not easy to ascertain relevant sample characteristics.

Large-scale data collection was also a limitation because information on particular decisions could be collected through a limited number of top managers who are usually either too busy or unavailable, particularly the CEOs.

Although CEOs who had been involved in strategic decisions were the best source of the much-needed data, it is likely that their responses are somewhat biased toward a rational, positive view of the decision-making process. The requested data was in some cases considered confidential, which could limit the participation.

### Suggestions for future research

While this study suggests something about the impact of decision processes and contextual factors on quality of the decision process outputs, we still know little about the relationship between processes and final decision outcomes. One clear opportunity for future research is assessing the strategic decision outcomes by conducting a longitudinal research project.

The findings of this study might not be generalizable to other cultures. It would be helpful to understand if the various cultures impact the process differently. It is obvious that replicating this study in other manufacturing firms with different strategic decision would increase our confidence in the results.

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#### Corresponding author

Mahmood Nooraie can be contacted at: [mnoor@yahoo.com](mailto:mnoor@yahoo.com)

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