

CONTEXTUAL FACTORS AND DECISION PROCESS
OUTPUT: THE MEDIATING IMPACT OF STRATEGIC
DECISION-MAKING PROCESS

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by

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DEDICATION

To my deceased father:

He was a great man who in his own way, always thought that “*education*” is the best gift parents could leave their children. He passed away while I was distant, a stranger in a strange land. Though I think that today he is probably very happy to know that our intentions and courage have overcome obstacles for receiving and giving education. He must be very proud, above all, to know that the tradition he started continues with our children,

To my wife “*Ziba*”:

Without whose patience and support this would not be possible, and
To all those who strive to learn.

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TABLE OF CONTENTS

	Page
Title Page	i
Dedication	ii
Acknowledgement	iii
Table of Contents	iv
List of Tables	ix
List of Figures	xi
List of Appendices	xii
Abstrak	xiii
Abstract	xiv

Chapter1: INTRODUCTION

1.1. Introduction	1
1.2. Background to the Study	1
1.3. Problem Statement	3
1.4. Research Questions	4
1.5. Purpose and Objectives	5
1.6. Significance of the Study	5
1.7. Scope of Study	7
1.8. Outline of the Report	8
1.9. Key Terms	8

Chapter 2: LITERATURE REVIEV

2.1. Introduction	11
2.2. Evolution of Management and Decision-making	12
2.2.1. The Classical Approach to Decision-making	13

2.2.2. The Behavioral Approach to Decision-making	13
2.2.3. The Management Science Approach to Decision-making	14
2.2.4. The System Approach to Decision-making	14
2.2.5. The Contingency Approach to Decision-making	15
2.3. Importance of Decision-making	16
2.4. Definition of Decision	20
2.5. Definition of Decision-making	20
2.6. The Decision-making Process	21
2.6.1. Define the Problem	27
2.6.2. Development of Alternatives	28
2.6.3. Considering Environment	29
2.6.4. Evaluating Alternatives	32
2.6.5. Choosing Alternative	34
2.6.6. Implementing the Decision	35
2.6.7. Monitoring and Controlling the Decision	36
2.7. Categories of Decision-making	38
2.7.1. Decision-making Style	38
2.7.2. Type of Decisions	40
2.7.3. Decision-making models	41
2.8. Strategic Decision-making	46
2.8.1. Definitions	46
2.8.2. Strategic issues	47
2.8.3. Process	48
2.9. Factors Influencing Strategic Decision-making Process	49
2.9.1. Decision-Specific characteristics	52
2.9.2. Internal organization Characteristics	58
2.9.3. External Environmental Characteristics	65
2.9.4. Top Management team Characteristics	70
2.10. Summary	76

Chapter 3: THEORETICAL FRAMEWORK AND HYPOTHESES

3.1. Introduction	78
3.2. Theoretical Framework	79
3.3. Hypotheses Development	81
3.3.1. Decision Specific Characteristics and Decision Process	81
3.3.2. Internal Organizational Characteristics and Decision Process	84
3.3.3. External Environmental Characteristics and Decision Process	86
3.3.4. Top Management Team Characteristics and Decision Process	89
3.3.5. Decision Process and Process Output	91
3.3.6. Mediating Effect of Process Choice	93

Chapter 4: Methodology

4.1. Introduction	96
4.2. Research Approach	96
4.3. Sampling procedure	97
4.4. Questionnaire Design	98
4.4.1. Variables and Measures	99
4.4.2. The pre-testing Questionnaire	102
4.4.3. Pilot study	103
4.5. Data Analysis	104
4.6. Summary	107

Chapter 5: FINDINGS

5.1. Introduction	109
5.2. Response Rate	109
5.3. Sample Profile	111
5.3.1. Organizational Profile	111
5.3.2. Respondent Profile	112
5.4. Goodness of Measures	116

5.4.1. Factor Analysis on Decision Specific Characteristics	116
5.4.2. Factor Analysis on Internal Organizational Characteristics	118
5.4.3. Factor Analysis on External Environmental Characteristics	120
5.4.4. Factor Analysis on Top Management Team Characteristics	122
5.4.5. Factor Analysis on Strategic Decision-making Process	124
5.4.6. Factor Analysis on Decision Process Quality	126
5.5. Descriptive Statistics	129
5.5.1. Overall Descriptive Analysis	129
5.5.2. Descriptive Analysis by Respondent Profile	130
5.6. Hypothesis Testing	134
5.6.1. Correlation	134
5.6.2. Multiple Regression	141
5.7. Summary	153

Chapter 6: DISCUSSION AND CONCLUSION

6.1. Introduction	155
6.2. Recapitulation of Major Finding	155
6.3. Discussion	158
6.3.1. Variation in Decision Process Characteristics by Demographic Variables	158
6.3.2. Decision Specific Characteristics and Decision Process Characteristics	159
6.3.3. Internal Characteristics and Decision Process Characteristics	161
6.3.4. External Characteristics and Decision Process Characteristics	163
6.3.5. Top Management Characteristics and Decision Process Characteristics	166
6.3.6. Decision Process Characteristics and Decision-making Process Output	167
6.3.7. Intervening Effects	169
6.4. Implications of the Study	173
6.4.1. Theoretical Implications	173
6.4.2 Practical Implications	174
6.5. Limitations of the Study	175

5.6. Suggestion for Future Research	176
5.7. Conclusion	177

LIST OF TABLES

Table No.	Title of Table	Page
Table 2.1.	Comparison of Decision-making Processes	24
Table 2.2.	Studies on Decision Specific Characteristics	57
Table 2.3.	Studies on Internal Characteristics	64
Table 2.4.	Studies on External Characteristics	69
Table 2.5.	Studies on Top Management Characteristics	75
Table 4.1.	Reliability test of pilot study	104
Table 5.1.	Rate of Return	110
Table 5.2.	Comparison Between Respondents and Non-respondents	111
Table 5.3.	T-test: Respondents and Non-Respondents	111
Table 5.4.	Manufacturing Firms Profile	112
Table 5.5.	Profile of Respondents	115
Table 5.6.	Measure of Sampling Adequacy (MSA) for Decision Specific Characteristics	119
Table 5.7.	Factor Analysis on Decision Specific Characteristics	118
Table 5.8.	MSA for Internal Characteristics	119
Table 5.9.	Factor Analysis on Internal Characteristics	119
Table 5.10.	MSA for External Characteristics	121
Table 5.11.	Factor Analysis on External Characteristics	122
Table 5.12.	MSA for Top Management Characteristics	123
Table 5.13.	Factor Analysis on Top Management Characteristics	124
Table 5.14.	MSA for Decision Process Characteristics	125
Table 5.15.	Factor Analysis on Decision Process Characteristics	126
Table 5.16.	MSA for Decision Process Output	127
Table 5.17.	Factor Analysis on Decision Process Output	128
Table 5.18.	Reliability Test	129
Table 5.19.	Descriptive Statistics of Variables	130
Table 5.20.	Post-Hoc: Decision Process in Organization Size	131

Table 5.21.	ANOVA: Decision Process in Management Level	132
Table 5.22.	ANOVA: Decision Process in Management race	133
Table 5.23.	ANOVA: Decision Process in Management Seniority	134
Table 5.24.	Pearson Correlation	137
Table 5.25.	Split-sample Validation Test	142
Table 5.26.	Multiple Regression Analyses: Contextual Factors and Strategic Decision-making Process	144
Table 5.27.	Multiple Regression: Decision-making Process and Decision Process Output	146
Table 5.28.	Multiple Regression: Mediating Effects of Y1	148
Table 5.29.	Multiple Regression: Mediating Effects of Y2	149
Table 5.30.	Multiple Regression: Mediating Effects of Y3	140
Table 6.1	Hypotheses Summaries	156

LIST OF FIGURES

Figure No.	Title of Figure	Page
Figure 2.1.	Multidisciplinary Nature of Decision-making	19
Figure 2.2.	Number of Studies in Each Concept	51
Figure 2.3.	Number of Studies In Decision Specific Characteristics	53
Figure 2.4.	Number of Studies in Internal Characteristics	69
Figure 2.5.	Number of Studies External Characteristics	66
Figure 2.6.	Number of Studies in Top Management Characteristics	71
Figure 3.1.	Theoretical Framework	79
Figure 5.1.	Path Diagram	151
Figure 5.2.	Path Diagram	151.a
Figure 5.3.	Path Diagram	152

LIST OF APPENDICES

Appendix No.	Title of Appendix	Page
Appendix A.1 to A.6	Pilot Study, Warm-up or introductory letter, Questionnaire, Follow-up Letters, and Terms	196
Appendix B	Firms Average Annual Sales and Employees	214
Appendix C	Frequency Tables for Demographics	215
Appendix C.1	T-test Between Top Managers and Operational Managers	217
Appendix D	Factor and Reliability Analyses for Decision Specific	219
Appendix E	Factor and Reliability Analyses for Internal Characteristics	222
Appendix F	Factor and Reliability Analyses for External Characteristics	225
Appendix G	Factor and Reliability Analyses for Top Management Characteristics	229
Appendix H	Factor and Reliability Analyses for Strategic Decision Processes	232
Appendix I	Factor and Reliability Analyses for Decision Processes Quality	236
Appendix J	Frequency Table for Variables	239
Appendix K	Correlation	247
Appendix L	Multiple Regression: Contextual Factors and Rationality	248
Appendix M	Multiple Regression: Contextual Factors and Decentralization	253
Appendix N	Multiple Regression: Contextual Factors and Politicization	258
Appendix O	Multiple Regression: Decision Process Output	262
Appendix P	Multiple Regression: Mediating (Y1)	265
Appendix Q	Multiple Regression: Mediating (Y2)	273
Appendix R	Multiple Regression: Mediating (Y3)	281

OUTPUT FAKTOR-FAKTOR KONTEKSTUAL DAN PROSES PEMBUATAN KEPUTUSAN: IMPAK “INTERVENING” PROSES PEMBUATAN KEPUTUSAN STRATEGIK

ABSTRAK

Walaupun banyak diperkatakan tentang kandungan strategi, namun tidak banyak diketahui tentang proses pembuatan keputusan strategik dan faktor-faktor yang mempengaruhinya. Di sebalik penulisan dan karya yang banyak tentang perkara ini, masih wujud keperluan untuk membangunkan serta menguji hipotesis yang menghubungkan kualiti proses pembuatan keputusan strategik dengan faktor-faktor kontekstual sementara proses pembuatan keputusan muncul sebagai pembolehubah “*intervening*”. Kajian ini mengambil kira isu-isu tersebut melalui model integratif seperti yang disampaikan di dalam bab 3.

Kajian ini bertujuan untuk meneliti dan memahami impak faktor-faktor kontekstual ke atas proses pembuatan keputusan strategik dan juga menguji sejauhmana proses pembuatan keputusan mempengaruhi kualiti *output* proses pembuatan keputusan.

Dengan menggunakan 116 sampel dari 44 buah firma di Pulau Pinang, Malaysia, kajian ini telah menguji hipotesis di dalam bentuk univariat dan multivariat. Berdasarkan kepada kadar respon sebanyak 17.21 peratus, penemuan menunjukkan terdapatnya banyak hubungkait yang signifikan di antara faktor-faktor kontekstual dan proses pembuatan keputusan.

Walaupun terdapat pandangan yang bertentangan mengenai hubungkait di antara dinamisme persekitaran, saiz organisasi, impak keputusan dan keperluan pengurus untuk pencapaian ke atas tahap kerasionalan di dalam proses pembuatan keputusan namun kajian ini mengesahkan lagi bahawa pengurus menggunakan proses yang rasional komprehensif sekiranya; (1) situasi di mana mereka membuat keputusan strategik adalah sangat dinamik, (2) organisasi adalah besar, dan (3) keputusan mempunyai impak yang tinggi ke atas ukuran organisasi yang berbeza. Tahap keperluan pencapaian pengurus tidak mempunyai kesan terhadap tahap kerasionalan di dalam proses pembuatan keputusan. Kajian ini juga mendapati bahawa proses pembuatan keputusan strategik mempunyai kesan yang signifikan terhadap kualiti output proses pembuatan keputusan.

Perbincangan telah dibuat tentang implikasi secara teori dan praktik berdasarkan penemuan kajian ini. Beberapa limitasi kajian ini serta saranan untuk kajian masa depan juga dibentanglean.

ABSTRACT

Whereas much is known about the content of strategies, too little is known about strategic decision-making process and factors influencing the process. In spite of a substantial body of literature, a need remains for the development and testing of hypothesis relating the nature of the strategic decision-making process to contextual factors while a decision-making process surfaces as an intervening effect. This study addresses these issues using an integrative model presented in chapter three.

The purpose of this study is to examine and understand the impact of the contextual factors on strategic decision-making process and also to test the extent to which the nature of decision-making process influences the quality of the decision-making process output.

Using a sample of 116 usable questionnaire responses from 44 firms in the state of Penang, Malaysia the study investigated research hypotheses in univariate and multivariate fashions. The findings show that numerous significant associations between contextual factors and the decision-making process.

Beyond the contradictory views on the relationships between environmental dynamism, organization size, magnitude of decision's impact, and manager's need for achievement on the extent of the rationality/comprehensiveness in the decision-making process this study confirms that managers utilize a rational/comprehensive process if (1) the situations where they make strategic decisions are highly dynamic, (2) the organization is large, and (3) the decision exerts a high level of impact on different areas of the organization. The findings also show that manager's need for achievement has no effect on the extent of rationality/comprehensiveness in the decision-making process. This study found that strategic decision-making process significantly affects the quality of the decision-making process output.

Based upon the study findings theoretical and practical implications are discussed. Limitations of this research and suggestions for future research are also presented.

CHAPTER ONE

INTRODUCTION

1.1 Introduction

This chapter describes a brief background to the research. It explores the problem statement, research questions, purposes and objectives, and finally the significance and outline of the thesis.

1.2 Background to the Study

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 & 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 decisions every day. They have to make decisions even if they are not willing to do so. Pearce II & Robinson (1989) indicated that decision-making is inevitable, because to explicitly avoid making a decision is in itself to make a decision. Toffler (1980) in his book entitled *The Third Wave* indicated that 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 unpredictable environment to make more and more decisions and at a faster and faster pace.

Mark (1997) concluded that for many reasons, the hardest part of managing an organization today is making the appropriate decision. Decision may be programmed or non-programmed (Simon, 1977), generic or unique (Drucker, 1956), routine or non-

routine (Mintzberg et al., 1976) and certain or uncertain (Milliken, 1987).

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. And the difficulty arises when the most preferred alternatives are infeasible (Nutt, 1998).

This study explores strategic decision-making and its process. The choice to focus on strategic decisions is due to its nature and significance. Strategic decisions are long term, highly unstructured, complex, and inherently risky and have great impact on the future of the organization. Strategic decisions are those important decisions that typically require a large amount of organizational resources, and firm's environment consideration. In strategic decisions, top management usually plays a central role, in making the decisions (Hofer & Schendel, 1978). These decisions influence organizational direction, administration, and structure (Christensen et al., 1982).

Since strategic decision not only affects the organization in which they are taken but also the society (Colignon & Cray, 1980), it is not surprising that strategic decision-making process has been heavily researched (Amason, 1996). One stream of these researches has focused on the strategic decision-making process and factors influencing the process. (e.g. Fredrickson, 1985; Miller, 1987; Eisenhardt & Bourgeois, 1988; Fredrickson & Iaquinto, 1989; Hill & Tyler, 1991; Dean & Sharfman, 1993; Priem et al., 1995; Smith & Hayne, 1997; Van Bruggen et al., 1998; Papadakis et al., 1998). However, past research on strategic decision process has been anecdotal and case analyses with little generalizable conclusions. Empirical studies in terms of factors that influence the strategic decision process is either limited or have produced contradictory results. According to Papadakis et al. (1998) "in spite of the crucial role of strategic decisions the strategy process research has not departed significantly from a stage of

being based on” (p.115); “Mature paradigms and incomplete assumptions”(Eisenhardt & Zbarack, 1992 p.17). Thus, the study of strategic decision-making process remains very important (Astley et al., 1982) and much more empirical research is required before any definitive conclusion can be reached.

1.3 Problem Statement

The challenges brought about by changes in the last decade have removed traditional constraints, enabling managers to focus on their organization’s overall strategies. Effective managers must know managerial theories, concepts and principles, and must be able to take them into account. Drucker (1993) indicated “in today’s economy where the primary resource is knowledge, collective knowledge building is a key strategic task for managers”.

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 and factors influencing the process have received relatively less attention (Rajagopalan et al., 1993) and those available have produced contradictory results. Papadakis et al. (1998) concluded that despite the literature, our knowledge of strategic decision-making process and factors affecting the process is really limited.

These arguments indicate that the literature still lacks a single acceptable theory to describe how decision process flows through the organizational structure (Kriger & Barnes, 1992) and also shows a lack of conceptual consensus, which makes it difficult for managers to recognize an appropriate decision-making process (Archer, 1980) or to define the key factors influencing strategic decision-making process (Papadakis et al.,

1998). Thus the problem statement for this research can be stated as follows:

What are the factors influencing strategic decision-making process, in particular the characteristics of the process used, and its impact on the quality of the decisions?

1.4 Research Questions

Deriving from the above or similar discussions in our literature review the research questions presented in this study are:

1. To what extent do contextual factors and decision characteristics influence strategic decision-making process? Or more specifically:
 - Do decision specific characteristics influence strategic decision-making process?
 - What are the impacts of the internal organizational characteristics on strategic decision-making process?
 - What are the effects of the external environmental characteristics on strategic decision-making process?
 - What is the relationship between top management team characteristics and strategic decision-making process?
2. To what extent do strategic decision-making process influence strategic decision process outputs?
3. Does the decision-making process mediate the relationship between contextual factors, decision characteristics, internal organizational characteristic, external environmental characteristics, and top management team characteristics with decision process output.

This study addresses these issues by formulating an integrative model that is presented in Chapter three. The model focuses on the effect of the four different concepts: (1) decision specific characteristics, (2) internal organizational characteristics, (3) external

environmental characteristics, and (4) top management team characteristics on strategic decision-making process and also the impact of the strategic decision-making process on decision process output.

1.5 Purpose and Objectives

The purpose of this study is to review and evaluate existing literature describing theoretical and practical studies of the strategic decision-making process, and to determine the contextual factors that commonly affect the strategic decision-making process in different firms. The following objectives frame this study:

- To examine the relationships between contextual factors and strategic decision-making process,
- To identify the relationships among strategic decision-making process and decision process outputs, and
- To test the possible relationships between contextual factors and decision process outputs while a strategic decision-making process surfaces as an intervening effect.

1.6 Significance of the Research

Strategic decisions have an impact on many aspects and functions of the organization. These are very important decisions and they play very vital roles in any organization. According to Astley et al. (1982) “research on strategic decision-making process and factors affecting the process remains of paramount importance in the field of organizational theories and management” (P.357). Thus, it is clearly necessary that we focus our study at strategic decisions-making process and factors that affect the process.

In our literature review we have found more than 130 studies that were related to

strategic decisions, from among them we have chosen 73 research that had carried out 101 studies in terms of factors influencing strategic decision-making processes. These factors can be divided into four broad categories (Rajagopalan et al., 1993; Papadakis et al., 1998).

1. Decision Specific Characteristics,
4. Internal Organizational Characteristics,
5. External Environmental Characteristics, and
6. Top Management Team Characteristics.

Most of the researchers have focused on the effects of a limited number of factors involving one dimension of contextual factors on strategic decision-making process (e.g. Fredrickson, 1984; Eisenhardt & Bourgeois, 1988; Priem et al., 1995) rather than in an integrative manner. In our literature review we could find one empirical study conducted by Papadakis et al. (1998) that focused on all the dimensions simultaneously. However they have not examined the effects of the organizational slack, and level of top management team experience on decision-making process, while they did not test the impact of strategic decision-making process on quality of the decision-making process output. It is evident from our literature review that:

- Most of the research in this area has been in the form of case study of large resource allocation and policy decision (e.g. Astley et al., 1982; Cray et al., 1991) or has looked at prototypical (assessed by response to a scenario) rather than actual decision-making process (e.g. Fredrickson, 1984; Fredrickson & Iaquinto, 1989; Fredrickson & Mitchell, 1984). And several studies have used laboratory experiments (e.g. Schwenk, 1984; Schweiger & Sandberg, 1989; Van Bruggen et al., 1998). While these procedures may produce satisfactory results, these may not have the flexibility to uncover the facts. Part of this deficiency is due to the differences between actual life and artificial setting. This

- This study is of benefits to both executives and top management team for a better understanding of the nature of the gap between studies that have produced contradictory results (e.g. Fredrickson & Mitchell, 1984; Miller & Friesen, 1983; Dean & Sharfman, 1993).
- Most of the researches on strategic decision-making process and factors affecting the process have produced contradictory results, while most of them have focused on a limited number of dimensions. Thus, the findings of this study will enrich the discussion on the relationship between strategic decision process and contextual factors.
- This study was carried out among Penang 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 process. This in turn may open up a promising avenue for future research.
- This study is believed to be the first, to examine the impact of the different factors on strategic decision-making process using an integrative model in terms of quality of the decision-making process output.
- The findings of this study could also serve as feedback mechanisms about the influence of the contextual factors on quality of the decision-making process output while a strategic decision-making process surfaces as an intervening effect.

1.7 Scope of Study

This investigation is limited to firms operating in Malaysia, which are located in Penang. This study examines the impact of a limited number of factors in each contextual dimension that have received either limited attention or have produced

contradictory results in the literature. The study focuses only on strategic decisions made in 1999 and 2000.

The differences in knowledge, degree of authority, managerial style, level of professionalism, and experience of managers might possibly be a limiting factor in completing the data.

1.8 Outline of the Report

This thesis is divided into five chapters. In the present chapter, the phenomenon to be explored and the rationale for the study have been discussed. Chapter two elaborates on a review of literature related to the strategic decision-making and the relevant parent discipline (Phillip & Pugh, 1987). Chapter three describes the methodology employed in gathering and analyzing the data. Chapter four reports the findings of the study and finally, chapter five analyzes the findings, provides interpretation and conclusions related to the research hypotheses, and discusses the implications of these results for future research and practice.

1.9 Definition of Key Terms

Some of terms appearing regularly throughout this report are briefly defined below.

1. **A decision** is a conscious choice to behave or to think in a particular way in a given set of circumstances (Duncan, 1973).
2. **Strategic decisions** are those important decisions that typically require a large amount of organizational resources, and firm's environment consideration. These decisions are long term, complex, and have great impact on organizational direction, administration, and structure (Hofer & Schendel, 1978; Christensen et al., 1982).

3. **A decision-making process** is a process involving various steps or phases through which a decision is made.
4. **Decision specific characteristics** are the nature of the decision itself. This study restricts itself to characteristics such as decision's familiarity and decision's impact.
5. **Familiarity** is the degree to which the decision problems are clear to the decision-maker.
6. **Magnitude of impact of the decision** is the extent to which a strategic decision may affect various areas of an organization.
7. **Internal organizational characteristics** are factors occurring inside the organization that can influence the organizational decision-making such as organizational size and slack.
8. **Organizational size** refers to firm's annual sales, net asset, and number of employees.
9. **Organization slack** is a cushion of resources that help organization to cope with its unknown commitment.
10. **External environmental characteristics** are factors occurring outside the organization that influence the organizational decision-making. This study limits itself to dynamism and hostility of the external environment.
11. **Environment dynamism** is the rate of change, absence of pattern and unpredictability of the environment (Dess & Beard, 1984).
12. **Environmental hostility** is the extent that the situations in which firms are faced with price, production and distribution competition, severe regulatory restrictions, shortage of resources, and unfavourable market demand (Miller & Friesen, 1983).
13. **Top management team characteristics** refer to managerial observable and unobservable characteristics that influence the organizational decision-making. This

study looks at manager's risk propensity and need for achievement.

14. **Risk propensity** is the degree to which managers possess the confidence to act.
15. **Need for achievement** is the desire to reach goals by assuming challenges.
16. **Decision process output** is the result of a decision process that provides value to the alternative that was selected by measuring the results in terms of the decision criteria e.g. speed of decision-making, acceptability, and adaptiveness to change (Rajagopalan et al., 1993).
17. **Nature of decision-making process** refers to the extent of the following element in the decision-making process.
 - **Rationality/comprehensiveness of the decision-making process** is the extent to which the decision process involves the collection and analysis of information for identifying the problem, generating alternatives, evaluating alternatives, choice, and integrating the decision (Dean & Sharfman, 1993; Fredrickson & Mitchell, 1984).
 - **Decentralization of the decision-making process** is the extent to which different levels of management are involved in strategic decision-making process.
 - **Politicization of the decision-making process** is the extent in which the primary criterion is not the right decision but a decision acceptable to decision-makers. It is based on individual or group interest rather than organization goals.

CHAPTER TWO

REVIEW OF LITERATURE

2.1 Introduction

Decision-making is one of the most important functions of managers in any kind of organization. But decision-making is a complex process that must be understood completely before it can be practiced effectively.

Those responsible for strategic decision-making face a task of extreme complexity and ambiguity. For these reasons, over the past decades, numerous studies have been conducted to the construction of models to aid managers and executives in making better decisions concerning the complex and highly uncertain business environment. In spite of much work that has been carried out in the area of strategic decision-making especially during the last two decades, we still know little about strategic decision-making process and factors affecting it.

This chapter provides a background for the design of this study and for the analysis of results. What follows is a review of the past theoretical and empirical research that focus on the area of research problem and also demonstrates a familiarity with the immediate and parent discipline/field, related to this present study. The chapter is divided into four sections. The first section briefly describes the evolution of management and decision-making. The second section contains the importance of decision-making and describes the decision-making process and models. The third section examines the strategic decision-making processes, and factors that affect it. And the last section discusses the primary empirical research on the extent of the use of various factors that influence the strategic decision-making processes.

2.2 Evolution of Management and Decision Making

“The study of management is relatively new. Many of the early individuals who study and write about management were practicing managers. They described their own experiences and tried to generalize the principles they believed could be applied in similar situations” (Donnelly et al., 1998)

During its evolution, practitioners and scientists have described management as both an art and a science. As an art, it is considered that management is informed by sensibilities, perceptions, and intuitions. The manager as an artist tries to create new realities and to influence others as he or she enacts the surrounding environment. As a science, an understanding of structures, schedules, systems and power operates management. The manager as a scientist collects and analyzes information, assesses relationship, infers causality, and generates and test hypotheses (Nisbett & Ross, 1980). As Birnbaum (1988) says “Trying to lead without art is usually sterile; trying to lead without science is usually ineffective. Good managers are probably both artists and scientists, and are able to integrate the two ways of thinking and of processing data.”

Decision making, as one of the most important functions of management may be considered both an art and a science, as Carlisle (1979) in his broad discussion regarding decision-making process indicated: Decision making process is conducted by managers in three different ways. Intuitively, based on judgment, or using a more detailed problem-solving process. Making choices based on judgment is primarily an art learned through experience. And using problem-solving methods to arrive at decisions is an analytic process that is scientific in nature and requires considerable skill and knowledge.

2.2.1 The Classical Approach to Decision Making

Decision-making as a science, as reflected in the field of management science is relatively new. Classical (or traditional) viewpoint, also called administrative management theory, started with scientific analysis of work and efficiency (Taylor, 1967) and later dealt with concepts and principles of bureaucratic theory, such as hierarchical structure, authority, procedures, and rationality (Weber, 1983). These concepts were integrated into the administrative functions of planning, organizing, leading and controlling (Fayol, 1987), and describing what managers do and how they act today (Hellriegel & Slocum, 1992).

Traditional management's three branches - scientific, bureaucratic and administrative - still have their proponents, are often written about, and are effectively used in different situations. Hellriegel and Slocum (1989) concluded that, similarities among traditional management regarding decision-making consisted of:

- Conscious rationality,
- Efficiency, and
- Optimization.

2.2.2 The Behavioral Approach to Decision Making

The behavioral approach developed partly because practicing managers found that the ideas of the classical viewpoint did not always achieve total efficiency and workplace harmony. Managers observed that employees did not always behave as indicated by the classical approach. Thus, those who were interested in helping managers for more effective management of people gained the recognition of the behavioral viewpoint that uses the concepts of psychology, sociology, economics and other behavioral sciences to assist managers in understanding human behavior and needs in the work (Donnelly et

al., 1998). The behavioral approach focuses on helping managers deal more effectively with the human element of organization (Hellriegel & Slocum, 1989).

Follett's contributions (1868-1933), to the behavioral viewpoint of management with respect to decision making suggested that; to reduce the possibility of facing a new problem managers may involve workers in solving problems (Follett, 1941).

2.2.3 The Management Science Approach to Decision Making

The management science approach developed from knowledge of teams, which often consisted of statisticians, mathematicians, physicists and other professionals in applying quantitative analysis to military problems, during the World War II. Since the war was over many researchers have attempted in applying this broad interdisciplinary approach to industry studies (Pearce II & Robinson, 1989). Many of the team members continued their research on quantitative approach to managerial decision-making and planning. This approach emphasizes the use of mathematical models in decision making and planning.

Turban and Meredith (1977) defined management science as: “The application of the scientific method to the analysis and solution of managerial decision making problems” (p.5). They also concluded that management science primarily focuses on managerial decision-making, the application of science to decision-making and also the examination of the decision situation from a broad perspective (Turban & Meredith, 1977).

2.2.4 The Systems Approach to Decision Making

Drawing freely from biology, psychology, sociology and information theory, the system approach attempts to view the organization as a single, integrated system of

subsystems. Instead of dealing separately with individual parts of an organization, managers are advised to focus on what role each part plays in the whole organization (Pearce II & Robinson, 1989). The systems view of management represents an approach to solving problems by considering a system's input, transformation process, and output interrelationship (Fahey & Narayanan, 1986). "The system approach views an organization as a group of interrelated parts with a single purpose because the action of one part influences the others, managers cannot deal separately with individual parts, in decision making and solving problems" (Donnelly et al., 1998). Systems analysis has been used primarily in decision-making area of management. It represents one approach to solving problems within the framework of systematic output followed by feedback (Robbins & Decenzo, 1995).

2.2.5 The Contingency Approach to Decision Making

The contingency viewpoint or the situational approach is the most recent school of thought about management. It emphasizes the fact that no one way of managing is best for all situations. It recognizes the possibility of using the other four approaches in managing an organization independently or in combination as the organizational situation requires. The contingency approach encourages managers to use those managerial theories and concepts that are most appropriate for a specific situation and have the best contribution to environmental variables (Tosi & Slocum, 1984). The contingency approach is the foremost approach to management today (Luthans, 1973). Managers at any level should consider the three key contingency variables of external environment, technology, and people, before making any decision (Hellriegel & Slocum, 1992).

We can, therefore, conclude that managers can differentiate among the four

perspectives of management. Each of them has its proponents, and obviously can positively respond to managerial aspects if they are applied in suitable environment and situation. However, in spite of a variety of these viewpoints there are similarities among them with respect to decision-making.

- All four approaches emphasize on managerial decision-making effectiveness, but in different applications and perspectives.
- The classical approach focuses on the task of managing work and organization.
- The behavioral approach focuses on the task of managing people.
- The management science approach focuses on the task of managing production and operations.
- The system approach attempts to focus on the tasks of managing work and organization, managing people, and managing production and operation simultaneously (Donnelly et al., 1998). Managing work and organization may be considered as structured decision-making, managing people is more considered to be behavioral decision-making, managing production and operation can be considered as technical decision-making and finally system approach may be considered as analytical decision-making.

2.3 Importance of Decision Making

“Decision-making is an integral part of the management of any organization. More than anything else, competence in this activity differentiates the manager from the non-manager and, more importantly, the good manager from the mediocre manager” (Harrison, 1975). Simon (1977) defined decision-making as a process synonymous with the whole management. In reality, managers must make decisions while performing managerial functions; planning, organizing, staffing, leading, and

controlling. Therefore to be a good planner, organizer, staffer, leader and controller, a manager must first be a good decision maker (Rue & Bayrs, 1986).

Decision-making is so important that none of the managerial functions can be performed without it (Trewatha & Newport, 1982). They argued that for management purpose, decisions are obviously required in planning, organizing, actuating and controlling. However, some authors believed that, decision-making is only one of the tasks of an executive; it usually takes time but a small fraction of manager's time (Drucker, 1967). Plunkett and Attner (1994) suggested that, decision-making is an important part of managers' job. A manager makes decisions constantly while performing managerial functions. But none of his activities is more important than making wise decision (Newman & Warren, 1977).

We can, therefore, conclude that 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 & Lambert, 1998), short-range or long-range (Pearce & Robinson, 1985), flexible or inflexible (Sharfman & 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 II & Robinson (1989) indicated that decision-making is inevitable, because to explicitly avoid making a decision is in itself to make a decision. Thus making decisions is the most important job of any manager or executive (Hammond et al., 1998). To be effective in the highly competitive environment of today, managers in any organization need to devote a significant amount of skill, knowledge and attention to managerial decision-making.

The preceding discussion illustrates three important themes in managing an organization: (1) the link that exists between the success of an organization and the quality of its managerial functions, (2) the link that exists between success of the

managerial functions and managerial decision-making outcomes, and (3) the third theme is related to the first two, attempts to link managerial decisions outcomes to knowledge and ability of managers in making a decision.

Many managerial researches in the past several decades, especially in the early 80's, have investigated and written about managerial decision-making from a variety of dimensions and perspectives (e.g. Argyris, 1976; Cohen et al., 1972; Hickson et al., 1986; Mintzberg et al., 1976; Simon, 1957; Werhrich & Koontz, 1993; Kim & Mauborgne, 1998). In spite of this ongoing attention, the subject of decision-making is still in a contradictory and controversial phase with theoretical dilemmas. Harrison (1999) believed that part of the problem is derived from the multidisciplinary nature of the decision-making (e.g. psychology, economics, politics, sociology and mathematics which all contribute their own perspectives). The problem can be more complicated by differentiating decision maker into individual, group, multi-group or organizational (Kriger & Barnes, 1992). Figure 2.1 shows the multidisciplinary nature of decision-making.

Source:

2.4 Definition of a Decision

In the Webster dictionary a decision is described as a conclusion arrived at after careful consideration. By a decision we transfer from internal to external action (Lapin, 1994). Decision is defined as a moment in an ongoing process of evaluating alternatives related to a goal, at which the expectation of decision maker with regard to a particular course of action impels him to make a selection (Harrison, 1981). Decision is an event that occurs (Carlisle, 1979), a conscious choice to behave or to think in a particular way in a special situation (Duncan, 1973).

2.5 Definition of Decision-making

Decision-making is often referred to as the heart of the management process (Mann, 1976). “Decision-making is the process of thought and deliberation that leads to a decision” (Qlueck, 1977). It is a dynamic process (Harrison, 1975), which indicates that a problem exists, thus the best courses of action must be selected and implemented (Gass, 1985). Decision-making is a conscious process, involving both individual and social phenomena (Shull et al., 1970). It is the right of choosing a course of action from among a number of alternatives.

Many literature viewed decision-making as the process of choosing among alternative courses of action for the purpose of solving a problem or attaining better situation regarding the opportunities that exist (e.g. Carlisle, 1979; Stoner, 1982; Trewatha & Newport, 1982; Bedeian, 1986; Plunkett & Attner, 1994; Turban, 1995; Harrison, 1999). Results of these definitions and discussions lead to the following conclusions:

- Most of the definitions of decision-making are very similar to each other.
- The decision-maker has several alternatives for evaluation and selection. Thus, if there is only one choice the manager is not actually involved in decision-making.

- Decision-making involves conscious choices and acts.
- Decision-making is aimed at some specific goal(s).
- Managers must constantly make decisions even if they are not willing to.
- Decision making like any other organizational activity does not take place in a vacuum (Kreitner, 1995).

2.6 The Decision-making Process

Decisions are means of achieving predetermined goal or goals (ends). Every decision is an outcome of a dynamic process. Harrison (1999) suggested that decision-making is a dynamic function rather than a static action. It is a sequential process. However, managers in making a decision may apply different processes. Several varieties of these processes have been recognized and suggested by many researchers (e.g. Bross, 1953; Druker, 1956; Simon, 1965; Newman, 1971; Mintzberg et al., 1976; Archer, 1980; Reitz & Jewell, 1985).

Since Simon (1976) questioned the validity of the rational model of decision-making, many theorists and researchers have been trying to define, and develop feasible decision-making processes that can be applied in real life. There are numerous approaches to the decision-making process and which is best, depends on the nature of the problem, the availability of resources, the cost, decision-maker characteristics, time pressure and others factors (Donnelly et al., 1998). Decision-making process has emerged as one of the most active areas of current management researches. In recent years, researchers concerned with decision-making process have investigated a range of process antecedents, characteristics, and have tested a profusion of research hypotheses on aspects of the decision process and factors that may affect this process (Rajagopalan et al., 1993).

Archer (1980) argued that the following objectives of decision-making that were presented by Barnard in Princeton University in 1936 might be the groundwork for decision-making processes:

- To ascertain the truth,
- To determine a course of action, and
- To persuade.

According to Archer (1980) Barnard's idea was ignored, and likewise little attention was paid to Bross's (1953) decision-making process, which was composed of the following:

1. Responding to conditions in the environment,
2. Determining mutually exclusive courses of actions, and
3. Selecting a course of action to achieve a specific purpose.

McDonald (1955) raised the question that was whether managerial decision-making is an unconscious and intuitive art form, or a scientific, conscious, rational, and systematic process? To answer this question, Drucker (1956) in his article "How to make a business decision" defined, the decision-making process as a rational and systematic process consisting of four steps (Archer, 1980). However decision-making can be considered both an art and a science.

The impact of the two articles by Mc Donald and Drucker was manipulated in such a way that, suddenly many researchers tried to substantiate the existence of a decision-making process. These researches and investigations led to Simon (1965) contribution to decision-making theory. He suggested three distinct but related phases in the decision-making process (Archer, 1980).

1. The intelligence phase,
2. The design phase, and

3. The choice phase.

Newman (1971) suggested a five-step decision-making process consisting of:

- Recognition of a situation that requires a decision,
- Identification and development of alternative courses of action,
- Evaluation of the alternatives,
- Choice of one of the alternatives, and
- Implementation of the selected course of action.

For the past few decades, researchers have attempted to model the strategic decision process and identify the major types or categories of strategic decisions. Mintzberg et al. (1976) provided an early attempt at modeling the process and identified three main phases as:

1. The identification phase: opportunities, problem, and crises are recognized and relevant information is collected and problems are more clearly identified,
2. The development phase: alternative solutions to problems are generated and modified, and
3. The selection phase: alternatives are analyzed and scanned, and an alternative is chosen.

Cray et al. (1991) suggested three types of decision-making processes: fluid, constricted, and sporadic. A fluid decision process is one that is steady-paced, formally channelled, and speedy. A constricted process is one that is narrowly channelled and is limited in terms of obtaining information and participation in the decision-making. And finally sporadic decision-making processes tend to take longer than others do and involve relatively more informal interactions along the way and it is spasmodic and protracted. Table 2.1 summarizes the different decision-making processes and methods reviewed by Archer (1980) and appended.

Table 2.1 Comparison of Decision-Making Processes

Barnard 1936	Bross 1953	Drucker 1954	Simon 1965	Newman 1971	The Systems Approach	Operations Research Approach	The Scientific Method
	Step 1 : Biological and cultural response to environmental condition		Phase 1 : Intelligence (finding conditions calling for a solution)		Step 1: Select the problem		Phase 1: observation
		Step 1: Define the problem		Step 1: Recognize a situation that calls for decision action	Step 2: Define the problem- quantify when possible	Step 1: Define the problem	Phase 2; Formulation of the problem
		Step 2: Define the expectations					Phase 3: State research objectives
Purpose 1: Ascertain the truth					Step 3: Determine causal relationship (facts for solutions)	Step 2: Determine variables and factors affecting the problem	Phase 4: Determine causal relationships
	Step 2: Determine mutually exclusive or alternative courses of action	Step 3: Develop alternative solutions.	Phase 2: Design (inventing, developing and analyzing courses of action)	Step 2: Identify and develop alternative courses of action	Step 4: Determine tentative alternatives for solution	Step 3: Develop alternative solutions	Phase 5: formulate hypotheses
							Phase 6: State research methodology
				Step 3: Evaluate alternatives	Step 5: Test potential solutions	Step 4: Analyze alternatives	Phase 7: Test the hypotheses
Purpose 2: determine a course of action	Step 3: Select a course of action to achieve some specific purpose		Phase 3: Choice (select a course of action)	Step 4: Choose one of the alternatives		Steps 5: Select optimum solution	Phase 8: Formulate conclusions
Purpose 3: Persuade		Step 4: Know what to do with the decision after it is reached		Step 5: Implement the selected course of action	Step 6: Describe and document procedure for further evaluation	Step 6: Recommend action and implement	Phase 9: Communicate findings