



DOI: 10.18427/iri-2017-0068

Which Factors have an Impact on Managerial Decision-Making Process? An Integrated Framework

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Abstract. *One of the most important functions of management is decision-making. Major of decisions is made by the management department in organizations. Although it is misleading to see decisions as single and isolated, it reflects past behavior and future outcomes. In this case, it is necessary to see decision-making as a process consisting of various stages. A manager is the last decision maker in the process. When managers make decision, they have to consider the purpose of business so it has a high impact on all the company's plans of activities and results. Aims of this article are to give an overview of the current status of the research on the managerial decision-making process and find which factors have an impact on this process and to make integrated framework. The article which related to decision-making process was examined as a result of the literature review was conducted. In conclusion of the literature research, factors which affect the process of the managerial decision-making are classified as three dimensions; personal, psychological and environmental factor.*

Keywords: decision, decision-making process, environmental factor, personal psychological factor, Managerial Information System (MIS)

Introduction

Decisions are the essence of management and active in all the company's plans of activities and results. The study of the decision-making process is getting more and more important because the effectiveness of the activities taking place in business depends on the way decisions are largely designed and implemented. When we look at the nature of decision-making, the constant and always present factor is the decision maker. The fact that information gathering and evaluation systems are highly developed will mean nothing to an unrecognized problem or an undetected information need. The decision-making process depends entirely on people. It is a manager's central work, all other activities being

conducted to ensure correct decisions or if the decision was already taken, to implement and monitor its effectiveness. Managers are constantly required to evaluate alternatives and make decisions regarding a wide range of matters (Panzaru, 2010).

In this study, different decision-making processes were evaluated within the framework of the integrated framework and it was clarified that the factors affecting the administrative decision-making processes were personal, environmental and psychological. At the same time, it was determined that management information systems should be involved in the administrative decision-making process.

Decision-Making Process

Decisions play a special role in the company's management. There are several definitions of the decision in the literature. Massie (1971) defined it as involving a choice between alternatives; if there are no alternatives, then no decisions are required or can be made. A decision is purposive, to attain some objective; that is, there is a reason for making it.

Decision making is a course of action consciously chosen from available alternatives for the purpose of achieving the desired result. The process of decision-making is one of the most complex mechanisms of human thinking, as various factors and courses of action intervene in it, with different results. It is about making choices by identifying a decision, gathering information and assessing alternative solutions. Orasanu and Connolly (1993) defined it as a series of cognitive operations performed consciously, which include the elements from the environment in a specific time and place. Another different definition was given by Corcoran-Perry (1997): Decision-making is the interaction between a problem that needs to be solved and a person who wishes to solve it within a specific environment.

There are several steps that must be followed in order to arrive at a decision: Firstly, determine the goals to be achieved, secondly, generate alternatives that lead to attaining the proposed goals, thirdly, evaluate whether these alternatives meet one's expectations and, lastly, select the best alternative, the one that implies an efficient global result (Halpern, 1997).

There are many decision-making models in the literature. Simple decision-making models involve the steps that participants need to follow when making a decision. Different authors have differentiated the phases of the decision-making process in different ways.

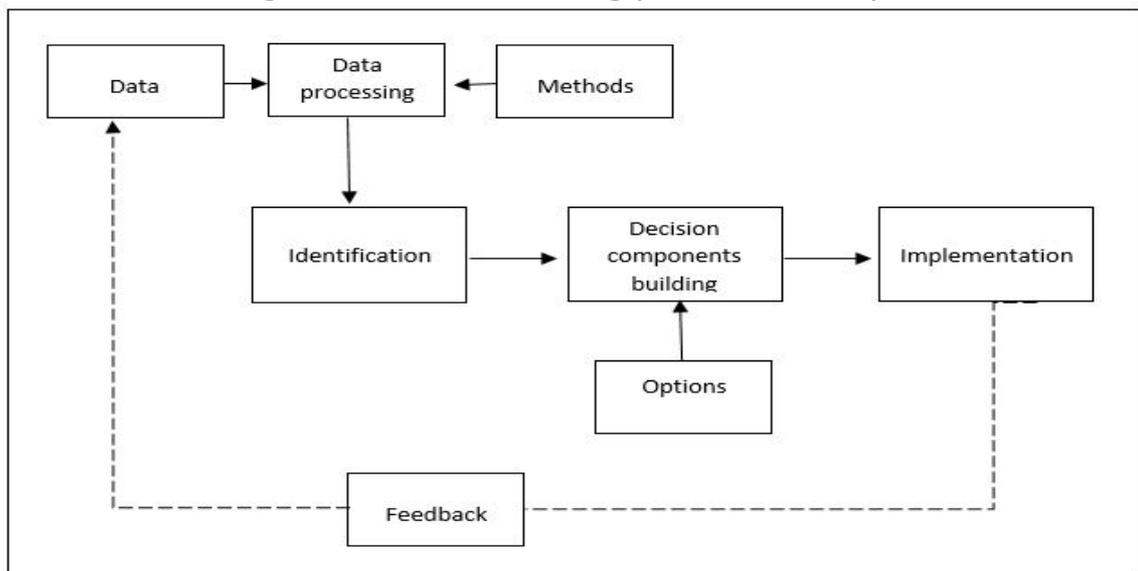
Decision-making processes are almost 3, 5, 7 steps. The basic features of these models are that the first step is to determine the problem or decision. The most important feature that separates the problem solving and decision making are the property of the limits of human rationality.

Simon (1986) developed a model of decision making. The model consisted of three steps, intelligence, design, and choice. In the

intelligence phase, the problem is identified, and the information is collected concerning the problem. This can be a long process, as the decision to be made comes from the information. The design phase develops several possible solutions for the problem. Finally, the choice phase chooses the solution.

One decision-making model was created by Chestnut (2013). According to author the decision-making process includes three stages: First stage is identification, the second stage is building decision components and the third stage is implementation, which is shortly presented in Figure no. 1.

Figure 1. Decision-making process in 3 steps



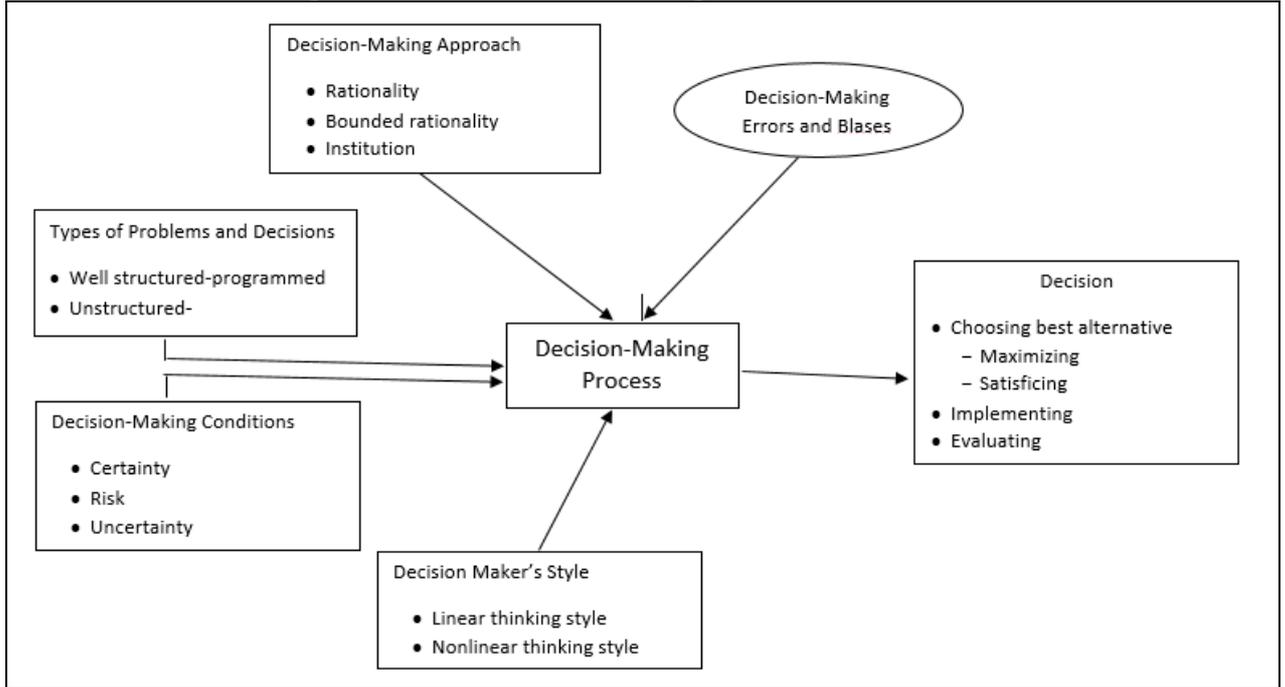
Source: Based on Negulescu (2014).

Identification: In the first stage, the problem is thoroughly analyzed. The manager collects data from the various sources; they apply mathematical and statistical methods to the gathered data and use the results to maintain decision-making.

Decision components building: While presenting an alternative in the second phase, the manager evaluates all possible combinations, constraints, and limitations as a result of every possible decision until they are taken into account. Then statistical and mathematical equations are probed. The result is to be a list of decision options to which successful probabilities are associated.

Implementation: Manager uses the information that gathered and the arguments made while forming the decision to create a plan of implementation. It should be decided what steps need to be taken, in what order, to give the change a solid foundation (Doyle, 2016). In this stage, a support system can be used to collect and analyze data within the organization to implement managerial decision (Negulescu, 2014). Another model of the decision-making process was made by Robbins and Coulter (2012).

Figure 2. Overview of Managerial Decision



Source: Robbins & Coulter (2012).

It is known that making decision is the main duty of the manager. Figure no.2. provides an overview of the managerial decision-making model. Managers want to make the best decision in the interests of the company that evaluates the alternatives. The managerial decision-making process is affected by four factors: the decision-making approach, the type of problem, decision-making conditions, and their decision-making style. In addition, in the decision-making biases refer to the situation in which decision-making shortcuts are inappropriately applied. So certain decision-making errors and biases may impact the process. Each factor plays a role in determining how the manager makes a decision (Robbins & Coulter, 2012).

Factors affecting the managerial decision-making process

The decision reflects a past behavior and results connected with future. Thus making a decision is dealt with as a rational and conscious choosing process which contains several periods. Decision-making is considered as a rational and conscious choice between alternatives, but this process influences a number of factors other than rational regulation. Not only rational regulations but also some objective and subjective factors affect this process.

Personal and Psychological Factors in Managerial Decision Making Process

The most important factor influencing the decision-making process is the personality of the manager. The manager's family background, education, and information can be considered as sub-bases that constitute the personal factor in the decision-making process. However, even when all these sub-structures are almost similar or identical, it is observed that the managers differ among themselves. This is the personality of the decision maker who makes difference (Kurt, 2003).

The cognitive, moral and psychological qualities of people have influenced on the decision process. According to Massie (1971), a decision is defined as involves mental processes at the conscious level, processes which contain important logical aspects and these suggest that decisions should be "rational". However, there are also emotional and sub-conscious factors which may not be consciously expressed and which may make a decision appear to be non-rational to an observer.

According to Onaran (1971) individuals' psychological characteristics such as perception, motivation, comprehension, interpersonal relations, and interactions influence the decision-making process. Perception, such as conceptualization and evaluation, has more impact on the mental components of the decision-making process. Emotion is about the excitement that plays a role in the evaluation of options. Pohankova (2010) stated in her study that the result of decision-making process depends on motivation. Motivation is an important element in any change in the organization and influence of the whole process.

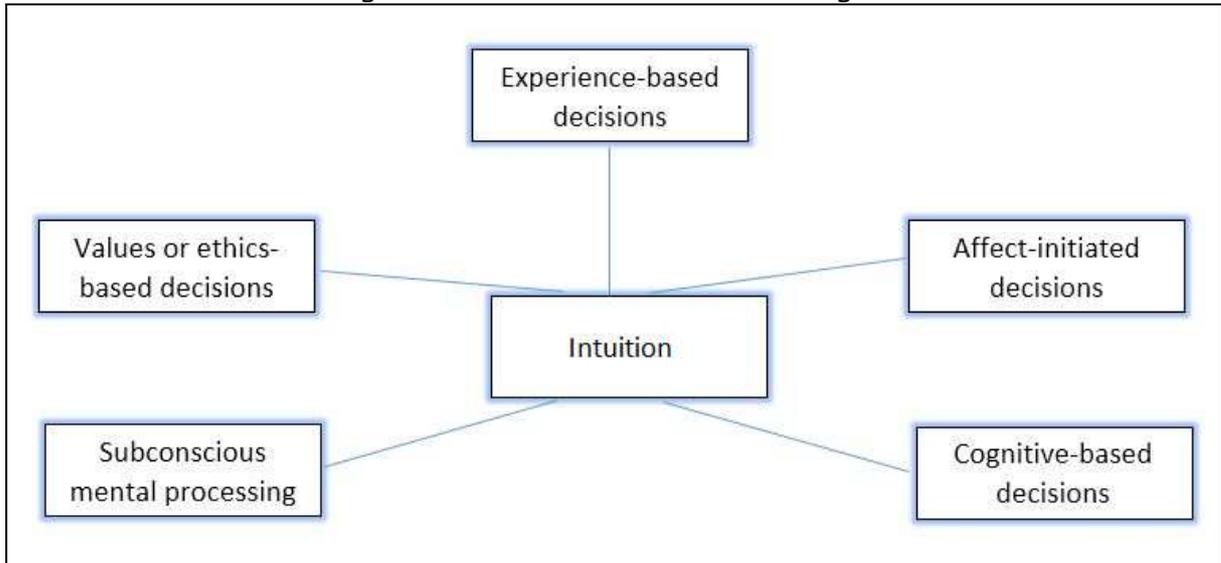
Tekin (2009) emphasized that intelligence, cognitive style, age, experience, the level of knowledge of the manager play a role in the decision-making process. For example; It is seen that managers who are witty, easy to learn, knowledgeable and profound can make decisions more quickly and qualitatively than others.

Öztürk (2009) has analyzed managers who worked in the primary and secondary schools in the center and villages of Giresun city (in Turkey) in his own study. Based on the research result, there is a meaningful relationship between manager's psychological characteristics and manager's decision-making skills competence. In the process of decision-making, managers are affected by their decision-making skills with personal and psychological characteristics.

A manager is making decisions on the basis of experience, feelings, and accumulated judgment. According to reports by Gilgoff (2009), almost half of the surveyed managers were found to use more intuition than operate an official analysis to run their companies.

Burke and Miller (1999) identified five different aspects of intuition in studying managers' decision-making process which is described in Figure no. 3.

Figure 3. Intuitive decision-making



Source: Based on Burke and Miller (1999).

1. Experiences-based decisions- Managers make the decision based on past experiences.
2. Affect-Initiated decisions- Managers make decisions based on feelings or emotions
3. Cognitive-based decisions- Managers make the decision based on skills, knowledge and training.
4. Subconscious mental processing- Managers use data from subconscious mind to help them make decisions.
5. Values or ethics-based decisions – Managers make decisions based on ethical values or culture.

The manager who experienced intense feelings and emotions when making decisions actually achieve higher decision-making performance, especially when they understood their feelings as they were making decisions (Robbins & Coulter, 2012). In many cases, the usual behavior is hidden under the decisions taken. Leaving such behaviors implies that the manager understands the problem well and seeks new options.

Environmental factors

Decision making is a multi-step process and, the environmental conditions also affect the quality of decision-making behavior. Managers should act in the decision-making process, taking environmental factors into consideration. Because, organizations are in constant interaction with their surroundings, and environmental factors influence organizations to a great extent.

The organization has a mutual and continuous relationship with its surroundings in open system model. Managerial decisions making and behaviors should be based on the interaction model among many factors,

both internal and external factors. The manager must have knowledge of the factors that make up the environment for an organization to be successful.

Graham (2004) researched 46 strategic marketing decisions from 32 small businesses. It was six in-depth interviews for developing a theoretical research framework in the decision-making process. It was determined in this study that external contextual factor such as stakeholders, competition, technology, macroeconomic indicators (financial credit, interest rate, inflation), regulatory (political-legal) etc. are strongly impacted upon decision-making processes.

It is necessary for the manager to act in this mode when making the decision for understanding and deciding on the relationships between intra-organizational and non-organizational factors.

According to the system approach, the complex relational model used in organizational decisions is stated in Figure no. 4. (Eren, 2001).

Figure 4. Complex Relational Model Used in Organizational Decisions



Source: Based on Eren (2001).

In the above model, intra-organizational factors significantly affect each other. However, when making decisions about these factors and the mission of the organization, strategies and plans, the manager has to take into consideration the environmental factors, the changes and developments in them, their interrelationships and their mood effects.

In the same way, the organization is directly affected by all kinds of changes and developments in general environmental factors. However, these general environmental factors also span close environmental factors affecting the organization and also affect their behavior.

For example, in periods of economic downturn, customers are affected and stop buying, competitors have difficulty finding new customers, attacking each other's market shares and competition in the industry is getting hotter (Eren, 2001). It has become imperative for the manager to pass and change the decisions according to the ever-changing environments.

The role of Management Information System

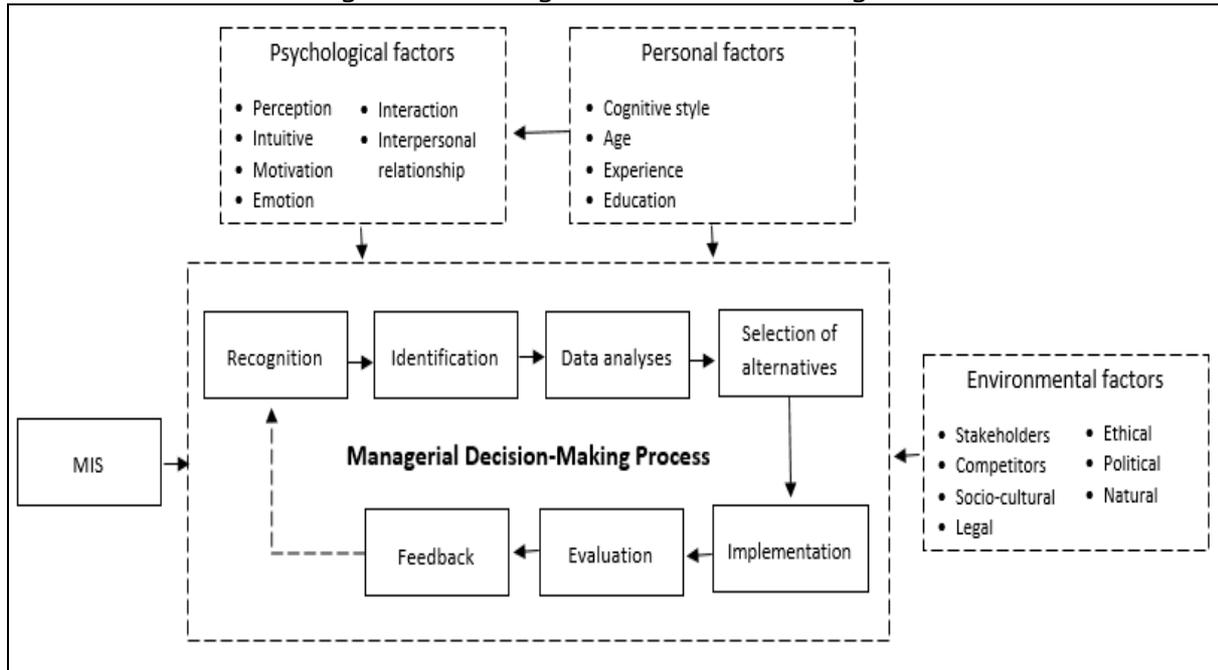
The effectiveness and adequacy of the decisions to be taken in achieving the objectives of the organization are very important. This is concerned with the managers who have to make decisions. The pressure this responsibility creates on the managers affects the decisions taken by the managers in various ways (Can, 1992).

Decision making involves various processes which are influenced by technology. One of the technological tools is Management Information Systems (MIS). It provides information to help managers control operations and monitor their performance in the form of scheduled reports based on summarized data obtained from the data processing system. The role of MIS is described and analyzed capability of decision making. According to Nowduri (2011), MIS helps to the manager for quick access to information. It also provides to compare strategic goals with a practical decision, avoiding erratic choice. Manager saves money and time that would have been otherwise wasted by that person. MIS also ensures a sense of how their decision fit the organizational strategy. As a result, MIS has a very important role in managerial decision-making process.

Conclusion

In this paper, we traced the decision- making process and determined which factors effect on the managerial decision-making process. The integrated framework of the managerial decision-making process has been made as a result of the literature review.

Figure 5. Managerial Decision Making Process



The process consists of eight stages (Figure no. 5.). In the first stage, the manager recognizes and defines the problems or opportunity. After identification of the problem, the manager should collect and process data and analyze underlying causal factors with the decision situation. In the selection of alternatives step, the manager develops alternative solutions for solving the problem. The manager determines the criteria that are appropriate for the selection of alternatives. After making the decision, the manager should put the decision into action and implement it. In evaluation stage, the manager evaluates the outcome of the decision and looks whether there is anything that should be learned and then correct in future decision-making. It is gathering information about effectiveness and likes the control function of the decision-making process in feedback. The manager should find out whether the decision was effective or not. In this situation, feedback helps to improve the quality of future decisions.

As it seen in the figure no. 5. MIS affect to managerial decision-making process. It plays the crucial role of providing a wide range of streamlined options from which decision-makers are able to make their preferred choices and this ensures that whatever choices are made by decision makers, the outcome, more often than not, becomes positive. This, as a matter of fact, is the reason why many managers tend to prefer using MIS tools when making tough business choices.

In integrated framework it is obvious that personal, psychological and environmental factors also affect the process. In the decision-making process, the personality and psychology of the manager are the factors to be taken into consideration, and this depends on the behavior in the sense of decision-making alone. Personal factors such as cognitive style, age, experience, education, level of knowledge of the manager play a role in

the decision-making process. According to the information obtained in the research result the cognitive, moral and psychological qualities of people such as perception, intuitive, motivation, comprehension, emotion, interpersonal relations, and interactions have influenced on the managerial decision-making process. Based on literature review there is the relationship between personal and psychological factors. For instance, there is a linear relationship between age as a personal factor and emotion as a psychological factor. The older manager who has intense feelings and emotions while making decisions gets higher decision-making performance.

Moreover, today's changing environment, the complex process of decision-making becomes more difficult. Organizations are constantly interacting with their environment. With changing environmental conditions, companies' decision-making processes become more complex. Based on literature review environmental factors such as stakeholders, competition, technology, socio-cultural, legal, political and natural in the global or national context also affect manager decision-making.

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