



The Effects of Environmental and Organizational Factors in the Decision Making of Hospital Administrators

Mohanad Badour¹, Dilaver Tengilimoglu² and Aykut Ekiyor^{3*}

¹*Institute of Social Sciences, Gazi University, Ankara, Turkey.*

²*Department of Business Administration, Atilim University, Ankara, Turkey.*

³*Department of Healthcare Management, Gazi University, Ankara, Turkey.*

Authors' contributions

This work was carried out in collaboration between all authors. Authors MB, DT and AE designed the study, performed the statistical analysis, wrote the protocol, and wrote the first draft of the manuscript and managed literature searches. Author AE managed the analyses of the study and literature searches. All authors read and approved the final manuscript.

Article Information

DOI: 10.9734/BJAST/2015/18063

Editor(s):

(1) Hui Li, School of Economics and Management, Zhejiang Normal University, China.

Reviewers:

(1) Rajwinder Singh, International Management Institute, Bhubaneswar, Odisha, India.

(2) Anonymous, Mersin University, Turkey.

Complete Peer review History: <http://www.sciencedomain.org/review-history.php?iid=1138&id=5&aid=9322>

Original Research Article

Received 1st April 2015
Accepted 1st May 2015
Published 21st May 2015

ABSTRACT

Study Design: Decision making process involves the best choice among the alternatives. Decision makers come across many problems and take decisions by choosing the suitable alternative. The process of decision making carries great importance in terms of the administrators. The administrators of today make various decisions in the dynamic environment. For these decisions to be rational and accurate, administrators need to have wide and trustable information about the factors that affect the decision making process. In this case, the establishments of today also need to consider the different variables that can affect the decision making process.

Aim: In this study an attempt has been made to study the environmental and organizational factors affecting the decision making process of administrators working in 36 different hospitals in the province of Ankara and how these factors affect the decision making process? Also, an attempt has been made to identify and analyse the potential variables involved in the decision making process.

Methodology: Within the scope of the study, questionnaires have been conducted to a total of 160

*Corresponding author: E-mail: AYKUTEKIYOR1974@YAHOO.COM;

administrators from 36 hospitals. Out of these administrators, 30 are senior administrators (e.g. general director, deputy director general) and 130 are unit administrators (e.g. chief physician, head nurse, administrators of financial and administrative affairs). A statistical software program has been used in the analysis of the data obtained. A t test has been used to state the decision making process and the environmental and organizational factors affecting this process. The reliability of the factors has been determined according to the Cronbach Alfa coefficient and the relationship between the factors has been conducted through a correlation analysis. Also, regression analysis has been used in order to test the research hypotheses.

Conclusion: At the end of the study, it has been concluded that there is a meaningful relationship between decision making and environmental and organizational factors.

Keywords: Hospital; decision making process; administrative decision; organizational and environmental factors; Turkey.

1. INTRODUCTION

The rapidly changing life and working conditions which are getting more difficult day by day force people, corporation and establishments to be good and successful in their fields. Uncertainties, new situations, developments and the diversity of options require corporations and individuals to make healthy and accurate decisions in order for them to survive, gain competitive advantage and sustain this advantage.

The traditional path to be followed during the process of a decision is gathering data related to the decision process, analyzing intuitionally and the result is achieved. However, modern people and corporations need to make more rational decisions. In order to make successful decisions, alternative behavior methods are evaluated with the support of scientific decision making techniques in many situations. Decision problems encountered; the necessity to evaluate more than one factor and objective together, the objectives generally conflicting one another, difficulties in the measuring achievement degrees, uncertainties of the decision situations, the inclusion of more than one actor in the decision process, the results of the decision effecting a lot of people and the vital importance of these results. With this, the situation gets more complicated.

Many decisions are made in corporations every day and the decisions made in different levels of the corporation carry a different importance. These decisions can be related to a variety of topics such as changes in the external environment, changes in the customer demands and personnel recruitment and can be decided upon individually or as a result of group discussions.

Administrators need to consider the available resources, their elbowroom and how it will affect the other actors in the system. Successful decisions may not always be made in a corporation with insufficient resources. The efficiency of the decisions is related with providing the desired results. The most important subject in decision making can be stated as whether the individual or group sees itself at the position of decision making. In many cases, the person to make the decisions may not be aware of this. Or on the contrary, those who are not meant to make decisions may act as decision makers. Sometimes decision making follows a gradual process. Groups facilitate the decision making of the administration by informing the senior administration of their decisions. Decision making cannot be simply determining the options and choosing one of them. It is a process in which the topics are determined based on research at the right place, right position, and right time. Choosing one of the options in decision making is not simple either. The process of choosing may be abandoned at any moment, may require the persuasion of the other members, may be temporary and experimental, towards forcing, preliminary and to determine the reactions of the personnel. As Kocel [1] has emphasized, it should not be ignored that corporations are responsible of the correct direction of the resources used in the good or service production process and that corporations demonstrate a rather complicated structure within the cycle of information-decision-application.

Decisions made in the health sector carry a vital value in terms of both the corporation and the environment. When healthcare organizations are analyzed, the complicity of their structures and the height of the level of their expertise appear as the primary characteristics of these

organizations. The healthcare system today is improving according to the expectations of the stakeholders and the principles of being a social state. In order for expectations to be met, continuously developing technology and scientific accumulation need to advance productively and be distributed to fields such as protecting the human health, then treating it and rehabilitating it rapidly and accurately. Those who have the responsibility of administrating the healthcare system need to be able to use the innovations brought by the information age, act rapidly in order to meet the new expectations and make accurate decisions.

This paper has been classified into six sections. The first section focuses on introduction followed by literature survey, research objectives, research methodology, discussion and conclusion. The literature survey covers all the relevant literature on environmental and organizational factors in the decision making and hospital administration. The aim of the study is mentioned in the research objectives and the research methodology focuses on the research type and application of the data. The findings and results are given in the discussion and it is ended with the conclusion.

2. LITERATURE SURVEY

In this section the literature is given in administrative decision making, the decision making process and environmental factors and the decision making process and organizational factors.

2.1 Administrative Decision Making

Individuals encounter a number of problems during the decision making process of their personal and professional lives [2]. These problems may be either simple or rather complicated affected by many factors. When the decision making process is evaluated in terms of the administrative individuals, all administrators are also decision makers. Administrators need to be closely interested in the decision process in order to succeed in the administration process [3]. The productivity of administrators is measured through the accurate decisions they made in the past. These decisions, which are characterized as accurate, depend on their skills to employ the correct employees to assist them with the solving of the problems or their ability in placing the available personnel in the correct positions [4]. The selection of topics such as

which objectives of the administrative activities will be prioritized, which opportunities will be created, which resources will be allocated under which principles and who is going to be in charge of the execution of the decisions made are all characterized as decisions [5].

As a concept of the corporate administration, decision states a choice. A selection made by an administrator or any individual on any topic is a "decision". With this understanding; there is a close relationship between selection, preference, taking up a position, internalizing and decision making. The path taken as an expedience or a solution by the administrator on a topic after careful consideration states the decision of the administrator [1]. Under these circumstances, we can define decision making simply as the selection of one of the options. The point to consider here is the fact that making a selection is not the large part of decision making but only a portion of it [6].

The success of corporations is in the hands of administrators. In reality, there are many factors that may cause a corporation to be unsuccessful. The most important of these factors is the one related to the decision making skills of the administrators, since a corporation is run by an administrator. If the administration makes poor decisions or is tentative about making decisions, this leaves negative effects on the motivation of the other employees. In other words, wrong decisions and wrong activities may hinder the corporation to achieve its objectives since it will cause these wrong decisions to be carried out by the wrong people. The ineffective use of insufficient resources causes productivity to drop [7].

It is impossible to completely know the future results of an alternative performed by the administrator. The term future is the key to the decision making process. Because organizations and their environments change continuously, the future results of decisions performed cannot be predicted perfectly [8]. In general, which decision is to be made is explained under three main titles. These take place in literature as making decisions under the known conditions, making decisions under risk, and making decisions under uncertainties. Each one of these situations depends on the degree of predictability of the future results [9].

No matter which type, a decision represents a result. In order for the topic of decision to be

analyzed, the analysis of only the selection representing the result or the analysis of the preference is not going to be sufficient. It is necessary to see the whole of the decision making process. The decision making process consists of seven steps: (1) the diagnosis and definition of the problem, (2) determination of the objectives, (3) search of the alternative solutions, (4) comparison and evaluation of the alternative solutions, (5) selecting among alternative solutions, (6) the application of the alternative selected, (7) observation and control [10].

The aim of this process ensures the judgments related to the degree of the achievement to be unbiased and solid. Through this, the objectives of organizations are closer. These judgments should not be used as praise or criticism, but a means to rearrange [11].

2.2 The Decision Making Process and Environmental Factors

The decision making process is affected by the organization's environment. Various powers and establishments around the organization limit organizational behavior and controls the results of the decisions made. These powers or establishments may be customers, adversaries, government agencies, syndicates, and parties of the agreement or the general socio-cultural structure of societies [12].

Kanter [13] states that organizational decisions are limited or controlled by the organizations own activities, previous experiences of the members, their physical and mental characteristics, the social, politic and economic environments of the organization and its members. Similarly, Feldman [14] suggests that strategic decisions are under the influence of the geography where the organization is located, the size and age of the organization, the technological level and variety of the place where operated, branch of operation and the attitude and experience of the individual making the decision.

Environment encompasses everything around the organization such as customers, providers, geographical, social, economic and political factors etc. There are many dimensions of the environments in which organizations take place. Some of these are standard of the performance, channels of communication, complicity, uncertainty and heterogeneity.

In general, environmental complicity is related to the number and variety of environmental

elements effecting the organization. Environmental complicity is also defined as the content of the environment, and reflects the reason why they are similar in terms of the organizational effects of the environmental elements considered to be significant [15]. This term indicates the degree of the information obtained by the organization about the environmental developments, their reasons, results, their effects on the organization and the effects of environmental factors on the behavior of the organizational activities [16].

Environmental complicity is analyzed under two sub-dimensions referred to as complicity and the pace of change. Uncertainty is defined as the difference between the information required to conduct a responsibility and the information about that responsibility. In order to decrease environmental uncertainty, it is necessary to obtain as much accurate information as possible from the environment [14].

Lawrence and Lorsch [17] state that environmental uncertainty consists of three components: (1) lack of open information, (2) the presence of a long time gap in order to obtain a definite feedback and (3) the general uncertainty of causality relations. Duncan [18] also suggests three components in defining environmental uncertainty. He lists these as (1) lack of information related to environmental factors, (2) not knowing the result of a decision in the sense of what the outcomes can be in case of an incorrect decision and (3) not knowing how environmental factors can affect the success of the organization. Both the stated studies have focused on the term of perceived environmental uncertainty and have attempted to measure the perceptions of administrators on environmental uncertainty. In these measurements, it seems that it is more common among the organization that perceived uncertainty is more a determinant than true uncertainty in the process of making decisions and establishing strategies [19]. For example, according to Schnieder and DeMeyer [20], the perceived environmental uncertainty affects strategic behavior. As it is also emphasized by Downey and Slocum [21], environment presents a series of stimulant. When individuals perceive these stimulants, they set meanings to them and thus provide them with a mean value. Another researcher [22] who bases environmental uncertainty on the perceptions of individuals defines uncertainty as the difficulty an individual experiences whilst deciding on which actions are the most

appropriate or which option may bring about the best results. According to this view, it is very difficult for an individual who perceives environment as uncertain to make decisions when faced with a situation where there are two or more options. Jurkovic [23] also relates uncertainty with situations where the organization is not able to predict the upcoming events, the amount of information to process is too much or the organization not being able to predict the outcomes of an action. Leblebici and Salancik [24] on the other hand do not relate uncertainty with only the environment but also with decision situations. They emphasize that uncertainty also occurs in decision situations where there is no consensus or cause-effect relations or priorities apart from environmental conditions such as variety and versatility.

The environment's pace of change or as it is sometimes referred to as the dimension of stability or dynamism is related to whether environmental factors demonstrate any changes in a short time [25]. Duncan [26] also accepts that the dimension of dynamism consists of two sub-dimensions and that one of these is the speed of change; however, he suggests an additional secondary sub-dimension. The second sub-dimension suggested by the author is about the frequency of including a new and different environmental factor to the decision making process by decision makers.

The organization may encounter difficulty in adapting to change or the results of the change in an environment where the factors or components establishing the environment are in constant change [19]. According to the findings of a study conducted by Keats and Hitt [27] suggest that highly unstable environments are related to low level of classification and variety.

While Halebian and Finkelstein [28] state that when the speed of environmental change or the level of uncertainty increases, the need of acquiring information also increases, causing the decision making process to become more difficult; Eisenhardt [29] states that many administrators can experience difficulty in making important strategic decisions in an environment where the speed of change is uncertain. However, in their study, Eisenhardt and Bourgeois [30] suggest that there is a pressure to make fast and high quality decisions in environments where high speed changes are encountered.

Speed of change may require new technologies - which are the propellants of an environment [31], new business models and the desire of possessing the advantage of being the first [32], and rapid decision making [33].

Positive environmentalism which can also be referred to as environmental capacity is one of the important environmental determinants explaining the attitude and results of decision making [34,35]. Studies about positive environmentalism suggest that this environmental element has significant effects on establishing the organizational strategies, determining the organizational structure [36,37] and the decision making process and speed [33].

Yasai-Ardekani [37] suggests that having abundant amount of resources enough to prevent the need to act fast will decrease the motivation to make rapid decisions, and therefore high level environmental richness may decrease the speed in decision making. However, Baum and Wally [33] state that decision making administrators who have low motivation on being first will make rapid decisions because they will focus on the decisions they will make since they are less concerned with time consuming problems such as standing solid and finding resources. Decision making in environments with low environmental capacity is more difficult than environments with high level of wealth because the risk and price of making incorrect decisions is higher [35]. Therefore, decision makers may lengthen the decision making process due to the pressure and stress they feel with the effects of high risk factor in environments with low capacity.

2.3 The Decision Making Process and Organizational Factors

The term organization can be used in different meanings. The first means a structure, a society of preplanned relations. Its second meaning states the process of establishing this structure, series of activities and organizing. Sometimes a third meaning is also added to the term organization. Here, organization is the name given to a social system between different elements in the society [3]. The elements effective in the establishing of the organization structure of any organization can be categorized under two primary titles; structural and contextual. Structural elements are related to the internal characteristics of the organization. These elements establish a scale and basis to evaluate

and compare the organization. Contextual elements determine the organizational environment by effecting and shaping the structural elements representing both the organization itself and its environment. Structural elements may be stated as (1) formalizing, (2) specialization, (3) standardization, (4) hierarchy of authorization, (5) complicity, (6) degree of centralizing, (7) professionalization, (8) personnel ratios, (9) departmentalization. Contextual elements are (1) size of the organization, (2) organization technology, (3) environment, (4) the objective and strategy of the organization. As a result of the factor analysis of scales on structure, Pugh et al. [38] have found that organization structure has four dimensions (1) structuring of the activities consisting of formal and specialization, (2) gathering the authority of centralizing the decision making power in one hand, (3) workflow and (4) the size of supplementary elements.

The in his study Child [39] gathered the three dimensions - other than holding authority in one hand - under one factor he called structuring the activities. Reinman [40] listed the dimensions of an organization's structure as (1) centralization of authority, (2) specialization, (3) stylistic and (4) stated a fourth dimension as the size of personnel or supplementary elements. Innovation, formalization and centralization, which are among the factors effective in the establishing of organization's structure, have been included in the scope of the study.

While innovativeness, which is a derivative of innovation, is accepted as the ability of applying products and processes successfully and innovativeness culture states the organization's cultural values and beliefs about innovation [41]. When innovativeness culture is joined with the other cultural factors, it creates a wide capacity towards innovation and this causes high organizational performance [42]. Organizations with innovativeness culture are open to new ideas. The fact that these organizations are open to innovation directs administrators to produce new products, enter new markets, try new ideas and thus take risks, search for new opportunities and create changes in their strategy and structures. Administrators of successful organizations have generally internalized being innovative and have successfully made it a part of the business [43].

Formalization, which is another element of organizational structure, refers to the weight

given to following specific principle and methods while conducting business. In other words, it also means the bureaucratization of the way of doing business. Generally speaking, using variables such as determined positions, legitimate policies, law and regulations, job descriptions, organization plans, strategies, cost and quality control, cause formalization [44]. Mintzberg [45] has found that organizations that have formalized in operational fields tend to formalize in other fields as well. Formalization causes reactive attitudes rather than proactive attitudes [46]. For example, March [47] states that they will not be detected or they can be ignored if decision stimulants are not defined in the stylistic system.

Centralization is the gathering of the right to decision making on organizational administration, planning, policies and strategy development in the hands of the organization's senior staff [8]. Wally and Baum [48] define centralization as gathering the authority of decision making within the organization in one hand. A centralized organization means that authority is less distributed to the subordinates by senior administrators. The most significant method of coordinating organizational decision making is high degree of centralization, which requires high level of perceptual capacity among administrators with authority [46]. Mintzberg [45] suggests that an average person does not possess the information or perceptual capacity to fully comprehend the decisions an organization faces. That is why the decision making process in a centralized organization is conducted by a small group of senior administrators while the strategic process activities are supervised by one person [46]. Wally and Baum [48] indicate that organizations gathering power in one center can make decisions rapidly and easily. Because a limited number of people participate in the decision making process in these sorts of organizations, sharing information and coming to a consensus decreases. If the chance of dispute - which slows the process - is low, decision maker(s) can rapidly pass the phase of establishing and evaluating information. Because these people depend less on counseling and reconciliation, they can make their selections rapidly. Similarly, March and Olsen [49] suggest that the process will take time if the decision making process includes a large number of people. Hickson et al [50] also state that the most important factor causing delays in the decision making process is the contradiction or resistance of effective people taking part in the process. On the other hand, the

research results of Eisenhardt [29] support the view that centralized power expedites the decision making process. Related to the research results, Eisenhardt [29] states that people postpone their decisions due to anxiety, lack of information and lack of time.

3. RESEARCH OBJECTIVE

In this study an attempt has been made to study the environmental and organizational factors affecting the decision making process of administrators working in 36 different hospitals in the city of Ankara and how these factors affect the decision making process? Also, an attempt has been made to identify and analyse the potential variables involved in the decision making process. Within this scope, the problem sentence of the research has been designed as; "How administrators in hospitals make decisions and how effective organizational and environmental factors are in the decision making process?"

4. RESEARCH METHODOLOGY

A descriptive research method has been used in the study. A questionnaire has been selected as the means of collecting data. The questionnaire has been conducted with 36 administrators from public and private hospitals operating in the city of Ankara. The target population of the study consists of senior administrators and administrators of functional units. Not only the senior administrators but also functional units, to a certain extent, take place in the decision making process of hospitals and other establishments. Therefore, both senior administrators (board chairman, board members, CEO, general manager and deputy general manager) and directors (such as directors of financial and administrative services) of functional units (department) make up the target population of the research.

The questionnaire has been applied to a total of 160 administrators from 36 hospitals, 30 of which are senior administrators (such as general managers and deputy general managers) and 130 are unit administrators (chief physician, head nurse, directors of financial and administrative services).

In the analysis of the obtained data, a statistical software has been used. A t test has been used to state the difference between female and male administrators and the decision making process

and the environmental and organizational factors affecting this process. The reliability of the factors has been determined according to the Cronbach Alfa coefficient and the relationship between the factors has been conducted through a correlation analysis.

The hypotheses of the research have been determined as the following:

- H1a: The speed of environmental change affects the decision making process of hospital administrators.
- H1b: Environmental competition affects the decision making process of hospital administrators.
- H1c: Environmental capacity affects the decision making process of hospital administrators.
- H2a: High level of innovativeness affects the decision making process of hospital administrators.
- H2b: High level of formalization affects the decision making process of hospital administrators.
- H2c: High level of participation affects the decision making process of hospital administrators.
- H2d: High level of autonomy affects the decision making process of hospital administrators.
- H3a: Environmental factors affect the decision making process of hospital administrators.
- H3b: Organization factors affect the decision making process of hospital administrators.

Regression analysis has been used in order to test the research hypotheses.

5. DISCUSSION OF RESULTS

A reliability analysis has been conducted in order to determine the consistency of the variables determined in the study. Reliability can be defined as the internal consistency of a measurement considering the average relationship between the questions within a variable. In literature, Cronbach Alfa coefficient 0.70 has been accepted to be sufficient for internal reliability in social sciences [33]. The Cronbach Alfa coefficient has been determined to be 0.768.

When the demographical characteristics of the participants are to be analyzed; 36.9% are female and 63.1% are males. Of these, 18.8%

are senior administrators, 80.2% are unit administrators. When the age distribution of administrators is considered; 37.5% are 36-45, 29.4% are 46-55, 14.4% are 56-65, 13.8% are 25-35 and 5.0% are 65 and above. It is understood from the analysis result that a majority (61.2%) of administrators are university graduates. Duration of experience of administrators is between 6-10 (35.0%) and 11-15 (-31.3%).

As a result of the defining analysis of the hospitals within the scope of the study; 52.5% are public hospitals, 26.9% are university hospitals and 20.6% are private hospitals. When the number of beds in these hospitals is analyzed, it has been seen that 30.5% had 401-500, 25.0% had 201-300, 22.2% had 301-400, 13.8% had 500 and more and 8.3% had a bed capacity of 101-200.

5.1 Testing of the Research Hypotheses

The results of the correlation and regression analysis conducted in order to determine whether environmental change speed, environmental competition and environmental capacity affect the decision making process of hospital administrators are illustrated in Table 1.

A significant relationship has been found between the decision making process of administrators and environmental factors consisting of speed of environmental change, environmental competition and environmental capacity ($p < 0.05$). Speed in environmental change, environmental competition and environmental capacity has an effect on the decision making process of hospital administrators.

Hypotheses H1a, H1b and H1c that we had determined in our study have been accepted.

Table 1. The relationship between the decision making process of administrators and environmental factors

Variables	t	p	R ²	F
Speed of Environmental Change	4.750	0.00	0.300	7.40
Environmental Competition	3.210	0.01	0.280	12.10
Environmental Capacity	3.640	0.01	0.420	6.80

$p < 0.05$

Table 2. Relationship between the decision making process of administrators and organizational factors

Variables	t	p	R ²	F
Innovativeness	2.250	0.00	0.390	6.12
Formalization	0.480	0.01	0.520	14.50
Participation	2.060	0.02	0.320	6.89
Autonomy	3.670	0.00	0.450	4.26

$p < 0.05$

In Table 2, the relationship between the decision making process of administrators and organizational factors a correlation analysis has been conducted.

In Table 2 it has been seen in the regression analysis conducted in order to test the hypotheses that organizational factors affect the decision making process of hospital administrators.

A significant relationship has been found between the decision making process of administrators and organizational factors such as innovativeness, formalization, participation and autonomy ($p < 0.05$).

Hypotheses H2a, H2b, H2c and H2d have been accepted.

Table 3. Relationship between the decision making process of administrators and environmental factors and organizational factors

Variables	t	p	R ²	F
Environmental factors	3.510	0.00	0.370	13.20
Organizational factors	3.550	0.01	0.450	8.60

In Table 3, the relationship between the decision making process of administrators and environmental factors and organizational factors a correlation analysis has been conducted.

In Table 3, a regression analysis has been conducted in order to test the effects of the hospital administrators' decision making process on environmental and organizational factors. As a result of the analysis, a significant relationship has been found between the decision making process of hospital administrators and environmental and organizational factors ($p < 0.05$). Environmental and organizational factors affect the decision making process of hospital

administrators. The effects of organizational factors on the decision making process of hospital administrators is more than that of environmental factors.

Hypotheses H3a and H3b which constitute the center of the study have been accepted.

6. CONCLUSION

Hospital administrators need to know the healthcare service procedures in the hospital and intervene rapidly when necessary and possess the ability to transfer data into information. Making effective and productive decisions is only possible through this information. Hospital administrators need to value team work, share authority and act accordingly. For the hospital to sustain its existence in a rapidly changing environment and for it to turn opportunities to profit require the administrator to be adaptive to this rapid change process. For this reason, objectives should be determined well and decisions should be made rapidly.

When the results related to the decision making process of administrators working in hospitals are analyzed; 61.4% of administrators have stated that experience is their most important decision making basis; 72.5% have stated that important decisions concerning the hospital are made in groups; 64.3% have stated that various alternatives about the objectives are considered while making decisions; 78.3% state that they don't avoid taking responsibility when making decisions; 52.3% state that they make decisions under risk and uncertainty; 69.7% have stated that they make decisions under a meaningful and systematic route; 67.3% have stated that they consider the responses of patients and employees when making decisions; 64.4% consider law and regulations when making decisions; 54.7% state that they try to make use of quantitative decision making techniques.

In the regression analysis related to determine whether environmental factors affect the decision making process of hospital administrators, it has been seen that the results are statistically significant ($p < 0.05$) in terms of the variables of environmental change ($t = 4.750$, $p = 0.00$), environmental competition ($t = 3.210$, $p = 0.01$) and environmental capacity ($t = 3.640$, $p = 0.01$).

In terms of environmental factors, administrators have given the following as characteristics of the sector. 84.7% of administrators have stated that changes in goods and service technology occur frequently, 77.3% have stated that there is serious competition in terms of quality and 81.3% have stated that it is necessary to have a wealthy structure in order to invest.

A regression analysis has been conducted in order to reveal the effects of organizational factors on the decision making process of hospital administrators. As a result of the analysis, it was revealed that there is a statistically significant relationship between hospital innovativeness ($t=2.250$, $p=0.00$), formalization ($t=0.480$, $p=0.17$), centralization ($t=2.060$, $p=0.01$) and the decision making processes of hospital administrators. 75.3% of hospital administrators have stated that they value innovative ideas in terms of goods and service in their hospitals; 68.7% have stated that they always participate in decisions related to implementing new goods and services; 68.7% have stated that they usually need the approval of the senior administration in developing the inner capacity of the hospital.

As a result of the study, our suggestions towards hospital administrators are: (1) They need to know all the healthcare service procedures within the hospital and carry the ability to intervene rapidly. (2) Hospital administrators need to possess the ability to transfer data into information. Decisions can only be effective and productive through this information. (3) The administration structures of hospitals need to be professional. The first step of professionalism is to be equipped with sufficient knowledge. (4) Administrators working in hospitals need to value team work, share authority and act with the appropriate positions in decision making processes. (5) Hospital administrators need to be open to improvement and should be able to constantly improve themselves. (6) For the hospital to survive in environments where speed of environmental change and competition is high and to turn opportunities into profit, hospital administrators need to adapt to the environment. (7) In order for hospitals to be successful in continuously changing environments which are dynamic and competitive, participation, autonomy and innovativeness should be encouraged.

In the study, the effects of environmental and organizational factors on the decision making process of hospital administrators have been analyzed. The study has been conducted on 160 administrators working in 36 hospitals operating in the city of Ankara. Therefore, the results of the study are special to only hospitals operating in the healthcare sector. In order to generalize the study results, the study needs to be applied in different regions, hospitals and sectors. Based on the results of this study, other researchers can contribute to the development of this study with different factors.

COMPETING INTERESTS

Authors have declared that no competing interests exist.

REFERENCES

1. Kocel T. *İşletme Yöneticiliği*. İstanbul: Beta Basım Yayım Dağıtım AS; 2003.
2. Byars L, Rue L. *Human Resource Management*. 7th ed. USA: The McGraw-Hill Companies; 2004.
3. Tosun K. *İşletme Yönetimi*. Ankara: Savas Yayınları; 1992.
4. Vroom VH, Yetton PW. *Leadership and Decision-Making*. PA: University of Pittsburgh Press; 1973.
5. Varoğlu AK, Basım N, Ercil Y. Bilimsel araştırma yöntemine farklı bir bakış: Analitik düşünce-butunleşik düşünce modelleriyle ilgili belirsizlikten kaçınma ve güc mesafesi araştırması. 8. Ulusal Yönetim ve Organizasyon Kongresi. 2000;421-441.
6. Daft RL. *Interactive Test for Management*. 6th ed. USA: South-Western; 2003.
7. Atıgan F. *Yönetim ve Organizasyon*. Ankara: Nobel Yayın Dağıtım; 2011.
8. Certo S. *Modern Management*. 9th ed. New Jersey: Person Education Inc; 2003.
9. Kurt U. *Karar Verme Surecinde Yöneticilerin Kişilik Yapılarının Etkileri*. Yüksek Lisans Tezi. Yayınlanmamış. Ankara: Baskent Üniversitesi Sosyal Bilimler Enstitüsü; 2003.
10. Hellriegel J, Slocum J. *Management: A Competency-Based Approach*. USA: South Western College Publishing; 2002.
11. Mendel D. *BPM Best Practice #2: Enterprise Business Process Architecture*; 2009. Available: <https://community.emc.com/docs/DOC-3639>
12. Ebert R. *Organizational Decision Process: Concepts and Analysis*. New York: Gran; 1976.
13. Kanter RM. Supporting innovation-venture: Development in established corporations. *Journal of Business Venturing*. 1985;1(1): 47-60.
14. Feldman L. *Organizational Decision Making*. Chicago: Rand McNall; 1965.
15. Usdiken B. *Buyukluk, Teknoloji, Cevre ve Orgutsel Yapi. Doktora Tezi*. Yayınlanmamış. İstanbul: İstanbul Üniversitesi Sosyal Bilimler Enstitüsü; 1979.
16. Usdiken B. *Orgutlerin cevre ozelliklerinin olculmesi uzerine*. İstanbul Üniversitesi İşletme Fakültesi Dergisi. 1980;(9):2.
17. Lawrence PR, Lorsch J. *Organization and Environment*. Cambridge: Harvard Graduate School of Business Administration; 1967.
18. Duncan RB. Multiple decision-making structures in adopting to environmental uncertainty: Impact on organizational effectiveness. *Human Relations*. 1973;26: 273-291.
19. Tung R. Dimensions of organizational environments: An exploratory study of their impact in organizational structure. *Academy of Management Journal*. 1979; 22(4):672-693.
20. Schneider SC, De Meyer A. Interpreting and responding to strategic issues: The impact of national culture. *Strategic Management Journal*. 1991;12(4):307-320.
21. Downey HK, Slocum WJr. Uncertainty: Mmeasure, research and sources of variation. *Academy of Management Journal*. 1975;18:562-578.
22. Nebeker DM. Situational favorability and environmental uncertainty: An integrative study. *Administrative Science Quarterly*. 1975;20:281-294.
23. Jurkovic GJ. *The Relationship of Moral and Cognitive Development to Dimensions of Juvenile Delinquency*. Ph. D. Thesis. Unpublished. Austin: University of Texas; 1975.

24. Leblebici H, Salancik G. Effects on environmental uncertainty on information and decision processes in banks. *Administrative Science Quarterly*. 1981;26: 578-596.
25. Hatch MJ. *Organization Theory: Modern, Symbolic, and Postmodern Perspectives*. USA: Oxford University Press; 1997.
26. Duncan RB. Characteristics of organizational environments and perceived environmental uncertainty. *Administrative Science Quarterly*. 1972;17:313-327.
27. Keats BW, Hitt MA. A causal model of linkages among environment dimensions, macro-organizational characteristics, and performance. *Academy of Management Journal*. 1988;31(3):570-598.
28. Halebian J, Finkelstein S. Top management team size, CEO dominance, and firm performance: The moderating roles of environmental turbulence and discretion. *Academy of Management Journal*. 1993; 36(4):844-863.
29. Eisenhardt KM. Making fast strategic decisions in high-velocity environments. *Academy of Management Journal*. 1989; 32(3):543-576.
30. Eisenhardt MK, Bourgeois LJ. Politics of strategic decision making in high velocity environments: Toward a midrange theory. *The Academy of Management Journal*. 1988;31(4):737-770.
31. Dodge HR, Fullerton S, Robbins JE. Stage of the organizational life-cycle and competition as mediators of problem perception for small businesses. *Strategic Management Journal*. 1994;15(2):121-134.
32. Smith KG, Griram CM, Gannon MJ, Chen M. Organization information processing, competitive responses and performance in the U.S. domestic airline industry. *Academy of Management Journal*. 1991;34:60-85.
33. Baum RJ, Wally S. Strategic decision speed and firm performance. *Strategic Management Journal*. 2003;24(11):1107-1129.
34. Castrogiovanni G. Environmental munificence: A theoretical assessment. *Academy of Management Review*. 1991; 16:542-565.
35. Wan WE, Hoskisson RE. Home country environments, corporate diversification strategies, and firm performance. *The Academy of Management Journal*. 2003; 46(1):27-45.
36. Goll I, Rasheed AMA. Rational decision-making and firm performance: The moderating role of environment. *Strategic Management Journal*. 1997;18:583-591.
37. Yasai-Ardekani M. Effects of environmental scarcity and munificence on the relationship of context to organizational structure. *The Academy of Management Journal*. 1989;32(1):131-156.
38. Pugh DS, Hickson DJ, Hinings CR, Turner C. Dimensions of organizational structure. *Administrative Science Quarterly*. 1968;13: 65-105.
39. Child J. Organizational structure, environment and performance: The role of strategic choice. *Sociology*. 1972;6:1-22.
40. Reinman B. On the dimensions of bureaucratic structure. *American Society for Quality*. 1973;18:462-477.
41. Hult GTM, Snow CC, Kandemir D. The role of entrepreneurship in building cultural competitiveness in different organizational types. *Journal of Management*. 2003;39(3): 401-426.
42. Hult GTM, Ketchen DJ, Nichols EL. Organizational learning as a strategic resource in supply management. *Journal of Operations Management*. 2003;21:541-556.
43. Priem RL, Walters BA, Li S. Decisions, decisions! How judgement policy studies can integrate macro and micro domains in management. *Journal of Management*. 2011;37(2):553-580.
44. Miller D, Droge C. Psychological and traditional determinants of structure. *Administrative Science Quarterly*. 1986;31: 539-560.
45. Mintzberg H. *The Structuring of Organizations: A Synthesis of the Research*. USA: Prentice-Hall; 1979.
46. Fredrickson JW. The Strategic decision process and the organizational structure. *Academy of Management Review*. 1986; 11(2):280-297.
47. March JG. *A primer on decision making: How decisions happen*. New York: The Free Press; 1994.
48. Wally S, Baum RJ. Personal and structural determinants of the pace of strategic decision making. *The Academy of Management Journal*. 1994;37(4):932-956.

49. March JG, Olsen JP. The new institutionalism: Organizational factors in political life. *The American Political Science Review*. 1984;78(3):734-749.
50. Hickson D, Butler R, Cray D, Mallory G, Wilson D. *Top decisions: Strategic decision making in organizations*. San Francisco: Jossey-Bass; 1986.

© 2015 Badour et al.; This is an Open Access article distributed under the terms of the Creative Commons Attribution License (<http://creativecommons.org/licenses/by/4.0>), which permits unrestricted use, distribution, and reproduction in any medium, provided the original work is properly cited.

Peer-review history:

The peer review history for this paper can be accessed here:
<http://www.sciencedomain.org/review-history.php?iid=1138&id=5&aid=9322>