

The Impact of Decision Making Styles on Organizational Learning: An Empirical Study on the Public Manufacturing Companies in Jordan

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Abstract

The main aim of this paper is to investigate the impact of decision making styles on the organisational learning in the Jordanian manufacturing companies. The total of 152 questionnaires was distributed throughout 76 companies. Each company received two copies of questionnaire for its general manager and executive manager. Usable responses of 119 were received and analysed. The researcher conducted 7 semi-interviews to interpret and validate the survey results.

The main findings indicted that the organisational learning is improved through:

- The flexible and integrative DM styles facilitate horizontal and/or vertical forms of interaction among leaders in organisations through decision making processes.*
- Decision making is a tool for training of future leaders. Accordingly, the leaders' mentality reflects the strategic approach of survive and growth.*

The study also explained that the decisive and hierarchic DM styles positively affect the organisational learning.

However, these two styles decelerate the improvement of organisational learning.

Keywords: Decision Making, Decision Making Styles, Manufacturing Sector, Jordan

Introduction

Decision making process is a basic activity in organisations. Managers in all organisational levels take decisions to achieve firm's objectives and to survive an organisation. Decision making is a systematic approach, and consists of seven steps, namely: appreciating of problem, gathering of information and data, analysing of data and information, developing of alternatives, evaluating of these alternatives, and finally choosing of appropriate alternative.

However, this systematic approach is dissimilar depending on three tips: managerial level, importance of decision, and decision making styles. The most critical one is the styles of decision making because it reflects the mentality or the way of thinking of managers in organisations. Moreover, it explains how the managers use information and how they conceptualise and envision the future of their organisations. Decision making styles affect knowledge' acquisition, sharing and utilization. Rowe and Boulgarides (1992: 28) revealed that "Knowing an individual's decision style pattern, we can predict how he or she will react to various situations". Organisational learning and knowledge building come from decision making processes throughout organisations (Ellstrom, 2001; Parker et al., 2007). Stephen (1996) argues that success in the innovative programs and learning competences depend on the styles of decision making processes. Therefore, this study attempts to investigate the impact of decisional making styles on the organisational learning.

Literature Review

Decision Making

Decision making (DM) is as a fundamental function in management (Grant, 2011). DM reflects the success and failure of managers and the organization mainly hinges upon the quality of decisions (Leonard et al, 1999). Simon (1976) revealed that "decision making role" is the "heart of executive activities".

Most of scholars in management emphasize that decision making is a process. This process includes a group of procedures or steps; begins with a definition of problem or opportunity and ends with the achievement of objectives.

Dumler and Skinner (2007) define decision making as “a choice among competing alternatives and the implementation of the chosen alternative; all decisions have a time horizon or scope. Decision making is a cognitive process that rationally leads to the selection of a course of action among several available alternatives.... Rational decision making means ‘making consistent, value-maximizing choices with in specified organizational constraints’” (Dumler and Skinner 2007: 39). Decision making is a process of making a choice from a number of alternatives to achieve a desired result (Eisenfuhr, 2011). “It is important to note that decision-making is primarily a cognitive process that combines the mental process of perception, action, and coming to closure on stimuli. Cognitive style, on the other hand, is the patterning or linking of these thinking processes and coming to closure in the presence of ambiguity and uncertainty” (Goodyear, 1987: 9).

The decision making process depends on the differences amongst managers’ values, attitudes, education, organisation, managerial level. This difference in DM amongst managers is also made because of the difference in experience, analytical ability, in forming perception and processing of information, scope of consultation, degree of freedom of choice, availability of resources and trust and rapport between the managers and the managed (Ehrgott, 2011). The skills that are considered vital to efficient and effective decision making were based on normative model of decision making, which prescribes how decisions should be made. These skills consist of (a) identifying the possible options, (b) identifying the possible consequences that follow from each option, (c) evaluating the desirability of each consequence, (d) assessing the likelihood of each consequence and (e) making a choice using a decision rule (Gilboa, 2011).

Decision Making Styles

The term decision style is the way a person uses information to formulate a decision (Rowe and Mason, 1987). Decision style is still a cognitive process which includes one’s personality in relation to one’s needs, values, and self-concept (ibid). Harren (1979) revealed that decision making style reflects an individual characteristic for perceiving and responding to a decision making process. The style of decision making for any manager or in any organisation depends on learning process and experience. Driver, Brousseau, and Hunsaker (1993) explained that the differences among individuals when making a decision depend on two factors: information use and focus (the number of solutions considered). Rowe and Mason (1987) explained that decision style framework is defined by three key factors: 1) the way one thinks about a problem, 2) the way one communicates to others, and 3) the way one expects others’ behaviour to affect his/her performance. The operational definition for DM style is a habitual pattern or preferred way of doing something that is consistent over time and across activities (Sternburg and Li-fang, 2001). There are five decision making styles (Driver *et al.*, 1998 Eisenfuhr, 2011), namely: (1) The decisive: the use of minimum amount of information, rapid solutions, focus on efficiency and consistency. (2) The flexible: focus on adaptability and several meaning and implications. (3) The hierarchic: thorough analysis and quality of outcome, focus on hierarchical relationships and mutual trust. (4) The integrative: creativity and exploration are highly important, the use of several ways to solve problems, focus on team work and co-operation and trust.

Organizational Learning

Organisational learning is an accumulative process, which reflects the ability of an organisation to develop unique and rare skills and experiences. Fiol and Lyles (1985: 803) define learning as "the process of improving actions through better knowledge and understanding". Ellstrom (2001: 422) states that organisational learning is "a change in organisational practice, including routines and procedures, structures, technologies, systems and so on". Zairi (1996) stated that organisational learning consists of skills, know-how, knowledge (tacit and explicit) and expertise, which enable an organisation to gain its competitive advantage. Organisational learning and knowledge building come from decision making processes throughout organisations (Ellstrom, 2001; Parker *et al.*, 2007).

Also, organisational learning ensures that an organisation "understand[s] the cognitive and behavioural changes in an organization which occur as a result of its experiences from the interaction with its environment" (Larsen, 1998: 3). Saad (2000) points out that organisational success depends on the ability of an organisation to manage a change through innovation and learning. Valoka (2000: 819) writes that "companies are trying to use organisational learning and innovation in order not only to solve existing problems but also to improve their status continuously in the face of changing conditions".

Also, he indicates that the "ability to learn from an organisation's own early radical innovation and assimilate lessons into subsequent work is important...for enabling a firm to avoid unnecessary and potentially damaging error" (ibid: 24).

A "learning organization is an organization skilled at creating, acquiring, and transferring knowledge and at modifying its behavior to reflect new knowledge and insights" (Anjana, 2002: 8). Moreover, Garvin (1993) shows that an organization learns through best practice, experiences, experimentation, transfer of knowledge and systematic problem solving. Neely and Hii (1999: 9) write that innovation depends on organizational learning and competences, and therefore they explain organizational innovation as "the introduction of new approaches to managing or organizing a firm", as opposed to process innovation which they describe as "the adoption of new or significantly improved production methods".

Organizational learning plays a vital role in sustaining a competitive advantage, especially in the modern dynamic and changing business environment (Chattel, 1995; Lopez, 2005). Thus, Anjana (2002: 10) stresses that "in the longer run, the only source of competitive advantage is the organization's ability to learn faster than its competition". This means that organizational learning as a source of strategic competitive advantage demands the dynamic creation of new knowledge through interactions between internal environment (organizational and individual skills, experience, participation, value chain etc) and external environment (customer needs and requirements, competition, supply chain etc) (Lopez, 2005; Williams, 1992). However, this competitive advantage requires a clear methodology of strategic decision making. Davenport and Prusak (1998: 17) state that knowledge is "a fluid mix of framed experience, values, contextual information, data and expert insight that provides a framework for evaluating and incorporating new experiences and information". The development of strategies for organization evolution and transition depends on the quality of knowledge generation and organizational learning (Lopez, 2005; Lei, 2003). Figure 1 shows the effective dynamics of knowledge creation, and the Learning-Based View (L-BV) as an essential basis for innovation and then the underlying sources of SCA.

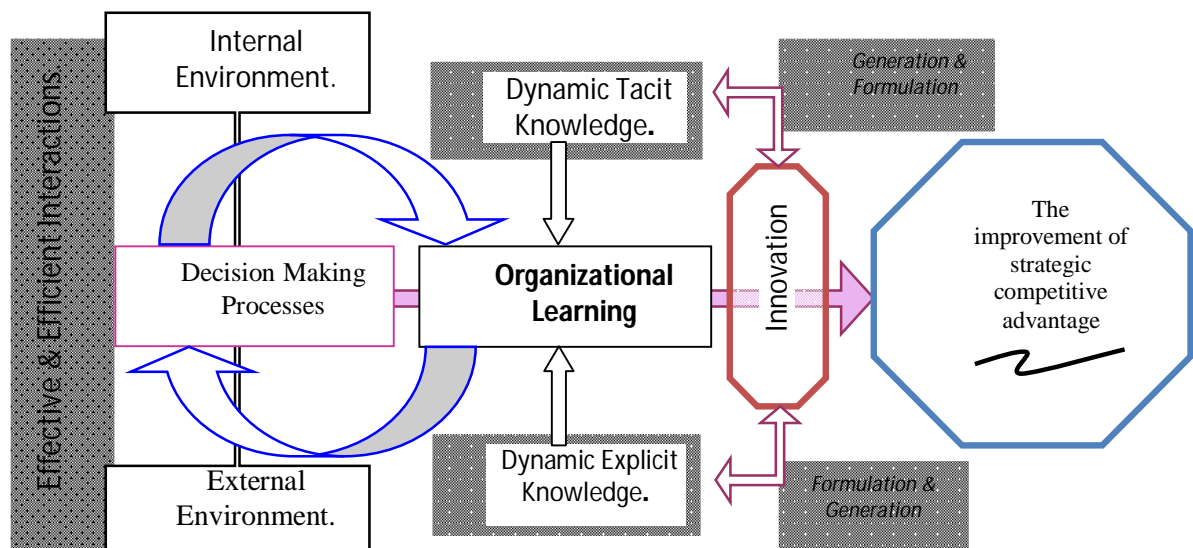


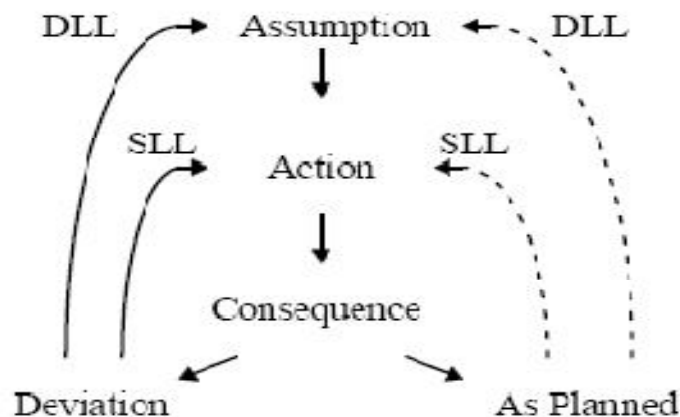
Figure 1: The Relationship among Decision Making, Learning, Knowledge, Innovation and the Improvement of Strategic Competitive Advantage

A "learning process has three identifiable stages, viz. knowledge acquisition (through development or creation of skills, insights and relationships), knowledge sharing (i.e. the dissemination of what has been learned) and knowledge utilization (i.e. the integration of learning so it is broadly available and can be generalized to new situations)" (Nevis *et al.*, 1995: in Anjana, 2002: 9-11). There are two types of knowledge: tacit and explicit knowledge. Anjana (2002) explained that the creation of organizational knowledge can be shaped through four steps: leveraging and transferring tacit knowledge; amplifying knowledge creation across different levels of the organization; enhancing the enabling conditions of knowledge creation; continuing to create new knowledge consultancy. All these steps pass decision making processes.

Larson and Leinsdorff (1998: 4) argue that organizational learning "takes place partly as single loop learning and partly as double loop learning. Single loop learning (SLL) occurs when the organization asks itself: 'Do we act in the right way?'" (ibid: 4). On the other hand, double loop learning (DLL) takes place when the organization asks: 'Do we do the right things?'

SLL is nearly found in all organizations, but few organizations experience DLL" (ibid: 5). According to Argyris and Schon (1996: 80), the rarity of DLL is attributed to fear of "vulnerability, risk, embarrassment and the appearance of incompetence". Figure 2 shows the differences between SLL and DLL. DLL bridges the gap between theories and practice, but SLL depends on action. This means that DLL is more relevant to radical innovation. Fiol and Lyles (1985) argue that *first-order-learning* (learning through doing existing things) is SLL, while *second-order-learning* (learning through doing new things) is DLL. The styles of decision making processes affect the effectiveness of learning loops and knowledge building.

Figure 2: The differences between SLL and DLL



(Adopted from: Larson and Leinsdorff, 1998: 5).

Research Framework

The previous sections have discussed decision making (DM) processes, the styles of DM and organisational learning. According to Figure 1, DM is the equation of the quality of knowledge and the quality of innovation. The main objective of any manufacturing firm is to gain strategic competitive advantage. However, the success of firm to sustain its strategic competitive advantage depends on the relationship between DM styles and organisational learning. Figure 3 illustrates the research framework. This study tries to achieve the following objectives:

- Explain the impact of DM styles on the organisational learning.
- Which is the most common DM style in Jordanian manufacturing firms?
- Introduce a group of recommendations to improve the role of decision making processes in learning and innovation.

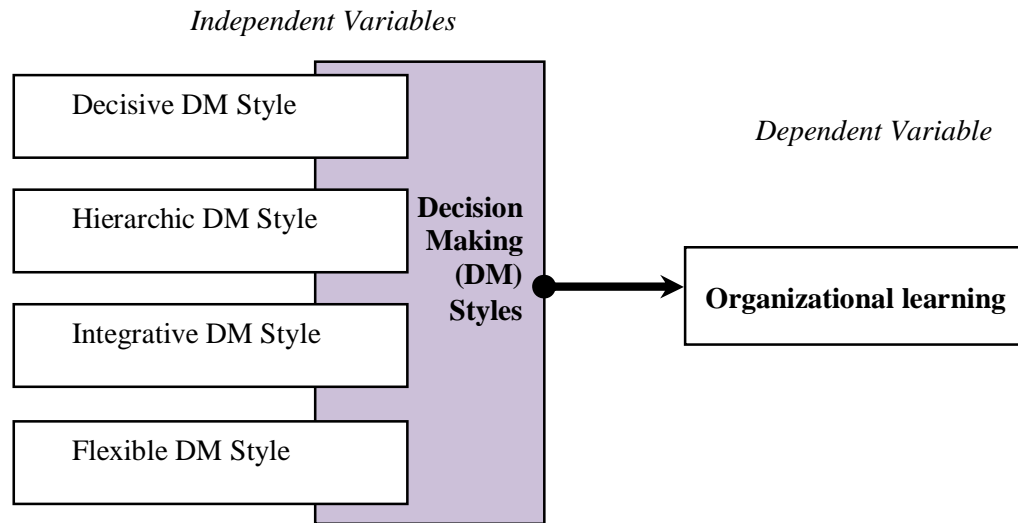


Figure 3: The Research Framework.

Research Hypotheses

Based on the previous argument, this research attempts to test the following hypotheses:

Main Hypothesis: There is no statistically significant effect of decision making styles on organisational learning in the Jordanian manufacturing sector.

The Sub -hypotheses:

- 1) There is no statistically significant effect of decisive decision making style on organisational learning in the Jordanian manufacturing sector.
- 2) There is no statistically significant effect of hierarchic decision making style on organisational learning in the Jordanian manufacturing sector.
- 3) There is no statistically significant effect of integrative decision making style on organisational learning in the Jordanian manufacturing sector.
- 4) There is no statistically significant effect of flexible decision making style on organisational learning in the Jordanian manufacturing sector.

Research Methodology

Data of this research were collected using two research instruments; survey questionnaire and semi structured interviews. The combination between these two methods enables the researcher to validate the proposed model using quantitative data, and to gain in depth information regarding the relationship between decision styles and organisational learning. The semi structured interviews enabled the researcher to interpret and validate the quantitative research results. Follow a detailed description of the methods and procedures used in the current research.

Survey Questionnaire

In order to empirically test the relationship between decision making styles and organisational learning, a questionnaire was developed and tested. The questionnaire was administered on a broad range of manufacturing companies in Jordan. The questionnaire consists of three parts, namely; (1) general information of sample, such as sex, age, education, skills, managerial position, experience. (2) 13 questions about the dependent variable - organisational learning. (3) 42 questions about the independent variables - decision making styles. In order to increase the reliability of answers, the researcher visited each corporation personally to meet and request the managers to fill out the questionnaire in his presence. The managers were requested to indicate their answers regarding each item based on a five- point Likert scale with 1 scoring disagree to 5 scoring strongly agree. The questionnaire was distributed to 76 companies, each company received two copies.

The total of 152 questionnaires was distributed. 33 questionnaires with 21.7 percent were unusable because most of the questions were unanswered. Usable responses of 119 managers were received resulting in response rate of 78.3 per cent as shown in Table 1.

Table (1): Survey Responses Rate

Number of visited companies	76
Total responses	152
Unusable responses	33
Final usable responses	119
Useable responses rate (%)	78.3

Semi Structured Interviews

The author conducted 7 semi structured interviews. All of these interviews were conducted with managers. All managers have experiences more than 11 years in manufacturing sector. These interviews aimed to: (1) validate survey results, (2) interpret the results of survey analysis, (3) formulate the final conclusions and future research.

Results and Discussion

Multiple regression analysis was used to test the hypotheses of study (H0, H01, H02, H03, and H04). In order to ensure that the results of the regression models could be generalized, the assumptions underlying regression analyses were tested.

The residual analysis revealed that the assumptions concerning linearity, homoscedasticity, normality, and independent error terms were not violated. The overall Cronbach's Alpha (α) of the study model was (0.821), which means that the reliability and consistency test is acceptable and more than 70 percent. Reliability more than 70% is generally considered to be acceptable (Sekaran, 2003).

It was expected that the decision making styles were highly correlated, and this situation may lead to multi-collinearity which causes unreliable results. Subsequently, variance inflation factor (VIF) was used to deal with this problem. The results clearly indicated that VIF in the regression model ranged between 1.020 and 1.951. These values were below the 2.5 level pointed by Allison (1999) as an indicator of multi collinearity; therefore, multi-collinearity was not a concern in the results of this study.

Many interviewed leaders indicated that Organisational culture is the results of the multiple regression model showed that the main (H0) and sub hypotheses (H01, H02, H03, and H04) were accepted as shown in table (2). This means that, decisive, hierarchic, integrative and flexible decision making styles were positively and significantly associated with organisational learning. The study model interprets 86.4 percent of the impact of decision making styles on the organisational learning. Flexible DM style has a strong impact on the development of organisational learning with $\beta = 0.778$ and $R^2 = 0.606$. The integrative DM style has a reasonable impact on the organisational learning. In the other hand, decisive and hierarchic DM styles have the weakest impact on the organisational learning.

Table (2): Multiple Regression Analysis and VIF test

Variables	Model Coefficient β	T test	Sig.	R ²	Collinearity statistics (VIF)
Decisive DM Style	0.305	4.878	.000	0.093	1.020
Hierarchic DM Style	0.359	3.657	.000	0.129	1.578
Integrative DM Style	0.602	5.862	.000	0.363	1.538
Flexible DM Style	0.778	3.941	.000	0.606	1.176
Decision Making Styles (The main dependent variable)	0.827	17.886	.000	0.864	1.951

Conclusions

This study investigated the influence of decision making styles on the organisational learning. Organisational learning is a cumulative process and depends on how an organisation makes its decisions. Learning is the equation of decision making process.

Learning processes constitute the main part of absorptive capacity, and increase the rate of successful innovation. Organisational learning determines how a firm acquires, assimilates and exploits internal and external knowledge. This means that the knowledge accumulated through decision making processes reflects and explains the nature of organisational learning in an organisation.

The results of study explained that the flexible and integrative DM styles facilitate the organisational learning through:

- The generation of new knowledge achieved through participation in decision making processes.
- The accumulation of knowledge gained through involvement and implementation of decisions.
- Participation in decision making processes prepares the transferring of new developments in science and technology.
- Participation in decision making processes improves leadership styles and capacities.
- The flexible and integrative DM styles facilitate horizontal and/or vertical forms of interaction among leaders in organisations through decision making processes. This means that an organisational learning is improving and building up through these two styles.
- Decision making is a tool of training of future leaders. Accordingly, the leaders' mentality is the strategic approach of survive and growth.
- Organisational culture as a framework of learning processes forms the decision making styles.

The study also explained that the decisive and hierarchic DM styles positively affect the organisational learning. However, these two styles decelerate the improvement of organisational learning. The decisive and hierarchic DM styles constrain the continuous improvement and innovation.

Future Research

There is a shortage in studies about decision making styles, organizational learning and absorptive capacity in the Middle East countries like Jordan. Accordingly, there is a need to study the following areas: the relationship between decision making styles and absorptive capacity, the role of culture in learning processes, the impact of learning on innovation and development.

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