

# Factors Influencing Decision Quality: An Empirical Study on Managers in Public Institutions in Jordan

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## Abstract

The aim of this study was to explore factors influencing decision quality made in public institutions in Jordan. On the basis of the literature, four factors were determined as factors associated to decision quality; moral intensity, information quality, group cohesiveness and decision experience. Each factor along with decision quality was assessed using six indicators adopted from previous studies. A questionnaire was developed and utilized in this study to collect data. The population of the study comprised managers, assistant managers and authorized employees to participate in decision making in 15 public institutions in Irbid governorate in Jordan. The total number of population was 210 participants, all of them included in the study. A total of 210 questionnaires were distributed to the participants and 179 were returned complete with a response rate of 85.23

**Index terms**— moral intensity, information quality, group cohesiveness, decision experience, decision quality, public institutions, jordan.

## 1 Introduction

Decision making has been defined as a process of two cornerstones: choice from decision alternatives and achievement of the needed results (Lunenburg, 2010). Negulescu and Doval (2014) defined quality of decision with regard to three principal drivers, which were: How and when managers make decisions and what decisions they make? According to them the first driver suggests six dimensions associated with environmental factors, strategy, ethics, empowerment, information, and feedback. The second driver is relevant to types of decision making, i.e., programmed, not programmed decisions, made on known alternatives, incomplete information, the basis of scientific methods, or intuitive or in risks. The third driver is related to situations in which managers take these decisions. Donelan et al. (2015) investigated factors affecting quality of decision making. Examples of factors they found incorporated data quality, time of decision making, and awareness of the decision. Due to the importance of decisions to the organization and its stakeholders, quality of decision making has gained great attention. Hastie and Dawes (2010) specified that decision quality should not be evaluated based on decision outcomes, but on the extent to which the decision is rational. Here, rationality refers to using available tools in circumstances in order to meet decision maker's objectives. In a study carried out by Elbanna et al. (2014), five factors were hypothesized to have an impact on quality of decision implementation; trust, participation, past performance, implementation uncertainty and speed of decision implementation. Out of these factors, implementation uncertainty and speed were negatively associated to quality of decision implementation. Factors that have an influence on decisions reported by Dietrich (2012) include past experience, individual differences, cognitive biases, belief in personal relevance and commitment.

In fact, most of the studies on this subject, a few studies, did not address public institutions. Thus, the reality of factors affecting the quality of decisions in these institutions is not yet known. Therefore, the current study aims to explore some of these factors using a sample of participants working in public institutions in Jordan. The importance of the study is that it provides the decision makers with the recommendations that can be taken

to draw the policies used in decision-making and to choose decision groups and specifications required in them, which contribute to improving the quality of the decision.

## II.

### Literature Review and hypotheses Development

Quality of decisions was studied in the literature in terms of numerous aspects associated with factors that gave effects on this process. For instant, Jones (1991), Singhapakdi et al. (1996), Frey(2000), Barnett (2001), Paolillo and Vitell (2002), Carlson et al. (2002) and Sweeney and Costello (2009) pointed up moral intensity as an important dimension that has an influence on quality of decision making. One more vein of literature emphasized the role played by information in decision making quality (Postmes et al., 2001; Negulescu and Doval, 2014 and Abumandil and Hassan, 2016). Simon (1994) suggested a direct relationship between administrative processes and decision quality, i.e., decision planning, review of subordinates' activities, expertise, and structure of authority. For the current study, four major factors were studied, which were moral intensity, information quality, group cohesiveness and decision-related experience. Moral intensity was cited in the literature as a dimension studied in the context of ethical decision making. It was used in this study due to its importance as a factor of positive decision making models that describe the actual activities done in the organization (Loe et al., 2000).

#### a) Moral intensity

Jones (1991) studied ethical decision making by individuals in organizations and showed the significance of moral intensity in the context of ethical decision making. According to the author, moral intensity refers to the severity of ethical conduct in a given circumstance and can be measured by the urgency of the situation, the certainty of the effects, moral effects of the decision maker on the events, and availability of alternatives. For this study, three dimensions were used as factors of moral intensity: social consensus, certainty of decision effects Social consensus refers to the extent to which an action is considered as right or wrong from the community, i.e., the organization members, perspective. Certainty of decision effects described the extent to which the decision results in the intended purpose such as financial gains. Finally, size of decision effects was defined as sum of benefits provided to beneficiaries. Singhapakdi et al. (1996), Frey(2000), Barnett (2001), Paolillo and Vitell (2002), Carlson et al. (2002) and Sweeney and Costello (2009) found a significant influence of moral intensity of the circumstance on decision-making process. Based on these results, it was suggested that: H1: Moral intensity significantly and positively related to decision's quality.

#### b) Information Quality

Quality of information was one of the most important factors that have a significant impact on quality of decision making (Negulescu and Doval, 2014). Van Riel et al. (2016) illustrated that quality of information plays a little role in improvement of decision making quality. In their study on factors affecting quality of decision making, Donelan et al. (2015) recognized data quality as one factor of those have an influence on quality of decision making. Abumandil and Hassan (2016) located a significant role of data quality in decision making. Furthermore, Postmes et al., 2001 considered information sharing as a critical part that affect the quality of decision. All over, the influence of information quality on decision quality was cited by several studies (Carpenter and Westphal, 2001). Accordingly, the following hypothesis was advanced: H2: Information Quality significantly and positively related to decision's quality.

#### c) Group cohesiveness

Group cohesiveness was defined as group members' willingness to act as a team in a response to the affective needs of the members (Dyaram and Kamalanabhan, 2005). That is, group cohesiveness refers to individual sense of sociality and attachment to a group. Decision making process led by groups was found more effective than individual decisions. Lunenburg (2011) argued that group decision making process has many benefits due to the fact that these decisions were made on the basis of consensus among the group in addition to the high degree of commitment to the final decision. Using Janis's (1972) theory on group-thinking, Pitt and Nel (1990) found a positive effect of group cohesiveness on decision quality, while Mullen et al. (1994) indicated that group cohesiveness had no effect on decision quality. H3: Group cohesiveness significantly and positively related to decision's quality.

#### d) Decision Experience

Simon (1994) regarded expertise as one of the most important factors in decision making domain. According to him, decisions that require particular skills can be made by individuals who have those skills. In the context of ethical decision making, Loe et al. (2000) stated the experience in decision making has no clear influence on decision quality. On the other hand, it was understood in other studies that experience of decision maker has an influence on decision quality (Cohen et al., 2008, Ashill and Jobber, 2013 and Ghattas et al., 2014). Therefore, It was hypothesized that: H4: Decision experience significantly and positively related to decision's quality.

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## 8 III.

### 9 Methodology a) Research model

Figure ?? shows the research model in which four hypotheses were postulated to investigate the effect of moral intensity, information quality, group cohesiveness and decision experience on decision quality.

### 10 Figure 1: Research conceptual model b) Research sample and data collection

The population of the study consisted of managers and assistant managers and authorized employees to participate in decision making in 15 public institutions in Jordan. The total number of the population was 210 participants. The sample of the study covered all the population. Therefore, 210 questionnaires were distributed on participants. A total of 179 questionnaires were returned complete with a response rate of 85.23%.

### 11 c) Measures

Moral intensity was measured based on Jones (1991) through three dimensions: social consensus, certainty of decision effects and urgency of the situation. Each dimension was measured by two items. Information quality was measured by three dimensions adopted from ; information dissemination, information processing, and perceived sufficiency of information. Six items were used to evaluate these dimensions. Group cohesiveness was measured using three major dimensions related to interpersonal attraction, commitment to task, and group pride adopted from Mullen et al. (1994). Decision experience was assessed using 6 items based on ??imon (1994) and Ashill and Jobber (2013). These items were related to personal experience represented by knowledge and skills, participation in past decisions, and job description relevance. Finally, decision quality was rated based on theoretical bases of the construct provided by Negulescu and Doval (2014), Donelan et al. (2015) and Dietrich (2012). Six items were applied to measure quality of decisions.

### 12 d) Validity and reliability

Convergent and discriminant validity were evaluated on the basis of the average variance extracted (AVE) (Spreng and Mackoy, 1996). Composite reliability and Cronbach's alpha coefficients were used to assess the reliability. The results shown in Table 1 revealed acceptable values of factor loadings of moral intensity (? min = 0.692, ? max = .874), information quality (? min = 0.668, ? max = 0.866), group cohesiveness (? min = 0.711, ? max = 0.789), and decision experience (? min = 0.557, ? max = 0.846) as well as decision quality (? min = 0.634, ? max = 0.742). Values of AVE confirmed a good level of convergent validity for all dimensions (Berthon et al., 2005), except decision quality (AVE < 0.50). However, composite reliabilities (CR), on the other hand, were also accepted since all values were greater than 0.60 (Yang and Peterson, 2004); moral intensity (CR = 0.91), information quality (CR = 0.90), group cohesiveness (0.89), and decision experience (0.88) as well as decision quality (0.85). Additionally, Cronbach's alpha coefficients for all dimensions ranged from 0.71 to 0.816. Furthermore, the results identified that all values of the square root of the AVE, which ranged from 0.73 to 0.82, were greater than the squared correlations among variables (Kuo et al., 2009). IV.

## 13 Results

### 14 a) Covariances and correlations

Covariances and correlations shown in Table 1 indicated that changes in group cohesiveness, information quality and moral intensity were not related to changes in decision experience (cov. = 0.037, 0.097 and -.049, P = 0.502, 0.163 and 0.278 respectively), that is, these variables were not significantly correlated (r = 0.081, 0.170, and -.132, P = 0.504, 0.195 and 0.277). On the other hand, the results in Table 2 confirmed that changes in information quality and moral intensity were related to changes in group cohesiveness (cov. = 0.219 and 0.158, P = 0.007 and 0.003). Basically, these variables were significantly correlated (r = 0.345 and 0.379, P = 0.003 and 0.001). Finally, the change in moral intensity was associated to the change in information quality (cov. = 0.153, P = 0.019). In other words, moral intensity and information quality were significantly and positively associated (r = 0.249, P = 0.014).

### 15 b) Regression analysis

Table 3 demonstrated regression weights among independent and dependent variables. It was revealed that all independent variables have a significant effects on decision quality. Particularly, the results showed that moral intensity ( $\beta = 0.129$ , C.R. = 2.42, P = 0.015), information quality ( $\beta = 0.195$ , C.R. = 5.67, P = 0.000), group cohesiveness ( $\beta = 0.215$ , C.R. = 4.93, P = 0.000), and decision experience ( $\beta = 0.172$ , C.R. = 3.81, P = 0.000) were all have significant effects on decision quality. Figure 2 displayed the final model that represents the graphical paths among variables. According to the figure, group cohesiveness was ranked first in terms of its effect on decision quality, followed by information quality, decision experience and finally moral intensity.

## 16 Discussion and Conclusion

The aim of this study was to explore factors affecting decision quality in public institutions in Irbid governorate in Jordan. Based on the literature, four factors were identified and studies in terms of their relationship with decision quality. These factors were moral intensity, information quality, group cohesiveness, and decision experience. In relation to the objective of the study, the results confirmed that moral intensity, information quality, group cohesiveness, and decision quality have a significant impact on decision quality.

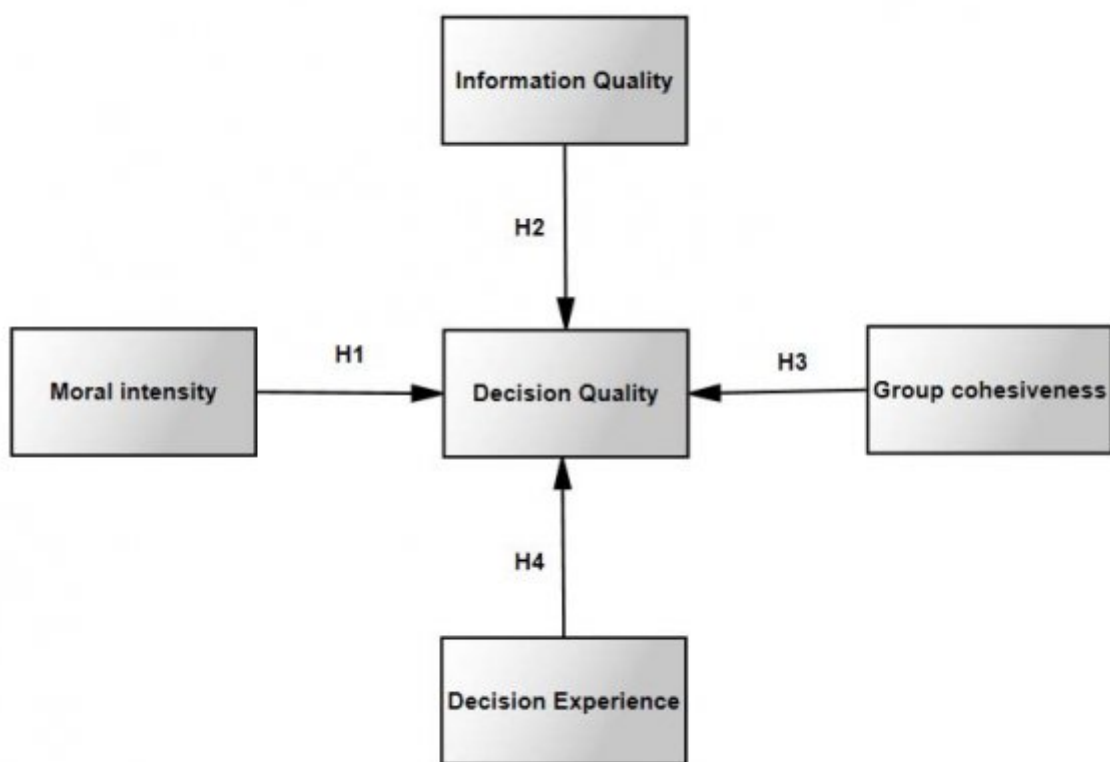
Moral intensity was measured in this study by social consensus, certainty of decision effects, and size of decision effects. Each of these factors has its own influence on decision quality. Social consensus identified the extent to which a decision is accepted from the perspective of organization's members. Members of the organization, whether participated in decision-making or not, do not agree on wrong decisions because wrong decisions hurt the organization and the staff. Especially, these organizations are public and the impact of decisions is reflected on society as a whole. Hence, it is clear that the moral aspect of the decisions requires that decisions should be moral and within the collective agreement. Otherwise, the effect will be negative on the quality of the decision. Moreover, certainty of decision effects assumes that the decision-making process leads to a decision that achieves the goal that the organization is seeking to achieve. For example, if the objective is to improve the quality of service provided to the local population in a given area, the decision to be taken must lead to this goal. If this is not the case, the decision is not of good quality. Size of decision effects presumes that a good decision is the one that provide beneficiaries with relevant benefits. The positive effect of moral intensity on decision quality as found in the current study was also cited in previous studies, either directly or indirectly (Jones, 1991;Singhapakdi et al., 1996; ??rey,2000;Barnett, 2001;Paolillo and Vitell, 2002;Carlson et al., 2002 andSweeney andCostello, 2009).

Information is one of the most vital elements for decision makers. Therefore, the quality of information as measured by information dissemination, information processing, and perceived sufficiency of information, has a significant effect on decision quality. Of course, the lack of access to information that is necessary for decision-making is a challenge to the decision maker and leads to poor decision quality. If the information is available, but being processed in an inappropriate manner also leads to poor decision quality. As well as the fact that access to inappropriate information does not benefit the decision-maker and adversely affect the quality of the decision. Similar results were echoed in the literature ??Postmeset al., 2001;Negulescu andDoval, 2014 andAbumandil andHassan, 2016).In terms of the coherence of the decision group, the results of the present study showed that this variable affects the quality of the decision. This result was agreed with some previous studies (Pitt and Nel, 1990;Dyaram and Kamalanabhan, 2005;Lunenburg, 2011).This finding can be explained by the fact that the cohesion of the decisionmaking group that describes the group's desire to act as an integrated group of cognitive, emotional and social aspects influences the quality of the decision, because this sense of group cohesion means no conflict between the group members. This naturally affects the acceptance of the decision because it is a collective decision as well as the commitment by everyone towards the implementation of the decision.

Finally, the results of the study showed that the experience related to the decision, whether it means the availability of knowledge and skill in how to make decisions or experience, which means the exercise of previous decisions by the decision-maker to or at least the awareness of previous decisions, is in fact has an effect on the quality of the decision. This results was in agreement with numerous previous studies ??Simon, 1994;Loe et al., 2000;Cohen et al., 2008;Ashill andJobber, 2013 andGhattas et al., 2014). Given these results, it was concluded that the decision-making process requires a lot of elements. It is not just a qualified individual with an experience in decisionmaking but also takes into consideration many factors such as collective agreement on decisions, the degree of certainty of the effects of decisions, the extent of benefits to their beneficiaries, access to appropriate information, proper processing of information, in the light of a harmony between the decision group, experience in the current decision-making process, and awareness of previous decisions implications.

## 17 VI. Recommendations and Limitations

In the light of the findings of the study, it was recommended to focus on the ethical aspects, the quality of information, the cohesion of the decision group, and the availability of expertise among the decision makers with current and previous decisions because these factors have a direct impact on the quality of the decision. The variables of this study were measured by different dimensions. However, other dimensions should be used in order to gain a more understandings of the theoretical foundations of the constructs. For instant, moral intensity in this study was assessed by three dimensions; additional dimensions can be used such as the ethical effect of the decision maker on the events to measure the same variable. Furthermore, additional factors that have an effect on decision should be added to the current model. The data used in this study were collected from participants



2

Figure 1: Figure 2 :

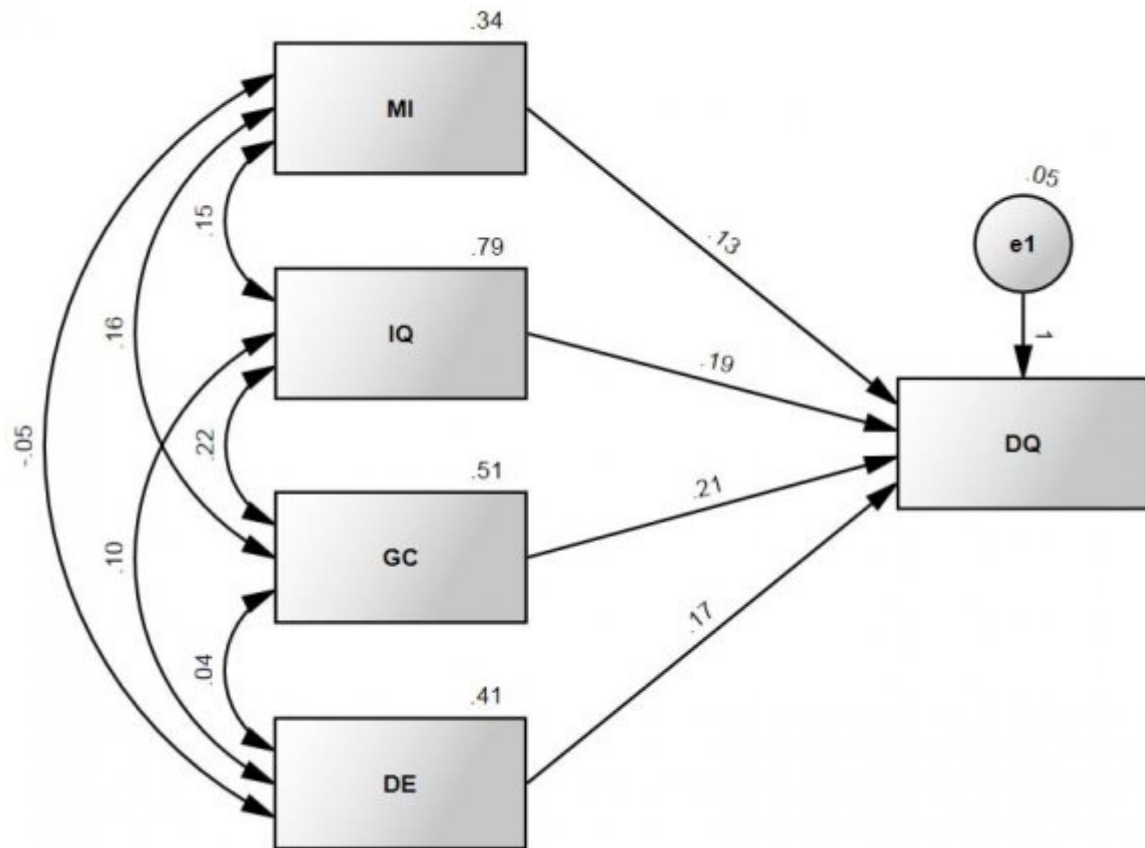


Figure 2:

1

Factor	Items	?	?	2	?	AVE	CR	AVE	?
								2	
	MI1	.874	.763		.236				
	MI2	.863	.744		.255				
MI	MI3 MI4	.772 .731	.595 .534		.404 .465	0.606	0.91	0.81	0.772
	MI5	.722	.521		.478				
	MI5	.692	.478		.521				
	6	4.65	3.63		2.36				
	IQ1	.866	.749		.250				
	IQ2	.859	.737		.262				
	IQ3	.799	.638		.361				
IQ	IQ4	.745	.555		.444	0.611	0.90	0.82	0.737
	IQ5	.736	.541		.458				
	IQ6	.668	.446		.553				
	6	4.67	3.66		2.32				
	GC1	.789	.622		.377				
	GC2	.781	.609		.390				
	GC3	.760	.577		.422				
GC	GC4	.753	.567		.432	0.572	0.89	0.79	0.736
	GC5	.744	.553		.446				
	GC6	.711	.505		.494				
	6	4.54	3.43		2.56				
	DE1	.846	.715		.284				
	DE2	.835	.697		.302				
	DE3	.770	.592		.407				
DE	DE4	.766	.586		.413	0.546	0.88	0.77	0.816
	DE5	.618	.381		.618				
	DE6	.557	.310		.689				
	6	4.39	3.28		2.71				
	DQ1	.742	.550		.449				
	DQ2	.722	.521		.478				
	DQ3	.714	.509		.490				
DQ	DQ4	.700	.490		.510	0.488	0.85	0.73	0.710
	DQ5	.680	.462		.537				
	DQ6	.634	.401		.598				
	6	4.19	2.93		3.06				

Figure 3: Table 1 :

**2**

	Cov.		Estimate	S.E.	t	P	R	P
GC	< ->	DE	.037	.055	.67	.502	.081	.504
IQ	< ->	DE	.097	.069	1.39	.163	.170	.195
IQ	< ->	GC	.219	.081	2.70	.007	.345	.003
MI	< ->	GC	.158	.054	2.94	.003	.379	.001
MI	< ->	IQ	.153	.065	2.34	.019	.294	.014
MI	< ->	DE	-.049	.045	-1.08	.278	-.132	.277

t-value is significant at the 0.05 level

Figure 4: Table 2 :

**3**

	Variables		Estimate	S.E.	C.R.	P
DQ	?	MI	.129	.053	2.42	.015
DQ	?	IQ	.195	.034	5.67	.000
DQ	?	GC	.215	.044	4.93	.000
DQ	?	ED	.172	.045	3.81	.000

Figure 5: Table 3 :



from 15 public organizations, therefore, a larger sample of participants is recommended in order to gain a more understanding of factors affecting decision quality in public institutions in Irbid governorate in Jordan.

## .1 VII.

## .2 Future Research Directions

In a study conducted by , the authors marked the importance of decision maker preferences as a critical factor that affects the quality of decisions. Therefore, future studies should consider this factor to ensure deep understanding of real factors affecting decision making quality. On the other hand, the focus of numerous studies was on the integration between decision making process and information technologies such as knowledge management applications (Courtney, 2001); hence future research should investigate new factors like decision support systems and its effect on decision quality.

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