

## The Moderating Effect of Organisational Structure on Information Quality and Decision-Making Effectiveness Link

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### Abstract

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Banks in Palestine are an important source of businesses and organizations for financing and bank's managers have to make effective decisions. The literature indicates the important role of information quality to facilitate managers to make effective decisions. Information quality dimensions of accuracy, accessibility, relevancy, completeness, accuracy, and timeliness are the factors that determine whether the information received by managers meet the quality. In this paper we argue that the effective decision making effectiveness depends on the structure of the organization. A formalized organizational structure, for example, is likely to affect the information quality, and, hence, the decision-making process. In essence, this paper proposes the moderating effect of organizational structure on the link between information quality and decision making effectiveness.

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**Keywords:** Decision making effectiveness; information quality; organizational structure; Banking sector; Palestine.

### 1. Introduction

The banking sector considers as an important source of financing for most businesses and organizations in Palestine (Alkhatib & Harsheh, 2012). The common assumption is that a company's business success depends much on its financial performance, because a good financial standing allows it to improve its functions and activities Islamic Development Bank (2014). Banks are the primary source of financing and it is imperative to understand how banking managers make effective decisions to meet the bank's objectives of providing financial assistance to business companies and other



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organizations. Thus, this study is carried out to determine the factors related to effective decision making in banking sectors in Palestine.

## **2. Literature review**

### *2.1 Decision-making effectiveness*

In order to be effective in making decisions, managers have to consider, assess, and evaluate several choices or alternatives. Researchers specified that decision making effectiveness is a systematic and incremental process that consists of recognizing, acting, and selecting alternatives by using the utility functions (Ehsani, & Sadi, 2010). Making effective decision means making the correct choice among several alternatives. However, to do that, it depends on the quality of information available to the decision maker (Dean & Sharfman, 1996).

Previous research shows that managers are able to learn to successfully manipulate and manage complex causal systems (Hagmayer, & Meder, 2013). This is because making a decision involves a metacognitive process that can allow individuals to exert cognitive control by enabling them to generate multiple, alternative decision frameworks that focus on interpreting, planning, and implementing goals (Haynie & Shepherd, 2009).

Past research showed a number of factors purported to decision-making effectiveness. Among these factors, two of them are organizational structure and information quality. Researchers point out those problems in making effective decisions begin to emerge in a situation where banks have a broad organizational structure that affects the quality of information available to managers who are responsible to making a decision (Valensisi & Missaglia, 2010; Welch 2002).

### *2.2 Information quality*

Information can be defined from the organization's perspective as data that need to be processed (Michnik & Lo, 2009). Without adequate processing of such data, organizations may not have the necessary information to operate effectively. Some scholars view information and data in a similar light (Gwartney, Lawson, and Norton 2008). An appropriate alternative definition of information that can be used is provided by Osvaldo, Meireles and Carvalho (2014), who stated that "information is not a by-product, nor documentation but rather information is a direct product of process used to capture knowledge about the persons, places, things and events discovered while conducting business transactions". When managers have the necessary information, they can make good decisions as information can be tabulated into diagrams which managers can interpret.

According to English (2000), there is an indication to support the perception that good information can help lead an organization towards effective decision making. However, it is difficult to make good decisions without processed data or information in each activity and phase of the decision making effectiveness. This is because of the increasing numbers of alternatives, time constraints, decision complications, cost of making wrong decisions, and the need to access appropriate information (Buhalis, & Law, 2008). In other words, information has value if it contributes to decision-making effectiveness for the organization. That is, the value of information should be measured to determine if that information is useful to a particular organization (Michael, & Dean, 2009).

Findings from past studies indicated that good information improves decision making, enhances efficiency, and provides a competitive edge to the organization. As pointed out by Rolker (2000), the quality of the information circulated by several sources is a major problem encountered by information users. This is because most of the information sources are not well-structured and, hence, they cannot be relied upon to get information with high quality attributes (Baars & Kemper, 2008). The quality of information received can be measured against its attributes or dimensions, such as accuracy, accessibility, relevancy, timeliness, completeness, interpretability. Accuracy is not the only factor in determining the quality of information. Accuracy depends on how the data is collected, and is usually judged by comparing several measurements, calculation, or specification from the same or different sources to the correct value or a standard (Widom, 2004). Accurate information enables a decision maker to make effective decisions. On the contrary, if the information is inaccurate or incorrect, it leads to a lack of precision in the decisions made.

Accessibility can be defined as the availability of data and ability to obtain or retrieve it when needed by managers (DeLone & McLean, 1992). Accessibility of information quality is connected with the problems of medium of communication rather than the data itself. A poor or unavailable communication channel may lead to the problems of accessibility.

Relevancy in information quality dimension means that the data should have relevance to the task at hand (Wang & Strong, 1996). DeLone and McLean (1992) Considered relevancy as one of the important dimensions of information quality. It is argued that when data is relevant to the task, this means that it is adequate for managers to make decisions (Miller, 2005; Wang & Strong, 1996).

According to Schaffer (2008), timeliness of information means the sooner the information is available to decision makers the faster it is for them to make decisions. A study conducted to examine the relationship between the timing of the availability of information and decision making and found positive relationship (Schaffer, 2008).

Completeness of the information can be defined as “the extent to which data are of sufficient breadth, depth, and scope for the task at hand” (Wang & Strong, 1996). This definition is task-centred and is derived from the intended use of the information for managers. According to the data-centred view, completeness is defined as all values for a certain variable that are recorded (Ballou & Pazer, 1985).

Interpretability implies ease of understanding of information. In information quality perspective, interpretability is concerned with the interpretational semantic aspect. According to Kahn, Strong, and Wang (2002), interpretability refers to the extent to which information is in appropriate languages, symbols, and units the definitions are clear and to technical aspects, for instance, whether information is represented using an appropriate notation.

Based on the above arguments on the role of information quality, we developed the following hypotheses:

*H1: There is a significant relationship between information quality and decision-making effectiveness.*

*H1a: Accuracy of information has a significant relationship with decision making effectiveness.*

*H1b: Accessibility of information has a significant relationship with decision making effectiveness.*

*H1c: Relevancy of information has a significant relationship with decision making effectiveness.*

*H1d: Timeliness of information has a significant relationship with decision making effectiveness.*

*H1e: Completeness of information has a significant relationship with decision making effectiveness.*

*H1f: Interpretability of information has a significant relationship with decision making effectiveness.*

### 2.3 Organizational structure

Theorists have defined organizational structure in various ways. Miner (2002) defined structure as capturing centralization of authority, formalization, complexity, and integration. To Griffin and Moorhead (2011), structure represents the organization's task reporting and the various relationships within the organization. According to Islam, Ahmed, Hasan, and Ahmed, (2011), organizational structure consists of three components i.e. centralization, formality, and complexity. Formality indicates the extent to which the rights and duties of the members of the organization are determined and the extent to which these are written down in rules, procedures, and instructions (Willem, Buelens, & Jonghe, 2007). An organization that is less formal in its structure generally leads to greater or better communication with partners and employees within the organization. It creates greater flexibility and openness, which is conducive for organizational structure that is less formal. An organizational structure that is more flexible helps to lower the obstacles during communication flow in the organization (Islam et al., 2011).

Centralization, on the other hand, refers to the hierarchy of authority that can make decisions. In centralized organizations, senior managers and those who are at the top of the organization have the responsibility for making decisions, whereas in a decentralized organization, the decision-making is typically dispersed at the lower levels (Vazifedoust, Nasiri & Norouzi, 2012). Finally, complexity in a structure setting of an organization in different banking sectors pose difficulties for employees in knowledge sharing capabilities (Vazifedoust, Nasiri & Norouzi, 2012).

Gibson, Finnie, and Stuart (2015). Revealed that centralization, formality and complexity inversely influence role ambiguity for the Americans, but not for the Japanese and Koreans. Johari and Yahya, (2009) argued that differences in the attitude of Japanese and Korean employees are collectivistic as compared to the American counterparts who are individualistic. Also, formalization (in terms rules, policies, and procedures) provides guidelines to Japanese and Korean employees but not to the American employees.

Because an organizational structure serves as a framework and offers a boundary for managers when making decisions, it has bearing on whether the information received by the managers is of quality or not. For instance, in a formal organization, we expect that managers are not likely to receive information in a timely manner because it has to go through a proper channel. Furthermore, the accuracy and completeness of the information is also affected because the information has to go

through several layers in the organization and it is likely to get filtered as it reaches to the bottom of the hierarchy's appropriateness imperative. Through a proper line of reporting and clear job description that managers understand where their authority is in a decision-making effectiveness. Accessibility of quality information is also likely to be compromised because a formalized organization, knowledge-sharing capabilities are more likely to be limited (Gonzalez-Cruz, Huguet-Roig, & Cruz-Ros, 2010) Hence, we developed the following hypothesis:

*H2: Organizational structure moderates the relationship between information quality and decision-making effectiveness.*

#### 4. Proposed Research Model

Based on the literature cited above, the classical theory emphasizes rationality in decision making effectiveness in which the decision maker to obtain adequate information which is of sufficient quality, quantity and accuracy (Mintzberg, 1973). According to contingency theory, the completeness of information which is available to the decision makers differs from one situation to another (Tarter & Wayne, 1998). Consequently, we develop a model that gives us a graphical representation of the conceptual relationships between information quality, organisational structure, and decision-making effectiveness. In this framework, information quality is conceptualised as the independent variable that influences or acts as a causal variable for decision making effectiveness. The direction of this relationship may be affected by the nature of organisational structure. Hence, organisational structure is conceptualised as a moderating variable between information quality and decision-making effectiveness. Figure 1 shows the theoretical relationships.

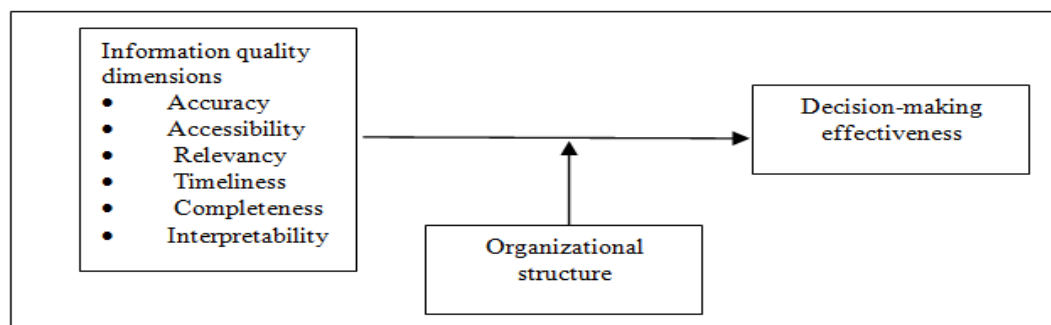


Fig. 1. Proposed research model

#### 5. Conclusion

This paper explained the decision-making effectiveness factors in the banking industry in Palestine. As information for decision making comes from different levels within the banks, it affects the effectiveness of the decision-making process. If the study's proposition is valid, the findings will have important implications for the design of the banks to ensure that the decisions made are effective to facilitate business and non-business organizations to accomplish their goals and objectives.

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