

THE IMPACT OF MARKETING INFORMATION SYSTEMS ON DECISION-MAKING SYSTEMS AT ISLAMIC INTERNATIONAL ARAB BANK IN JORDAN

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ABSTRACT

This paper aims to study the impact of Marketing Information Systems (MKIS) on Decision Making Systems (DMS) at banks sectors. Islamic International Arab Bank (IIAB) managers in Jordan are the target of this study. A questionnaire was developed to achieve the study's objectives and distributed to (30) branch managers in IIAB. The questionnaire has 5 variables; four variables are used as independent variables (Databases System, Marketing research, marketing analysis, and marketing intelligence). Also, the "decision-making systems" is used as dependent variable.

The Islamic banking sector in Jordan still suffers from a weak infrastructure in the marketing information systems, which clearly affected the decision-making systems in these banks. This reflected negatively on the ability of these banks to make successful marketing decisions that would reach consumers in a way that they could compete with commercial banks. Thus, this study can provide the scientific foundations for banks to determining the impact of marketing information systems on the decision-making systems.

In addition, this study is important in practical terms because it is considered as the quality of decision-making systems to meet the needs of customers, which raise their confidence in the banking sector especially the Islamic banks sector. The results, marketing information systems have a significant influence on decision making systems of bank management. Marketing intelligence, research and analysis are dependent on database systems as a main source of information.

Keywords: Decision-Making Systems; Marketing Information Systems; Databases; Marketing Research; Marketing Analysis; Marketing Intelligence; Islamic International Arab Bank.

INTRODUCTION

Marketing information systems and decision-making systems have an important and prominent place in banks area, especially after the challenges and changes facing banks locally and internationally. Today, marketing information systems have become one of the main resources that owned by banks, because it contributes to raising the productivity of banks and increasing their effectiveness. Also, marketing information systems are playing an influential role in marketing activities and management systems (Koçoğlu et al., 2017). Additionally, using information systems to support the decision makers is an element of organizational change and growth in banks; therefore, it is an important element to increase the banking business and one of the critical factors for achieving a competitive advantage, which affects the level of performance. For that, the Bank's management seeks to collect the information

about all the parties it deals with, such as customers, competitors and markets, as an important decision-making strategy in the Bank (Hashem, 2016), especially after the rapid development of the past decades; especially when the customers are changing their desires and looking for high quality products that suit their income.

The main idea of this research is to provide an important combination between two important parts in the science of marketing and management, which aims to improve decision making systems to meet the needs of the markets' target through creativity and innovation in order to get benefit from all forms of technology development, which has saved time and cost by taking advantage of marketing information systems to provide accurate information that helps management in the bank to make right decisions. The problem of the study is that the majority of the banking sector in Jordan faces strong competition because of the increasing number of banks in Jordan compared to the small number of customers. Therefore, it is necessary for banks to use marketing information systems to help them making the right decisions to improve and develop their banking operations.

Thus, banks need to invest at information systems to be a clear framework and deal with it electronically to meet the needs of management in the bank to improve the quality of its decision. In addition, despite the fact that monitoring the Impact of Marketing Information Systems on Decision-Making Systems is not a new phenomenon, limited studies have been conducted in developing countries. Jordan as one of these developing countries suffers from the limited studies in this topic, especially the Islamic bank sectors. For that, the research shall simultaneously provide an important discovery on how efficient decisions from decisions-making systems could help promote social welfare, whilst enabling the Islamic banking sector to grow in terms of returns and efficiency in service delivery. Accordingly, the main aim of this research is to study the impact of marketing information systems (including databases, marketing research, marketing analysis and marketing intelligence) on management decision making systems.

LITERATURE REVIEW

Many previous researches tried to study the impact of information systems on decision making to help decision-makers in the organizations to make the right decision and achieve the organization's goals (Aina et al., 2016). Accordingly, banking sectors are most interested in business analysis to do the right decisions. In order to increase the quality of managerial decision making systems, Kowalczyk and Buxmann (2015) suggested that it will be useful for analytics experts to support decision processes by applying the technological capabilities after using the business intelligence and analytics techniques. Moreover, Koçoğlu et al. (2017) have investigated that marketing information systems play an important role to get the benefits of customer information in order to improve the services. Therefore, attention to marketing information systems should be one of the banks priorities, which can be used in the decision-making process that can help banks achieve profitability. Additionally, designing of the decision-making system and using it in non-routine decisions are important ways to be followed in different institutions that sometimes require quick and non-routine decisions (Herrmann et al., 2007).

According to IIAB annual report (2019), the Islamic International Arab Bank was ranked as the best Islamic bank in Jordan 2019 (according to the banker journal issued by financial time's group/UK., the bank relies on the Governance Council to take administrative decisions through a group of reports that are submitted from the various departments and

branches of the bank. Consequently, there is no marketing information system that is adopted as a reference that supports banking decision-making systems.

On the other hand, based in the same report, in 2019, the bank launched a smart phone application that enables users to do a lot of banking operations easily through this application. In addition, In order to apply the maximum protection methods, which improve information security, the bank has operated modern protection systems such as (Zero Day Attack-Anti malware). Also, The Bank has sought to renew obtain certifications such as PCI & ISO22301, ISO27001.

Information systems management was a major part of the bank's annual report. The bank works to keep pace with global technological development. This was done by focusing on information security, diversity in customer service, and preserving the technological gains achieved in previous years. This reflected positively on the stability, improvement and development of the technological work environment. Moreover, according to the report, the technical work during the year 2019 focused on continuing to modernize the technological infrastructure and support it with new tools that facilitate work methods, increase productivity and facilitate procedures to support users.

Moreover, According to Tarka (2018) marketing intelligence in Jordanian banks are related to customer feedback, social media, and specialized agents and building relationships with new customers. Jordanian banks use marketing intelligence mainly to develop the market, attract new customers, and support market segmentation. On the other hand, marketing research plays a rather supporting role for decision makers in companies like banks. A lot of managers make decisions and analyse decision problems on the basis of their own intuition and creativity rather than on rational thinking. For that, Marketing Information systems can play a good role to help manager to take their decisions on rational way (Al-Weshah, 2017).

The valuable of the information and its quality can benefit the organizations outcomes. Related to that, integrating structured and unstructured information and its quality can help organizations to collect more data about their customers which increase the quality of their decision making systems especially in marketing information systems (Harrison et al., 2016). Moreover, according to Bhatia (2011) in order to help decision makers to take the right decisions successfully, companies should take an attention that the reliable and timely Information is important to enhance the efficiency of banking operations to follow up with competition in the market. For that, marketing information systems and decision making systems should be used in parallel and measure the development of these systems according to the correct decisions.

However, there is a positive relationship between the quality of information and firm success. Additionally, decision making systems are a main part of information technology in general, especially the management and marketing information systems. According to that, many previous researches support the contributing of information technology in decision-making capabilities. Based on the foregoing, it can be concluded that information systems in all its forms have come to help institutions in general and banking sectors in particular in supporting decisions, and thus enable them to make the right decisions at the right time.

RESEARCH METHODOLOGY

The Study Importance

This study can provide the scientific foundations for banks to determining the impact of marketing information systems on the decision-making systems. In addition, this study is

important in practical terms because it is considered as the quality of decision-making systems to meet the needs of customers, which raises their confidence in the banking sector.

The Study Objectives

The study aims to achieve the following objectives:

1. To evaluate the impact of Marketing Information Systems in decision-making systems at Islamic bank sector.
2. To recognize the relationship between Marketing Information Systems and decision-making systems.
3. To explore the administrative Decision-Making Process in Jordanian Islamic bank institutions.

The Research Model

As shown in Figure 1 the independent side has four variables; database system, marketing research, marketing analysis and marketing intelligence. In addition, the dependent variable is decision-making systems.

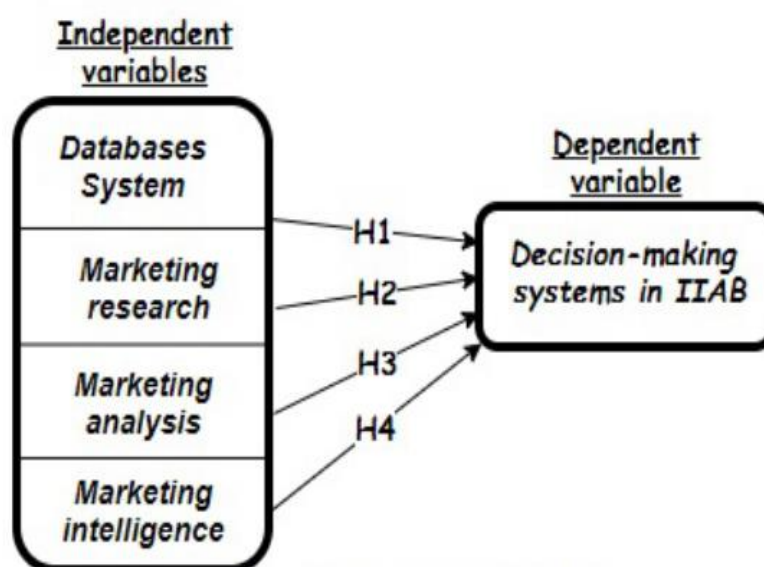


FIGURE 1

RESEARCH MODEL

Thus, according to research model, this survey has four hypotheses as the following:

H1: Databases systems will have significant influence on decision-making of bank management.

H2: Marketing research will have significant influence on decision-making of bank management.

H3: Marketing analysis will have significant influence on decision-making of bank management.

H4: Marketing intelligence will have significant influence on decision-making of bank management.

The Study Approach

Based on the problem of the study which is the increasing number of banks in Jordan compared to the small number of customers, the researchers adopted a descriptive approach to examine the responses of sample study about how the Marketing Information Systems methods can influence the administrative decision-making process. Furthermore, the analytical approach is used in this study to measure the Impact of Marketing Information Systems on Decision-Making Systems at Islamic International Arab Bank in Jordan.

Sampling

The target populations for the distribution of the final version of the questionnaire are the decision makers at Islamic International Arab Bank in Jordan (IIAB). The sample included (27) selected from more than (10) branches for the year 2018.

Instrument

The questionnaire amounts the influence of Marketing Information systems on Decision Making Systems at IIAB. All the questionnaire items utilize a five-point Likert scale ranging from “strongly disagree” to “strongly agree” with a middle neutral point.

RESEARCH ANALYSIS AND FINDINGS

Characteristics of the Sample

Table 1 shows the sample distribution according to demographic variables. According to the results, there are (25) males with a (92.6%) percent, while the females are (2) with a (7.4%) percent. In addition, Table 1 indicates that 51.9% of managers have bachelor degrees and 40.7% have master degrees while 7.4% have PhD degrees. Moreover, there are three job titles which are "Manager" with 48.1% percent, "Assistant Manager" with 22.2% percent and "Head of the Department" with 29.6% percent. Additionally, according to the results, 40.7% have a management experience between 11-15 years while 44.4% have more than 16 management experience years. Finally, it is found that more than the half of manager (63%) is between 30-40 years old.

Category	Frequency	Percentage%
Gender		
Male	25	92.6%
Female	2	7.4%
Total	27	100%
Age		
Less than 30	1	3.7%

Between 30-40	17	63%
Between 41-50	7	25.9%
More than 50	2	7.4%
Total	27	100%
Academic qualification		
Bachelor	14	51.9%
Master	11	40.7%
Ph.D.	2	7.4%
Total	27	100%
Job Title		
Manager	13	48.1%
Assistant Manager	6	22.2%
Head of the Department	8	29.6%
Years of management experience		
From 6-10 years	4	14.8%
From 11-15 years	11	40.7%
More than 16 years	12	44.4%

Reliability Test

Cronbach Alpha (α) test was used in order to find the instrument reliability. According to Malhotra (2004), the accepted values should be more than 60%. As shown in the following Table 2 the value was = 82.9% for the questionnaire:

TABLE 2		
CORNBACH ALPHA		
<i>Cronbach's Alpha</i>	<i>Cronbach's Alpha Based on Standardized Items</i>	<i># of Items</i>
0.829	0.882	5

Statistical Results

As showing in Table 3, the grand mean of each variable reflects positive attitudes toward them since each one of them is greater than virtual mean (3).

Variables	Mean	Std. Deviation
Database	12.9259	4.74687
intelligence	12.3704	3.72257
analysis	7.0741	1.87956
research	13.5926	2.72113
DMS	7.3704	1.86358

Collinearity Statistics Test

In order to test the multicollinearity between the independent variables, collinearity statistics is used for testing (Table 4). According to Mason (1987), the minimum acceptable cutoff value for tolerance should not be less than (0.10) while the value for VIF should not be more than (10).

	Collinearity Statistics	
	Tolerance	VIF
(Constant)		
Database	0.443	2.259
intelligence	0.443	2.255
analysis	0.383	2.610
research	0.343	2.914

Hypothesis Testing

Simple Regression is used to test all the following hypotheses in this study.

H1: Databases systems will have significant influence on decision-making of bank management.

The Table 5 indicates that F calculated value is significant at (0.01) level. Therefore, databases system will have significant influence on decision-making of bank management with moderate Pearson correlation (r) 0.677132; also 45.8% of the variance (R-Square) in the decision-making of bank management has been significantly explained by databases system.

TABLE 5						
SIMPLE REGRESSION						
	r²	r	Sig t	t	Sig F	F
<i>H1</i>	0.458508	0.677132	0.000105	4.600947	0.000105	21.168717
<i>H2</i>	0.509093	0.713508	0.000029	5.091776	0.000029	25.926183
<i>H3</i>	0.395306	0.628734	0.000444	4.042677	0.000444	16.343237
<i>H4</i>	0.303065	0.550514	0.002926	3.297176	0.002926	10.871372

H2: Marketing research will have significant influence on decision-making of bank management.

The Table 5 indicates that *F* calculated value is significant at (0.01) level. Therefore, marketing research will have significant influence on decision-making of bank management with moderate Pearson correlation (*r*) 0.713508; also 50.9% of the variance (R-Square) in the decision-making of bank management has been significantly explained by marketing research.

H3: Marketing analysis will have significant influence on decision-making of bank management.

The Table 5 indicates that *F* calculated value is significant at (0.01) level. Therefore, marketing analysis will have significant influence on decision-making of bank management with moderate Pearson correlation (*r*) 0.628734; also 39.5% of the variance (R-Square) in the decision-making of bank management has been significantly explained by marketing analysis.

H4: Marketing intelligence will have significant influence on decision-making of bank management.

The Table 5 indicate that *F* calculated value is significant at (0.01) level. Therefore, marketing intelligence will have significant influence on decision-making of bank management with moderate Pearson correlation (*r*) 0.550514; also 30.3% of the variance (R-Square) in the decision-making of bank management has been significantly explained by marketing intelligence.

DISCUSSION AND CONCLUSION

According to the results, marketing information systems have a significant influence on decision making systems of bank management. Marketing intelligence, research and analysis are dependent on database systems as a main source of information. These results are consistent with studies of Kowalczyk and Buxmann (2015) and Koçoğlu et al., (2017) whom found that marketing information systems play an important role to get the benefits of customer information in order to improve the services, and this, in turn, affects decision-making systems of banks sectors. Based on that, the bank sectors should work harder in their marketing information systems to collect the useful information, in order to support the decision making systems and help the decision makers to take the right decision in the right time.

Additionally, the study showed that Islamic banks should implement marketing information systems due to their contribution in making important decisions. In addition, Islamic banks are in need to get the benefits from the new technology which positively affects the use of marketing information systems which in return have influence on decision-making

systems. Because Islamic banks do not use any new technology until it has been approved by the Sharia Supervisory Board, and this is one of the reasons for the slow development of Islamic banks. Moreover, it becomes a necessary to activate the use of decision-making systems in a way that helps to the achievement of marketing creativity in Islamic banks. Thus, the study showed that the Islamic banks should implement decision making systems according to their marketing information systems. The Islamic banks sector requires developing its marketing information systems, as it has an impact on accessing accurate information, which in turn helps in making the right decision.

RECOMMENDATIONS

1. The research recommended that there is a need for keeping up with the developments of marketing information systems in a way that enables Islamic banks to increase their effectiveness in using these systems to achieve a decision making systems can help them to take a right decisions in the right time.
2. Islamic banks have to focus on how to train their marketing department staff to use marketing information systems related to their work tasks, by making training courses about the various programs that are related to the marketing information systems.
3. To expand the means of marketing information systems between the Bank staff and that helps in promoting the use of decision making systems in Islamic banks.
4. Allocate provisions for the development of decision making systems in Islamic banks become a necessary.
5. Do another studies related to this study's subject using other different topics.

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