



IMPACT OF SMART APPLICATIONS CHARACTERISTICS ON THE QUALITY OF BANKING SERVICES IN COMMERCIAL BANKS IN QATAR STATE

Dr. Faraj Harahsheh¹, Abdullah Fahad Rashed²

^{1,2} Isra University, Amman - Jordan

Email: ¹ faraj.harahsheh@iu.edu.jo, ² abdullahrashed@iu.edu.jo

Abstract

This study aimed to identify the impact of Smart Applications Characteristics on the Quality of Banking Services in Commercial Banks in Qatar State, the dimensions of smart applications characteristics represented in (easy to use, availability, privacy), and the dimensions of the quality banking services represented in (Responsiveness, Dependability, and Security), simple random sample of (380) customers of commercial banks in Qatar was selected, the study used the descriptive analytical approach, and reached a set of results, the most important of which: there is Statistically significant impact of the characteristics of smart applications on the quality of banking services in commercial banks in Qatar state, also the characteristics work to provide an appropriate environment in enhancing the quality of banking services that are provided through smart applications, the study recommended management of commercial banks in Qatar state pay attention to the provision of smart applications characterized by smooth and easy use and, also updating smart applications continuously to ensure the availability and ensure that applications are secure of privacy and confidentiality when using applications.

Keywords: *Smart applications Characteristics, Quality of banking services, commercial banks in Qatar State*

1. Introduction

Business organizations in the twenty-first century are facing many challenges such as technical, political, social, cultural, security imposed by environmental changes in the business environment, especially in the banking sector, It has achieved great achievements in various fields of life, the information and communication technology, governments, organizations and individuals, including banks, have benefited from it, and multiple methods related to total quality practices reflected in the quality of banks performance, smart applications are considered a concepts of modern technology that countries and organizations have become resort to in providing their services to customers and plays a major role in improving and developing the quality of services provided to customers. (Mulyono & Pasaribu, 2021)

The characteristics of smart applications play a major role in attracting the needs of many business sectors and customers, and has great impact on the recipients of the service, the extent of using these applications has become widespread and many customers are searching and benefiting from these services provided by the applications. (Zahr, 2020). The importance of the quality banking service is evident through its relations with the bank

employees in terms of increasing satisfaction, raising morale and commitment to the banking business that they carry out. Creating the appropriate environment for banking work by searching for the best opportunities to acquire skills, diversify business and implement improvements, the most important factors that help to improve the quality of its services (Al-Sarn, 2007). This study aimed to identify the impact of smart applications characteristics on the quality of banking services in commercial banks in Qatar State.

2. Problem of Study

Organizations in general, especially commercial banks, seek to achieve the quality of their services through many means to achieve profits with less risk by providing services to customers in the best ways and innovative methods, but the methods used to achieve their goal differ from organization to another, and their focus is on smart applications limited in its operations as a means to achieve the quality of banking services, because of its positive effects in improving the level of quality of banking services provided to customers.

The problem of the study is to explain the impact of smart applications characteristics on the Quality of Banking Services in commercial banks in Qatar State, in order to reach specific perceptions about the possibility of using smart applications, and to come up with recommendations that are supportive to reduce the obstacles facing the use of smart applications, which justifies conducting this study because there are few Previous studies that combined the two variables of the current study, which dealt with the impact of the characteristics of smart applications on the quality of banking services in commercial banks in the State of Qatar. The problem of the study is represented in answering the following question :

What is the impact of the of smart applications characteristics in its dimensions (ease of use, availability, and privacy) on the quality of banking services in its dimensions (Speed of response, Dependability, and Security) in commercial banks in Qatar?

3. Important of the Study

This study aims to clarify the concepts of smart applications in its dimensions (ease of use, availability, and privacy) and the importance of quality of banking services in its dimensions (speed of response, dependability, and security) in commercial banks in Qatar State, also this study will perform a theoretical and conceptual framework and will help decision-makers in banks and other organizations. The significance of the study come from the importance of commercial banks in Qatar state) because its consider one of the most important sector in Qatar state.

4. Study Hypothesis

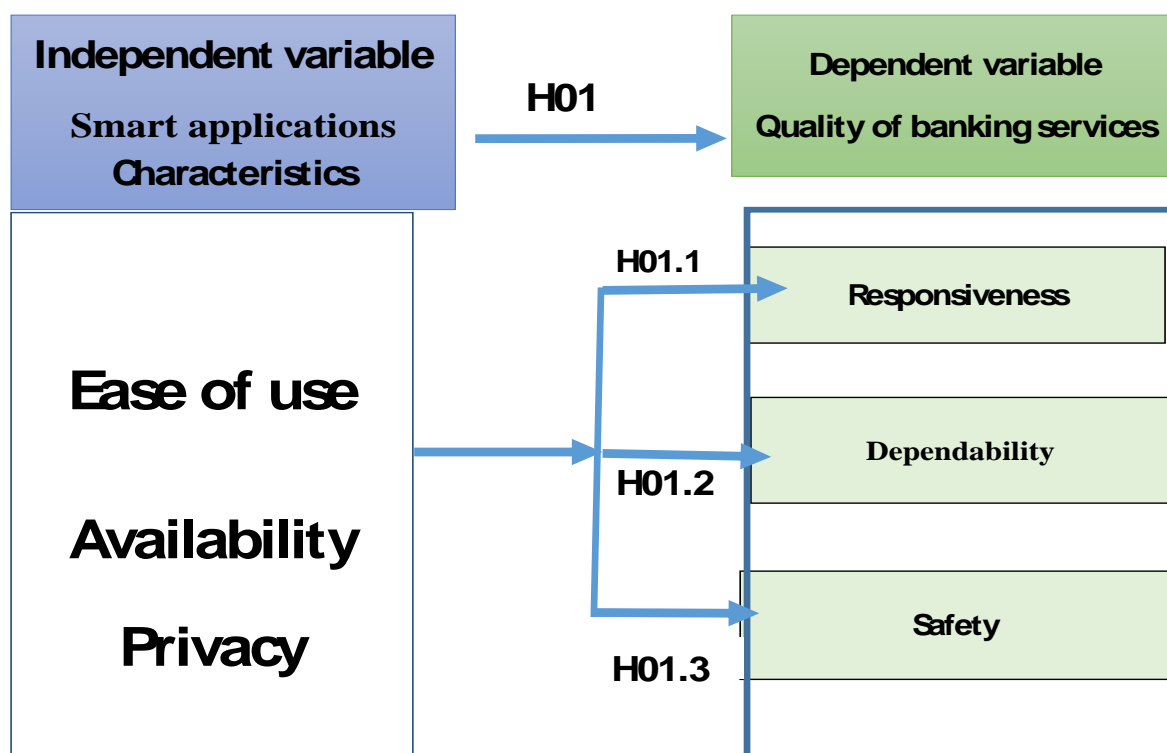
Main hypothesis: H01: There is no statistically significant impact at the level of $(0.05 \geq \alpha)$ for smart applications characteristics with their its dimensions (ease of use, availability, and privacy) on the quality of banking services with its dimensions (speed of response, dependability, and security) in commercial banks in Qatar State.

Sub-hypotheses: H01-1: There is no statistically significant impact at the level of $(0.05 \geq \alpha)$ for smart applications characteristics with its dimensions (ease of use, availability, and privacy) on speed of response in commercial banks in Qatar State.

H01-2: There is no statistically significant impact at the level of $(0.05 \geq \alpha)$ for the of smart applications characteristics with its dimensions (ease of use, availability, and privacy) on dependability in commercial banks in Qatar State.

H01-3: There is no statistically significant impact at the level of $(0.05 \geq \alpha)$ for the of smart applications characteristics with its dimensions (ease of use, availability, and privacy) on security in commercial banks in Qatar State.

5. Model of Study



6. Theoretical framework

Smart applications characteristics: Its a computer programs programmed to carry out a number of specific tasks, and they are intended for smart phones and tablet computers, and they have an infinite number of applications for Android devices or iPhone devices, also they are divided into many classifications such as music applications, games, social communication, exercise, purchasing of products electronically, In addition to free education applications, banks and many companies are using smart phone applications to provide fast and high-quality services to customers and reduce costs for companies.. (Kotler & Keller, 2006).

Dimintions of Smart applications:

(1) Ease of use: It is the simplicity and ease when using special systems in smart applications used by customers, the simpler and smoother of the systems clearer and easier it is to use. (Shatara, 2013).**(2) Availability:** the ability of smart applications to be constantly available

and its ability to fix errors directly and respond to customer requests in a quick time. (Al-Batran, 2021). **(3) Privacy:** It is the ability of the organization to find the rules that govern the process of data confidentiality and information management for customers, and only the concerned parties and stakeholders have access to it, and to maintain the privacy of this information. (Abdullah, 2013).

Quality of banking services: It is a set of activities and operations with full useful content in the tangible and intangible elements provided by the bank, which constitute a source for meeting its current and future economic needs and desires, and at the same time constitute a source of benefits for the bank through the mutual relationship between the two parties. (Awoke & Mekonnen, 2015).

The dimensions of Quality banking services are: **(1) Responsiveness:** It is the desire to help customers and provide them with service. This dimension focuses on kindness, cordiality, and originality in dealing with customer requests, including questions, complaints, problems, and recommendations, where a balance is made between responses and accompanying events that may lead to adaptation (Al-Qmaz, 2021), **(2) Reliability:** It is the natural environment of the organization and its ability to provide reliable, accurate and timely service and with a specific structure that must be taken into account in delivery time, service delivery, problem solving and price, all of which have the value of influencing determining service quality perceptions among customers. (Al-Qmaz, 2021), **(3) Security:** It is the ability of the service provider to provide the service to the customer, in a safe and risk-free environment as much as possible, and to spread confidence and safety, as it represents the guarantee, and it is one of the things that the customer does depends on the evaluation of the quality of service, because he always prefers the institution that provides him with a degree From safety (Hussein, 2019).

Important of Smart applications Smart applications especially smart phone play an important role in business growth and effective communication between companies and their customers for the ease of carrying out business with these phones. Users can pay their bills, enter their data, or purchasing products with just one click on their phones. These smart applications can be downloaded on different systems of phones or even devices such as iPhone, Android, Blackberry or Windows. The creation of these applications was not limited to different companies and institutions with the aim of working, but today these applications can be created and developed by individuals and start their own business and profit through it, person needs is to think and plan well for a specific idea and then start launching and marketing it using a special application for the purpose of all , smart applications easily attract customers to companies and banks, by facilitating people to carry out tasks and duties, and research in the field of science has contributed to the spread of the services of these applications. (Rose, 2020) Mobile applications are a smart idea and easy to deal with..the importance of smart applications has increased in our lives because of the services they provide and facilitate life functions for customers, and among the areas of smart applications are transportation, culture, education, and tourism, the uses of smart applications have spread rapidly over the years In the past few years, and with the development of smart phones and operating systems, the use of application has expanded, and appears new application, the development of these applications has been a revolutionary renaissance in technology,

especially since smart phone users are also increasing. The past few years have witnessed a great renaissance in the field of technology in general and smartphone technology in particular, and it has become easy to communicate between people, and there are many applications that can be used in communication, learning and entertainment, and now it has become necessary to create and develop applications not only for personal use, but to include Companies, banks and other institutions..(Almarashdeh, I. (2018)

Study Methodology:

The study followed the analytical descriptive approach in achieving its objectives represented in identifying the impact of the characteristics of smart applications in their dimensions (ease of use, availability, privacy) on the quality of banking services in their dimensions (Responsiveness, dependability, safety) in commercial banks in the State of Qatar.

Study population:

The study population consisted of all individuals who deal with commercial banks in the city of Doha / Qatar who use smart applications.

Study sample:

Sample random selected from individuals dealing with commercial banks in the city of Doha / Qatar who use smart applications (380) users.

Study tool:

To achieve the objectives of the study and collect its data, a research tool was developed, which is a questionnaire consisting of (30) items with a five-point scale (strongly disagree, disagree, neutral, agree, strongly agree), distributed in two dimensions. The first dimension covered the characteristics of smart applications (Ease of use, availability, and privacy), while the second dimension covered the quality of banking services (Responsiveness, dependability, and safety).

Validity of the study tool:

The validity of the content of the study tool was verified by presenting it to a group of experts and specialists in the field of business administration. To express their opinions on the validity of the paragraphs and their suitability for the purpose for which they were prepared, the paragraphs that obtained the approval of (85%) of the arbitrators were selected.

The construction validity of the study tool was also verified by calculating the values of the correlation coefficients of the scores of the paragraphs with the dimension to which they belong and with the total score of the scale as follows:

Table (1) Paragraph correlation coefficients

Paragraph No	Correlation coefficient with dimension	Correlation coefficient with the tool	Paragraph No	Correlation coefficient with dimension	Correlation coefficient with the tool
1	.487**	.519**	16	.430**	.352**
2	.488**	.412**	17	.273**	.231**
3	.178**	.476**	18	.325**	.336**
4	.520**	.231**	19	.220**	.536**
5	.356**	.325**	20	.157**	.307**

Ease of use		.717**	Responsiveness		.724**
6	.197**	.474**	21	.259**	.398**
7	.595**	.287**	22	.212**	.429**
8	.754**	.486**	23	.267**	.612**
9	.729**	.508**	24	.378**	.550**
10	.595**	.461**	25	.316**	.316**
availability		.671**	dependability		.775**
11	.520**	.174**	26	.234**	.275**
12	.227**	.251**	27	.325**	.181**
13	.428**	.222**	28	.236**	.555**
14	.577**	.333**	29	.281**	.399**
15	.357**	.450**	30	.157**	.630**
privacy		.692**	safety		.744**

It is clear from Table (1) that the values of the correlation coefficients of the degree on the paragraph with the degree of the dimension to which it belongs ranged between (0.157-0.754), while it ranged with the total score of the tool between (0.222-0.630). In addition, the degree correlation coefficients ranged on the dimensions of the tool with the tool as a whole ranged between (0.671-0.775). Moreover, they were all statistically significant at the level of significance (0.01).

Reliability of the study tool:

The reliability of the study tool was estimated through the method of Cronbach alpha coefficients for all items and dimensions of the study, and the following table shows that:

variable	number of paragraphs	Cronbach's Alpha
ease of use	5	0.875
availability	5	0.874
privacy	5	0.793
Responsiveness	5	0.768
dependability	5	0.852
Safety	5	0.856
all paragraphs	30	0.952

It is clear from Table (2) that the Reliability values through the Cronbach alpha equation for the dimensions of the study tool ranged between (0.768-0.875). and the Reliability values for all the questionnaire items combined were (0.952), and they were all higher than the acceptable value set by (Sekaran , 2003) with a value of (0.70), and thus it can be said that the scale has suitable and acceptable Reliability values for application to the main study sample.

7. Study Results and Discussion

What is the level of smart application characteristics in commercial banks in the State of Qatar from the point of view of individuals dealing with those banks?

To answer this question, the means and standard deviations were calculated for the responses of the study sample on the characteristics of smart applications dimension as follows:

Table (3) the means and standard deviations of the responses of the sample of study on the dimension of smart applications

NO	dimension	means	STD	Rank	Level
2	availability	3.74	0.723	1	High
1	ease of use	3.69	0.729	2	High
3	privacy	3.64	0.676	3	Medium
smart application characteristics		3.69	0.709	High	

Table (3) shows that a set of characteristics are available for smart applications in Qatari commercial banks.

It is the availability dimension, which came in the first rank with an arithmetic mean of (3.74) within the high level. As this value indicates that the respondents to this study who are dealers in Qatari commercial banks believe that the smart applications provided by these banks are characterized by availability and that they can be used at all times and places Also, these banks support the periodic maintenance procedures for these applications.

And the ease of use dimension, which came in the second rank, with an arithmetic mean of (3.64) within the high level, this result indicates that the respondents to this study who are dealers in Qatari commercial banks believe that the smart applications provided by these banks are characterized by ease of use and lack of complexity in their operation.

Moreover, privacy dimension, which came in the last rank with an arithmetic mean of (3.64) within the average level, this result indicates the need for Qatari commercial banks to pay attention to issues of customer and customer privacy when using smart banking applications.

What is the level of quality of banking services in commercial banks in the State of Qatar?

To answer this question, the arithmetic means and standard deviations were calculated for the responses of the study sample on the quality of banking services dimension as follows:

Table (4) Arithmetic means and standard deviations of the responses of study sample individuals on the quality of banking services dimension

NO	dimension	means	STD	Rank	Level
1	Responsiveness	4.08	0.621	1	High
3	Safety	3.67	0.695	2	High
2	dependability	3.65	0.717	3	Medium
quality of banking services		3.80	0.687	High	

Table (4) shows that the level of quality of banking services in commercial banks in the State of Qatar is high. The Responsiveness dimension came in the first rank with a mean of (4.08) within the high level. As this result indicates that Qatari commercial banks are working to focus to provide immediate and fast services through smart applications, in addition to providing technical infrastructure to assist in technical support for any technical problems

that customers may encounter. In addition, the Safety dimension came in the second rank, with a mean of (3.67) within the high level, and this indicates that Qatari commercial banks are working to focus on providing safe and comfortable services that provide privacy and appropriate confidentiality. Moreover, the dependability dimension came in the last rank with a mean of (3.65) within the average level.

What is the impact of smart applications characteristics in their dimensions (ease of use, availability, privacy) on the quality of banking services in their dimensions (Responsiveness, dependability, Safety) in commercial banks in Qatar?

To answer this question, the following statistical hypothesis was derived:

H0: There is no statistically significant effect at the level of significance ($0.05 \geq \alpha$) for the characteristics of smart applications with their combined dimensions (ease of use, availability, and privacy) on the quality of banking in commercial banks in the State of Qatar.

To test this hypothesis, Multivariate Analysis was relied on as follows:

Table (5) Multivariate Analysis to examine the impact of the characteristics of smart applications on the quality of banking services in commercial banks in the State of Qatar.

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	42.889 ^a	25	1.716	12.320	.000
Intercept	931.732	1	931.732	6691.200	.000
smart applications	42.889	25	1.716	12.320	.000
Error	49.294	354	.139		
Total	4198.324	380			
Corrected Total	92.182	379			

Table (5) shows that there is a statistically significant effect at the level of significance ($0.05 \geq \alpha$) for the characteristics of smart applications. with their combined dimensions (ease of use, availability, and privacy), on the quality of banking services in commercial banks in the State of Qatar, as this result can be inferred through the values of (sig), which are less than (0.05).

8. Sub-hypotheses:

H01: There is no statistically significant effect at the level of significance ($0.05 \geq \alpha$) for the characteristics of smart applications on the Responsiveness in commercial banks in the State of Qatar.

Table (6) ANOVA Analysis to examine the impact of the characteristics of smart applications on the Responsiveness in commercial banks in the State of Qatar.

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	68.028	25	2.721	15.769	.000

Within Groups	61.087	354	.173		
Total	129.115	379			

Table (6) shows that there is a statistically significant effect at the level of significance ($0.05 \geq \alpha$) for the characteristics of smart applications, on the Responsiveness in commercial banks in the State of Qatar, as this result can be inferred through the values of (sig), which are less than (0.05).

H02: There is no statistically significant effect at the level of significance ($0.05 \geq \alpha$) for the characteristics of smart applications on the dependability in commercial banks in the State of Qatar.

Table (7) ANOVA Analysis to examine the impact of the characteristics of smart applications on the dependability in commercial banks in the State of Qatar.

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	75.279	25	3.011	8.135	.000
Within Groups	131.036	354	.370		
Total	206.315	379			

Table (7) shows that there is a statistically significant effect at the level of significance ($0.05 \geq \alpha$) for the characteristics of smart applications, on the dependability in commercial banks in the State of Qatar, as this result can be inferred through the values of (sig), which are less than (0.05).

H03: There is no statistically significant effect at the level of significance ($0.05 \geq \alpha$) for the characteristics of smart applications on the Safety in commercial banks in the State of Qatar.

Table (8) ANOVA Analysis to examine the impact of the characteristics of smart applications on the Safety in commercial banks in the State of Qatar.

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	61.168	25	2.447	8.704	.000
Within Groups	99.511	354	.281		
Total	160.679	379			

Table (8) shows that there is a statistically significant effect at the level of significance ($0.05 \geq \alpha$) for the characteristics of smart applications, on the Safety in commercial banks in the State of Qatar, as this result can be inferred through the values of (sig), which are less than (0.05).

9. Conclusions

This study aimed to identify the impact of Smart Applications Characteristics on the Quality of Banking Services in Commercial Banks in Qatar State, the dimensions of smart applications characteristics represented in (easy to use, availability, privacy), and the

dimensions of the quality banking services represented in (Responsiveness, Dependability, and Security) the results showed that ,the altitudes of paper sample towards Smart Applications Characteristics and the quality banking services are positive with high degree,and there is a statistically significant effect of of smart applications characteristics. with its dimation (ease of use, availability, and privacy), on the quality of banking services in commercial banks in the Qatar State,and most of the users of smart applications are young, middle-aged and educated ,the paper recommended top management of commercial banks in Qatar state should pay attention to the provision of smart applications characterized by smooth and easy to use and ensure that applications are secure and confidentiality when using applications, also updating smart applications continuously to ensure the availability of privacy and confidentiality when using applications.

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