

The Effect of Using Mobile Banking Services Applications on Electronic Word of Mouth: The Mediating Role of Perceived Trust

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Abstract

The objective of this study is to examine selected dimensions of mobile banking, (such as Ease of Navigation, Personalization Level, Information Quality, Rewards) on e-wom through the mediating role of perceived trust. Self-structured questionnaire is used to collect data which is then shared via Google forms online and targeted only to the users of mobile banking services application in Jordan. Quantitative and analytical methods were used to analyze the data. 499 questioners were returned, 30 of which were rejected as they were not using mobile banking service applications. 469 of the questionnaires were accepted and analyzed using reliability test analysis, descriptive statistics and regression process.

The findings of the study indicate that there is a statistically significant effect of mobile banking (Ease of Navigation, Personalization Level, Information quality, Rewards) through the mediation role of perceived trust on relationships between using mobile banking services and e-wom. It is recommended that banks pay more attention to mobile banking and build powerful and good E-WOM in order to spread the use of mobile banking rapidly.

Keywords: mobile banking, e-wom, Banks, perceived trust, Jordan

1. Introduction

The world is changing and how work is done in business has changed. Internet, smart phones, applications and social media have given organizations the opportunity to directly communicate with their customers and easily establish a close relationship with them (Yan, Shah, Zhai, Khan, Shah, 2018). Almost all banks in recent years have become interested in internet and mobile banking (E.Basci, 2014). Consumers used to perform their bank transactions through Automated Teller Machines (ATM), over the phone, or by using Internet banking. Now companies have replaced these traditional ways and introduced an easier way for their customers to complete their transaction with just one click on their mobile application (Bagudu, Khan, Roslan, 2017).

Internet banking has effectively changed bank work. It has accelerated the attaining and processing of information, displaying it to users without delay and at any time they choose (AlKailani, 2016). The idea of banks is based on the trust that a customer's money will be secure. This is an extremely sensitive issue for banks thus they are highly interested in safeguarding the security of their services and strive to improve internet and mobile banking in order to ensure customers feel safe and supported with every step they make on their account (Anton, 2014).

Most banks found that if they provided internet banking, it improved their service quality and more customers established a direct relationship with them. This resulted in an increase in revenue, higher profit, lower costs and reduced risk (Kombe and Wafula, 2015).

The use of mobile phones has greatly changed customer behavior as they are able to complete so many tasks on this one device. As such, customers have become accustomed to speedy transactions. Companies have noticed the reliability of smart phones and recognize the willingness of their customers to use this device to complete their daily tasks. This lead banks to take massive strides in expanding their internet and mobile banking services (Perdigoto and Picoto, 2014).

Mobile banking is defined as an application via wireless network connecting banks with their customers,

providing them with financial services like billing payment or non-financial services like account balance request through smart phone or tablet (Shaikh and Karjaluo, 2016). In recent years the use of mobile banking applications has increased in Jordan. Banks encourage their customer to use mobile banking as this allows them to reach more customers and gain their satisfaction and loyalty. The use of mobile banking application also minimizes labor costs (Alalwan, Dwivedi, Rana, Lal, Williams, 2015).

Customers have become familiar with e-wom on social media, posting comments, reviews and sharing personal experiences with more potential customers, assisting them in making decisions about products they may be interested in. (Saleem and Ellahi, 2017). Nowadays, when consumers need a product or service, they turn to their smart phones and search for information on websites, applications and social media in order to find the product or service that best fits their needs (Erkan and Evans, 2016).

E-wom is sharing your opinion, feelings and attitudes with groups of people on any subject matter through Internet (Ishida, Slevitch and Siamionava 2016). There is no longer any need to use traditional media or traditional word of mouth (WOM) as mobiles and social networks have created a new WOM. Online communities where people share the same interests, company pages that consumers can directly communicate with, and the ability to ask for advice to choose products or companies that meet a consumers needs are examples of this (Wattegama and Qing, 2014).

Companies have become aware of the importance of e-wom and increased their use of it for advertising as it is cheaper than traditional methods of advertisement and enables them to reach anyone, anywhere (Nair, Pinto, Chandran, Satheesh, 2017). Research shows that e-wom is considered important for organizations in marketing their products and services (Majali and Bohari, 2016).

The importance of this study lies in how people live in this fast changing world and adapt to the new, rapidly evolving, technology.

- This research may be useful for banks that have not yet activated mobile banking services to encourage them to embrace this technology and make plans for conducting mobile banking applications.
- Banks will be more interested to utilize apps in the future as everyone owns smart phones and prefer to make their transactions via applications. Long working hours and a desire to avoid long waiting period in banks, especially on days before holidays, drives customers to adopt mobile banking as a convenient alternative.
- The study will investigate how mobile banking applications affect e-wom and help companies retain their customers as well as increase their loyalty. Subsequently it will investigate the resulting good reputation and increase positive e-wom given by customers who want to be more involved in dealings with the bank.

2. Problem Statement

The banking sector has always been interested in using effective and new technology to provide the best services to their customers. After acceptance of internet banking, mobile banking has been utilized to complete numerous operations that customers need (Asfour and Haddad, 2014). The more that banks improve their services, the more people will talk about them on social media via e-wom. Discussions, media, and experiences are shared on online communities or pages on various social network sites where potential customers are able to see what others like (Phua, Jin, Kim, 2016). Mobile Characteristics have helped to expand the use of applications due to enhancement in transaction speed, decreasing costs and better service (Adewoye 2013)

This study investigates how customers use mobile banking applications and explores other factors such as ease of navigation, personalization, information quality, rewards (independent variables), and electronic word of mouth (dependent variables). It will study how these factors impact a customer's view of a company and how these services encourage customers to maintain a long relationship with banks, leaving them satisfied and wanting to talk about their experience with other potential customers. This study investigates how users accept mobile banking applications for performing transactions and how mobile banking applications effect e-wom when customers tell other people about the different kinds of services offered by the bank.

This study will attempt to answer the following questions:

1. Is there an effect of using mobile banking services on e-wom?

The following sub-questions will be considered:

- a) Is there an effect of ease of navigation on e-wom?
- b) Is there an effect of personalization on e-wom?
- c) Is there an effect of information quality on e-wom?
- d) Is there an effect of rewards on e-wom?

3. Research Objectives

Purpose of this study is to reach the following objectives:

1. Test the effect of using mobile banking e-wom to:
 - a) Find the effect of ease of navigation in mobile banking applications on electronic word of mouth.
 - b) Test effect of personalization level in mobile banking application on e-wom.
 - c) Find out the effect of information quality in mobile banking applications on e-wom.
 - d) Test the effect of rewards in mobile banking applications on e-wom.
2. Test the effect of the mediating variable trust on the relationship between using mobile banking services on e-wom.

4. Operational Definition

Ease of Navigation: In brief, includes both good formatting of the content layout as well as ease of use. And this variable can be measured by website accessibility, fast download, and language options (Hamid and McGrath's, 2005).

Personalization level: Adaptation of a service to fit the individual demands of a customer (Ball, Coelho, Vilares, 2006). The definitions found in a number of studies concur that personalization is the offer by a business to provide services that are adapted to the customer's needs. This variable can be measured by determining customer wants, attracting customers to services (Ball et al., 2006).

Information quality: is attaining information in a timely, clear, and easy manner and to keep the information correct (Jun and Cai, 2001).

Rewards: Are what you get for using a service or a prize you win for completing an action (Colin Pitts, 1995, p. 11.). This variable can be measured by reward quality and motivated rewards (Kirk & Miller, 1986).

Perceived Trust: According to Mayer, Davis, and Schoorman (1995) as well as Rousseau, Sitkin, Burt, and Camerer (1998) is defined as a customer's ability to easily make bank transactions online and knowing that the customers need to believe in bank security will be met. This variable is measured by a customer's trust that the bank site will keep their information confidential (Ringle, Henseler, Sarstedt, 2014) (Kassim, 2017).

E-wom: is the use of internet to share experiences with other people through communities who are interested in a particular subject (Litvin, Goldsmith, Pan, 2008). Zikmund, Babin and Carr, (2010) state that this variable is measured by review recommendation, positive reviews and trusted e-wom.

5. Literature Review

Theoretical Background

This section will discuss the theoretical framework and investigate previous studies. It will highlight the definitions of information and communication technology (ICT), social media, electronic banking, mobile banking, e-wom and display related research studies. The main focus will be on the effect of using mobile banking applications on e-wom by the mediating role of perceived trust.

Information and communication technology (ICT) has become an important asset of managerial life in recent years. These kinds of technologies are being used in communication, decision support/production and office work (Al-Azzawi and Altmimi, 2015). Banks usually provide money into ICT applications for automating front and back offices. Despite the challenges of ICT, it remains an important matter in the banking sector with a rising need for the mutual benefit of banks and customers (Muhammad, Gatawa and Kebbi, 2014). According to Grigorian, Manole, (2002) Okereke and Nzotta, (2009) Thiel (2001) globalization has showed strong competition around the world within the banking sector. The world is now viewed as a global village which has lead to markets and economies being viewed in the same light.

According to Alawneh and Hattab (2009) research study where data was collected from 140 employees in seven major banks, using multiple liner regression, to estimate value of e-business at the bank scale in Jordan, e-banking had a positive effect on bank performance. According to Awamleh, Evans, Mahae, (2003) in the

early days, only two banks conducted e-banking in Jordan, providing very few services online. Their websites were used to display the organization information, promotional information, branch locations, manager information, contact details and special news (Migdadi, 2008).

According to the researchers knowledge, there are not many studies on mobile banking service application variables (navigation, information quality, personalization level, rewards), particularly in Jordan. This study will investigate the effect of these variables on e-wom.

Electronic banking

Electronic banking (e-banking) is doing a bank transition such as you would perform in person within a branch, via the internet (Tavallaei, Shokouhyar, Pour, 2015). In order to make internet banking successful, the aim was to ensure efficacy and value of transactions. With the internet becoming a technology that everybody uses, big banks have created an internet banking system that is ready for companies to use and begin building a customer database (Salamah, 2017). E-banking has many advantages such as lower costs and ease of use via mobile and other electronic devices (Bello, 2010). To enhance customer loyalty, banks had to investigate new ways to retain their customer base and attract new customers (Al-Hawary, Hussien, 2017).

Alternative products have been created for customers due to increased competition in banking sector. Banks used different electronic channels to transfer their products and services for customer convenience and decreased cost. E-banking makes it easier for customers to get banking services at any time and place. E-banking is classified into three channels; Automatic teller machine (ATM), Internet banking (IB) and teller banking (George, Kumar, 2013). The banking sector in Jordan has been developed and treated as an essential aspect of the advanced economy, delivering electronic banking services to the customer, utilizing fast communication and cultivated information network security and comprehensiveness (Al-Hawary, et. al, 2017). Advantages of using e-banking include cost reduction, time saving, expansive customer reach, higher bank prestige through efficiency and services that meet customer gratification (Al-Fahim, 2013). According to Kujur, Shah (2015) e-banking introduced quicker, simpler and dependable services for customers, despite their uncertainty in security and inexperience in using e-banking application services.

Mobile banking

Banks have given attention to financial applications as a means of gaining a competitive advantage, creating effective customer relationship management (CRM) and facilitating decisions making in a timely, convenient way (Shaikh and Karjaluto, 2013). When mobile banking was launched, customer usage rates were low, prompting managerial changes aimed at encouraging customers to switch to this technology. Efforts to enhance transactions along with the development of mobile devices as well as international economical strain were factors that lead to a speedy adoption of this technology (Asfour and Haddad, 2014).

According to Mwangi (2011) mobile banking can enhance bank performance which raises market share and customer satisfaction. Mobile banking allows banks to extend products and services, personalize products and quickly respond to customer queries leading to improved customer retention as well as increase profit and decreased operational costs. According to Adewoye (2013) when banks provide new services through mobile banking, they are able to attract new customers as well as retain existing customers. The ability to promptly deal with customers helps to resolve and reduce complaints overall.

Four factors play a vital role when it comes to mobile banking; ease of navigation, personalization level, information quality and rewards. In 1992, Finland launched the first mobile banking application service, empowering customers by allowing them to do their financial activities on their mobile devices. Banks that intend to use m-banking services through mobile devices are required to follow the wireless service instructions (Al-Tarawneh, 2016).

Customers are increasingly able to rely on their bank association with services such as text alerts that notify a customer when they make a deposit, withdrawal or use credit cards and ATM cards. More advanced mobile banking services allow users to log into their accounts from mobile devices to make payments, check their account balance, transfer money between accounts, alert the bank of robbed credit cards, turn off payments on checks, change their security pin, display monthly statement and more (Jose, Kumar, Varghese, 2017).

Customers now expect to easily get service on demand through their mobile devices (Maroofi, Kahrarian, Dehghani, 2013). Studies show that 30% of customers in United Kingdom use mobile banking (Agwu and Carter, 2014). Mobile banking is distinguished by its easy accessibility and user friendly interface, allowing customers to execute a variety of actions such as scanning invoices through their mobile camera or connecting to the stock market. Geo-location also helps to improve offers recommendation (Bondeson, Lindbom, 2018).

According to Nicoletti (2014) it's a good opportunity for mobile banking to help customers perform their transactions in-front office application as they do in branches, ATMs, phone financial services, online financial services and more. There are numerous advantages with using mobile banking for small business, two of which being that it helps them give better services to old customers and reach new customers. Banks have been able to pass on their costs saving to customers by offering decreased monthly interest rates (Ammar, Ahmed, 2016).

Ease of navigation

Ease of use is the most fundamental aspect of using internet and mobile banking. It relates to how customers interact with a system and their willingness to accept it. It also alerts customers to new services (Al-Ghamdi, 2009). Research links ease of navigation to a customer's willingness to accept a new technology. Customer satisfaction depends on a website's or application's design fitting their desires (Fawzy and Esawai, 2017).

According to Amin, Onyeukwu and Osuagwu (2008), who tested the factors that result in an intention to use mobile banking through BIM bank, included that ease of navigation lead to the adoption of mobile banking. Ease of use is an important element to adjusting customers to use mobile banking applications and positively impacts customer intention to adopt it (Mashhour, Saleh, 2015). To avoid complications, it is important that it be easy to learn how to use mobile banking applications. Ease of navigation is considered one of driving elements for use of mobile banking (Alsamydai, Yassen, Alnaimi, Dajani, Qirem, 2014).

According to Islam, Salma (2016) ease of navigation effects the development and use of mobile banking application services. Ease of navigation can be measured by "internal control" (computer self-efficacy) and external control (facilitating conditions) into TAM (Kesharwani, Bisht, 2011). A complex interface that is difficult to navigate can delay customer adaptation, and result in customers being less willing to use the technology (Cudjoe, Anim, 2015).

Personalization level

According to Wessel and Thies (2015) the use of personalization features helps to provide products and services that are of particular value to individuals. Technological advances have allowed businesses to more accurately provide these individualized products and services, better meeting the needs and preferences of customers. The success of many website models has been largely dependent on personalization features due to the resulting customer satisfaction that comes with it (Wessel and Thies, 2015).

Attention to personalization is achieved by the method of collecting and analyzing data. Organizations can analyze every call and extract information in a systematic way (Berg, 2015, Tong, Australia, 2012). Using mobile banking application, banks can observe the preferences of their online customers in relation to a variety of subjects like weather, investments and hobbies. Customer will be able to control their finances by the use of personalized online financial planning tools (Nso, 2018). Personalized mobile banking application services can raise the capability and efficacy of active actions with mobile banking. Personalization level can help in evaluating the degree of customer satisfaction (Albashrawi, Motiwalla, 2015).

Information quality

According to English (1996), information quality is "consistently meeting customers' expectations, and through information and information services, enabling them to perform their job effectively". Information is the most important resource and because of that, different organizations depend on the quality of information. It allows organizations to make prediction which aid decision making.

Adopting of e-banking services has revolutionized the way banks interact with customer. The increased use of the internet has created a more informed population and this has heightened the expectations of customers (Ayyash, 2015).

Baskarada 2006; Ballou, Godwin, Shortridge., 2003 have found that through the use of the internet, information is easily accessible, abundant and reliable. Poor information quality causes problems and an unwanted crisis for businesses (Karagül and Özdemir, 2012). To achieve customer satisfaction banks should consider providing information quality (Eshlaghy, Bayanati, 2013). When a business has a quality information system it increases the reliability of the system and encourages customers to use it (Ayyash, 2017). Customers select systems with high quality information to obtain value (Eshlaghy, Bayanati, 2013).

Types of information must be accredited and valid. Customers have a fear that banks may conceal relevant content from them, so it is important to eliminate inconsistency in information in order to gain customer confidence (Huili, Shanzhi, Yinghui, 2013). According to Al-Mamary, Shamsuddin and Aziati (2014)

information should be relevant, understandable, accurate, brief, complete, on time and usable. Evaluating information quality demands a powerful base of information control including auditing, checking the state of information traits and constant enhancement to introduce acceptable active information systems (Alrayes, 2015). According to Chiguvu (2016), information quality effects customer loyalty, authenticity, sympathy, receptivity and positive certainty.

Rewards

“Reward is the benefits that arise from performing a task, rendering a service or discharging a responsibility.” (Colin Pitts, 1995, p. 11.). Loyalty programs provide customers with a sensation of involvement and connection to the organization, leading to customer loyalty and satisfaction (Carvajal, Ruzzi, Nogales, Moreno, 2011). A reward program is when customers collect points, purchases or activity that allows them to earn free gifts, such as vouchers, discounts or gaining special memberships (Hamid, Cheng, Akhir, 2011). Rewards can be tangible (such as vouchers or discounts) or intangible (such as preferential treatment, elevated customer status) (Waarden, 2015).

Perceived trust

According to Mayer et al (1995) and Rousseau et al (1998) customer trust is a customer's willingness to do a banking transaction through the internet knowing that the bank will get it done, despite the customer's incapability to control or observe bank procedures. According to Fawzy and Esawai (2017), in Egypt, e-banking has not been fully adopted because of the perceived risk, thus customers are not confident to share their personal information and card details over internet.

Intention to trust means that customers accept to trust. Previous studies proved a positive relationship between intention to trust and trust (McKnight and Chervany, 2000; Kim and Benbasat, 2003). A customer's trust in the internet system has a significant impact in their desire to be involved in e-banking, online shopping, currency exchange and sharing their personal information (Mahad, Mohtar, Othman, 2015).

Trust in a bank and a customer's willingness to use e-banking is dependent on factors like a bank's reputation, web protection and smooth operation (Friedman, Kahn, & Howe, 2000), (Munoz-Leiva, Luque-Martinez, & Sanchez-Fernandez, 2010). The primary reason for using mobile banking services is to make customers secure and relaxed. Viruses that effect mobile devices increase customer anxiety about the safety of online payments, reducing their confidence in e-banking, affecting their behavior (Lafraxo, Hadri, Amhal, Rossafi, 2018).

Customers who recall a specific bank that provides mobile banking can affect how customers use mobile banking for the same bank (Wang and Chu Shan, 2013). Perceived trust is an essential element in order for customers to adjust to online banking (Sarfaraz, 2017).

E-wom

E-wom refers to customer expression in the past, present or future, which highlights favorable or unfavorable characteristics of products and services through an online community (Almana and Mirza, 2013). E-wom shares many similarities with traditional wom but its distinctive feature is that it is able to reach a vast audience (Almana and Mirza, 2013).

E-wom appears on social media in a variety of ways. Customers can intentionally share information about brands, products and services without being paid. Or their interest in a brand can be displayed by them simply 'liking', commenting or being a member of a brand's page. Ad marketers also use social media, websites and accounts to post advertisements (Erkan and Evans, 2016).

Social networks including Facebook, LinkedIn, Twitter, Google, YouTube also provide different types of formats, like chat rooms, review sites and blogs that help spread e-wom (Senthilkumar, Ramachandran, 2013). E-wom is not limited by time or place which enhances its effectiveness and makes it the strongest path for marketing. However e-wom does not substitute traditional wom completely (Chen, 2011).

There are two types of online customers; customers who are diligent in posting their thoughts and opinions, and silent customer who read feedback from other customers (Alcocer, 2017). Information shared online is often written and can be published indefinitely, unlike traditional WOM. However, one of the downfalls of e-wom is that you can't always know who is sharing their opinion (Tantrabundit, 2018).

Banking sector

The banking sector in Jordan has been very stable with only a small number of banks exiting the market. There is good opportunity for growth, good capital and opportunities for external investors to enter the market (Ababneh, Wadi, Ismail, 2013). Jordan Ahli bank was the first bank to open in Jordan. It was established in

1955 in Amman, with a starting capital of 350.000 Jordanian dinars (Taha, 2013). Since 2002, the banking sector in Jordan has sought to improve transactions on internet and mobile banking services (El-Qirem, 2013). Banks realized that in order to excel above others, it was necessary to provide e-banking services and encourage customers to use it in order to improve their transactions (Masoud, AbuTaqa, 2017).

Previous studies:

Study of Dineshwar and Steven (2013): the aim was to examine the acceptance of m-banking in Mauritius and how many people would use it, as well as factors that prevent or stimulate people in Mauritius to use it. Factors like suitability and time helped to encourage people to accept this technology. Lack of trust in mobile banking inhibited its spread. Results also showed that gender, age and salary did not impact mobile banking usage, however education did have an impact. This study recommended that local banks introduce mobile banking services in Mauritius.

Study of Al-Rfou, (2013) "The Usage of Internet Banking Evidence from Jordan" examined use of internet banking for commercial banks in Jordan from an e-service employee point of view. The finding was that there was a notable relationship between ease of use, security and privacy and quality of internet connection with usage of internet banking.

Study of Mohammad, Al-Tarawneh, (2014): "The Intermediate Effect of the Adoption of Electronic Banking Services between the Word of Mouth and the Quality of Banking Services" examined the effect of the use of word of mouth on the quality of banking services with intermediate variable adoption of e-banking services in commercial banks in Jordan. The finding was that there was a moderate degree of customers using word of mouth which showed that e-banking services in commercial banks in Jordan were average. Overall, word of mouth and adoption to e-banking services has had a good effect on quality of banking services.

Study of Burtch and Hong (2014): focused on the behavior of customers who used and did not use mobile banking as well as mobile features such as connection due to mobility. The research aim was to draw attention to location- based advertising and its relation to customer practice and gained content. They displayed a set of valuable dissimilarity of comments that are sent by mobile devices. It showed diversity in star rating. It also includes factual and impassioned text, which is considered useful. Association was directed to both service providers and online platforms management.

Study of Alsamydai et.,al, (2014): "The Factors Influencing Customer Usage Of Mobile Banking Services In Jordan" investigated aspects of the acceptance of the use of mobile banking services from customer opinion. The results showed that provided data demonstrated support of the conducted model.

Study of Alfina, Ero, Hidayanto, Shihab, (2014): "The Impact Of Cognitive Trust And e-wom On Purchase Intention In C2C E-Commerce Site" developed a model to define the C2C e-commerce environment, to determine what builds customer trust. The study used perceived trust and acceptance of e-wom information as well as an online questionnaire in kaskus format directed at the biggest online shopping community in Indonesia. The findings showed that trust positively effects purchase intention, and linked competency and transparency of the seller in relation to e-wom with an increase in customer trust.

Study of Alsheikh, Bojei, (2014): Aimed to detect elements that effect customer intention to accept mobile banking services in commercial banks in Saudi Arabia. The findings displayed that to understand technology functions and advantages depended on mobile experience and perceived attention. The recommendation was that if banks wanted to improve acceptance of mobile banking they needed to provide creative services that were unique to e-banking in order to compete with other banking services.

Study of Kachembere and Choga (2015): The aim was is to study the impact of e-marketing on commercial banks for a period of 20 years. The study examined the acceptance of e-marketing services in commercial banks. The variables that are measured in the study were ease of use, usefulness, perceived cost and trust. The findings of the study indicated that useful, ease of use and acceptance rate of e-marketing services were high. The aspects that caused customer fear included uncertainty of extent reliability, electronic channels, the banks themselves, network providers and infrastructure. The recommendation of the researcher was to increase interaction with customers as well as to increase involvement in customer account needs.

Study of ElAziz, ElBadrawy and Hussien (2015): "ATM, Internet Banking and Mobile Banking Services in a Digital Environment: The Egyptian Banking Industry" aimed to discover the factors that affect customer intention to use self-service banking technologies in Egypt. The findings showed there was a significant difference between the three groups in relation to usage, value, risk, tradition and image.

Study of Mehrad and Mohammadi (2016): examined the effect of e-wom on acceptance of mobile banking in

Iran. It presents how some factors effect adjustment to mobile banking services. Results showed that the primary factor that effected user attitude toward mobile banking is word of mouth. They agree that positive affect of WOM influences other factors on the acceptance of mobile banking. Most of the research gave attention to a number of factors working on the acceptance of mobile banking, but not many of them gave any attention to word of mouth in iran.

The study of Zhao, Liu, Lai, Zhang. H. and Zhang, Y., (2016): Showed that with all new technologies, social networking sites enabled people to contact others easily and gave them the ability to share information through wireless connection and smart-phones. Social network sites have evolved with the evolution of mobile devices, creating many new applications and attracting an increase in the number of users. The findings displayed how mobile sensor computing industry aid to establish powerful strategies and form sustainable user relationship.

Research model

Based on thorough literature review related to electronic word of mouth theories and practices through social networking sites; the researcher suggested this conceptual model to define and establish the relationships between the research variable:

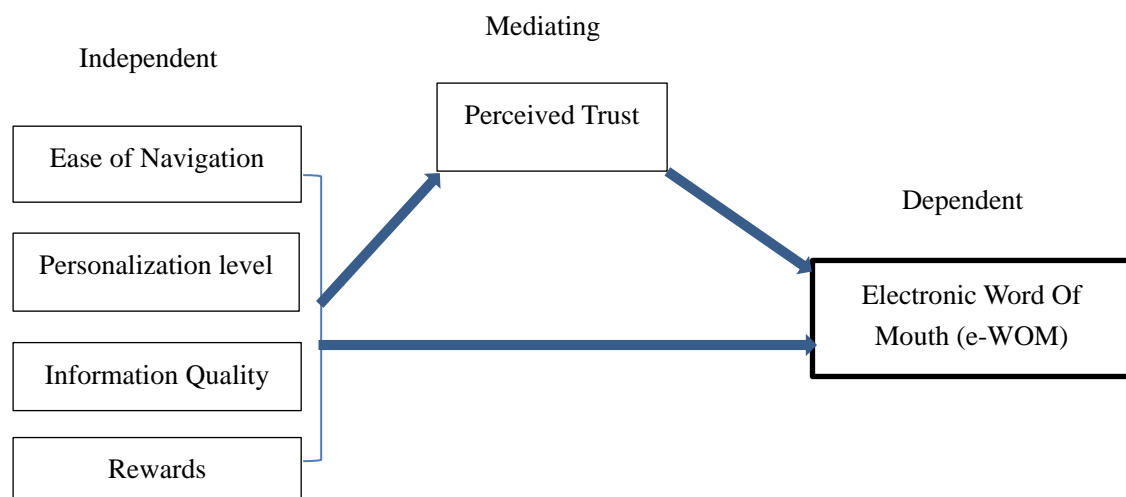


Figure 1. Proposed Research Model

Adapted from (Senthilkumar et al., 2013, Hamid et al 2011; Montazemi, Saremi, 2014)

Research hypotheses:

- H01: there is no effect of ease of navigation on electronic word of mouth at a $\leq (0.05)$.
- H02: There is no effect of personalization level on electronic word of mouth at a $\leq (0.05)$.
- H03: There is no effect of information quality on electronic word of mouth at a $\leq (0.05)$.
- H04: There is no effect of rewards on electronic word of mouth at a $\leq (0.05)$.
- H05: There is no effect of ease of navigation, personalization level, information quality, and rewards on electronic word of mouth through perceived trust at a $\leq (0.05)$.

Research Methodology

Research methodology contains the research design, approach and methods that are used in the study. Collection of data, data processing and analyzing techniques that help to examine the effect of using mobile banking application services on electronic word of mouth.

The research used quantitative technique and both descriptive and analytical method. A research questionnaire was used and distributed to 551, of which 469 were returned and accepted.

6. Results and Discussions

Table 1a. the mean standard deviation and level of significance of the research variables

<i>Descriptive Statistics</i>	<i>Mean</i>	<i>Std. Deviation</i>	<i>Analysis N</i>	<i>level</i>
<i>Independent Variables</i>				
<i>Ease of Navigation</i>				
<i>Q1</i>	4.73	0.566	469	high
<i>Q2</i>	4.62	0.586	469	high
<i>Q3</i>	4.58	0.614	469	high
<i>Q4</i>	4.54	0.661	469	high
<i>Q5</i>	4.49	0.694	469	high
<i>Q6</i>	4.60	0.628	469	high
All	4.5928	0.50553	469	high
<i>Information Quality</i>				
<i>Q7</i>	4.33	0.695	469	high
<i>Q8</i>	4.25	0.899	469	high
<i>Q9</i>	4.50	0.665	469	high
<i>Q10</i>	4.56	0.679	469	high
<i>Q11</i>	4.55	0.725	469	high
<i>Q12</i>	4.53	0.807	469	high
All	4.4542	0.56831	469	high
<i>Personalization Level</i>				
<i>Q13</i>	4.32	0.663	469	high
<i>Q14</i>	4.20	0.889	469	high
<i>Q15</i>	2.30	1.267	469	Low
<i>Q16</i>	2.89	1.395	469	Moderate
<i>Q17</i>	2.27	1.229	469	Low
All	3.1962	0.68941	469	Moderate
<i>Rewards</i>				
<i>Q18</i>	2.77	1.323	469	V.Low
<i>Q19</i>	2.10	1.176	469	Low
<i>Q20</i>	1.89	1.054	469	Low
<i>Q21</i>	2.42	1.280	469	Low
<i>Q22</i>	2.06	1.152	469	Low
All	2.2486	0.92535	469	Low
<i>Mediator Variable</i>				
<i>Perceived Trust</i>				
<i>Q23</i>	3.93	0.932	469	high
<i>Q24</i>	4.12	1.055	469	high
<i>Q25</i>	4.23	1.035	469	V,high
<i>Q26</i>	4.47	0.888	469	V.high
<i>Q27</i>	4.28	1.094	469	V.high
All	4.2055	0.86975	469	V.high
<i>Dependent Variable</i>				
<i>e-wom</i>				
<i>Q28</i>	4.18	0.890	469	high
<i>Q29</i>	4.38	0.890	469	high
<i>Q30</i>	4.27	0.955	469	V,high
<i>Q31</i>	4.39	0.938	469	V.high
<i>Q32</i>	4.37	0.954	469	V.high
All	4.3190	0.74197	469	V.high

Table 1a shows the following:

- There is a statistically significant effect for ease of navigation on electronic word of mouth through perceived trust.
- There is a statistically significant effect for personalization level on electronic word of mouth through perceived trust.
- There is a statistically significant effect for information Quality on electronic word of mouth through perceived trust.
- There is a significant mediation role for Perceived Trust in the effect of Rewards on e-wom.

The results of the study showed that there was a significant effect mediation role in the ease of navigation, personalization level, information quality, rewards on e-wom through perceived trust for users of mobile banking

in Jordan. It showed that there is a necessity to increase the comfort zone of the user of mobile banking services applications in order to gain more value in completing their transactions as quickly as possible with less effort and cost.

In comparing the results of the study with other similar studies such as (Harelimana,2017) study which showed that mobile banking had a positive effect on financial performance of Unguka Bank Ltd. Mobile banking products like bill payment increased profit through the commissions gained from customers, showing that using mobile banking is more effective than traditional banking services. However some services such as account transfer, account statement, mobile money and book check order are not yet active enough. In the study of (Javabdeh, Ahmad, 2014) they examined two important aspects in mobile banking security in relation to customer trust, loyalty and positive WOM. Results showed a direct and significant relationship between trust and WOM finding a direct and significant relationship between trust and loyalty.

Data Analysis

To analyze the data collected from the respondents who answered the questionnaire, SPSS application is used, applying the following tests: reliability analysis and descriptive statistics and regression process.

Reliability Analysis:

Table 1b shows the Cronbach's alpha test value is equal to 0.853. That means that the items have relatively high internal consistency. The reliability coefficient of 0.70 or higher is considered "acceptable" in the majority social science research.

Table 1b. Cronbach Alpha Results

	Ease of Navigation	Information Quality	Personalization Level	Rewards	Perceived Trust	e-wom	All Variables
No. of items	6	6	5	5	5	5	32
Cronbach's Alpha	0.893	0.852	0.752	0.829	0.917	0.861	0.853

Descriptive statistics

Table 2. Cross Tabulation Statistics for demographic questions

Using mobile banking application services	Variables				
	Age				
	Less than 21	21 to less than 30	30 to less than 40	40 and above	
Count	35	146	189	99	
Percent	7.5%	31.1%	40.3%	21.1%	
	Gender				
	Male		Female		
Count	225		244		
Percent	48%		52%		
	Education Level				
	High school or less	2 years Diploma	Bachelor	Graduate Studies	
Count	40	62	295	72	
Percent	8.5%	13.2%	62.9%	15.4%	
	Marital Status				
	Single	Married		Other	
Count	182	187		100	
Percent	38.8%	39.9%		21.3%	
	Employment status				
	Full-time employment	Part-time employment	Self-employed	Unemployed	Others
Count	284	55	94	14	22
Percent	60.6%	11.7%	20%	3%	4.7%
	Monthly Income in JD				
	500 or less	501 to 100	1001 to 1500	1501 to 2000	More than 2000
Count	125	131	86	60	67
Percent	26.7%	27.9%	18.3%	12.8%	14.3%

Table 2 shows:

79% of the respondents are less than 40 years old, 52% are females, 63% are bachelor degree holders, 40% are married, 61% have full time employment and 73% have an income of less than 1500JD.

1) Descriptive statistics for Q1 to Q32:

Table 3. Descriptive Statistics for Q1 to Q50

<i>Descriptive Statistics</i>			
	<i>Mean</i>	<i>Std. Deviation</i>	<i>Analysis N</i>
<i>Independent Variables</i>			
<i>Ease of Navigation</i>			
<i>Q1</i>	4.73	0.566	<i>High</i>
<i>Q2</i>	4.62	0.586	<i>High</i>
<i>Q3</i>	4.58	0.614	<i>High</i>
<i>Q4</i>	4.54	0.661	<i>High</i>
<i>Q5</i>	4.49	0.694	<i>High</i>
<i>Q6</i>	4.60	0.628	<i>High</i>
All	4.5928	0.50553	<i>High</i>
<i>Information Quality</i>			
<i>Q7</i>	4.33	0.695	<i>High</i>
<i>Q8</i>	4.25	0.899	<i>High</i>
<i>Q9</i>	4.50	0.665	<i>High</i>
<i>Q10</i>	4.56	0.679	<i>High</i>
<i>Q11</i>	4.55	0.725	<i>High</i>
<i>Q12</i>	4.53	0.807	<i>High</i>
All	4.4542	0.56831	<i>High</i>
<i>Personalization Level</i>			
<i>Q13</i>	4.32	0.663	<i>High</i>
<i>Q14</i>	4.20	0.889	<i>High</i>
<i>Q15</i>	2.30	1.267	<i>Low</i>
<i>Q16</i>	2.89	1.395	<i>Low</i>
<i>Q17</i>	2.27	1.229	<i>Low</i>
All	3.1962	0.68941	<i>Medium</i>
<i>Rewards</i>			
<i>Q18</i>	2.77	1.323	<i>Low</i>
<i>Q19</i>	2.10	1.176	<i>Low</i>
<i>Q20</i>	1.89	1.054	<i>Low</i>
<i>Q21</i>	2.42	1.280	<i>Low</i>
<i>Q22</i>	2.06	1.152	<i>Low</i>
All	2.2486	0.92535	<i>Low</i>
<i>Mediator Variable</i>			
<i>Perceived Trust</i>			
<i>Q23</i>	3.93	0.932	<i>Medium</i>
<i>Q24</i>	4.12	1.055	<i>High</i>
<i>Q25</i>	4.23	1.035	<i>High</i>
<i>Q26</i>	4.47	0.888	<i>High</i>
<i>Q27</i>	4.28	1.094	<i>High</i>
All	4.2055	0.86975	<i>High</i>
<i>Dependent Variable</i>			
<i>e-wom</i>			
<i>Q28</i>	4.18	0.890	<i>High</i>
<i>Q29</i>	4.38	0.890	<i>High</i>
<i>Q30</i>	4.27	0.955	<i>High</i>
<i>Q31</i>	4.39	0.938	<i>High</i>
<i>Q32</i>	4.37	0.954	<i>High</i>
All	4.3190	0.74197	<i>High</i>

For the purpose of the analysis, 4.0 and above is considered high, 3.0-3.99 is considered medium, and below 3.0 is low. Table 3 indicates that respondents answer for ease of navigation, information quality, perceived trust and e-wom are high, while personalization level is moderate and rewards is low.

Testing of validity

The questionnaire was given to a group of experts to investigate the set of questions and show their remarks on their relevancy to the researcher problem. All notices are taken in account and the questionnaire reproduced accordingly.

Test of multicollinearity

Table 4. shows the results of multicollinearity using the variance inflation factor (VIF)

Test of Multicollinearity

	Variance Inflation Factors(VIF)
Ease of Navigation	1.549
Information Quality	1.666
Personalization Level	2.380
Rewards	1.089
Perceived Trust	1.671

The obtained VIF values in Table 4 test the severity of the multicollinearity problem, is between 1 and 10, meaning that there is no multicollinearity which indicates that there is no correlation between predictors (independent variables) in the model, so the model is valid to use regression process test.

Testing Hypothesis

a- First Hypothesis:

H₀₁: There is no statistically significant effect of ease of navigation on e-wom through perceived trust at a ≤ (0.05).

Table 5. Test of H01 results

Model	Independent Variable	Correlation (R)	(β) Value	t value	Sig. t	F value	p-value Sig. F	Hypothesis Support
Model1	Ease of Navigation	0.3972 Sig. = 0.000	0.5830	9.3529	0.000	87.4768	0.000	
Model2	Ease of Navigation	0.6497 Sig. = 0.000	0.3789	7.0760	0.000	170.187	0.000	Reject H ₀₁
	Mediator Perceived Trust		0.4544	14.5999	0.000			
Model1 (R ² =0.1578), Model2 (R ² =0.4221, R ² changed=0.2643)								

Table 5 shows that the direct relationship between the independent variable Ease of Navigation and the dependent variable e-wom in the model is a medium positive significant relationship where the value of person correlation was equal to (0.397), but the relationship between the two variables through the existing of the mediator variable Perceived Trust increased in Model 2 to 0.6497, indicating to a strong positive significant relationship.

There is a significant mediation role for Perceived Trust in the effect of Ease of Navigation on e-wom.

H₀₂: There is no statistically significant effect of Personalization Level on e-wom through perceived trust at a ≤ (0.05).

Table 6. Test of H02 results

Model	Independent Variable	Correlation (R)	(β) Value	t value	Sig. t	F value	p-value Sig. F	Hypothesis Support
Model1	Personalization Level	0.0487 Sig. = 0.2923	-0.0524	-1.0543	0.292	1.1116	0.2923	
Model2	Personalization Level	0.6070 Sig. = 0.000	-0.0993	-2.4994	0.012	135.950	0.000	Reject H ₀₂
	Mediating variable Perceived Trust		0.5175	16.4362	0.000			
Model1 (R ² =0.0024), Model2 (R ² =0.3685, R ² changed=0.3661)								

Table 6 shows that the direct relationship between the independent variable Personalization Level and the dependent variable e-wom in Model 1 was a very weak, insignificant relationship where the value of person correlation was equal to (0.0487), but the relationship between the two variables through the existing of the mediating variable Perceived Trust increased in Model 2 to 0.6070, indicating to a strong positive significant relationship.

There is a significant mediation role for Perceived Trust in the effect of Personalization Level on e-wom.

H₀₃: There is no statistically significant effect of Information Quality on e-wom through perceived trust at $\alpha \leq (0.05)$.

Table 7. Test of H03 results

Model	Independent Variable	Correlation (R)	(β) Value	t value	Sig. t	F value	p-value Sig. F	Hypothesis Support
Model1	Information Quality	0.3876 Sig. = 0.2923	0.5061	9.0867	0.292	82.5683	0.000	
Model2	Information Quality	0.6472 Sig. = 0.000	0.3275	6.8684	0.000	167.926	0.000	Reject H ₀₃
	Mediator Perceived Trust		0.4573	14.6758	0.000			
Model1 ($R^2=0.1502$), Model2 ($R^2=0.4188$, R^2 changed= 0.2686)								

Table 7 shows that the direct relationship between the independent variable Information Quality and the dependent variable e-wom in Model 1 was a medium positive significant relationship where the value of person correlation was equal to (0.3876), but the relationship between the two variables through the existing of the mediator variable Perceived Trust increased in Model2 to 0.6472, indicating to a strong positive significant relationship.

There is a significant mediation role for Perceived Trust in the effect of Information Quality on e-wom.

H₀₄: There is no statistically significant effect of Rewards on e-wom through perceived trust at $\alpha \leq (0.05)$.

Table 8. Test of H04 results

Model	Independent Variable	Correlation (R)	(β) Value	t value	Sig. t	F value	p-value Sig. F	Hypothesis Support
Model1	Rewards	0.0094 Sig. = 0.8385	-0.0076	-0.2040	0.838	0.0416	0.8385	
Model2	Rewards	0.6070 Sig. = 0.000	-0.0572	-1.9226	0.012	133.957	0.000	Reject H ₀₄
	Mediator Perceived Trust		0.5181	16.3661	0.000			
Model1 ($R^2=0.0001$), Model2 ($R^2=0.3650$, R^2 changed= 0.3649)								

Table 8 shows that the direct relationship between the independent variable Rewards and the dependent variable e-wom in Model 1 was a very weak, insignificant relationship where the value of person correlation was equal to (0.0094), but the relationship between the two variables through the existing of the mediator variable Perceived Trust increased in Model2 to 0.6042, indicating to a strong positive significant relationship.

There is a significant mediation role for Perceived Trust in the effect of Rewards on e-wom.

7. Conclusion and Recommendation

The research shows that there is a statistically significant effect of ease of navigation, personalization, information quality and rewards on e-wom. Perceived trust as a mediating variable was found to be significant in the impact of relationship between independent variables (ease of navigation, personalization, information quality and rewards) on the dependant variable (e-wom).

It is recommended that banks need to increase the comfort zone for the users of mobile banking service applications in order to gain more value in completing their transactions as quickly as possible with less effort and cost. More attention must be given to personalization level and rewards in e-banking in order to improve them and become more involved with customers so as to encourage them to use this technology. These factors can be adopted in future research in other countries to assist them in measuring their impact in other environments.

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