

CHAPTER 2

LITERATURE REVIEW

2.1 Introduction

This chapter reviews the literature on the prior studies are reviewed. This chapter addresses online banking performance initially, then it shows the review of the literature regarding the factors affecting online service performance (INQ, SYQ, E-SQ) and, finally, continuous-use intention relating to the present study.

This chapter further reviews the literature on the potential mediation of continuous-use intention on the relationship between INQ, SYQ, E-SQ, and online service performance. In addition, it shows the gradual development of a conceptual framework that eventually becomes the full research model based on the literature discussion. The final section conclusions of the chapter.

2.2 Online Banking performance

2.2.1 Online Banking

Online banking services have become one of the most beneficial services in finance along with the technological progress of the digital environment (Mohamed, 2017; Shiraj, 2015). Advances in IT have led to online services-driven marketing; this is the main driver for the conversion of traditional banking to online banking services (Chen et al., 2017b). Online services have a vital role in the competitiveness of the financial industry (Shiraj, 2015). The context and concept of services, including banking, have been entirely renovated by recent developments in IT. Companies have also changed their sales and purchase system for both services and products (Mohamed, 2017).

The banking sector has undergone significant changes, especially in the conversion of financial transactions from a traditional, written system to a more digitalised, automated system (Chen et al., 2017b). Accordingly, online banking and such technologies as the internet, mobile phones, and smartphones have provided opportunities to solve banking and financial issues (Shaikh & Karjaluo, 2015). Nevertheless, there is no guarantee that clients would adopt this service, and so banks must inquire their level of acceptance when first adopting a new technological procedure in their strategy (Rawwash et al., 2020). There is thus a need to mensurate the critical factors that can contribute to the adoption of online banking by clients. By doing so, the bank can determine the extent to which this new technology could penetrate the lives of the clients. Previous studies have described the concept of online banking in different ways. These will be comprehensively reviewed below.

Sarreal (2016) defined online banking as any electronic payment system that allows bank clients to perform financial transactions through the bank's website. Today, online banking comes as mobile technology, for instance peer-to-peer payment applications and text banking. Ragusa (2013) described online banking as the automated distribution of new and traditional banking products and services directly to clients through e-interactive communication channels. Online banking comprises the systems that allow individual or corporate clients to access their accounts, process transactions, or obtain information on financial products and services through a public or private internet connection (Shannak, 2013). Online banking is an e-commerce product in the banking and financial services sector. It provides various types of online services, including account opening, chequebook request, stopping payment, balance inquiry, funds transfer, smart card settlement, and other conventional banking transactions (Suriyamurthi et al., 2012).

Alsajjan & Dennis (2010) described online banking as implementing banking services through technology (online service) without relying on the human resources (HR) of banks. Al-Majali (2011) defined online banking as the process of providing a wide range of advanced banking services by directly reaching the bank website through a web browser using an internet-connected device. Based on these definitions, researchers agreed that online banking is the electronic implementation of banking transactions without the intervention of a physical resource (Alsajjan & Dennis, 2010; Al-Majali, 2011; Sarreal, 2016).

2.2.2 Benefits of Online Banking

Online banking simplifies procedures so that clients do not need to visit the bank to perform simple transactions, for instance opening an account, transferring funds, opening a fixed deposit account, and so on. These procedures and more can now be easily carried out through a personal computer (PC) from work or home (Abu-Assi et al., 2014; Mohamed, 2017). A simple internet connection allows the client to carry out transactions and queries and affords them a range of services that they can utilise with no extra charge (Rawwash et al., 2020). The added layer of service improves quality, and clients become more trusting as online banking addresses many financial issues of clients (Mohamed, 2017). Online banking offers many other advantages, which will be described below.

According to Kanwaria & Gupta (2017), the online banking system is a secure platform to perform financial transactions. It is accessible around the clock from any place and provides the person with the bank's official receipt. The website, if secured with legal security certificates, can deter hacking and online fraud. It facilitates the process of personal and professional financial matters (Popoveniuc et al., 2019). It

gives clients the flexibility to complete transactions without the hassle of going to the bank and foregoing other responsibilities (Rahul Kumar & Anand, 2017). Clients can access banking transactions, their bank account details, and recent transaction history without going to the bank. The online banking system allows clients to track purchases, expenses, and financial transactions from any place and time (Abu-shanab & Matalqa, 2015; Maneechot & Chirapanda, 2014). Online banking has also simplified financial affairs, and a person or an organisation can manage financial transactions at ease from their home or workplace (Abu-Assi et al., 2014). Clients can also apply for a loan, credit card, investment sponsorship, credit line, and mortgage online (Sharma et al., 2018).

Paying bills has become easier for customers with online banking. Almost all companies have registered themselves with billing systems, which enable clients to pay directly from their accounts (Mohamed, 2017). The client does not have to remember to pay bills every month, because online banking provides the advantage of automatic debiting for landlines, mobile phones, water, electricity, credit cards, loans, online products, and insurance plans (Sharma et al., 2018). It gives the client the flexibility to choose automatic debiting if the billing period is monthly. It also facilitates financial transaction procedures and reduces the need to visit a bank (Maditinos et al., 2009; Mohamed, 2017). These characteristics have helped online banking to become more widespread, especially if the client is aware about the services and is prepared to try them (Sarreal, 2016). Accordingly, the benefits of online banking can be summarised in the following points:

- Unlimited service: Online banking can be accessed seven days a week and 24 hours a day. Everything can be performed with just a mouse click.

- Smart and interactive: Smart troubleshooting operations with automatic solutions.
- Comfortable: Online banking is a secure system that allows scheduled banking transactions.
- An easy way of payment: Bills can be paid through the computer with ease instead of standing in a queue for a long time.
- Higher rate of interest: Unlike conventional banks, the annual interest rate for online banking ranges from 3.40% to 5%. This means that cost is lower and savings interest is higher.
- Efficient and effective: The efficiency and effectiveness of online banking allows all financial transactions to be carried out properly and safely.

Online services are essential, and even a matter of survival and continuity, for banks, especially if they can gain customers' trust about the safety and convenience of online banking. Furthermore, online banking is a competitive advantage, and bankers use the system to develop their business in a wider geographical environment efficiently and effectively. However, like any other solutions, online banking has several disadvantages. These are summarised as follows (Agarwal, 2019; Dulawat, 2010; Koskosas, 2011):

- Banking relationship: Traditional banks allow clients to interact personally with the bank. The bank director, for instance, can change an accounting term without referring to the client which reduces discretion and may include an undeserved service charge.
- Security: Banks that offer online banking are governed by the same laws as traditional banks. In fact, in the US, the Federal Deposit Insurance Corporation (FDIC) insures the deposits of online banks. Complex and sophisticated

software is used to protect the customers' accounts. However, these websites are susceptible to malware, phishing, hacking, and illegal tampering.

- Learning curve: The website may be complicated to use. Sometimes, tutorials may be needed to browse the website.
- Transaction issues: Dealing with complex transactions requires traditional face-to-face meetings. The bank may host meetings and seek advice from experts to solve a specific issue.

2.2.3 Global Perspective of Online Banking

Some modern banking systems are long present in Western economies, such as the United Kingdom. As mentioned previously, online banking is more common in developed countries. In 2010, the Lloyds Banking Group became the first banking institution in the United Kingdom to provide smartphone banking services, which allows clients to transfer funds via mobile applications (McPhilemy, 2013). Customers could also access banking services by downloading the application into their smartphones (Chawla & Joshi, 2017). Mobile banking transactions require a six-digit PIN code, which costs only EUR 2.50 per month. Complemented by the high penetration of smart devices, which were owned by 95 percent of UK residents, the revolutionary innovation of online banking was clear (Shannak, 2013).

According to a Global Online Banking Market report, the global online banking adoption rate was expected to grow by 22.6 percent from 2017 to 2023. Figure 2.1 shows the global rate of online banking adoption.



Source: Shoaib (2017)

Figure 2.1: Global Online Banking Market

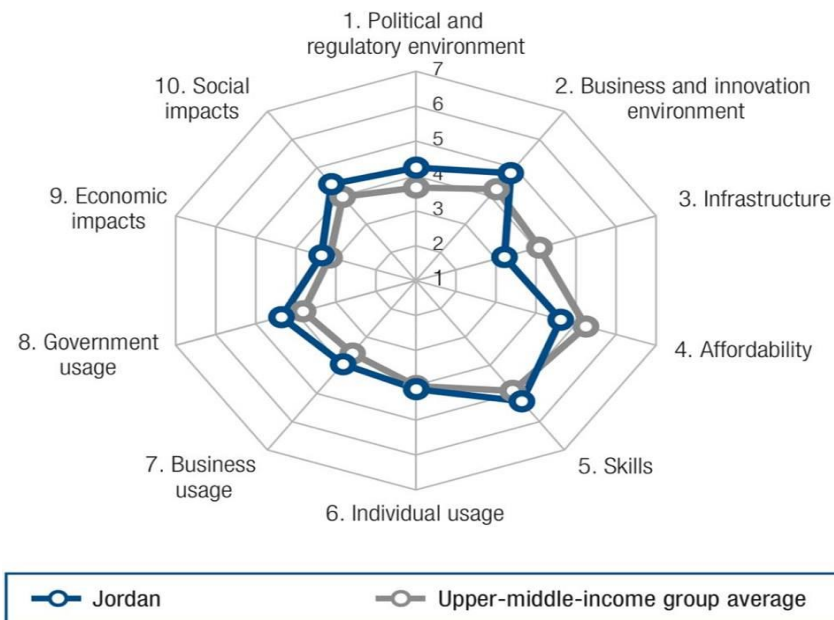
2.2.4 The Arab World Perspective of Online Banking

The rate of online banking adoption in the Arab states differs. To provide a better clarification on this issue, the current section deals with a case study between Jordan and the UAE as a neighboring Arab country, which shares many characteristics, such as culture, language, education level, and geographical location.

First, Jordanian commercial banks contribute significant value to the local economy. They have developed modern technologies to enable online banking and thereby reducing the time, effort, and cost of transactions (Rawwash et al., 2020). Furthermore, clients do not have to interrupt their business day to visit a bank to inquire about their accounts, transactions, or other banking procedures (AL-Adwan & AL-Tarawneh, 2017). Despite implementation new technology and the expansion of distribution channels by Jordanian commercial banks to include multimedia technology (Cheng, 2014), online banking adoption is still in the early stage (Abu-Assi et al., 2014; AL-Adwan & AL-Tarawneh, 2017; Alnsour & Al-Hyari, 2011;

Anouze & Alamro, 2019; Al-smadi, 2012; Irvine, 2016; Rawashdeh, 2015). In contrast, Altobishi et al. (2018) stated that customers of Jordanian commercial banks and other financial institutions are willing to adopt online banking. However, the provision for these services is still in the testing phase.

Researchers have found mixed results on the performance of online banking in Jordanian commercial banks. Baller et al. (2016) provided an overview of the status of online banking in Jordan. Using the Networked Readiness Index, they also highlighted its weaknesses and strengths, which may affect its performance (Figure 2.2.)



Source: Baller et al. (2016: 118)

Figure 2.2: The Networked Readiness in Jordan

Networked Readiness was introduced in 2016 and comprises four sub-indices, namely readiness, environment, impact, and usage. The chart above shows the sub-categories of the four indicators and their results. The first value represents the rank of the 143 states after every descriptive phrase, whereas the four sub-indicators in the second value represent the rank out of seven. The first value of the sub-indicators out

of the ten categories below represents the rank out of 143 countries, while once more the second value represents the rank out of seven. In some matters, there is no result, but the corresponding value reflects the scoring process. More details and information can be found in the World Economic Forum document (Baller et al., 2016).

Second, the banking sector of the UAE comprises national and international banks and contributes to 10 percent of the GDP. It assumes a robust role to improve the economic processes of the nation by managing financial assets and financing the national economy (UAE Banks Federation, 2017). The banking sector is considered the backbone of the financial movement of the country, and it operates within the laws and regulations issued by the Central Bank of the UAE (Mohamed, 2017).

Commercial banks in the UAE are gradually investing in banking technology (Kumar, 2016). In recent years, the banks have established several major branches to provide better services to their customer while continuously improving their infrastructure and innovations, such as branch development, internet and online banking portals, more ATMs, and staff training (Mohamed, 2017). The level of online banking adoption in the UAE is high: over 61 percent of UAE clients use online banking (Kate, 2015).

Based on the above paragraphs highlighting the issues of online banking adoption, online banking in Jordan and the UAE is similar in terms of providing better services and technological development, such as improving the infrastructure and innovation. Still, the level of online banking adoption in Jordan is very low compared to the UAE.

2.2.5 Regulation and Laws of Online Banking

Online banking adoption in any country is often dominated by legal concerns, especially the risks to which banks and their customers are subjected to. Before reviewing the online banking regulations and laws in Jordan, regulations at the global and Arab level, represented by the UK as a Western European country and UAE as an Arab and Middle East peer, will first be discussed.

2.2.5.1 Regulations and Laws–United Kingdom

The United Kingdom led the expansion of online banking by establishing a Revision Committee to draft a report on Banking Services Law and Practice in 1986. The Committee published its report in 1989. The focus of the Commission was client-activated Electronic Fund Transfers transactions (Shannak, 2013). The Commission recommended the adoption of provisions similar to articles 83 and 84 of Consumer Credit Act 1974 (Bank of England, 2015). Those articles state the client handles financial losses incurred up to where he notifies the bank, after which the bank will be responsible for any economic losses. If a party is proven to incur the losses due to gross negligence, that party will bear the entire losses.

Regulatory entities in the United Kingdom have issued three different strategies that banks may employ:

1. Conditions akin to card transactions. The bank assumes responsibility following the client's notification, but the client is imposed with a certain limit.
2. Banks will bear the entire risk until and unless the customer's negligence or fraudulence can be proven.

3. Although banks are subjected to banking laws, each bank has its own set of regulations and rules. Here, the client has two options: accept them or move to another bank.

Article (2) of Banking Code 2008 includes essential commitments that require banks to treat their customers fairly. Article (12) requires banks to provide their clients with the most up-to-date information on how to protect their accounts from fraud. Clients are not responsible for any losses unless they are found to act negligently or fraudulently (Bank of England (2015)). The clients are required to take all necessary precautions and to follow the directives provided by the bank. Though the law has delineated the responsibilities and liabilities of both bank and customer, certain issues remain unclear and need to be resolved.

2.2.5.2 Regulations and Laws –United Arab Emirates

In 1996, domestic banks in the UAE began offering online banking (Mouakket, 2009). The Central Bank of the UAE (CBUAE) is the only regulatory body that issues laws and regulations for all banks operating in the country. CBUAE has published the Minimum Guidelines on the Provision of Online Banking for Licensed Banking Institutions. Its goal is to protect clients from risks related to online banking, such as security, user protection, supervision, risk management, and compliance (CBUAE, 2017).

CBUAE (2017) allows any banks operating in the UAE to adopt online banking by applying for a license. The requirements for the application are:

1. The purpose of creating the online banking unit.
2. Suggested location for the online banking unit.
3. Branch of the bank for which the online banking unit will be adopted.

4. Facilities to be established at the online banking unit and their numbers (ATM, deposit machines, and other machines).
5. The total number of employees in the online banking unit.
6. Taking protective measures.
7. Permits or any other appropriate information.

Those banks are governed by the banking laws of the UAE, but each bank has its own rules and regulations. Article (11) stated that this decision shall apply to all online banking units which have been licensed before issuing this regulation, and all banks must commit accordingly. Article (10) states that “the central bank will periodically verify the online banking unit as part of its investigations at the bank’s branches to ensure the proper application of the terms of this resolution. This article protects clients from the risks of regularly dealing with a banking service unit (CBUAE, 2017). Additionally, since introducing online banking to UAE in 1996, there have been various obstacles, such as illiteracy and online frauds, that inhibited the diffusion of this technology (Mouakket, 2009).

2.2.5.3 Regulations and Laws –Jordan

There is a common belief that the laws in Jordan do not provide adequate legal protection to users of Online banking, and that they do not give proper solutions to settle any potential dispute between financial institutions and customers (Shannak, 2013). This section explains that this common belief is untrue: the laws could resolve disagreements between the parties, as stipulated in a wide range of legal articles related to Online banking. Examining Electronic Transactions Law No. 85 of 2001, Article (2) (Central Bank of Jordan, 2003), it is found that the regulations sufficiently address important issues related to online banking.

A. Concepts, Terminology and Assigned Meanings

Article (2) provides specific concepts and definitions of the terms related to online banking used in this law. Articles (7) and (8) grants e-documents and signatures with the same importance and legal consequences as their traditional counterparts. Other articles stipulate the requirements for both bank and client. The bank is especially required to ensure secure delivery channels.

B. Duties Required

Articles (27), (28), and (29) explain the responsibilities and liabilities for each party (Central Bank of Jordan, 2003). These and other related articles are like the regulations and laws in the UK and the UAE. These laws mostly require banks to ensure minimum required protection to their online banking delivery channels, as well as to provide clear guidelines and directions to their customers in using the service. If the customer complies with those directions, then his liability will be passed on to the bank.

Article (27) releases the customer from any illegal activities that occur after he has notified the bank, so long that he complies with local and bank-specific regulations (Central Bank of Jordan, 2003). Shannak (2013) described two scenarios regarding liability:

1. The customer may not be held responsible for any illegal activities occurring after his notification to the bank.
2. If the illegal activity occurs before the notification date, the bank will investigate to determine whether the customer has fully complied with the instructions. If the bank cannot prove his non-compliance, the customer cannot be held responsible for those activities.

C. Penalties and Fines

Punishments and financial fines are specified in Articles (35), (36), (37), and (38). They specify the punishments and fines for online fraud and online banking offences. These articles described the crimes and their penalties. The punishments for the crimes include imprisonment and financial penalty of up to JD 50,000 (CBJ, 2003).

According to the aforementioned, the researcher concludes that the common perception about online banking laws in Jordan is inaccurate. The regulations and laws on online banking that have been issued by CBJ are comparable to those employed in developed states like the UK.

2.2.6 Jordanian Literature on Online Banking

The success and development of the banking sector depend on information and communication technology (ICT). Banks that employ modern technology and techniques are more successful in financial market competition, as they can create more business, which increases their performance and profitability. Some empirical and theoretical research at the local and international levels has analysed the influence of online banking and ICT in the banking system. Table 2.1 shows selected studies on online banking and related issues in Jordan.

Table 2.1: Summary of Previous Studies about Online Banking Adoption

Scholar	Objective	Factors	Major results
Shankar & Jebarajakirthy (2019)	The goal of the paper is to examine online banking quality toward enhancing client loyalty.	<ul style="list-style-type: none">• Website design• Reliability• Client service and Support• Security & Privacy• Consumer involvement• Trust• loyalty	The results indicated that reliability with security and privacy enhanced client loyalty to online banking. The trust in online banking mediates the impacts dimensions online banking quality on client loyalty except for website design.

‘Table 2.1, Continued’

Scholar	Objective	Factors	Major results
Abu-Assi et al. (2014)	The paper's objective is to investigate the factors that influence the online banking adoption of clients who have internet access.	<ul style="list-style-type: none"> • Perceived ease of use • Usefulness • Compatibility • Trainability • Security • Demographic characteristics 	The results show that compatibility, perceived ease of use, security and perceived usefulness positively affect online banking adoption. The effect of all the independent factors together and identifies a positive relationship between them and online banking adoption.
Isibor et al. (2018)	This paper aimed to know the impact of online banking on clients' satisfaction and economic growth.	Bank perspective: <ul style="list-style-type: none"> • online banking • Clients' satisfaction • Economic growth 	The finding found that online banking has improved clients' satisfaction and caused the growth of the economy.
Anouze & Alamro (2019)	The paper aimed to examine the status of Jordan's online banking and to elucidate the slow adoption.	<ul style="list-style-type: none"> • Perceived usefulness • Perceived ease of use • Reasonable price • Security 	The results showed that perceived usefulness, perceived ease of use, reasonable price, and security, appear as obstacles to intention to use online banking.
Al-Hawary & Hussien (2017)	The purpose of this study is to investigate the influence of online banking on the clients' loyalty of Jordanian commercial banks.	<ul style="list-style-type: none"> • Ease of use • Web site design • Usefulness • Accessibility • Cost of use • Privacy 	The results indicated that there is statistically significant effect of the all online on banking factors client's loyalty, except for accessibility factor, the results showed it has insignificant effect on client's loyalty.
Salihu & Metin (2017)	The study aimed to examine the impact of product improvements, efficiency, and reliability on client satisfaction of online banking.	<ul style="list-style-type: none"> • Product improvements • Efficiency • Reliability • Client satisfaction 	The findings indicated that efficiency has negative effect on client satisfaction, while service and reliability effect are positive.
Rawwash et al. (2020)	This paper aimed to determine the factors impacting on online banking in Jordanian banks.	<ul style="list-style-type: none"> • Ease of use • Trust • Perceived usefulness • Security & Privacy • Convenience 	The results showed that ease of use, privacy, perceived usefulness, and trust positively affected online banking. Convenience was showed to have no influence on online banking.
Yaseen & El Qirem (2018)	This study aimed to examine the major factors impacting the use and adoption of online banking in the Jordanian commercial banks.	<ul style="list-style-type: none"> • Effort expectancy • perceived online banking quality • Social influence • hedonic motivation • Performance expectancy • online banking 	The finding showed that social influence, effort expectancy, and perceived online banking services quality to be good indicators, while hedonic motivation and performance expectancy are not significant indicators.
Masoud & AbuTaqa (2017)	This paper aimed to determine factors impacting clients' online banking adoption in Jordan.	<ul style="list-style-type: none"> • E-service quality • E-security • E-perceived usefulness • E-reliability 	The study showed that there was a significant impact of e-service quality, e-security, e-perceived usefulness, and e-reliability on the online banking adoption.

‘Table 2.1, Continued’

Scholar	Objective	Factors	Major results
Isibor et al. (2018)	This paper aimed to know the impact of online banking on clients’ satisfaction and economic growth.	Bank perspective: <ul style="list-style-type: none"> • online banking • Clients’ satisfaction • Economic growth 	The finding found that online banking has improved clients’ satisfaction and caused the growth of the economy.

Source: Author

Table 2.1 summarises several studies on online banking adoption and its determinants. The literature provides several insights on the impact of technology on all transactions in the e-environment. This review focused on works related to technology in banking. The literature review showed that there is a positive relationship between several explanatory factors – such as e-service quality, ease of use, convenience, reliability, security, prior online knowledge, and demographic characteristics – and online banking adoption. These factors have a strong influence on online banking adoption.

Based on the literature, there are a set of factors that can influence online banking. In other words, a decrease or increase in these factors will lead to lower or higher online banking adoption. Prior studies have highlighted security as an obstacle to the adoption of online banking in Jordanian banks. Researchers also differ on how to measure online banking adoption, but they agree that e-service quality has been effective in determining online banking adoption.

Finally, a comprehensive review of the Jordanian literature indicated that most of the studies have analysed the influence of online banking adoption and ICT in the banking system. Therefore, there is a rarity of studies on online banking performance assessment and its determinants in the context of Jordan, and thus highlighting another gap in literature.

2.2.7 Performance Assessment

The concept of evaluation performance in Islam refers to dedication to work, which is considered a virtue. In Islam, the individual must put enough effort into work. Islam also encourages him to consult and cooperate to overcome obstacles and avoid mistakes. In other words, there must be plans to manage social and individual relations to promote social life at work, since work creates an independent identity for the individual, as well as to boost his self-confidence and self-esteem (Ennew et al., 1993). Competition at work may encourage quality improvement (Enright & Newton, 2005). The Quran urges Muslims to improve their work, "The artistry of Allah, who disposes of all things in perfect order for he is well-acquainted with all that ye do". (Al-Qur'an. Al-Naml 27:88)¹. The hadith encourages a similar objective, "That God loves when one of you do it well". (Hadith. Al-Albāniyy. Kitāb as-Sagheer wa Ziyaadatuh: Ju'z I: #383)².

On the other hand, the literature indicated that performance assessment is a strategic process because it helps organisations to obtain valuable information about their performance (AL-Adwan & AL-Tarawneh, 2017). Assessment helps to identify their strengths and weaknesses. In summary, the performance is not an end in itself, but it is a vital tool for continuous growth (Fletcher & Williams, 1996; Rojas, 2015). Furthermore, performance assessment focuses on determining the difference between what the organisation has achieved and what it had initially expected, as well as between actual and required performance (Lancaster & Massingham, 2005). Though

¹ All Quranic translation in this writing are based on Abdullah Yusuf Ali. 1989. *The Holy Qur'an, Text, Translation and Commentary*. Maryland: Amana Corporation.

² Al- Albāniyy. Ṣaḥīḥ Al-Jami. (Internet). Abu Sabaayaa. 2010. *Saheeh al-Jaami as-Sagheer wa Ziyaadatuh*. #383. <http://www.emaanlibrary.com/book/selected-ahaadith-from-saheeh-al-jaami/>

researchers have proposed different concepts of performance assessment, there is a general agreement among them about its meaning. As a general idea, performance assessment is the process of getting valid information about performance and the factors that influence it (Wanyoike, 2016). It differs from other kinds of assessments because it focuses on the organisation as the unit of analysis (Rojas, 2015).

It could then be concluded that performance evaluation is a continuous process that is of interest for both organisation and customer, as it helps them to achieve their objectives. Performance measurement can also help the organisation determine the possibility of achieving its intended goals and to draw plans for growth and improvement.

In the financial markets, bank performance is a key supporter of any country's financial growth. In a continuously volatile environment, understanding its determinants would reduce the threat of economic decline (Chouikh & Blagui, 2017). Hence, the extent to which banks efficiently and successfully perform the services provided determines not only the level of clients' trust in the banking sector but also the performance of the banks themselves and the general economy (Clementina & Isu, 2016). Besides, a high-performing bank enhances the technical innovation and social skills of human resources to support excellent interpersonal relationships in the workplace which ultimately benefits the bank (Abdallah, 2014; Callaway & Jagani, 2015).

Because of the emergence of the global economy, e-business has become the most important factor in the future development of banking, affecting banks' business and marketing strategies (Anouze & Alamro, 2019). Online banking has become common because of its flexibility and convenience, as well as transaction-related features like efficiency, speed, accessibility, etc. (Rawwash et al., 2020). Despite the

potential features of online banking, there is some debate concerning how and whether their acceptance improves the performance of the bank. Efforts have been made to examine the role of online banking on bank performance. A study conducted by Ngango et al. (2015) indicated the positive effects of online banking on their banking performance. The results confirmed that those banks with growth and high profit are more likely to be utilising larger numbers of online banking. The study concluded that online banking leads to an increase in profits in the long-term.

2.2.8 Online Banking Performance Assessment

Online banking performance refers to the rate of use, that is, the number of online transactions and online banking users (Al-Alawi, 2018). Sadeghi et al. (2012) described online banking performance as a complex process that includes interaction between the technology, environment, internal operations, and external activities. The online banking performance can also mean a multidimensional construct that encompasses the service system provider and user evaluation of the service, as suggested by the inseparability characteristic of services (Olayinka, 2012). In addition, the diverse operational issues and ever-changing regulations provide opportunities for banks to produce efficient traditional and electronic banking services (Anouze & Alamro, 2019; Firdous & Farooqi, 2017). Such improvements are only possible after detailed measurement and analysis of online banking performance (Olayinka, 2012).

Service management theories like total quality management (TQM) and customer perception approaches have respectively discussed the assessment of services from the operations management and services marketing perspectives. Conceptualising banking service as an online service and combining the components of online services (e.g., product/service, service delivery, and service environment)

with the emerging e-business and e-business studies in developing countries, online banking improvements can be identified following a service analysis and performance assessment of the online service components (Taylor et al., 2008).

2.2.8.1 Service/Product: Assessment and Analysis

Whereas tangible products are assessed based on physical specifications, intangible services are evaluated based on customer service value and environmental analysis (Olayinka, 2012). The following section discusses the assessment and analysis of the service and service environment system.

2.2.8.2 Service Environment: Assessment and Analysis

The service environment in online services includes organisational resources used by the service provider. Studies on the effects and performance of online services have been inconclusive due to the productivity paradox or information technology payoff (Chuang & Lin, 2017; Zhu et al., 2004). Studies on service performance measurement offer various perspectives and analytical constructs in describing and measuring the influence of service/product, organisation, industry, and country (Chircu & Kauffman, 2000; Grey et al., 2003; Mohammadyari & Singh, 2015; Vilaseca et al., 2006; Zhu et al., 2004).

The services environment is described as organisational resources, and internal organisation assessment measures comprise business value, competitiveness, and productivity (Friedline et al., 2019; Santhanam & Hartono, 2003). Moreover, standardised self-evaluation systems and management of organisational performance systems, for instance Japan Quality Award, Educational Accreditation Quality

Systems, and the Malcolm Baldrige National Quality Award, can also be considered in the assessment of service environments (Olayinka, 2012).

2.2.8.3 Service Delivery System: Assessment and Analysis

The service delivery systems, including the procedures and mechanisms employed in providing services, may use organisational criteria such as business value and productive capacity, which give a sample overview of performance. External criteria, like service quality and competitiveness, in contrast, provide industry- and client-level perspectives and offer robust assessments of the internal departments and comprehensive service response (Olayinka, 2012). These client-level assessments, mostly of service quality and satisfaction, are appropriate measures of service performance. They have been implemented to examine the perception of consumers about organisational services and their performance using such constructs as client value, service quality, and satisfaction (Gera et al., 2017; Massad et al., 2006; Oh & Kim, 2017).

The extent of services marketing literature in the preceding section emphasises their dominance in customer evaluations of performance; given the two-sided nature of services together with the multi-dimensional explanation of service quality, the insulated application of these models brings up questions of durability (Olayinka, 2012). Accordingly, the model of online banking performance showed is established in the service of science studies and is described as a multi-disciplinary and multi-dimensional construct. The model includes the service environment and the systems of service delivery determined by services marketing theories and information systems and respectively.

The online banking performance model is developed based on the relational view of online service, calls for multi-disciplinary research in service science management and engineering (SSME), and the multidimensionality of service systems (See Figure 2.3). The relational online service view defines service systems as a collection of resources that co-create or co-produce the service (Rust & Kannan, 2003). Therefore, the evaluation of online banking performance is a combination of performing all components of the service system, including product, environment, and delivery (Taylor et al., 2008). The intangibility, perishability, and inseparability of most online services support the evaluation of service products as an integral part of service delivery evaluation (Olayinka, 2012). Multidimensionality is expressed by two components of evaluation, that is, the service provider and consumer (Alter, 2008).

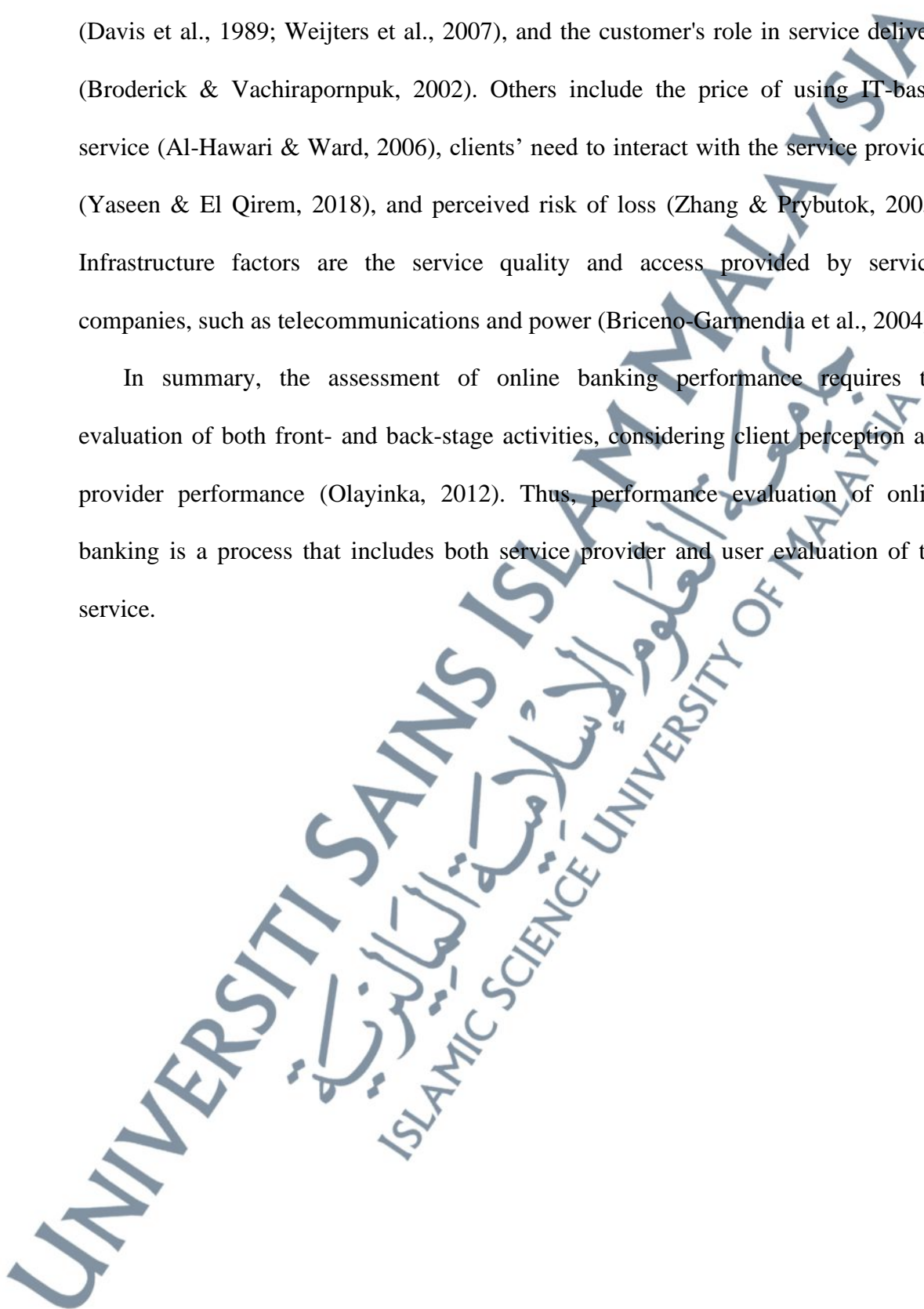
The model below shows the information system conceptualisation of the service environment surrounding online banking, which is used by bank clients to create value (economic, customer, and organisational). The service delivery system is explained by the gaps model of service quality, from where customer perceptions of quality are used as a proxy of customer performance (Olayinka, 2012). The model also highlights the important role of online service performance on value creation, customer satisfaction (Zhang & Prybutok, 2005), economic value (Ifm and IBM, 2007), and organisational loyalty (Zhang & Prybutok, 2005).

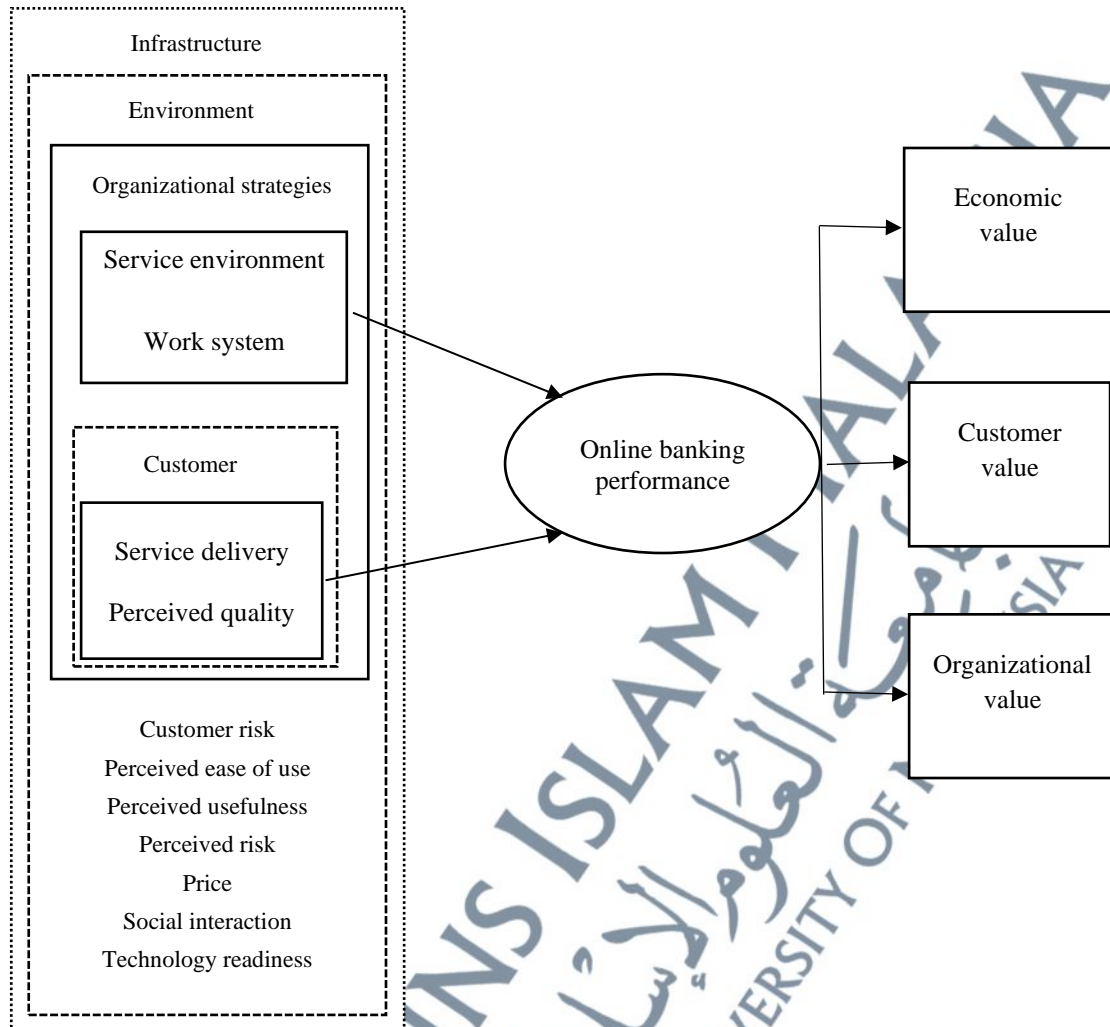
The efficacy of the service system (service delivery system and service environment) is constrained by organisational strategies, government infrastructure services, and socio-cultural environment (Briceno-Garmendia et al., 2004). These factors are important for online services in developing countries, whose infrastructure quality and socio-cultural readiness are typically low (World Economic Forum, 2016).

These socio-cultural factors include technological readiness of customers

(Parasuraman, 2000), perceived ease of use technology, perceived ease of usefulness (Davis et al., 1989; Weijters et al., 2007), and the customer's role in service delivery (Broderick & Vachirapornpuk, 2002). Others include the price of using IT-based service (Al-Hawari & Ward, 2006), clients' need to interact with the service provider (Yaseen & El Qirem, 2018), and perceived risk of loss (Zhang & Prybutok, 2005). Infrastructure factors are the service quality and access provided by services companies, such as telecommunications and power (Briceno-Garmendia et al., 2004).

In summary, the assessment of online banking performance requires the evaluation of both front- and back-stage activities, considering client perception and provider performance (Olayinka, 2012). Thus, performance evaluation of online banking is a process that includes both service provider and user evaluation of the service.





Source: Olayinka (2012)

Figure 2.3: Online Banking Performance Model

Added to the above, previous studies established that website quality components (INQ, SYQ, and E-SQ) were significantly related to online service performance (Agus et al., 2007; Chang et al., 2012; Kassim & Hussin, 2010). In addition, Al-Qeisi et al. (2014), found that banks were affected by website quality to improve their online banking performance. However, other prior study indicates empirical results showed that continuance intention has a positive effect on the online service performance (Mohammadyari & Singh, 2015).

2.3 Website Quality

2.3.1 Quality Concept

This term quality is recognised for its effect on external clients (service recipients), particularly on their behaviour (Apostolou et al., 2017; Li et al., 2018). Quality refers to the excellence and superiority of products/services, and it includes the characteristics that meet the client's needs in all efforts related to processes, marketing, manufacturing, and maintenance (Charles et al., 2016). Furthermore, the term quality refers to the availability of all features and characteristics in the product/service on time and with lower cost, which meet the needs and expectations of the client (Makanyeza et al., 2016). In general, quality is the extent to which specific features satisfy the needs, desires, or expectations of clients, whether implied or explicit.

The concept of quality is not new to Muslims. Islam urges its adherers to master their jobs; it calls for improvement, quality, and proficiency in work, and promises rewards for those who improve their work. In the Quran, the Almighty says, "Those who believe and work righteousness, verily we shall not suffer to perish the reward of any who do a (single) righteous deed" (Al-Qur'an. Al-Kahf 18:30)³. Some hadiths also urge Muslims to improve their work, for example, "That God loves when one of you do something well". (Hadith. Al-Albāniyy. Kitāb as-Sagheer wa Ziyaadatuh: Ju'z I: #383)⁴. The following section discusses the history and growth stages of the quality.

³ All Quranic translation in this writing is based on Abdullah Yusuf Ali. 1989. *The Holy Qur'an, Text, Translation and Commentary*. Maryland: Amana Corporation.

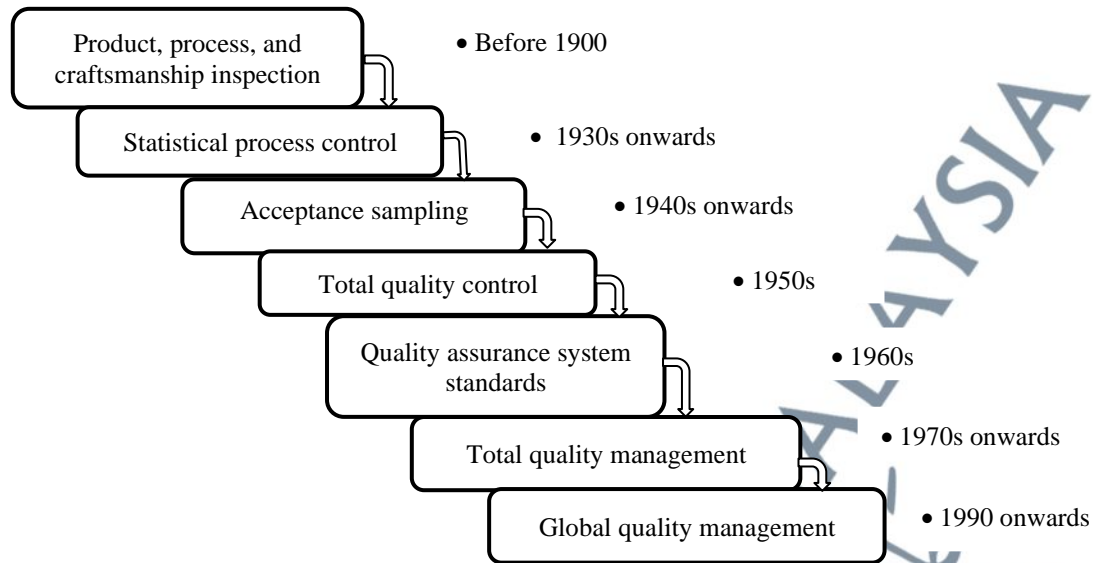
⁴ Al- Albāniyy. Ṣaḥīḥ Al-Jami. (Internet). Abu Sabaayaa. 2010. *Saheeh al-Jaami as-Sagheer wa Ziyaadatuh'*. #383. <http://www.emaanlibrary.com/book/selected-ahaadith-from-saheeh-al-jaami/>

2.3.2 History of Quality

In 1911, the concept of quality gained great interest when Taylor published *Scientific Management Principles*, which uses statistical theory to present a framework for increasing employee productivity in industrial organisations (NetMBA, 2010). The 1920s then saw the effective application of statistical theory in quality control. In 1924, Shewhart created the first modern control chart (DJI, 2011). The works of Shewhart, Deming, who built on Shewhart's work, and Dodge and Romig contributed greatly to statistical process control theory. Nevertheless, these techniques were rarely implanted in manufacturing firms until the late 1940s (Mittal & Singh, 2012).

At that time, Japan's economy and industry were virtually destroyed; it had an illiterate workforce and could only manufacture low quality products (Mittal & Singh, 2012). In an attempt to improve the situation, the Japanese requested the help of experts in quality, like Deming and Juran (*The Global Voice of Quality*, 2011). By the early 1950s, quality management (QM) practices had grown rapidly in Japan, becoming the main subject of management philosophy. In the 1960s, QM and control had become the main concern in Japan. By the end of the 1960s, Japan had become a more effective exporter compared to its western counterparts (DJI, 2011).

According to Willborn & Cheng (1994), the first standard on quality management, ISO 9000, was issued in 1987. The standard was then upgraded to global quality management (GQM), which complements modern global quality systems (QMS) employed by companies today. Figure 2.4 shows the history of QM.



Source: Willborn & Cheng (1994: 21)

Figure 2.4: History of QM

Figure 2.4 illustrates the historical development of QM. Inspectors controlled and examined the processes to identify the total quality of services/products. QM then adopted quality assurance practices as one of its dimensions. From the 1980s until now, several terms of quality have been used to indicate the efforts of organisations. Terms like total quality management, companywide quality management and control, total quality control, and improvement are used to refer to QM (Willborn & Cheng, 1994).

Excellence in QM includes using state-of-the-art information technology. The industry depends on software that performs without error (Juran & Godfrey, 1998). QM can help organisations provide easy-to-use and beneficial applications, in addition to designing website and preparing maintainable software (Mittal & Singh, 2012). QM helps organisations to design websites and systems that meet customers' information requirements and comply with industry standards. Customer needs can be met by offering easy-to-read-and-navigate interfaces, meeting user needs for changes, and satisfying the decision-makers of QM (Loiacono et al., 2002).

Since its introduction in the mid-1990s, e-services have spread around the world, changing many business activities (Hasan & Abuelrub, 2011). However, there has also been a widespread of websites with a large amount of information, whether high or low quality, in addition to explicitly misleading websites (Fogg et al., 2001). The web explosion has called for measurement standards to assess website quality, such as its accessibility and usability (Hasan & Abuelrub, 2011). The goal is to make the website profitable and useful and accessible by the user (Signore, 2005). Issues of quality awareness have recently emerged in industrial sectors (Mich et al., 2003). A complicated or difficult-to-use website gives companies a bad image and weakens their positions (Hasan & Abuelrub, 2011). Companies should thus assess the quality of their e-services and compare it to their competitors so they can continually improve them (Barnes & Vidgen, 2007).

In the last decade, several studies have focused on website design for general e-commerce and information inquiry (Zhang & Dran, 2001). Website design and development are very critical for the success of e-commerce (Cho et al., 2015). Previous studies have emphasised either a technological- or a client-oriented perspective to examine the main characteristics of e-commerce. The technological-oriented viewpoint concentrates on system characteristics such as accurate information and website usability, and their impact on client adoption of a website (Palmer, 2002). The client-oriented view concentrates on the website's provision of an adequate level of SEQ in accordance with what clients expect (Cenfetelli et al., 2008; Lin, 2007).

Furthermore, the literature indicated that website quality (WQ) involves both technical and service components: INQ, SYQ, and E-SQ (Ahn et al., 2007; Bai et al., 2008; Chang et al., 2014; Chen et al., 2015; Chen et al., 2017a; Hsieh, 2019; Liang &

Chen, 2009; Lin, 2007; Rostiana & Zuliestiana, 2019; Wen, 2009). These results are consistent with IS Success Model suggested by DeLone & McLean (2004), which has been adopted by several studies that seek to measure the success of e-commerce. INQ refers to the clients' perception of the INQ provided on a website which is a critical component of IS success (McKinney & Yoon, 2002). INQ reflects the content of the banks' website as perceived by a client as being accurate, sufficient, up-to-date, and relevant (Chen et al., 2015; Liang et al., 2011). SYQ refers to a client's perception of overall website system performance (Chen et al., 2015; Zheng et al., 2013). SYQ reflects the level of access speed, navigation, visual appeal, and ease of use (Zhou, 2013). SEQ refers to a client's evaluation of the E-SQ provided via the website comprising reliability, personalization, responsiveness, and assurance (Chen et al., 2015; Zhou, 2013).

2.3.3 Website Quality Components

With the aforementioned justification, the current study makes use of three components are INQ, SYQ, and E-SQ to measure the website quality in the Jordanian commercial banks. INQ, SYQ, and E-SQ make up are important website quality components that bring about online service improved performance (Agus et al., 2007; Chang et al., 2012; Kassim & Hussin, 2010). These components are presented in the following sections.

2.3.3.1 Information Quality

It is natural to consider that the concept of information leads to information quality (INQ). One may consider quality and INQ in particular as the level of benefit or the fitness to employ (Juran & Godfrey, 1998) in one or more tasks/contexts.

Additionally, concepts such as satisfying or exceeding client's expectations (Evans & Lindsay, 2005), draw more attention to client needs. Although these two components may initially look different, they are two sides of the same coin. Client information requirements are mainly shaped by the tasks/procedures that the client demands.

INQ refers to the client-perceived efficiency of the electronic system and client-perceived criteria for online content: it must be relevant, error-free, complete, consistent, and timely (Bock et al., 2012; Ranganathan & Ganapathy, 2002). The INQ can also mean the extent to which an information system can provide clients with timely, relevant, and error-free information (Aziz & Idris, 2012). Petter & Mclean (2009) stated that INQ is the characteristics of the output of the information system, such as reliability, accuracy, completeness, and timeliness. Furthermore, INQ relates to the integrity, error-free, and timely nature of information produced by the information system (DeLone & McLean, 2003). Added to the above, it could be concluded that the quality of the information in the context of online banking is the ability of the banking system to provide its users with a website that is featured by new, easy-to-understand, clear, and accurate information.

Previous studies indicated that ease of access and control are critical determinants of clients' perception of information quality (Abu Bakar & Melan, 2018). Information that is error-free, timely, and complete are critical dimensions for INQ in online services. Furthermore, DeLone & McLean (2004) and Saha et al. (2012) stated that IS Success model can be adapted to the measurement challenges of the new e-commerce world. Along the same line of discussion, the literature review shows that while the empirical measures of INQ models differed, they shared some common dimensions. Table 2.2 summarises the dimensions of INQ used in the empirical literature.

Table 2.2: Comparison of Information Quality Models

Scholar	Conceptual Model	Dimensions
Lee et al. (2002)	INQ Model	Completeness, Concise representation, Believability, Consistency, Appropriate amount, Ease of operation, Accessibility, Free-of-error, Understandability, Interpretability, Timeliness, Objectivity, Security, Relevancy, and Reputation.
Eppler & Muenzenmayer (2002)	INQ Model	Accurate, Convenient, Accessible, Timely, Secure, Traceable, Applicable, Interactive, Consistent, Maintainable, Concise, Responsiveness, Comprehensive, Correct, Clear, and Current.
Kahn et al. (2002)	INQ Model	Representation, Accuracy, Interpretability, Relevance, Objectivity, Concise, Understandability, Completeness, Consistent, and Appropriate amount.
Dedeke (2000)	INQ Model	Ease of navigation, Controllability, Conformability, Technical access, Relevancy, Learnability, System availability, Interpretability, Structure, Error tolerance, Adaptability, Timeliness, Visual signals, Technical security, System feedback, Consistency, Responsiveness, Audio signals, Data accessibility, Conciseness, Appropriate data, Value added, Efficiency, Data convertibility, Completeness, Contrast, Data sharing, and Readability.
Klein (2002)	INQ Model	Relevance, Accuracy, Amount of data, Completeness, and Timeliness.
Wang & Strong (1996)	INQ Model	Concise representation, Accuracy, Accessibility, Relevancy, Interpretability, Objectivity, Security, Value-added, Ease of understanding, Amount of information, Believability, Representation, Completeness, Reputation, Consistent, and Timeliness.

Source: Author

Based on Table 2.2 there are few measures being considered e.g. Dedeke (2000), Eppler & Muenzenmayer (2002), Kahn et al. (2002), Klein (2002), and Wang & Strong (1996). However, this study adapted 13 items from Lee et al. (2002), because it has higher consistency and reliability. In previous tests, their Cronbach's alphas were ranged from .72 to .94. The items were also relevant to the context of the study. These dimensions include timeliness, believability, consistency, appropriate amount, security, free-of-error, understandability, relevance, interpretability, objectivity, reputation, completeness, and accessibility.

Furthermore, INQ is a unique factor influencing the online service performance (Kassim & Hussin, 2010). Banks that high-quality information are more aware of

improving their performance (Al-Dmour et al., 2021). As noted by Chen et al. (2015) and Liang et al. (2011), INQ reflects the content of the banks' website as perceived by a client as being accurate, sufficient, up-to-date, and relevant. McKinney & Yoon (2002) found INQ to be an important influencing component on IS success. Furthermore, Abu Bakar & Melan (2018) also noted that INQ is the factor responsible for the continuous intention to use online services. In addition, Okechi & Kepeghom (2013) mentioned that customers' continuous-use intention was positively affected by the INQ content of an online banking system.

2.3.3.2 System Quality

System quality (SYQ) is defined as "the clients' perception of a website's performance in information retrieval and delivery" (McKinney & Yoon, 2002). The SYQ can also mean the technical features of a website's such as accessibility and usability (Xu et al., 2013). Moreover, it is the level to which a website is easy to use to fulfil tasks (Schaupp et al., 2006). In particular, SYQ depends on the needs of the clients, as defined during the analysis and development of the website. It is considered a critical factor of client satisfaction in using a website, and it relates to such factors as technical adequacy, privacy, appearance, navigation, security, and delay (Ahn et al., 2007).

Furthermore, system quality is a criterion of information system (IS) from a design and technical viewpoint (Gable et al., 2008). SYQ has also deemed a criterion of the data processing operation itself. SYQ is based on three elements: ease of use, accessibility, and interactivity. Accessibility is the availability and responsiveness of the system. Interactivity is another significant element of SYQ (Chen, 2010). Speed and availability of the system are also important because they allow clients to

complete their needs without too much waiting (Lederer et al., 2000). A high-quality website can afford clients with more convenience, privacy, and responsiveness (Saha et al., 2012). In addition, it could be concluded that the quality of the system in the context of online banking is the ability of the banking system to provide its users with a website that is featured by reliability, usability, efficiency, privacy, and portability.

The literature review shows that SYQ has been measured with different dimensions in the information system literature, they shared some common dimensions. Table 2.3 summarises the dimensions of SYQ used in the prior studies.

Table 2.3: Comparison of System Quality Models

Scholar	Conceptual Model	Dimensions
Gu et al. (2009) and Montazemi & Qahri-Saremi (2015)	Conceptual Model for system quality on the technical	Reliability, Accessibility, Network speed, Flexibility, Aesthetics, and Navigation.
Ali et al. (2012)	The ISO 9126 software quality standard model	Functionality, Usability, System Reliability, Efficiency, Maintainability, and Portability.
Bharosa et al. (2009)	Conceptual Model for system quality requirements	Accessibility, Response time, System reliability, System flexibility, interoperability, Ease of use, and Context awareness.
Sedera et al. (2004)	Systems Success Measurement Model	Ease of learning, System accuracy, Ease of use, User requirements, Customization, Sophistication, Integration, Features, and System flexibility.
Lee et al. (2009)	Conceptual Framework about Usage of Mobile Data Services	System reliability, System flexibility, Stability, Ease of use, System speed, Network speed, Sophistication, Usability, Response time, Access convenience, Accessibility, Integration, and Navigation.
Nelson et al. (2005)	Determinants of System Quality	Accessibility, System flexibility, System reliability, time, and Integration.

Source: Author

According to Table 2.3, there are few measures being considered such as Bharosa et al. (2009), Gu et al. (2009) and Montazemi & Qahri-Saremi (2015), Nelson et al. (2005), Lee et al. (2009), and Sedera et al. (2004). But this study adapted 6 items from Ali et al. (2012) because they have higher consistency and reliability. In previous tests, their Cronbach's alphas were ranged from .73 to .92. The items were also relevant to the context of the study. These dimensions include system reliability, usability, functionality, efficiency, maintainability, and portability.

The literature of technology acceptance suggests important links between SYQ and online service performance, which have been argued to be two of the most important organisation decisions made by managers (Chang et al., 2012). SYQ refers to a client's perception of overall website system performance (Chen et al., 2015; Zheng et al., 2013). SYQ reflects the level of access speed, navigation, visual appeal, and ease of use (Zhou, 2013). In relation to this, Kim et al. (2019) found that INQ is the core variable for understanding clients' continuance intention to use. To understand the level to which a client is willing to use technology continuously, issues relating to website quality are essential (Okechi & Kepeghom, 2013).

2.3.3.3 Electronic Service Quality

Unlike the service quality literature, there is still a lack of theoretical and empirical research on e-service quality (E-SQ) (Shatnawi, 2019; Alwan & Al-Zubi, 2016). E-SQ is a modern concept, and its interpretation has been various. E-SQ is increasingly significant in influencing clients' evaluation of virtual marketplace performance (Santos, 2003). E-SQ is a subject of high concern because it may lead to the failure or success of an internet-based organisation or service (Zavareh et al., 2012).

In the past, E-SQ has been described in different ways by several scholars and researchers. For instance, De Ruyter et al. (2001) perceived E-SQ as a reactive, content-focused, and online-based client service that is incorporated into the organisation's systems and supported by technologies to enhance the relationship between the service provider and client. Ariff et al. (2012) described E-SQ as the functionality and perceived quality of a system following its usage. Zeithaml (2002a) defined E-SQ as the extent to which a website facilitates effective online service.

Website quality affects the online service experience of clients before, during, and after using it (Zeithaml et al., 2002). Santos (2003) stated that E-SQ is the overall customer evaluation and perception of online service delivery in the virtual marketplace, and Rowley (2006) referred to E-SQ as the simplified delivery of services via information technology. Add to the above, it could be concluded that the quality of the electronic service in the context of online banking is the ability of the banking system to provide its users with an efficient, responsive, and fulfilling website.

In relation to this, Santos (2003) noted that E-SQ is important, as clients can assess online services faster and more accurately than traditional services, and that client expectations of online services are typically equal or higher than traditional services. In addition, before organisation offers high-quality services, it must first determine users' perception and evaluation of online services (Parasuraman et al., 2005). On the other hand, some prior studies, e.g. AL-Adwan & AL-Tarawneh (2017) and Mohmoodi & Asetmal (2014), indicated that E-SQ plays a vital role in explaining the extent to which users assess and perceive online banking. Companies that provide online services realise that the critical success factors of the service include the quality (Yang, 2001; Zeithaml, 2000b).

Furthermore, a review of the literature revealed that studies of E-SQ measurement have been used a variety of scales. The table below presents a set of measures being considered such as Kenova & Jonasson (2006), Siu & Mou (2005), Yoo & Donthu (2001), Wu et al. (2008), Zavareh et al. (2012), Zhilin et al. (2004), Zeithaml et al. (2002) and Zeithaml (2000b). But this study adapted 7 items from the E-SERVQUAL scale developed by Parasuraman et al. (2005) because they have higher consistency and reliability. In previous tests, their Cronbach's alphas were

ranged from .83 to .94. The items were also relevant to the context of the study. These dimensions include efficiency, fulfilment, system availability, privacy, responsiveness, compensation, and contact.

Table 2.4: Comparison of E-Service Quality Models

Scholar	Conceptual Model	Dimensions
Zavareh et al. (2012)	E-SQ Model	Efficient and reliable services, Security/ Trust, Fulfilment, Ease of use, Responsiveness/ Contact and Site aesthetic.
Wu et al. (2008)	E-SQ Model	Customization, System availability, Fulfilment, Contact, Privacy, Efficiency, Compensation, and Site aesthetics.
Kenova & Jonasson (2006)	E-SQ and E-RSQ Model	Fulfilment, Site aesthetics, Credibility, Efficiency, System availability and Security.
(Parasuraman et al., 2005)	E-SQ Model	Responsiveness, Fulfilment, Privacy, Contact, System availability, Efficiency, and Compensation.
Siu & Mou (2005)	WebQual Model	Security, Efficiency, Credibility and Problem processing.
Zhilin et al. (2004)	WebQual Model	Reliability, Responsiveness, Competence, Ease of use, Product portfolio and Security.
Zeithaml et al. (2002) and Zeithaml (2000b)	E-SQ Model	Privacy, Efficiency, Reliability, and Fulfilment.
Yoo & Donthu (2001)	SITEQUAL Model	Ease of use, Handling speed, Security, and Aesthetic design.

Source: Author

As the above discussion indicates, the most important goal of website quality is the focus on continuous service improvement. The appearance of constant improvement is positive, and the concept is mainly linked to total quality. It is also simple and easy to understand and requires low investment cost. Continuous improvement is now deemed one of the most effective methods to enhance competitiveness, besides the application of such methods as information technology (Wai et al., 2011) and six sigma (Bessant et al., 1994; Shah & Ward, 2007; Pettersen, 2009).

The application of IT in companies is increasingly growing. According to Malkawi (2017), IT is typically implemented to improve comprehension and to measure website quality. Alzoubi et al. (2019) argued that the dramatic performance

growth of all IT tools is the fundamental reason for their increased use to improve e-service quality. Many studies have confirmed the positive influence of both website quality and IT on system performance (Al-Qeisi et al., 2014). Furthermore, companies have the necessary abilities and resources to successfully procure and manage quality IT tools, allowing them to successfully link IT with e-service quality (AL-Adwan & AL-Tarawneh, 2017). In this regard, the Six Sigma is considered one of the best techniques to improve business processes as well as it is an effective way to improve the quality and decreasing the defect rate (Noori & Latifi, 2018).

Six sigma is defined as an improvement program that can minimise variation, and it focuses on continuous and breakthrough improvements. Variation is reduced for the principal aim of satisfying customers. According to Magnusson et al. (2003), Six sigma aims to improve a service or product so that only 3.4 out of a million clients are dissatisfied. Six sigma, therefore, differ from quality management in concept. However, they share some common ground in terms of goals, for instance reducing waste, improving customer satisfaction, improving performance, and increasing output (Dahlgard & Dahlgard-Park, 2006).

Six sigma begins by identifying customer demand and needs to measure their satisfaction level and compare it with their behavioural intention. It helps an organisation to develop its operations and improve its service performance. Moreover, six sigma provides principles and tools, which can be used for any process to measure the defect rate (Pande & Holpp, 2002). The following section discusses the six sigma principles.

1. Customer orientation in all decisions related to service, activity, and environment.

2. Data-oriented decisions and actions to provide a clear vision for the organisation and customer.
3. Full focus on the improvement and development of activities, operations, and management, including ensuring the continuity, accuracy, and simplicity of working procedures, without exposing the client to surprises or ambiguity.
4. Developing the desire to be proactive and providing the elements of effective administration by focusing on the needs of clients, taking into account the limits and cost of performing the service.
5. Open channels of communication and constant interaction between parties, implementing the principles of cooperation, interaction, and adjustment, thus improving responsiveness.
6. Perfecting customer service by developing the capacity for innovation and willingness to take risks and by decreasing errors.

Accordingly, an organisation that implements six sigma focuses on reducing the number of defects in any process. This is done by applying scientific methods, allowing the organisation to remove those defects and achieve zero defects. Based on the aforementioned paragraphs highlighting the importance of six sigma and its principles, the current study presents a theoretical proposal about requirements for the application of six sigma principles to develop the administrative organisation in commercial banks that provide online banking. Table 2.5 illustrates the administrative organisation and six sigma principles.

Table 2.5: Administrative Organisation and Six Sigma Principles

Six sigma principles	Administrative application requirements in commercial banks to make proportional six sigma principles
Customer orientation in all decisions related to service, activity, and environment.	<ol style="list-style-type: none"> 1. The formulation of the bank's vision and goals for customer service and linking features and benefits of all parties with the quality of the online banking. 2. Establish a set of policies and business rules that are interconnected, and in line with the online banking needs of the customer. 3. Determine the tasks and duties of all the functions on the basis that each individual in the bank will be responsible for customer satisfaction. Besides that, the employee also bears the responsibility of cooperation and self-censorship to ensure the quality of online banking provided to the customer.
Data-oriented decisions and actions to provide a clear vision for the organisation and customer.	<ol style="list-style-type: none"> 1. Determine the organizational structure and formulating tasks, in addition to regulating organizational relationships and communication channels, in order to ensure updated data and knowledge that contribute to responsiveness and provide high quality online banking. 2. The preparation and development of regulations and business rules which support the responsibilities of jobs. Also, the provision of data and clarity of facts in order to provide high quality online banking. 3. Establish limitations and rules for work, which satisfy the client in order to interact with the bank, as well display the customer perceptions, complaints, observations, and suggestions.
Full focus on the improvement and development of activities, operations, and management, including ensuring the continuity, accuracy, and simplicity of working procedures, without exposing the client to surprises or ambiguity.	<ol style="list-style-type: none"> 1. The building of administrative organization and the development of strategic plans, to provide an integrated package of online banking, and its associated activities. 2. Create and develop an organizational culture that supports the desire to ensure the customer satisfaction and happiness; and to achieve purchasing intention of online banking. 3. The establishment of rules for work, which allows the diversification of services, in addition to providing these services in accordance with the customer sectors.
Developing the desire to be proactive and providing the elements of effective administration by focusing on the needs of clients, taking into account the limits and cost of performing the service.	<ol style="list-style-type: none"> 1. The preparation of regulations for work and the formulation of policies which achieve integration and balance between goals of customer service, as well as continuity in the intention of purchasing, as well objectives of rationalizing the cost and adjust pricing service. 2. The preparation and development of administrative regulations through directing the human element, considering that it services recipients. 3. Establish policies and rules for work which push the bank's employees to increase their experience and skills and enable them to speak a common language. They should think and act according to united trends, assumptions, and perceptions.

‘Table 2.5, Continued’

Principles of six sigma	Administrative application requirements in commercial banks to make proportional principles of six sigma
<p>Open channels of communication and constant interaction between parties, implementing the principles of cooperation, interaction, and adjustment, thus improving responsiveness.</p>	<ol style="list-style-type: none"> 1. The building of an administrative organization and work rules, in order to enable the bank's employees to deal with emergencies and associated causes of job stress, as well cases of anxiety and tension. 2. To create a business climate this supports the effectiveness of administrative communications in all directions among the categories of specialized professionals, and the categories of their auxiliary services. 3. Formulating tasks and evaluation criteria to serve and satisfy the parties of the relationship with the customer; because these parties usually bear a great deal costs of the service.
<p>Perfecting customer service by developing the capacity for innovation and willingness to take risks and by decreasing errors.</p>	<ol style="list-style-type: none"> 1. The training and qualification of employees in high-level banks to benefit from the advantages of providing banking services to the client, in addition to avoiding risks and the occurrence of crises. 2. Establish regulations to establish authority, according to a method for creating motivation of all the bank's employees to actively participate in all stages of the decision-making strategy. 3. The preparation of a regulatory framework to guide leaders and officials to prepare files concerning the sources, potential risks, restrictions, and threats, in order to deal with these factors.

Source: Adapted from a researcher based on Pande & Holpl (2002:12:14)

Six sigma is a powerful methodology to accomplish quality and IT goals, that is, achieving higher performance by improving processes and products/services quality (Haigh, 2011; Zuppo, 2012). They mostly complementary and can be incorporated to form a superior approach, for instance WQ, which overcomes the insufficiencies of the individual approaches. Furthermore, each methodology is deemed appropriate for certain type and level of problem, hence why integrating the three methodologies is important.

To understand how to integrate QM, IT, and six sigma, they must first be compared. Past studies have compared the three methodologies across seven dimensions. Table 2.6 shows their differences and similarities. QM, IT, and six sigma share the same source and root (development and growth of quality in Japan), but their

development and process views are different. Additionally, they also differ in theory, methodologies, method, primary and secondary effects, tools, and criticisms. Integrating the approaches must take into consideration the differences of the three. Nonetheless, they share some similarities in that they aim to improve performance and focus on the customer. They are also complementary, so the weakness of one may be covered by the strength of the other. Integrating the three is therefore useful and possible.

Table 2.6: Differences and Similarities among QM, Six sigma, and IT

Concepts	QM	Six sigma	IT
Root	Quality growth in Japan.	The quality growth in each of Japan and Motorola.	The IT growth in each of (USA, Japan, UK, France, the Netherland, Germany, and the USSR)
Process view	Symmetric and improve processes.	Improve processes and minimize variation.	Improve computers and computer networks.
Theory	Focus on client	Zero defects	Focuses on using computing.
Methodologies	Plan, study, work, and performance	Determine, analyse, measure, design or improve, and control.	Store, study, restore, transfer, and data processing.
Method	Everyone committed	Project management	Technologies
Effects (primary)	Raising the level of client satisfaction.	Save money.	The simulation of higher-order thinking through computer programs.
Effects (secondary)	Realizes client loyalty and performance improvements.	Realizes company aims and improve performance financially.	Ease the transfer of information and different types of electronically mediated communications.
Tools	Statistical and analytical tools.	Statistical analysis and tools are advanced.	Statistical and mathematical tools.
Criticism	The lack of tangible improvements, unclear idea, and resource-demanding.	Does not have a regular perspective to include everyone, does not improve client satisfaction.	That information is useful only if you can get to it easily.

Source: (Daintith, 2009; Deming, 1994: 53; Haigh, 2011: 35; Zuppo, 2012: 19).

As the above discussion indicates, the most important goal of website quality is the focus on continuous service improvement. The appearance of constant improvement is positive, and the concept is mainly linked to total quality. It is also simple and easy to understand and requires low investment cost. Continuous

improvement is now deemed one of the most effective methods to enhance competitiveness, besides the application of such methods as information technology (Wai et al., 2011) and six sigma (Bessant et al., 1994; Shah & Ward, 2007; Pettersen, 2009).

Agus et al. (2007) reported that the E-SQ seems to influence the improvement of online service performance. In examining the performance of online service, the role of the E-SQ is critical. Service quality refers to a client's evaluation of the E-SQ provided via the website comprising reliability, personalization, responsiveness, and assurance (Chen et al., 2015; Zhou, 2013). Furthermore, E-SQ is one type of website quality that influences clients' evaluation of virtual marketplace performance (Santos, 2003). In particular, the study expressed further that E-SQ is a subject of high concern because it may lead to the failure or success of an internet-based organisation or service (Zavareh et al., 2012). On the other hand, prior studies suggested that the improvement of E-SQ is positively associated with continuous-use intention (Li et al., 2018). In addition, Bhattacharjee (2001a) asserted that E-SQ is a good response to change use intention on post-adoption.

2.4 Continuous-Use Intention

A person's intention towards something determines his behaviour (Ajzen, 1991a). It should be noted that intention sufficiently considers external elements, which can also affect the performance of behaviour (Omotayo & Adebayo, 2015). This is because differences arising from behavioural determinants have already been integrated into the behaviour prediction model. Behavioural standards may develop over time and shaped by intention changes, ability limitations, and environmental facilitators or inhibitors (Warshaw & Davis, 1985).

The Islam has highlighted the importance of intention: any activity must begin with a good intention (*niyyah*). Scholars like Imam al-Ghazali and Ibn al-Qayyim supported this. Islam, as a way of life, has outlined extensive guidelines in daily activities e.g., sleeping, exercising, eating, and drinking (Ramli, 2010). A routine activity, such as eating, could be considered as a benevolent act if it is initiated for with a benevolent intention. The Quran has also stressed the importance of intention. The behaviour of an individual depends on his intentions, as the Almighty said, "Verily, I am commanded to serve Allah with sincere devotion" (Al-Qur'an. Al Zumar 39:11)⁵. Some hadiths explain that one will be rewarded according to his intention. Narrated by Umar bin Al-Khattab, the Apostle of Allah said, "The reward of deeds depends upon the intention, and every person will get the reward according to what he has intended. So, whoever emigrated for worldly benefits or for a woman to marry, his emigration was for what he emigrated for". (Hadith. Al-bukhāriyy. Kitāb al-Sahih: Ju'z I: #1)⁶.

More than the above discussed is presumed as literature shows that the definition of intention varies, but scholars mostly agree that it is one's desire or tendency to display a particular behaviour. Ahn et al. (2007) stated intention is a certain probability to perform purchasing behaviour. The intention can also mean the preference of an individual to behave under his feelings, knowledge, or evaluation of experiences (Spears & Singh, 2004). According to Davis et al. (1989) and Sheeran (2002), social psychology and information system theories have confirmed that intention is a significant indicator of behaviour that incorporates the effects of external

⁵ All Quranic translation in this writing are based on Abdullah Yusuf Ali. 1989. *The Holy Qur'an, Text, Translation and Commentary*. Maryland: Amana Corporation.

⁶ Al-bukhāriyy. Kitāb al-Ṣaḥīḥ. (Internet). M. Muhsin Khan. n.d. *Tarjemah Hadith Sahih Bukhari*: Jil. I. p. 5. http://www.documentacatholicaomnia.eu/03d/0826-0888,_Sahih_Bukhari,_Hadith,_EN.pdf

factors and different beliefs. It can be classified as either appropriate or inappropriate (Ladhari, 2009). Oliver (1999a) defined intention as "an attitude toward purchasing a product/ service based on experience, and this attitude strongly relates to users' intentions to repurchase or to recommend the service or product to others.

Continuing in this line of discussion, the intention to use in the context of e-commerce refers to the degree to which customers use an information system (IS): amount of use, nature of use, extent of use, frequency of use, appropriateness of use, and purpose of use (Al-Blooshi et al., 2020). More important than the initial acceptance is continuous-use intention (CUI) (Al-Emran et al., 2020; Lee et al., 2019). Some considered continuous use as the behaviour after the first use (Guo et al., 2020). Bhattacharjee (2001a) claimed that CUI is more appropriate for studies on post-adoption e.g., assessing information system success (ISS). CUI refers to the degree to which a user is willing to use technology continuously (Lu & Hsiao, 2007). Bhattacharjee (2001b) defined CUI as user intention to continue using technology for the long term and continuously. Furthermore, Yun et al. (2013) described continuous-use intention as the degree to which a user plans to use an e-service continuously in the future. Accordingly, it could be concluded that the continuous-use intention in the context of online banking is the ability of a client to use the online banking system continuously and for the long term.

Added to the above, CUI plays a prominent role as a factor affecting the performance of online service (Mohammadyari & Singh, 2015). Hossain et al. (2019) suggested that users' CUI is one of the strongest predictors of online service performance. Furthermore, some researchers indicated that INQ, SYQ, and E-SQ have effects on CUI of online services (Abu Bakar & Melan, 2018; Apostolou et al., 2017; Chandra & Ibrahim, 2015; Okechi & Kepeghom, 2013). Thus, CUI has become an

important subject of research in the online service studies area (Yuan et al., 2016). However, compared to the several studies on initial adoption, the CUI of online banking has rarely been investigated, which includes great uncertainty and risk that may prevent clients' continuance usage.

2.4.1 Role of Continuous-Use Intention as a Mediator

Continuance intention features prominently as a mediator in various models (Chen 2013; Hossain et al., 2019; Lee, 2017; Mohammadyari & Singh, 2015; Moon & Jang, 2018; Okechi & Kepeghom, 2013). Nevertheless, most of these studies assumed CUI leads to actual use, while the opposite path has received little attention.

There has been little research on the interrelationships between INQ, SYQ, E-SQ, CUI, and performance. Following Cheng (2020), who examined the relationship between INQ, SYQ, E-SQ, continuance intention, and performance, the present study assumed that the relationship starts from customers' evaluation of website quality components. If customers evaluate a firm's INQ, SYQ, and E-SQ positively, their intention towards the firm's service might also likely be positive. This may strengthen their relations with the firm, as they have a positive perception of the firm's service performance. In contrast, if website quality components are found to be inferior, their intention towards the firm's service tends to be negative. This association is based on the assumption that a person's intention would lead to a particular behaviour, as described by the attitude-behaviour model (Ajzen & Fishbein, 1975b).

As stated earlier, Cheng (2020) found that continuance intention significantly mediates between INQ, SYQ, SEQ, and performance. A customer will thus remain or move to another firm based on his perception of INQ, SYQ, and SEQ. Accordingly, it is expected that CUI could mediate the relationship between INQ, SYQ, E-SQ, and

online banking performance. That is, it could clarify how website quality components are associated with online performance. CUI of online services also has a significant relationship with INQ, SYQ, E-SQ, and online service performance (Abu Bakar & Melan, 2018; Apostolou et al., 2017; Chandra & Ibrahim, 2015; Hossain et al., 2019; Mohammadyari & Singh, 2015; Okechi & Kepeghom, 2013). This means that customers are likely to lose their loyalty to the bank when they find its information, system, and e-service quality to be inferior. They would also be more unwilling to reuse online banking. Therefore, there is a need to examine the effect of CUI as a mediator variable on the relationship between INQ, SYQ, E-SQ, and online banking performance in Jordanian commercial banks.

2.5 Review of Prior Related Literature

This section addresses with the review of studies regarding the association between website quality (such as INQ, SYQ, and E-SQ), online banking performance, and CUI as a mediator variable.

2.5.1 Website Quality Components (INQ, SYQ, and E-SQ) with Continuous-Use Intention

2.5.1.1 Information Quality and Continuous-Use Intention

In order to have a better insight into the continuous intention, there is a need for more literature to examine the website quality components (Anouze & Alamro, 2019; Chandra & Ibrahim, 2015). Besides, not much has been stated on factors influencing the CUI in the service sector, like the banking sector. Moreover, the connection between INQ and CUI has been stressed in the technology acceptance literature (Abu Bakar & Melan, 2018; Okechi & Kepeghom, 2013). Similarly, Suryanto et al. (2016)

pointed out that INQ has a strong explanatory ability to predict intention to reuse a system. Apostolou et al. (2017) indicated that the lack of information quality in online transactions is the main reason for the decreased CUI of online services. Past studies (e.g., Abu Bakar & Melan, 2018; Kim et al., 2019; Okechi & Kepeghom, 2013; Sharma et al., 2017) have confirmed that INQ predicts CUI.

Several studies have examined the relationship between information quality and continuance intention. Abu Bakar & Melan (2018) showed that INQ has a positive effect on CUI, and it can enhance the predictive power in explaining CUI. Apostolou et al. (2017) found a strong relationship between INQ and continued-use intention within the online community context. On the contrary, Mardiana et al. (2015) and Brown & Jayakody (2008) did not find any significant direct associations between the two variables. Kim et al. (2019) and Brown & Jayakody (2008) found that INQ influences CUI through perceived usefulness, while Namahoot & Laohavichien (2015) showed that INQ, through the mediation of trust, has a negative impact on CUI of online banking.

2.5.1.2 System Quality and Continuous-Use Intention

System quality is considered mainly as a component in gaining insight into continuous-use intention (Chandra & Ibrahim, 2015). Brown & Jayakody (2008) argued that because SYQ influences CUI, it can influence the individual decision-making process. In recent times, Kim et al. (2019) investigated the influence of INQ, SYQ, and perceived usefulness on the User's intention to use continually. They found that SYQ and the intention to use continually are significantly associated. In addition, Okechi & Kepeghom (2013) evaluated the clients' use of online banking system in Nigeria by examining the influence of website quality components on continuance

intention and found that the continuance intention is significantly associated with the SYQ. Also, several researchers have highlighted the need to include SYQ (e.g., DeLone & McLean, 2003; Suryanto et al., 2016; Brown & Jayakody, 2008) to explain CUI. On the other hand, the relationship between INQ and CUI is negatively and significantly associated (Ibrahim et al., 2017).

2.5.1.3 Electronic Service Quality and Continuous-Use Intention

Several researchers have highlighted the necessity and importance of including E-SQ in studies on CUI of online services (e.g., Parasuraman et al., 2005; Sharma et al., 2017; Li et al., 2018). In the context of Jordan, Anouze & Alamro (2019) recommended investigating the effect of E-SQ to enhance CUI of online banking. According to Sharma et al. (2017), found that E-SQ is the most significant predictor of CUI, and it can enhance the predictive ability of models that explain CUI. In addition, a significant association has been found between the CUI of online banking and E-SQ (Okechi & Kepeghom, 2013). On other hand, some prior studies indicated the existence of significant associations direct and indirect of the E-SQ with the CUI (e.g., Natalia et al., 2016; Rahmayanti & Wandebori, 2016). On the contrary, (Suryanto et al., 2016; Liu, 2015; Brown & Jayakody, 2008) did not find any significant associations between the two variables.

2.5.2 Website Quality Components (INQ, SYQ, and E-SQ) with Online Banking Performance

2.5.2.1 Information Quality and Online Banking Performance

The quality of information has a significant implication on service performance (Kassim & Hussin, 2010). In addition, Winfred et al. (2018) reported that the website

quality components seem to affect the particular measures of performance. There is a significant association between website quality components and the performance expectancy of online banking (Al-Qeisi et al., 2014). Furthermore, the INQ causes organisations to improve their online service performance. Specifically, Al-mamary et al. (2014) showed that a high level of INQ helps organisations manage their processes, decide, and improve their performance. On the other hand, a few studies found that the quality of the information does not significantly influence performance (e.g., Song et al., 2017; Winfred et al., 2018). Also, Daoud & Triki (2013) found that the quality of the information does not influence performance.

2.5.2.2 System Quality and Online Banking Performance

According to Chen et al. (2015) and Zheng et al. (2013), SYQ stems primarily from a client's perception of overall website system performance. The SYQ has the most dominant impact on online service performance (Chang et al., 2012). Similarly, Al-mamary et al. (2014) found that SYQ could help explain performance. They recommended giving trainings in information systems and capacity building, as well as encouraging users in quality participation. On the other hand, the relationship between SYQ and performance is significantly low (Song et al., 2017; Winfred et al., 2018), while another study found that system quality does not influence performance (Daoud & Triki, 2013).

2.5.2.3 Electronic Service Quality and Online Banking Performance

The association of E-SQ with service performance is critical and even more than is assumed (Chahal & Kumari, 2012). E-SQ has a significant positive effect on online service performance (Agus et al., 2007). To predict overall banking performance,

Mohmoodi & Asetmal (2014) empirically tested a model using two factors, E-SQ and client satisfaction. They based their model on James Thompson's long-linked technology concept. The study examined the direct influence of client-perceived E-SQ on bank performance, as well as the mediating effect of client satisfaction. They found that E-SQ and client satisfaction significantly affect bank performance, and that client satisfaction mediated between E-SQ and bank performance.

Moreover, AL-Adwan & AL-Tarawneh (2017) examined the predictors of performance in Jordanian commercial banks. They found that components of online banking service quality (website interface, response, dependency, security, connection, and user-friendliness) significantly influence performance, and that components of online banking service quality (website interface, response, dependency, security, connection, and user-friendliness) significantly influence the components of performance (client loyalty, market share, client satisfaction, engagement of new clients). On the other hand, the relationship between the E-SQ and performance was found to be weak (Song et al., 2017).

2.5.3 Continuous-Use Intention and Online Banking Performance

The increased attention of continuous-use intention evaluation by academics and decision makers reflects the increased pressure to improve online service performance (Mohammadyari & Singh, 2015). Furthermore, Chen (2013) found that the intention to reuse is significant in explaining performance ratings. Although clients' continuous intentions have a positive effect on the performance, they may not refer to immediate but rather long-term improvement (Bhattacharjee, 2001a). To this end, in order to enhance a continuous intention, the simplest method is assessing information systems' success.

The continuous-use intention leads to increased online service performance (Hossain et al., 2019). In this context, continued intention to adopt technology has been argued to lead to improved performance in the future and has a positive effect on the long-term (Moon & Jang, 2018). In fact, banks that make use of new technology can attract customers to use such a service (Anouze & Alamro, 2019). In addition, several studies have reported that continuous intentions to use have a positive influence on performance (Chen, 2013; Sanami & Shojaei, 2016). Conversely, Wang et al. (2012) found that the variables have a negative relationship.

2.5.4 Website Quality Components, Continuous-Use Intention with Online Banking Performance

According to website quality theory, the customer continuous intention relies upon the information, system, and e-service quality (as well as other features of website), and better service performance will be achieved if they are (Chang et al., 2012; Okechi & Kepeghom, 2013). In addition, Chen (2013) suggested that the information quality, system quality, e-service quality, and the clients of intention to reuse are essential to enhance performance. In a survey carried out by Cheng (2020), a positive and significant association was indicated between (information, system, and service quality) and performance through continuance intention. Also, Lee (2017) conducted a case study to examine and explain the factors influencing the continuance participation intention and performance. Their findings indicated that the service quality positively influences continuance participation intention which improve performance.

Many studies have been carried out to investigate how the website quality components are associated with online service performance (Agus et al., 2007; Chang

et al., 2012; Chahal & Kumari, 2012; Kassim & Hussin, 2010) while others have examined how continuous-use intentions are related to online service performance (Hossain et al., 2019; Mohammadyari & Singh, 2015). However, the continuous-use intention as a mediator between the website quality components (INQ, SYQ, and E-SQ) and the online banking performance remains as a main gap in literature.

Table 2.7 shows the summary of prior studies concerning the association between website quality components (information, system, and e-service quality), continuous intention, and online service performance.

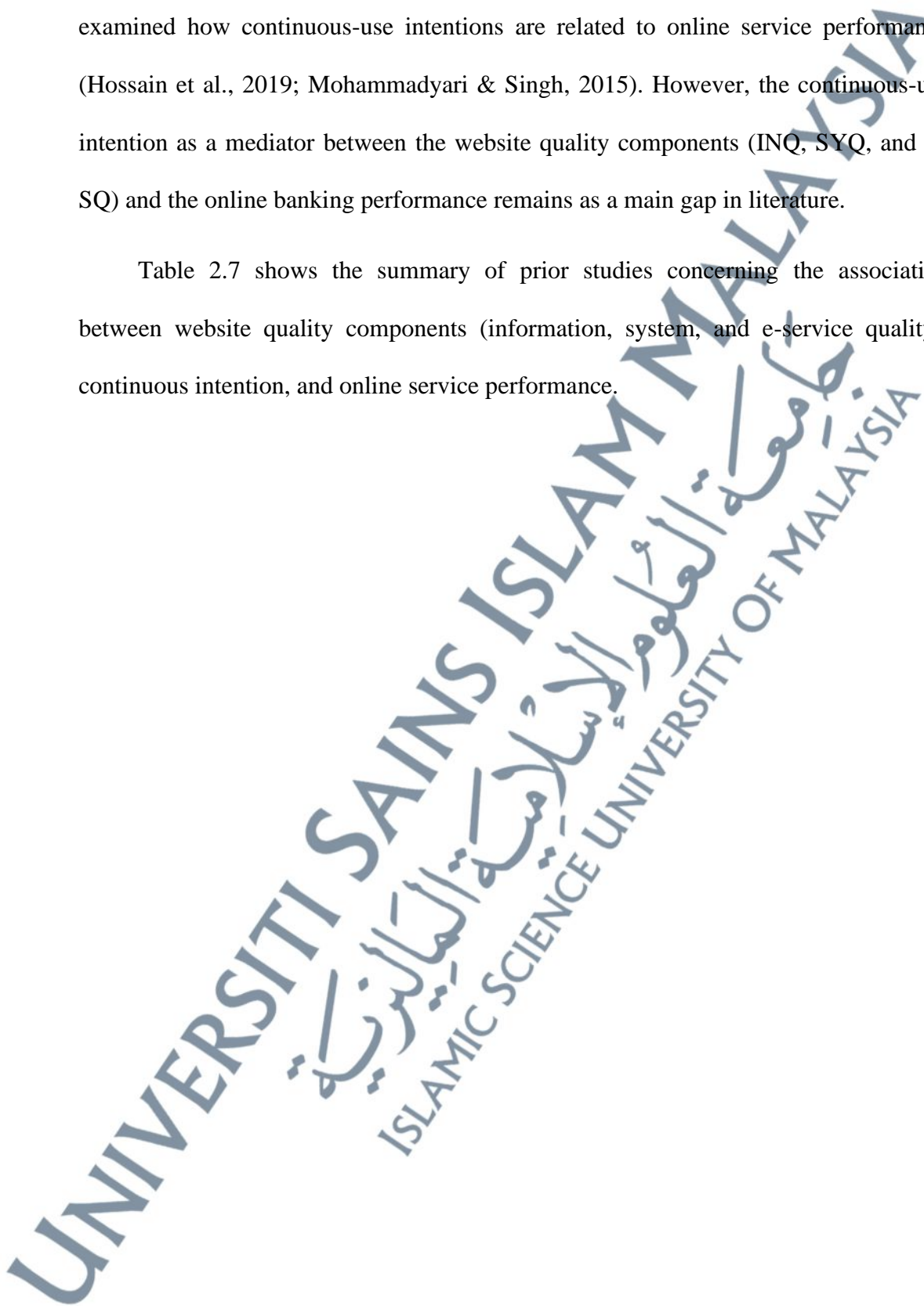


Table 2.7: Summary of Prior Studies Related to this Research

Author/ Year	Country	Website Quality Components	Continuous Intention	Performance	Results
Chen (2013)	Taiwan	Information and system quality		Performance	System and information quality have a significant effect on performance. (indirect)
Chang et al. (2012)	Taiwan	System and e-service quality		Performance	System and e-service quality have a significant positive impact on performance.
Mardiana et al. (2015)	Indonesia	Information and system quality	Continuous intention		Indicated a positive relationship between system quality and continuous intention. The finding also found a weak relation between information quality and continuous intention.
Apostolou et al. (2017)	USA	Information and system quality	Continuous intention		System and information quality have a significant positive impact on continuous intention.
Natalia et al. (2016)	Indonesia	E-service quality	Continuous intention		E-service quality has a significant positive influence on continuous intention.
Hossain et al. (2019)	Bangladesh		Continuous intention	Performance	Continuous intention has a significant positive impact on performance.
Sharma et al. (2017)	-----	Information, system, and e-service quality	Continuous intention		Information, system, and e-service quality have a significant impact on continuous intention.
Li et al. (2018)	China	E-service quality	Continuous intention		E-service quality has a significant positive effect on continuous intention.
Al-mamary et al. (2014)	Malaysia	Information and system quality		Performance	System and service quality have a significant positive effect on performance.

‘Table 2.7, Continued’

Author/ Year	Country	Website Quality Components	Continuous Intention	Performance	Results
Chen (2013)	Taiwan	Information, system, and e-service quality	Intention to reuse	Performance	The findings indicated the existence of a significant and positive association between (information, system, and e-service quality) and performance through intention to reuse.
Wang et al. (2012)	Taiwan		Continuous intention	Performance	The continuous intention has a significant negative impact on performance.
Kim et al. (2019)	South Korea	Information and system quality	Continuous intention		System and information quality have a significant positive impact on continuous intention. (direct/ indirect)
Song et al. (2017)	Korea	Information and system quality		Performance	The information and system quality did not explain the variance of performance.
Liu (2015)	Taiwan	E-service quality	Continuous intention		Indicated that e-service quality has a significant negative effect on continuous intention.
Lee (2017)	South Korea	Service quality	Continuous intention	Performance	The results indicated the positive association between service quality and performance through continuous intention.
Daoud & Triki (2013)	Tunisia	Information and system quality		Performance	The findings indicated that system and information quality did not influence performance
Rahmayanti & Wandebori (2016)	Indonesia	E-service quality	Continuous intention		Showed that e-service quality has a positive with partly significant effect on continuous intention.
Moon & Jang (2018)	Korea		Continuous intention	Performance	The findings indicate that continuous intention is significantly associated with performance.

‘Table 2.7, Continued’

Author/ Year	Country	Website Quality Components	Continuous Intention	Performance	Results
AL-Adwan & AL-Tarawneh (2017)	Jordan	Online banking service quality		Performance	The findings indicate that online banking service quality dimensions are significantly associated with performance.
Abu Bakar & Melan (2018)	Malaysia	Information quality	Continuous intention		Found a significant relationship between information quality and continuous intention.
Chang et al. (2012)	Taiwan	System and service quality		Performance	Suggested that system and service quality have a positive impact on performance.
Cheng (2020)	Taiwan	Information, system, and service quality	Continuous intention	Performance	A positive and significant association was indicated between (information, system, and service quality) and performance through continuance intention.
Kassim & Hussin (2010)	Malaysia	Information quality		Performance	The results showed that information quality has a direct impact on performance.
Brown & Jayakody (2008)	Taiwan	Information, system, and e-service quality	Continuance Intention		The results indicate that system quality is significantly associated with continuance intention. The finding also found a weak relation between (information and e-service quality) and continuance intention.
Suryanto et al. (2016)	Indonesia	Information, system, and e-service quality	Intention to reuse		Found that system quality has a significant positive effect on intention to reuse. The finding also found a weak relation between (information quality, e-service quality) and intention to reuse.

‘Table 2.7, Continued’

Author/ Year	Country	Website Quality Components	Continuous Intention	Performance	Results
Okechi & Kepeghom (2013)	Nigeria	Information, system, and e-service quality	Continuous intention		Found that system, information, and e-service quality have a significant positive effect on continuous intention.
Mohmoodi & Asetmal (2014)	Iran	E-service quality		Performance	The findings indicate that e-service quality is significantly associated with performance. (indirect).
Ibrahim et al. (2017)	Malaysia	System quality	Continuous intention		Suggested that system quality has a significant negative effect on continuous intention.
Mohammadyari & Singh (2015)	-----		Continuous intention	Performance	There are significant relationships between continuous intention and performance.
Agus et al. (2007)		Service quality		Performance	Found that service quality has significant influences on service performance.

Source: Author

2.6 Gap in the Literature Review

Many scholars have investigated how overall performance is affected by INQ, SYQ, and E-SQ (AL-Adwan & AL-Tarawneh, 2017; Al-mamary et al., 2014; Bejjar & Boujelbene, 2013; Chen, 2013; Daoud & Triki, 2013; Mohmoodi & Asetmal, 2014; Song et al., 2017; Winfred et al., 2018), whereas few focused on the influence of INQ, SYQ, and E-SQ on online service performance (e.g., Agus et al., 2007; Chang et al., 2012; Kassim & Hussin, 2010). However, prior studies highlighted their attention on those components separately toward the performance of online service. In this regard, the current study seeks to make a sufficient effort by such studies to combine the components taken from the website quality in order to improve the influence of online banking performance while seeking to fill this gap.

Regarding continuous-use intention, Several studies have been carried out to examine the relationship between (INQ, SYQ, and E-SQ) and continuous-use intention (Abu Bakar & Melan, 2018; Apostolou et al., 2017; Brown & Jayakody, 2008; Chandra & Ibrahim, 2015; Chen, 2013; Ibrahim et al., 2017; Kim et al., 2019; Natalia et al., 2016; Okechi & Kepeghom, 2013; Sharma et al., 2017; Suryanto et al., 2016), while few have focused on the effect of continuous-use intention on performance (e.g., Cheng 2020; Hossain et al., 2019; Lee, 2017; Mohammadyari & Singh, 2015). Nonetheless, the literature has focused on those factors separately, as shown in the tables above. Furthermore, AL-Adwan & AL-Tarawneh (2017) examined how online banking quality components correlate with overall banking performance. They recommended researchers give more attention to online banking quality and include mediators in their empirical models. For these reasons, the present research employs continuous-use intention as a mediator in explaining the association between the website quality components (INQ, SYQ, and E-SQ) and online banking

performance. This remains a gap in the studies in this area of research that needs attention.

Most literature that evaluated performance focused on the manufacturing industry (Mardiana et al., 2015; Apostolou et al., 2017; Daoud & Triki, 2013; Al-mamary et al., 2014; Song et al., 2017; Bejjar & Boujelbene, 2013; Winfred et al., 2018; Rahayuningsih, 2016; Phung et al., 2009; Sanami & Shojaei, 2016) and education sector (Al-Rahmi et al., 2018; Jena et al., 2018; Mohammadyari & Singh, 2015; Thai et al., 2017). Nevertheless, these studies have largely ignored other sectors, like banking. Therefore, this study focuses on the banking industry.

Moreover, the extant studies carried out on performance were mostly conducted in developed countries such as USA, Taiwan, and South Korea and also in developing countries like China and Malaysia (Abu Bakar & Melan, 2018; Apostolou et al., 2017; Kim et al., 2019; Li et al., 2018; Liu, 2015). However, such literature in emerging economies like Jordan is still a few. Thus, the present study seeks to minimise this research gap by investigating the mediating impact of continuous-use intention on the association between the components of website quality and the online banking performance in the Jordanian commercial banks.

2.7 Underpinning Theories

Website quality and continuous-use intention theories are the theoretical frameworks adopted in this research to help explain the relationships between website quality components (INQ, SYQ, E-SQ), continuous-use intention, and online banking performance. Website quality components and continuous-use intention were the independent variables, while online banking performance was the dependent variable.

Furthermore, continuous-use intention was used as a mediating variable between the three components of website quality and online banking performance.

Two theories were adopted for this research. The first was website quality theory, a theory constructed from e-commerce theories and focuses on website quality as the critical factor of e-commerce success. This theory was adopted because customer perception of website quality has a positive direct impact on continuous-use intention and performance (Agus et al., 2007; Chang et al., 2012; Kassim & Hussin, 2010; Okechi & Kepeghom, 2013). The second theory was continuous-use intention (technology adoption), which stems from the technology acceptance model, which focuses on the impact of intention to use technology on its actual use (Davis, 1989).

The website quality theory describes the relationships between website quality components (information, system, and e-service quality), continuous-use intention, and online banking performance. This study adopted the main section of the framework (See Figure 2.5). Website quality theory could be considered as the underpinning theory of the study. Furthermore, the continuous-use intention theory was adopted to provide an in-depth illustration of the relationships between continuous-use intention and online banking performance. This theory addressed the minor section of the framework. This last theory was considered as a supporting theory. Both theories were employed to describe the relationships between website quality components, continuous-use intention, and online banking performance. Their theories are further discussed below.

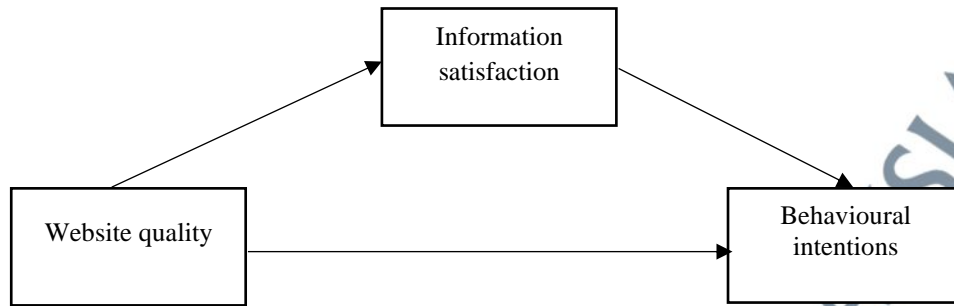
2.7.1 Website Quality Theory

There are three models that have been widely applied to evaluate the adoption of IT and post-adoption phases: website quality (WebQual), technology acceptance

model (TAM) and information system (IS) continuance behaviour. TAM hypothesises that external factors influence the beliefs, goals, and attitudes of users, while IS continuance explains usage at post-acceptance phases (Bhattacharjee, 2001b). Lastly, WebQual focuses on user perception and approach (Pradana, 2016). The first version of WebQual emphasises the analysis of information quality, but it does not explain service interaction. The second version puts more focus on interaction analysis, but it is severely lacking in information quality analysis. Both tools were used to study the quality of auction websites (Barnes & Vidgen, 2007). The findings indicated that website quality can be categorised into three domains: site quality, provided information quality, and interaction quality. The findings led to the third version of WebQual. Further analysis then resulted in the fourth version of WebQual, and the first dimension, site quality, was replaced with usability.

Barnes & Vidgen (2007) also explained that WebQual was developed in the domain of UK business faculties. The tool was developed by utilising quality function deployment (QFD), which is a structured process that offers a means to determine the client's needs at each stage of service or product development.

The website quality theory is a part of e-commerce theories that contend that there is no one way of theoretical approaches to model e-commerce (Wigand, 1997). Website quality has been utilised in online banking studies to examine a range of contextual components, such as information quality (e.g., Dedek, 2000; Wang & Strong, 1996), system quality (Nelson et al., 2005; Sedera et al., 2004) and e-service quality (Siu & Mou, 2005; Zhilin et al., 2004), and. The current research attempts to investigate the mediating effect of continues-use intention on the relationship between website quality components and online banking performance.



Source: Jeong et al. (2003)

Figure 2.5: Website Quality Evaluation Framework

The above framework illustrates how website quality directly, or indirectly through information satisfaction (e-service), predicts intention to use. According to the literature on website quality, the fit between contextual components (INQ, SYQ, and E-SQ) is very important to predict higher continuous-use intention (Ahn et al., 2007; Okechi & Kepeghom, 2013; Sharma et al., 2017), and website quality is most likely to have a significant effect on online banking performance (Al-Qeisi et al., 2014). In addition, the website quality theory asserts that intention to use depends on website quality and other characteristics of the company and that better performance will be obtained on the condition that they are both aligned (Chen, 2013; Cheng, 2020; Lee, 2017).

The literature on website quality theory confirms that the e-commerce environment of businesses would influence the particular form of online service practices, including the intention to use (Ahn et al., 2007; Jeong et al., 2003). Website quality studies are critical for studies on intention to use. Previous studies indicated that website quality comprises INQ, SYQ, and E-SQ (Lin, 2007), which could have strong associations with continuous-use intention and performance (Agus et al., 2007; Chang et al., 2012; Kassim & Hussin, 2010; Okechi & Kepeghom, 2013). In addition, the website quality literature shows that a fit between variables (e.g., website quality

and continuous-use intention) would lead to improved performance (Chen, 2013; Cheng, 2020; Lee, 2017). Moon & Kim (2001) stated that the intention of users to use websites could be directly or indirectly influenced by website quality. Web-related information transfers are also the main cause for the intention to use a specific website as an information source (Chang & Cheung, 2001). Similarly, Jeong & Lambert (1999;2001) proposed various purchase-related behavioural intentions because of experiencing website quality. Such intentions typically include users' intention to reuse the website, recommend the website to other users, and bookmark the website for future references.

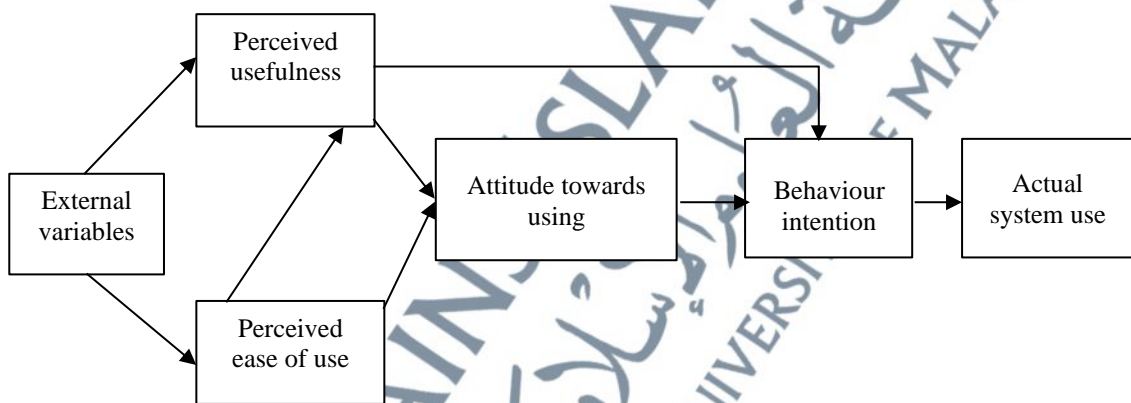
From the discussion above, some studies assumed that website quality theory allows fundamental analysis of the relationships between website quality components, continuous-use intention, and performance (Chang & Cheung, 2001; (Chen, 2013; Cheng, 2020; Jeong & Lambert, 1999, 2001; Lee, 2017; Moon & Kim, 2001).

2.7.2 Acceptance and Continuous-Use Theories

User acceptance is still an obstacle to the success of new technology. To explain this phenomenon, Davis (1989) developed the technology acceptance model, an extension of the theory of reasoned action, which hypothesises that attitude could provide a deeper understanding of behaviour intention (Ajzen & Fishbein, 1977a). Davis (1989) stated that an individual adopts an application (i) based on its functions and (ii) to facilitate or impede system performance associated with these functions. The model presents a foundation for investigating the influence of external variables on internal factors, besides attitude and behaviour (Davis et al., 1989).

The technology acceptance model supposes that apparent, observable behaviour in a situation is voluntary (Ajzen, 2006b). Intention indicates a person's desire to

achieve specific behaviour, which is considered as the main indicator for the actual behaviour (Ajzen, 2006b; Davis, 1989). In the technology acceptance model, intention to use is a function of attitude and perceived usefulness of technology, that is, the degree to which an individual believes he can improve his performance through the use of technology (Davis, 1989). Ajzen (1991a) described that attitude towards behaviour indicates the degree to which a person has an appropriate or inappropriate assessment of the behaviour in question. The technology acceptance model, as shown in Figure 2.6, is also the first model that considered external factors in measuring technology adoption.



Source: Davis (1989)

Figure 2.6: Technology Acceptance Model

The model measures perception instead of real use and proposes two critical variables that influence the user's choice of when and how he will utilise it (Davis, 1989). These are:

1. Perceived usefulness: The level to which an individual believes that using a certain system would improve his or her job performance.
2. Perceived ease of use: The level to which an individual believes that using a certain system would be free of any effort.

Moderate behaviours could appropriately be predicted by a theory of reasoned action, so long as the impediments to the action are the minimal success of expected behaviour (Apostolou et al., 2017). By introducing perceived behaviour control, Armitage & Conner (2001) pointed out that the theory of planned behaviour clarifies that intention is not always the expected behaviour. The major element of the theory of planned behaviour is one's intention to carry out a specific behaviour. Intention is included as motivation for and determinant of behaviour (Ajzen, 2006b). It is an indicator of an individual's readiness to try or will try to perform a certain behaviour. The theory posits that intention may lead to performing a behaviour (Armitage & Conner, 2001).

According to Ajzen (1991a) and Rise et al. (2008), behavioural intention in the theory of planned behaviour is explained by three antecedents: subjective norm, perceived behaviour control, and attitude. Ajzen (1991a) also stated that attitude refers to the level of the individual's behavioural intention towards an intended behaviour. Moreover, attitude in the theory of planned behaviour is divided into two: evaluation of behavioural outcomes and behavioural beliefs (See Figure 2.6). Mcmillan & Conner (2003) stated that behavioural beliefs indicate the subjective possibility that the behaviour will produce certain results. Meanwhile, evaluation of behavioural outcomes relates to whether an individual believes that the behavioural outcomes are negative or positive.

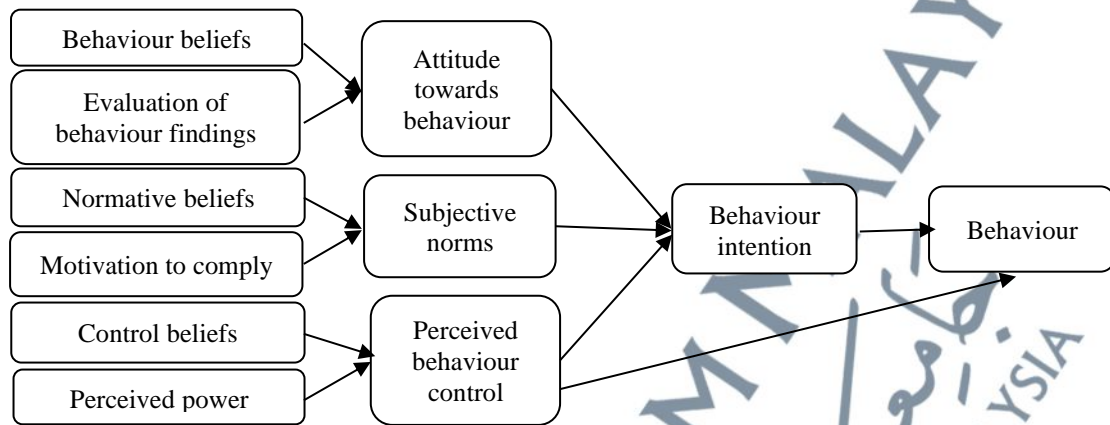
Subjective norm is an individual's perceptions of general social pressure to do or not do a certain behaviour. If a person perceives important persons approve (or disapprove) the behaviour, he would likely (or less likely) intend to perform it (Armitage & Conner, 2001). Mcmillan & Conner (2003) defined a subjective norm as normative expectations towards a behaviour (see Figure 2.7). Subjective norm is

determined by normative beliefs and motivation to comply with important referents. Normative beliefs are the behavioural expectations of individuals important to the person (Ajzen, 2006b). Motivation to comply with referents refers to the extent to which an individual is motivated to follow the beliefs of his referents (Mcmillan & Conner, 2003). The referent's approval of the behaviour motivates its performance by the individual.

Perceived behaviour control is incorporated into the theory of planned behaviour, an improvement over the theory of reasoned action. Perceived behavioural control is the perceived facilitator or impediment to performing a behaviour (Ajzen, 2006b). It is the perceived ease of difficulty in performing a behaviour based on experience and expected barriers and facilitators (Mcmillan & Conner, 2003). Perceived behavioural control includes the opportunities and resources available to an individual to perform a behaviour. It is entirely similar to the concept of self-efficacy in behaviour models (Ajzen, 1991a; Hernandez & Mazzon, 2007). According to Ajzen (1991a), self-efficacy is an individual's belief in his ability to carry out a task successfully. It relates to a person's choice of actions, preparing to work, effort spent, patterns of thinking, and passionate responses about work. In the theory of planned behaviour, perceived behavioural control and behavioural intention may directly predict expectations about performing a behaviour.

Perceived behavioural control comprises two dimensions: control beliefs and perceived power (see Figure 2.7) (Mcmillan & Conner, 2003). Control beliefs are the belief of the individual of the presence of factors that can facilitate or hinder the performance of a behaviour. The perceived presence of the factors could influence the individual whether to perform a specific behaviour or not. Perceived power is the strength of each control factor that either makes it easier or more difficult to perform a

behaviour. It is typically defined by the extent to which the presence of each control factor could influence behaviour. Figure 2.7 illustrates the theory of planned behaviour model.



Source: Mcmillan & Conner (2003)

Figure 2.7: Theory of Planned Behaviour Model

Theory of planned behaviour posits that attitude, subjective norm, and perceived behavioural control towards a specific behaviour could explain behavioural intention, which would determine whether the individual would perform a particular behaviour (Ajzen, 1991a; Mcmillan & Conner, 2003). The comparative significance of each model regarding attitudes and behaviours differs. Despite the significance of these differences, all models evaluate the individual's intention to perform the behaviour (Ajzen, 1991a; 2006b).

Based on the discussions above, TAM and TPB have been replicated in several settings as time passes with many communities and in various contexts and have proven capable (Venkatesh et al., 2007). But one concern related to TAM is that its focuses on the initial stage of technology adoption may reduce its ability to determine and inform usage at post-acceptance phases (Bhattacharjee, 2001b; Lee et al., 2003; Venkatesh et al., 2007). Venkatesh et al. (2007) indicated that an emerging area after the initial stage of adoption is the use of expectation-confirmation theory (ECT)

suggested by Oliver (1980) about marketing research to IS continuance behavior suggested by Bhattacharjee (2001b).

Bhattacharjee (2001b) looked beyond first-time adoption of the information system to investigate the longer-term results of continuous use or continuance (vs. adoption). IS continuance is critical to system development organisations because clients, revenue, and market share depend on both initial acceptance and continuous use. One feature of IS continuance model over initial adoption is that IS continuance in particular deals with discontinuance after initial adoption (Bhattacharjee, 2001b). An added feature of IS continuance theory is that it presents a model of the psychological motivations of continuous use after initial adoption.

Bhattacharjee (2001b) suggested the theory of IS Continuance based on ECT developed by Oliver (1980) from consumer behavior studies. The model comprises three constructs, perceived confirmation, usefulness, and satisfaction to determine IS continuance intention (see Figure 2.8). IS continuance is essentially determined by the clients' satisfaction of former use, i.e., clients who have positive feedback with system have a high level of continuous intentions than others. Furthermore, satisfaction is defined by two factors are confirmation and perceived usefulness or expectation as Oliver (1980) calls it. Higher degrees of confirmation describe that the clients' initial expectations have been exceeded through actual use of the system, and lower degrees describe that the actual use of the system did not fulfil the expectations. Higher degrees of confirmation are expected to have a significant positive effect on system satisfaction. Perceived usefulness significantly reflects expectation perceptions of post-consumption use and is associated with the TAM element of the same name. Higher degrees of perceived usefulness in the software are expected to result in higher degrees of satisfaction. Besides, perceived usefulness is expected to have a direct

impact on the continuance intention of IS, e.g., higher degree of perceived usefulness is expected to enhance the continuance intention of IS. The last relation in the model is that a higher confirmation is expected to have a higher degree of perceived usefulness. It could be concluded this is consistent with the TAM relationship that indicates a positive association between perceived ease of use and perceived usefulness.

ECT proposed by Oliver (1980) to use both the expectations of pre-and post-consumption to determine repurchase intentions; nonetheless, Bhattacharjee (2001b) investigated only the post-consumption relationship to determine IS continuance. The finding showed that post-consumption behavior is more important than pre-consumption behavior, in addition, Bhattacharjee & Premkumar (2004) indicated that as clients gained further knowledge concerning a system product, decrease their level of satisfaction and less predictive power on overall satisfaction.



Source: Bhattacharjee (2001b)

Figure 2.8: Theory of Planned Behaviour Model

Liao et al. (2009) compared the competing models of IS continuance theory, TAM, and ECT to determine continuance intention. The models all accepted the hypotheses that they founded. The results show ECT has more predictive capacity than IS continuance which has better predictive capacity than TAM. However, as Bhattacharjee (2001b) illustrates, IS continuance model is employed to determine and

illustrate how the factors impact continuance resolutions and may have a stronger theoretical basis to determine continuance intention.

2.8 Conceptual Framework

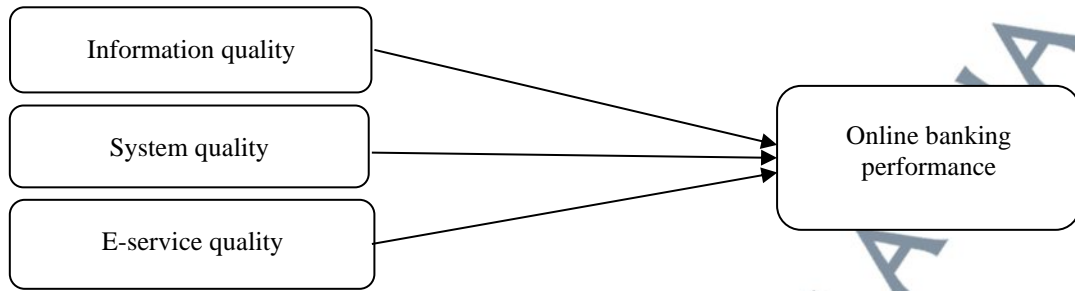
Based on the previous discussion and research evidence, a conceptual framework is developed to investigate the relationship between website quality components (information, system, and e-service quality) as independent variables, with the online banking performance as dependent variable, by using the continuous-use intention as a mediating variable in the Jordanian commercial banks. According to Sekaran & Bougie (2016b) theoretical framework presents a model which illustrates the logical associations between many determined factors that are related to the research problem. The conceptual framework for this study will be discussed below.

2.8.1 Explanation of Constructs in Conceptual Framework

2.8.1.1 Website Quality components with Online Banking Performance

The model was used to investigate the influence of website quality components on online banking performance (OBP). It examines the predictive power of each of INQ, SYQ, and E-SQ in explaining the online banking performance of Jordanian commercial banks. Figure 2.9 shows the components of the website quality model.

The components of website quality



Source: Adapted from a researcher based on (Agus et al., 2007; Chang et al., 2012; Kassim & Hussin, 2010).

Figure 2.9: Model of Determining OBP Using WQ Components

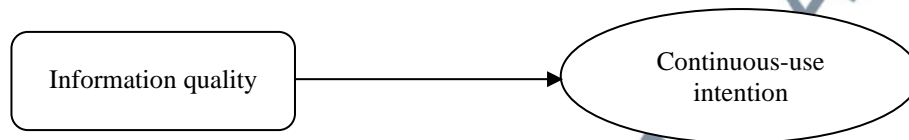
Modern information system provides accessible information for the users to help them use it. High-quality information, combined with a high-quality system, leads to high-quality services (Ahn et al., 2007). A high-quality service will help the organisation decide, manage their business processes, and improve service performance (Chang et al., 2012). Better service performance can be achieved through INQ, SYQ, and E-SQ (Agus et al., 2007; Chang et al., 2012; Kassim & Hussin, 2010).

Based on the literature, this study hypothesised that online banking performance could be predicted by website quality components (INQ, SYQ, and E-SQ). Online banking performance plays a vital role in achieving business objectives (Al-Qeisi et al., 2014; Namahoot & Laohavichien, 2015). Following the selection of INQ, SYQ, and E-SQ, as independent variables, three components were constructed to predict service performance, the dependent variable (Agus et al., 2007; Chang et al., 2012; Kassim & Hussin, 2010). Past studies showed the components of website quality are significantly associated with performance.

2.8.1.2 Website Quality components with Continuous-Use Intention

2.8.1.2.1 Information Quality and Continuous-Use Intention

This model was used to examine the relationship between information quality and continuous-use intention. Figure 2.10 shows the information quality model.



Source: Adopted by Abu Bakar & Melan (2018)

Figure 2.10: Model of Determining CUI Using INQ

Information quality is considered as a predictor for continuous-use intention. Using this variable can help determine the continuous-use intention of online banking (Abu Bakar & Melan, 2018). Apostolou et al. (2017) posited that INQ strongly predicts customer intentions, and they found that INQ significantly affects the intention to reuse.

Information quality was included in this study for the following reasons:

- i. The underlying theories proposed by DeLone & McLean (2003) and Seddon (1997) postulate that INQ is associated with intention to use. Previous studies, such as Suryanto et al. (2016), also indicated that INQ has a strong ability to predict intention to reuse a system.
- ii. Findings of prior studies about the influence of INQ on continuous-use intention. Recent literature (e.g., Apostolou et al. (2017) indicated that the lack of INQ in online banking services is the main reason for the low continuous-use intention within online communities. Furthermore, some studies have confirmed that INQ influences continuous-use intention (Kim et al., 2019; Okechi & Kepeghom, 2013). Abu Bakar & Melan (2018) showed that INQ has

a positive effect on continuous-use intention, and it can enhance the predictive power to explain continuous-use intention. Accordingly, the current study expected INQ to affect continuous-use intention.

2.8.1.2.2 System Quality and Continuous-Use Intention

This model estimates the association between SYQ and continuous-use intention of online banking in Jordanian commercial banks. Figure 2.11 shows the system quality model.



Source: Adopted by Kim et al. (2019)

Figure 2.11: Model of Determining CUI Using SYQ

System quality is a predictor of behavioural intention (DeLone & McLean, 2003). SYQ can determine the continued intention to use Cheng (2020). According to the literature, SYQ plays a critical role in explaining continuous-use intention (Brown & Jayakody, 2008; Sharma et al., 2017).

System quality was included in this research for the following justifications:

- i. Underlying theories – like the IS continuance behaviour developed by Bhattacharjee (2001b) and the ECT developed by Oliver (1980) – explain the expectations between system and continuance intention.

Brown & Jayakody (2008) have expanded the model of DeLone & McLean (2003) to examine the impact of business-to-consumer (B2C) e-commerce success factors on continuance intention. The results showed that continuance intention is significantly influenced by SYQ.

Many studies have proposed SYQ as an antecedent of continuance intention (Brown & Jayakody, 2008; Roca et al., 2006). Kim et al. (2019) highlighted that because of the effect of SYQ on continuance intention, SYQ has a significant role in the individual decision-making process. Moreover, several researchers have highlighted the importance of including SYQ (e.g., DeLone & McLean, 2003; Sharma et al. 2017; Suryanto et al., 2016) in studies on continuous-use intention. Ibrahim et al. (2017) recommended examining the effect of SYQ as a technological factor in e-commerce studies.

2.8.1.2.3 Electronic Service Quality and Continuous-Use Intention

The following model was used to verify the impact of E-SQ on continuous-use intention. Figure 2.12 shows the e-service quality model.



Source: Adopted by Sharma et al. (2017)

Figure 2.12: Model of Determining CUI Using E-SQ

E-service quality is considered the main determinant of continuous-use intention of users in an e-business environment (Zhou et al., 2015). Using this variable can reflect the significance of various aspects of continuous-use intention among online banking users (Okechi & Kepeghom, 2013).

Relevant theories and empirical literature emphasised the importance of e-service quality in determining continuance intention. Some researchers found that E-SQ has a positive relationship with continuous-use intention (Gera, 2013; Sousa & Voss, 2012). In addition, Li et al. (2018) examined the factor of online reuse intention of Indonesian customers. The findings revealed that the components of E-SQ have

significant effects on intention to reuse. Furthermore, Sharma et al. (2017) showed that E-SQ has a significant impact on continuous-use intention, and it can enhance the predictive power in explaining continuous-use intention. Therefore, E-SQ is a significant determinant of continuous-use intentions. The current study hypothesised that E-SQ has an influence on continued intention to use.

2.8.1.3 Continuous-Use Intention with Online Banking Performance

The continuous-use intention model was used to examine the effect of customers' continuous-use intention of online banking towards online banking performance. Figure 2.13 shows the continuous-use intention model.



Source: Adapted from a researcher based on Hossain et al. (2019) and Mohammadyari & Singh (2015)

Figure 2.13: Model of Determining OBP Using CUI

Continuance intention is considered essential for managers and decision-makers in service institutions, as it can provide useful information in assessing organisational ability and performance (Zemguliene, 2012). One study indicated that the link between continuance intention and service performance is a reliable indicator of technology acceptance (Abushanab et al., 2010).

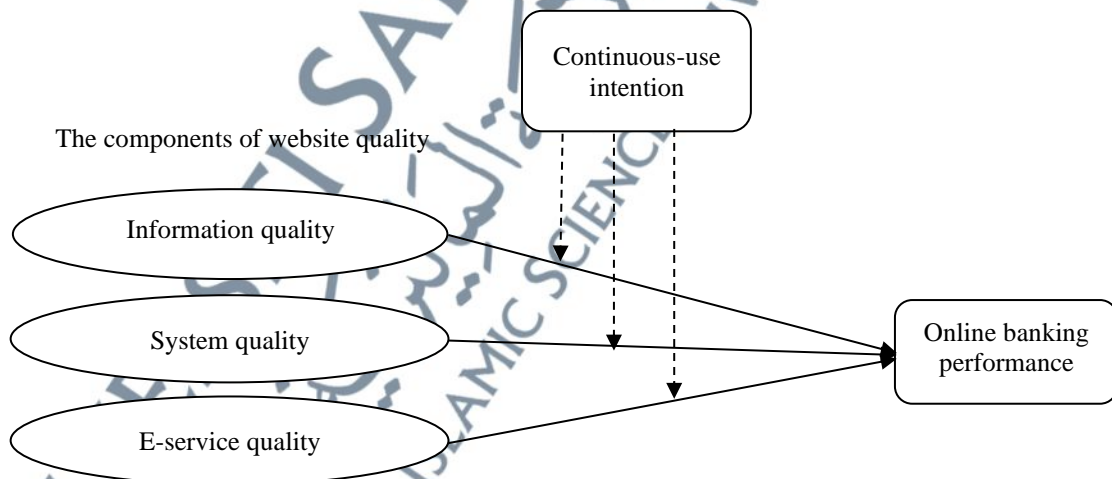
Mohammadyari & Singh (2015) clarified that continuous-use intention plays a prominent role in online service performance evaluation, and performance evaluation itself helps the organisation achieve its individual or organisational targets. Performance evaluation highlights any shortcomings between the expected and actual

performance of the organisation and provides feedback for improvements (Benliro, 2015).

Based on the literature, continuous-use intention can predict future online service performance. Some researchers (Chen, 2013; Hossain et al., 2019; Mohammadyari & Singh, 2015; Moon & Jang, 2018) used continuous-use intention to predict performance and found that understanding continuous-use intention has a direct influence on performance. Accordingly, the current study expected that continuous-use intention has an influence on online banking performance.

2.8.1.4 Continuous-Use Intention as a Mediator

The model was used to examine the effects of components of website quality (INQ, SYQ, and E-SQ) on online banking performance through the mediation of continuous-use intention. Figure 2.14 shows the continuous-use intention as a mediator model.



Source: Adapted from a researcher based on (Chen, 2013; Cheng, 2020; Lee, 2017).

Figure 2.14: Model of Determining CUI as a Mediator Variable

The variable can be deemed as mediator when it fulfils the following conditions (Baron & Kenny, 1986):

- The independent variable has a significant association with mediator variable.
- The mediator variable has a significant association with dependent variable.
- The independent variable has a significant association with dependent variable.

In other words, continuous-use intention can be hypothesised to be a mediator by following:

- There is a significant relationship between website quality components and continuous-use intention.
- There is a significant relationship between website quality components and online service performance.
- There is a significant relationship between continuous-use intention and online service performance.

Continuous-use intention can help define the relationship between variables (Chen, 2013; Lee, 2017). According to Cheng (2020) and Lee (2017), continuous-use intention plays a vital role in mediating the relationship between website quality components and performance. In particular, their findings revealed that INQ, SYQ, SEQ have significant effects on performance through continuance intention. Accordingly, the current study expected that continuous-use intention mediates the relationship between INQ, SYQ, and E-SQ and online banking performance.

Based on the discussion above, the conceptual framework was developed to investigate the effects of website quality components and continuous use intention of online banking towards online banking performance. Examining the impact of website quality components on continuous use intention of online banking would give a better

prediction about future online banking performance. Figure 2.15 shows conceptual framework.

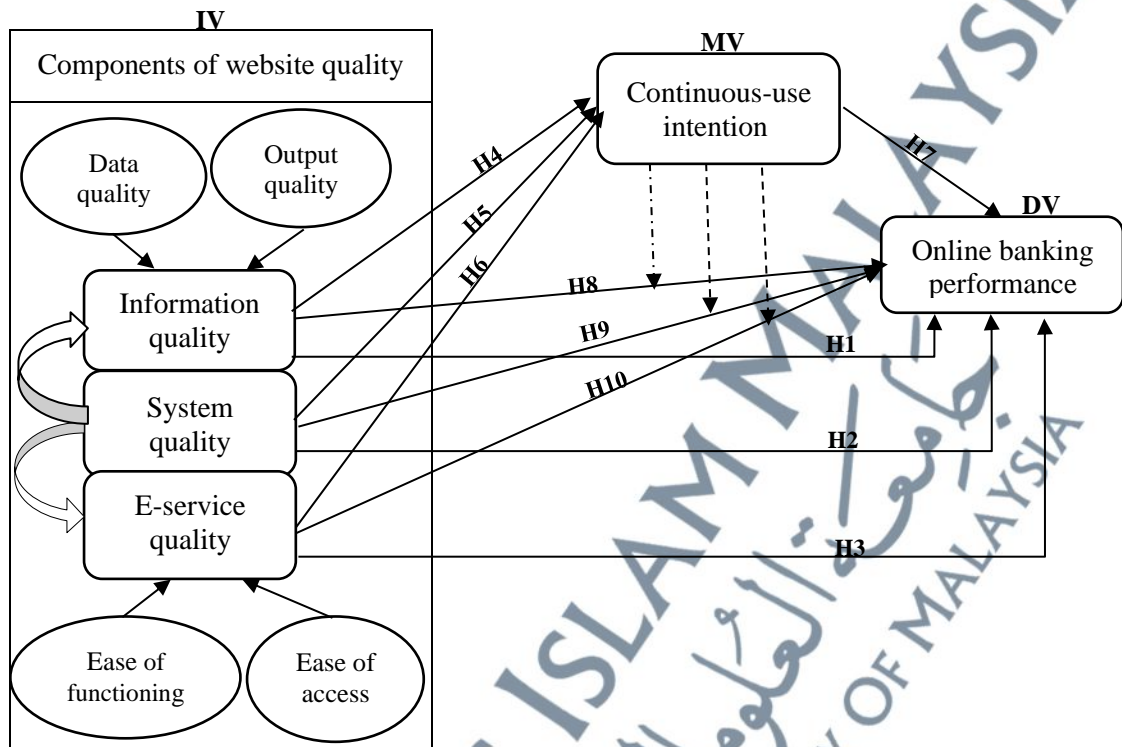


Figure 2.15: Conceptual Framework

2.9 Hypothesis Development

The study has formulated ten hypotheses to test the relationships between the variables. They are explained below.

2.9.1 Relationship between INQ, SYQ, E-SQ and Online Banking Performance

Online banking performance plays a vital role in achieving a large part of the bank's objectives (Olayinka, 2012). Employees are considered the most significant organisational resources to realise competitive advantage (Abdallah, 2014). Past studies indicate banks attached great importance to INQ, SYQ, and E-SQ due to their roles in enhancing competitiveness and improving performance (AL-Adwan & AL-

Tarawneh, 2017; Shagari et al., 2015). Therefore, INQ, SYQ, and E-SQ are found to be significant and positive determinants of service performance (Agus et al., 2007; Chang et al., 2012; Kassim & Hussin, 2010). In contrast, some studies did not find similar results (Daoud & Triki, 2013; Mohmoodi & Asetmal, 2014; Song et al., 2017). The literature thus shows inconsistent results regarding the effects of INQ, SYQ, and E-SQ on performance. Accordingly, the following hypotheses were formulated to guide the research:

H1: INQ influences online banking performance.

H2: SYQ influences online banking performance.

H3: E-SQ influences online banking performance.

2.9.2 Relationship between INQ and Continuous-Use Intention

The relationship between INQ and continuous-use intention is considered a well-established study subject. Many studies have investigated the relationship between these two variables in the context of e-services. For example, Suryanto et al. (2016) found that INQ is the strongest determinant of intention to reuse. Apostolou et al. (2017) revealed that INQ has a positive relationship with the continuous-use intention of customers. Other studies also confirmed that INQ influences continuous-use intention (Sharma et al., 2017; Abu Bakar & Melan, 2018; Kim et al., 2019; Okechi & Kepeghom, 2013). However, Mardiana et al. (2015) and Brown & Jayakody (2008) did not find any significant direct relationship between the variables. Accordingly, the current study formulated the following hypothesis:

H4: INQ influences customers' continuous-use intention of online banking.

2.9.3 Relationship between SYQ and Continuous-Use Intention

The literature states that SYQ has a strong influence on continuous-use intention (Brown & Jayakody, 2008; Mardiana et al., 2015; Okechi & Kepeghom, 2013). Therefore, SYQ is considered as an antecedent of intention to reuse (Apostolou et al., 2017; Suryanto et al., 2016). Kim et al. (2019) mentioned that SYQ has a positive effect on continuous-use intention, whereas Ibrahim et al. (2017) did not find such significance. Nonetheless, they recommended examining the effect of SYQ as a technological factor on intention. Accordingly, the current study formulated the following hypothesis:

H5: SYQ influences customers' continuous-use intention of online banking.

2.9.4 Relationship between E-SQ and Continuous-Use Intention

Several studies have investigated the association between E-SQ and continuous-use intention (Natalia et al., 2016; Sharma et al., 2017; Okechi & Kepeghom, 2013). The literature has shown that E-SQ positively influences continuous-use intention of customers. Customers that perceive the E-SQ of a website positively are more likely to provide positive word-of-mouth recommendations, purchase services or products via the website, and revisit the site, and less likely to turn to a competitor. However, (Suryanto et al., 2016; Liu, 2015; Brown & Jayakody, 2008) did not identify a significant association between the variables. Based on these results, the current study formulated the following hypothesis:

H6: E-SQ influences customers' continuous-use intention of online banking.

2.9.5 Relationship between Continuous-Use Intention and Online Banking Performance

Continuous-use intention is deemed important by managers and decision-makers in service institutions (Zemguliene, 2012). Scholars have examined it extensively in services marketing (Dudovskiy, 2015) due to its significance. Past studies have investigated the effects of customers' continued intention to use. They reported that customers' continued intention to use is a positive direct determinant of performance (Chen, 2013; Hossain et al., 2019; Mohammadyari & Singh, 2015; Moon & Jang, 2018). Wang et al. (2012), however, found a negative relationship between the mentioned variables. Accordingly, the study formulated the following hypothesis:

H7: Continuous-use intention of online banking influences online banking performance.

2.9.6 Mediating Role of Continuous-Use Intention

Continuous-use intention has also been investigated as a mediator in several studies (Chen 2013; Cheng, 2020). Lee (2017) suggested that service quality and performance are significantly associated through continuance intention. That is, a favourable service quality would likely motivate a customer to remain with a firm which in turn improves performance and vice versa. According to Cheng (2020), continuous-use intention mediates between INQ, SYQ, E-SQ, and performance. Based on these results, the present study formulated the following hypotheses:

H8: Continuous-use intention mediates the positive relationship between INQ and online banking performance.

H9: Continuous-use intention mediates the positive relationship between SYQ and online banking performance.

H10: Continuous-use intention mediates the positive relationship between E-SQ and online banking performance.

2.10 Conclusions

In summary, website quality components (INQ, SYQ, and E-SQ) influence service performance. Therefore, website quality will meet clients' expectations and needs while conforming to international standards. Developed countries consider INQ, SYQ, and E-SQ as efficient tools that can balance the expectations and requirements of clients and the interests of firms. As the chapter has shown, studies on the effects of website quality components towards continuous-use intention and performance, and of continuous-use intention on performance, have returned inconclusive results. Numerous indicators have indicated the widening research gap regarding technology and online service performance in Jordan, especially in the banking sector. At the same time, customers' adoption of online banking in Jordan is still low.

The literature on e-service quality shows that scholars agree on the need to measure e-service performance as one of the essential factors for developing service institutions. At the same time, its measurement, especially in the banking sector, is still a topic of debate (Anouze & Alamro, 2019). Furthermore, there is a shortage of Jordanian studies about the effects of INQ, SYQ, and E-SQ as components of website quality on online banking performance. There is no comprehensive evidence on the impact of website quality components on online banking performance through the mediation of continuous-use intention. There is also a lack of studies measuring the impact of continuous-use intention on performance online service. It is therefore

unclear whether website quality components and continuous-use intention could determine online banking performance. Further research on this issue is necessary.

