
**UNIVERSITI PUTRA MALAYSIA**

# *BENEFIT AND SACRIFICE FACTORS AFFECTING CUSTOMER SATISFACTION TOWARD ADOPTION OF INTERNET BANKING IN IRAQI KURDISTAN REGION*

**ASHTY RASULL MAJEED**

**SPE 2021 37**

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By

**ASHTY RASULL MAJEED**

**Thesis Submitted to the School of Graduate Studies, Universiti Putra Malaysia, in Fulfilment of the Requirements for the Degree of Doctor of Philosophy**

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Abstract of thesis presented to the Senate of Universiti Putra Malaysia in fulfilment of requirement for degree of Doctor of Philosophy

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**October 2020**

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As an information-intensive industry, the banking industry has been significantly influenced by information technology, particularly the Internet explosion and Internet banking service. Internet banking experience varies across different situations in various countries, thus generating dissimilar banking customers' attitudes and behaviours. While some countries have successfully installed this service in their banking sector and persuaded their customers to adopt it, some have not.

For instance, the Iraqi Kurdistan Region (IKR) is still experiencing difficulties related to Internet banking adoption. IKR has a population of 5.2 million, where a relatively large proportion is urban residents living in places where there are sufficient bank branches. IKR banks had been genuinely involved in IT integration in the 20$^{th}$ century. However, despite the appropriate potential IKR for adopting Internet banking, a large proportion of IKR bank patrons remain reluctant to replace face-to-face banking with this type of digital service. The reasons behind this reluctance and disinterest of bank customers in IKR are still unclear because of the scarcity of research on this issue. Thus, this research focuses on Internet banking adoption in IKR and sought to investigate the effect of benefit factors (perceived usefulness, perceived ease of use, perceived system quality) and sacrifice factors (perceived cost and perceived risk) on behavioural intention to use and, in turn, actual use of Internet banking through the mediating role of customer satisfaction in the Iraqi Kurdistan banking sector. In order to achieve this aim, a model inspired by several theories and models, such as TRA, TAM, ISS, etc., was conceptualized. In this research study, a quantitative approach was adopted, and a self-administered questionnaire was used as the research instrument. Data were collected from 412 respondents, and based on the research objectives, they were analysed using descriptive and inferential analysis methods. Structural Equations Modelling (SEM) was applied as a suitable inferential

analytical method to answer the research questions. The results generated revealed the significant role of benefit factors (perceived usefulness, perceived ease of use, perceived system quality) and sacrifice factors (perceived cost and perceived risk) on behavioural intention to use Internet banking through the mediating role of customer satisfaction, either directly or indirectly. Indeed, the findings demonstrated the pivotal role of customer satisfaction in the adoption of Internet banking.

Despite the limitations that this research has faced, such as limited sample size, variables, and focusing on specific regions, through developing a comprehensive model of Internet banking adoption, theoretical gaps in information and communication technologies were partially filled. Also, as a practical contribution, it enhanced the current knowledge about the attitude, perception and behaviour of Internet banking users in IKR. It highlighted the factors affecting their Internet banking adoption, which could assist bank managers in IKR to both eliminate and address related weaknesses in order to encourage their customers to use Internet banking service as opposed to traditional services.

Abstrak tesis yang dikemukakan kepada Senat Universiti Putra Malaysia sebagai memenuhi keperluan untuk ijazah Doktor Falsafah

# FAKTOR FADEAH DAN PENGORBANAN YANG MEMPENGARUHI KEPUASAN PELANGGAN TERHADAP PENERIMAAN PAKAI PERBANKAN INTERNET DI WILAYAH IRAQ KURDISTAN

Oleh

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Sebagai sebuah industri yang intensif-maklumat, industri perbankan secara ketara telah dipengaruhi oleh teknologi maklumat, terutamanya ledakan Internet dan perkhidmatan perbankan Internet. Pengalaman perbankan Internet berbeza-beza mengikut situasi di setiap negara. Ini seterusnya menimbulkan sikap dan tingkah laku pelanggan perbankan yang berbeza. Beberapa negara telah berjaya melancarkan perkhidmatan ini di sektor perbankan mereka dan meyakinkan pelanggan untuk menggunakannya, namun ada juga yang belum.

Salah satu wilayah yang mengalami kesukaran berkaitan dengan penggunaan perbankan Internet adalah Wilayah Kurdistan Iraq (IKR). IKR mempunyai 5.2 juta penduduk di mana sebahagian besarnya adalah penduduk bandar. Ia juga mempunyai jumlah cawangan bank yang mencukupi. Bank-bank IKR benar-benar terlibat dalam integrasi IT pada abad ke-20. Namun, di sebalik kesesuaian IKR yang berpotensi untuk menggunakan perbankan Internet, sebahagian besar pelanggan bank di IKR masih enggan menggantikan perbankan bersemuka dengan perkhidmatan ini. Sebab di sebalik keengganan dan sifat tidak berminat pelanggan bank di IKR ini masih belum jelas kerana kurangnya kajian mengenai isu ini. Oleh itu, penyelidikan ini menumpukan kepada penggunaan perbankan Internet di IKR dan berusaha untuk menyiasat pengaruh faktor manfaat (tanggapan kebergunaan, tanggapan mudahnya penggunaan dan tanggapan kualiti sistem) dan faktor pengorbanan (tanggapan kos dan tanggapan risiko) terhadap niat tingkah laku untuk menggunakan perbankan Internet. Seterusnya, penyelidikan ini mengkaji penggunaan perbankan Internet melalui peranan perantaraan kepuasan pelanggan dalam sektor perbankan Kurdistan Iraq. Untuk mencapai matlamat ini, penyelidikan ini mengkonsepsikan model yang diilhamkan oleh beberapa teori dan model seperti TRA, TAM dan ISS. Kajian ini mengambil pendekatan kuantitatif dan menggunakan soal selidik urus sendiri

sebagai instrumen kajian. Data dikumpulkan daripada 412 orang responden. Berdasarkan objektif penyelidikan, data dianalisis melalui kaedah analisis deskriptif dan inferens. Pemodelan Persamaan Berstruktur (SEM) digunakan sebagai kaedah analisis inferens yang sesuai untuk menjawab persoalan kajian. Hasil yang didapati mendedahkan peranan yang penting bagi faktor manfaat (tanggapan kebergunaan, tanggapan mudahnya penggunaan dan tanggapan kualiti sistem) dan faktor pengorbanan (tanggapan kos dan tanggapan risiko) terhadap niat tingkah laku untuk menggunakan perbankan Internet, sama ada secara langsung atau tidak langsung, melalui peranan perantaraan kepuasan pelanggan. Sememangnya, dapatan kajian menunjukkan peranan penting kepuasan pelanggan dalam penggunaan perbankan Internet.

Walaupun terdapat batasan yang dihadapi dalam penyelidikan ini seperti saiz sampel yang terhad, pemboleh ubah dan fokus pada wilayah tertentu sahaja, kajian ini sedikit sebanyak mengisi jurang teori yang ada dalam bidang teknologi maklumat dan komunikasi melalui pembangunan model penggunaan perbankan Internet yang komprehensif. Selain itu, sebagai suatu sumbangan praktikal, kajian ini meningkatkan pengetahuan terkini mengenai sikap, persepsi dan tingkah laku pengguna perbankan Internet di IKR dan menonjolkan faktor-faktor yang mempengaruhi penggunaan perbankan Internet mereka. Ini dapat membantu para pengurus bank di IKR untuk mengatasi kelemahan bagi memuaskan dan mendorong pelanggan bank untuk memilih perkhidmatan perbankan Internet berbanding cara tradisional.

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This thesis was submitted to the Senate of Universiti Putra Malaysia and has been accepted as fulfilment of the requirement for the degree of Doctor of Philosophy. The members of the Supervisory Committee were as follows:

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| | |
|---|---|
| ASV | Average Shared Square Variance |
| AU | Actual Use |
| AVE | Average Variance Extracted |
| BIUIB | Behavioural Intention To Use Internet Banking |
| CBI | Central Bank of Iraq |
| CFA | Confirmatory Factor Analysis |
| CR | Composite Reliability |
| CS | Customer Satisfaction |
| DULS | Model fit over the unweighted least squares |
| ERP | Enterprise resource planning |
| dG | Geodesic discrepancy |
| GDP | Gross Domestic Product |
| GOF | Goodness-of-fit |
| HTMT | Hetero Trait-Mono Trait |
| IKR | Iraqi Kurdistan Region |
| ISS | Information System Success |
| IT | Information technology |
| KIB | Kurdistan International Bank |
| KRG | Kurdistan Regional Government |
| MOF | Ministry of Finance |
| MOP | Ministry of Planning |
| MSV | Maximum Shared Squared Variance |
| NFI | Normed fit index |

| | |
|---|---|
| NGOs | Non-Governmental Organizations |
| NTP | National Transformation Program |
| PC | Perceived Cost |
| PEOU | Perceived Ease of Use |
| PLS | Partial Least Square |
| PR | Perceived Risk |
| PSQ | Perceived System Quality |
| SEM | Structural Equation Modelling |
| SMEs | Small-to-Medium Sized Enterprises |
| SPSS | Statistical Package for Social Sciences |
| SRMSR | Standardized Root Mean Square Residual |
| TAM | Technology acceptance model |
| TRA | Theory of reasoned action |
| UIB | Using Internet Banking |
| VIF | Variance inflation factor |

# CHAPTER 1

# INTRODUCTION

## 1.1 Introduction

This chapter provides introductory information and an overview of the study conducted in this thesis. It begins with the background of the study, followed by the identification of the problem that this investigation seeks to address. It also offers justification for the identified problem, as well as the study. The research objectives and questions to be explored in the current study are also discussed. Afterwards, the significance of the study and its scope are presented.

## 1.2 Background of the Study

The advent of new information and communication technologies within the financial industry has dramatically impacted banks' customer services. Indeed, technology change speed influences the banking industry's transformation than any other sector (Kirakosyan & Danaiata, 2014; Deraz, & Iddris, 2019). Among the various contemporary information and communication technologies utilized by banks, Internet banking is recognised as one of the most effective and practical business services in the world (Ariff et al., 2012; Nazaritehrani & Mashali, 2020). Because of the importance of Internet banking services and its significant influence on customer service delivery, profitability, and business performance, it has received much scholarly attention and bank managers' interest in recent years (Al- Sharafi et al., 2017; Lin et al., 2020). Germane studies have examined, in particular, the importance of customer views towards using Internet banking as a critical factor for the success of banking operations (Chen & Chen, 2017; Liao & Cheung, 2002; Vuković et al., 2019).

The growth and dynamism in Internet banking have impelled researchers to study the use of Internet banking and factors contributing to its adoption (Asad et al., 2016; Zaman et al., 2018). Reviewing the literature reveals that this attempt has led to developing several theoretical models that seek to understand and predict customers' behavioural intention using Internet banking (Santouridis & Kyritsi, 2014; Teka, 2020). One of the models that many scholars have adopted as the basis for developing new models in Internet banking is the theory of reasoned action (TRA) by Fishbein & Ajzen (1975). TRA considers attitude towards behaviour and subjective norm as two factors that lead to behavioural intentions (Lai, 2017).

Based on TRA, the technology acceptance model (TAM) (Davis, 1989) was developed. Davis (1989) proposed TAM to gain understanding and predict customer adoption and acceptance of information systems. TAM suggests that individuals' behavioural intention for utilizing information technology (IT) is predicated on two

beliefs: Perceived Usefulness (PU) and Perceived Ease of Use (PEOU). PU is the extent to which an individual believes that utilizing IT would improve their performance, whereas PEOU refers to the degree to which an individual believes that using IT would be free of any effort (Vuković et al., 2019).

TAM also fosters understanding customers' intentions to use Internet banking and antecedents for adopting this service. It is the most widely used instrument for assessing customers' adoption of information systems (Al-Sharafi et al., 2017; Kailani, 2016; Zaman et al., 2018). Since its introduction over 30 years ago, TAM has been continuously applied, modified, or combined with other models in various fields and information systems in different countries. Evidence shows that TAM is a reliable and valid theory for predicting 40% of information systems' usage (Ahmad, 2018), but that there is a need to include other attitudinal belief constructs to the original belief constructs of TAM to enhance its robustness and predictive power (Abdulkadir et al., 2013; Yaghoubi, 2010; Zhou, 2011; Teka, 2020). Therefore, several researchers have expanded TAM by incorporating additional variables or elements (e.g., Abdulkadir et al., 2013; Al-Somali et al., 2009; Amin, 2007; Luarn &Lin, 2005; Noronha & Rao, 2017; Porter & Donthu, 2006; Venkatesh & Morris, 2000; Xiao et al., 2017; Zaman et al., 2018; Teka, 2020). One of the variables that have attracted great empirical interest is customer satisfaction (Noronha & Rao, 2017; Phuong & Dai Trang, 2018).

The saturation of the world's business market, globalisation, and enhancement of information technology have improved customers' awareness to the extent that they now look at a wide range of attributes in evaluating the value and quality of a product or service (Assegaff, 2017). Such assessments are pivotal in the development of a customer's perception of satisfaction. Businesses, thus, have become increasingly interested in customer satisfaction (Assegaff, 2017). Companies build long-term positive customer relationships via enhancing customer satisfaction for contemporary business success (Mkoma, 2014; Hamid et al., 2018). The cost of attracting a new client is higher than maintaining an existing one (Chen & Chen, 2017). Therefore, the desire to retain customers through increased customer satisfaction levels has become a significant prerequisite for many business organisations (Chen & Chen, 2017).

Looking at the role of customer satisfaction in the banking sector, Narteh and Kuada (2014) ascertained that the level of satisfaction of customers differentiates one bank from another. Determining customers' satisfaction level is critical for any banking institution (Chen & Chen, 2017; Hamid et al., 2018). Identifying bank customers' needs and then offering products that provide the best value for bank patrons' money is of paramount importance (Simon et al., 2016). Thus, providing products and services that satisfy customers' needs is critical for any banking institution. After all, it helps banks enhance their competitive advantage (Khan & Kadir, 2011; Hammoud et al., 2018). Also, satisfied customers in banking institutions are more loyal, make repeat purchases, and have a positive brand image, all of which increase sales and profitability (Odindo & Delvin, 2010; Lin et al., 2020).

Given the importance of customer satisfaction, several scholars have explored its role in TAM (e.g., Mehmood & Shafiq, 2015; Sardar Donighi, & Yousefi, 2015; Zhang & Prasongsukarn, 2017; Phuong & Dai Trang, 2018; Wardani & Riskayanto, 2019). Furthermore, the subsequent literature review confirms the significant role of customer satisfaction in TAM, which offers a cogent practical, theoretical, and conceptual rationale based on the idea that satisfied customers tend to reuse a service (Sachithra & Sritharan, 2017; Deraz & Iddris, 2019). The importance of customer satisfaction in predicting one's intention to use and successful adoption of a technology information system led DeLone & McLean (1992) to develop the Information System Success (ISS) model (Michel & Cocula, 2017). This model pivots around six information system success factors and the interrelationships between them: information quality, system quality, service quality, user satisfaction, intention to use, and net benefits (Jaafreh, 2017). According to DeLone & McLean (2003), to measure a single system's success (individual system), the information quality, system quality, and service quality may be the most crucial quality components. They further argued that the information quality, system quality, and service quality affect users' satisfaction and intention to use the service. They also posited that a user's satisfaction and intention to use the service are interrelated (Petter et al., 2008; Ali & Ju, 2019).

As mentioned above, DeLone & McLean (1992) considered system quality as one of three important components of the ISS model in the successful adoption of a technology information system. System quality refers to the performance of IS in terms of reliability, convenience, functionality, and other system metrics. The literature indicates that high system quality is critical to ensure user satisfaction and affect users' attitude and behaviour (Namahoot & Laohavichien, 2015; Sachithra & Sritharan, 2017; Wardani & Riskayanto, 2019). For customers to rely on technology, it should be efficient and fast, thus fostering its utilisation and engendering positive outcomes (Budiwati & Kurniasih, 2014; Noronha & Rao, 2017; Sachithra & Sritharan, 2017).

Another variable that is a precursor to the adoption of information technology system is perceived cost, which is the extent to which a person believes that using technology will incur a financial cost. Some scholars believe that such factors have a negative impact on the adoption of a technology information system (e.g., AlSoufi & Ali, 2014; Chansaenroj & Techakittiroj, 2015; Chuwa, 2015; Xiao et al., 2017). Consequently, Fathima and Muthumani (2015) argued that technological innovations should be reasonably priced to facilitate Internet banking adoption.

Scholars have also included perceived risk as another variable and a critical factor affecting system users' attitude and behaviour. Some researchers have argued that perceived risk is an essential factor influencing online consumers' behaviour (e.g., Chuwa, 2015; Demirdogen et al., 2010; Fadare, 2016; Lin et al., 2020). The reason is that in an online environment, criminal acts can be performed rapidly without any physical contact. If an unauthorized individual accesses a user's Internet banking portfolio, financial information may be jeopardized, and financial assets stolen. Indeed, the literature affirms that perceived risk has a strong negative impact on

patrons' intention to use Internet banking (Demirdogen et al., 2010; Fadare, 2016; Lin et al., 2020).

According to Alsheikh & Bojei (2014), variables affecting information and communication technology adoption can be subsumed under two domains: benefit and sacrifice factors. On the one hand, benefit factors refer to the value customers desired (e.g., service quality) and, on the other, sacrifice factors refer to monetary and non-monetary considerations (Alsheikh, 2013). Martins & Monroe (1994) argued that "buyers' perceptions of value represent a trade-off between the quality and benefits they perceive in the product relative to the sacrifice they perceived by paying the price" (Alsheikh & Bojei, 2014). Accordingly, to satisfy Internet banking customers, banks should increase the perceived benefits of using their Internet banking and/or decrease its perceived sacrifices (e.g., cost and risk). In this study, perceived usefulness, perceived ease of use and perceived system quality are representative of benefit factors, whereas perceived cost and perceived risk are the indicators of sacrifice factors.

Research reveals that TAM and ISS are consistently reliable models to both evaluate and predict the adoption of a technology information system (Mehmood & Shafiq, 2015; Zhang & Prasongsukarn, 2017; Vuković et al., 2019; Ali & Ju, 2019). The literature postulates that in the extant work, customer satisfaction plays a significant role (mostly as a mediator) in predicting customers' behavioural intention using a technology information system. However, this effect's level has been inconsistent (Noronha & Rao, 2017: Phuong & Dai Trang, 2018). As such, further research on this variable vis-a-vis its role in TAM in an Internet banking context seems warranted.

Existing published research also indicates that researchers applying TAM to evaluate customers' attitude and behaviour towards information technology systems have not considered the variable of actual use. Most studies have only considered behavioural intention to use a service as the ultimate variable in predicting customers' behaviour (AlSoufi & Ali, 2014; Taleghani & Taleghani, 2016; Zaman et al., 2018). However, a crucial question that has been considered in the TRA and TAM original models, but has not been well-studied in the context of Internet banking, is whether behavioural intention to use Internet banking could, indeed, induce actual usage of this service (Teka, 2020). To answer this question, the inclusion of actual use as the ultimate variable in TAM in Internet banking seems necessary.

Furthermore, relevant work reveals that the impact of many variables on customer satisfaction and behavioural intention has been considered (Fadare, 2016; Marafon et al., 2018). Among those variables, perceived usefulness and perceived ease of use, which are the original variables of TAM, have consistently demonstrated their significant effects on behavioural intention both theoretically and practically (Ariff et al., 2012; Al-Sharafi et al., 2017; Wardani & Riskayanto, 2019). Therefore, their roles should be considered in TAM's adapted model for an enhanced assessment of Internet banking adoption. Moreover, the literature affirms the critical role of

perceived system quality, perceived cost and perceived risk variables in the adoption of information technology systems (Chansaenroj & Techakittiroj, 2015; Khedmatgozar & Shahnazi, 2018; Namahoot & Laohavichien, 2015; Aboobucker & Bao, 2018; Teka, 2020). Mixed findings have been obtained in previous studies about the influence of these three factors on customer satisfaction, behavioural intention to use, and actual use—as well as the mediating role of customer satisfaction in defining their effect on behavioural intention to use (Zaman et al., 2018; Lee & Lee, 2020). Therefore, further research is required to address the inconsistent findings and make a comprehensive model of customers' attitude and behaviour towards Internet banking.

Aside from the theoretical lacunae and limitations in the extant literature, a focus on Internet banking adoption in the Iraqi Kurdistan Region (IKR) is needed. Internet banking research has been undertaken using samples from across the globe; however, IKR has been noticeably absent from this empiricism (Singh & Bradosti, 2015; Hamakhan, 2020 A). Indeed, there is a lack of an effective modern banking system in IKR. The banking institutions have not established measures to ensure that their services meet a modern banking institution's quality standards. Most IKR banking institutions, including private banks, cannot connect with other world-class financial institutions (Jaffar et al., 2016; Omran, 2015; Hamakhan, 2020 B). Moreover, many Iraqis lack access to banking institutions due to low bank penetration (Jaffar et al., 2016). The weak banking system has also reduced its effectiveness, causing the public to lose trust in its services (Al-Najjar & Jawad, 2016; Kalin, 2015; Demir & Fakhir, 2017). Many IKR bank customers still prefer to go to the banks and do their financial transactions directly in the bank instead of using Internet banking (Singh & Bradosti, 2015; Hamakhan, 2020 A). Internet banking in the IKR is not widespread yet, and many bank customers do not have the required awareness and knowledge to implement Internet banking (Singh & Bradosti, 2015; Hamakhan, 2020 B).

Accordingly, identifying factors that affect customer satisfaction, behavioural intention, and actual use of Internet banking and understanding the reasons behind customers' attitude and behaviour towards IKR Internet banking are necessary. Therefore, this study enhances the understanding of customers' attitude and behaviour towards IKR Internet banking by investigating the antecedents (benefit and sacrifice factors) of customer satisfaction, behavioural intention, and actual use of Internet banking in the IKR using a holistic model. Hopefully, the results obtained here can be generalized to Internet banking in other developing countries.

## 1.3 Problem Statement

With the advent of the Internet and its rapid growth and prevalence, business organisations have realised that survival in this highly competitive environment is especially dependent on updating their business approach and adopting the Internet in their operational system (Santouridis & Kyritsi, 2014; Zaman et al., 2018). The ubiquity of the Internet and modern communication tools have revolutionized the information and communication technologies sector. The banking industry as an

information-intensive industry, is significantly influenced by information technology, particularly the Internet explosion (Al-Qeisi & Hegazy, 2015; Lin et al., 2020).

Over the past two decades, banks throughout the world have been gradually gravitating to Internet banking (Teka, 2020). Internet banking has achieved worldwide prominence, with an increasing number of banks offering a growing array of online services. This banking transaction channel provides users with round-the-clock access to bank services, reduced banking time, direct access from anywhere in the world, decreased transaction costs, and the elimination of cash-carrying anxiety (Santouridis & Kyritsi, 2014; Vetrivel et al., 2020).

Moreover, internet banking transpires in different situations in various countries, and in turn, the attitude and behaviour of customers regarding it also vary. For instance, many banks in developed countries have moved away from brick-and-mortar banking to Internet banking (Al-Qeisi & Hegazy, 2015; Nazaritehrani & Mashali, 2020). In contrast, some developing countries remain occupied in realising the transformations, while others have already adopted them. Still, customers' attitude and behaviour towards Internet banking in most developing nations are highly unpredictable (Shaikh & Karjaluoto, 2015; Hamakhan, 2019).

According to Eurostat data (2018), Internet banking users have a growing trend in developed countries. In most European countries, the percentage of users in 2017 was above 50%, where Scandinavian countries and the countries of Benelux are in the lead with more than 70%, and some with even more than 90% of Internet banking users. In the UK, customers have a positive perception of the security, safety and convenience of Internet banking and its time-saving nature. Also, in the US, the presence of highly secure web platforms has positively influenced customers' attitude towards the use of Internet banking (Mukhtar, 2015; Nazaritehrani & Mashali, 2020). Conversely, in developing countries such as Africa and some parts of Asia, banks have witnessed customers' unreliable nature towards the adoption of information technology in banks (Nyasha & Odhiambo, 2015; Simon et al., 2016).

For instance, even though Internet banking was introduced to Jordan nearly two decades ago, the adoption of Internet banking by Jordanians is still poor regardless of the millions of dollars invested in upgrading and maintaining the Internet technology infrastructure (AlKailani, 2016). Furthermore, in Malaysia, Internet banking was first introduced in June 2000. Still, only a small percentage of customers prefer performing financial operations such as making personal investments, applying for loans, or paying off housing mortgages through Internet banking. Instead, most customers prefer to perform transactions over the counter in a face-to-face manner as communicating with the staff of traditional banks allows customers to make enquiries and obtain more detailed information (Ling et al., 2016). In Pakistan, despite this increasing trend regarding the use of Internet banking, evidence highlights that over 91 per cent of the financial transactions in terms of value and over 70 per cent in terms of volume are still carried out through paper-based

instruments, as opposed to Internet banking (Mohsin, 2019).

In regions such as Latin America, where there is a significant digital divide, consumers refrain from using these types of technologically advanced services due to lack of awareness and concerns about security, usability, and trustworthiness. In Colombia, for example, data show that although both monetary and non-monetary online transactions increased from 951,616,157 in 2012 to 1,905,341,076 in 2019 (comprising 43.97% of total operations for that year), much scepticism is still apparent when only monetary transactions are considered; these accounted for 313,888,272 operations by 2019, representing only 13.10% of total monetary transactions (Sánchez-Torres et al., 2018). In the Brazilian context, the number of Internet banking users has grown quickly in recent years, reaching more than 62 million people. However, only 40 percent of the total number of users make their financial transactions online, 80 percent of whom use only simple operations such as consulting their bank accounts (Marafon et al., 2018).

Reviewing and comparing the literature on Internet banking adoption in both developed and developing countries reveals a significant difference between these two contexts in terms of the adoption of the service. In other words, developing countries face a considerable number of challenges in this area due to Internet banking users' perception, attitude, and behaviour in these countries (Belas & Gabcova, 2014; Khan et al., 2017; Hamakhan, 2019). Therefore, identifying factors that systematically affect customer views appears to be a requisite (Wu and Chang, 2012; Lin et al., 2020). Indeed, despite the prevalent usage of Internet banking, our understanding of the drivers of customer attitude and behaviour towards it, especially in developing regions, requires improvement (Asad et al., 2016; Yoon, 2010; Zaman et al., 2018; Lin et al., 2020). Thus, to provide an improved understanding of this, the research proposed in this thesis focuses on IKR as a developing region.

The evaluation of the banking sector in IKR indicates that there is currently only a single bank branch for every 60,000 IKR residents. Bank service offerings remain poor, and at least 73% of the population do not receive bank services, which is a low rate, even in other developing countries (Hamakhan, 2020A). Additionally, some IKR banks engage in limited activities and belong to a particular type of natural or legal customers, such as agricultural, industrial, and trade banks that have reduced banking information technology involvement. The IKR has experienced numerous issues regarding past banking service failures, such as the loss of client funds (Al-Najjar & Jawad, 2016; Demir & Fakhir, 2017). Also, customers' loyalty towards banking services has declined, making a large part of the IKR population reliant on non-banking methods for both saving and using their funds (Akbari & Darabi, 2015; Hamakhan, 2020B).

IKR bank customers have complimented the transaction system's quality because of its ease of use, geographical proximity to the services, reliability, and availability (Jaffar, et al., 2016; Demir & Fakhir, 2017). However, implementing information and communication technologies and offering Internet banking services have also

failed in achieving such key objectives as attracting new customers, increasing investments, and facilitating operations (Al-Najjar & Jawad, 2016; Demir & Fakhir, 2017). As a result, despite the benefits that Internet banking can provide customers, a large proportion of IKR bank patrons remain reluctant to replace traditional face-to-face banking with Internet banking (Hamakhan, 2019).

Although the evaluation of IKR bank customers' behaviour about adopting Internet banking asserts existing serious problems, reviewing the related literature indicates a lack of knowledge in IKR regarding this issue. Admittedly, research examining various factors influencing Internet banking has been performed in an array of alternative nations, including Bangladesh (Nupur, 2010), Iran (Sadeghi & Hanzaee, 2010), Jordan (Ahmad & Zu'bi, 2011), Lebanon (Ghaziri, 1998), Malaysia (Kadir et al., 2011), India (Ankit, 2011), Pakistan (Anjum et al., 2017), Taiwan (Zhu & Chen, 2012), Sri Lanka (Aboobucker & Bao, 2018), Croatia (Vuković et al., 2019), and Ethiopia (Teka, 2020). But, there have not been research studies in IKR focusing on this subject. The attitude, perception and behaviour of bank customers in IKR in terms of Internet banking adoption are still unclear. For IKR bank professionals, it is imperative to better understand the attitude, perception, and behaviour of their customers towards the adoption of Internet banking to resolve potential problems, address shortages, and optimise their performance in the context of Internet banking. Accordingly, identifying and understanding the factors that affect Internet banking adoption in IKR is of utmost importance.

In the study presented here, to understand customers' attitude and behaviour regarding the adoption of Internet banking in IKR, the first factor that should be considered is 'customer satisfaction. A crucial goal of any business is to retain existing customers and attract new ones. In other words, firms usually attempt to induce customers to use their products and services and then actually use them. If this pattern becomes an ongoing behaviour, customers are likely to experience satisfaction (Zhang & Prasongsukarn, 2017). Thus, Internet banking seeks to acquire and retain customers by providing products and services that positively affect and enhance general satisfaction. Banks adopt Internet banking to satisfy ever-changing customer needs (Paul, Mittal, & Srivastav, 2016; Deraz, & Iddris, 2019). Customer satisfaction is important in assisting a bank to sustain its competitive advantage. In a broad sense, customer satisfaction, intention to use, and actual use of Internet banking are likely to be critical contributors to banks' success and survival in today's business milieu. Some nations have observed more termination of banking organisations and their services because of customer dissatisfaction (Sayani & Miniaoui, 2013; Mchomba, 2018; Hammoud et al., 2018).

Across the world, as indicated by high rates of customers' unpredictable behaviour and dynamism in banking accounts, customer dissatisfaction is extensive in the banking industry (Simon et al., 2016; Vetrivel et al., 2020). The level of customer satisfaction is unpredictable, as customers' expectations are usually difficult to determine (Akbari & Darabi, 2015; Lee & Lee, 2020). Therefore, identifying factors affecting customer satisfaction in Internet banking is warranted. In addition, understanding the cause-and-effect relationships of these factors may well improve

the quality of Internet banking services. Given the multi-dimensional effect of Internet banking on customer satisfaction, it still remains a somewhat neglected topic. Moreover, the role of customer satisfaction in predicting customer intention to use Internet banking demands further empiricism (Mensah & Mi, 2017; Deraz & Iddris, 2019).

Recently, several theories have been developed to identify determinants of Internet banking usage and adoption, including the intention models from social psychology (e.g., Nasri and Charfeddine, 2012; Fadare, 2016; Xiao et al., 2017). In this context, the Information System Success (ISS) model and the Technology Acceptance Model (TAM) (Davis, 1989), which is rooted in the Theory of Reasoned Action (TRA), have demonstrated their ability to predict the technology acceptance behaviour of customers (Abdulkadir et al., 2013; Noronha & Rao, 2017; Ojo, 2017; Ahmad, 2018; Vuković et al., 2019; Ali & Ju, 2019). Despite the research attention given to ISS and TAM in the banking sector and the development of several new models, the literature remains inadequate in introducing an enhanced model that could predict customer attitude and behaviour vis-à-vis Internet banking.

This study is based on a theoretical and practical view from TRA, TAM, and ISS and inspired by newly developed models. It also evaluates two taxonomies of effective Internet banking adoption variables, including benefit factors (perceived usefulness, perceived ease of use and perceived system quality) and sacrifice factors (perceived cost and perceived risk). This is to determine the behavioural intention to use Internet banking through the mediating effect of customer satisfaction. The variables mentioned above have proved their importance and effects in predicting Internet banking adoption (Wardani & Riskayanto, 2019; Teka, 2020; Lin et al., 2020). The research applies these variables in the model to answer the following three questions: (1) Do customers feel dissatisfied with the cost of internet banking. So this negative perception affects their intention to use Internet banking? (2) Do customers perceive that using Internet banking is risky for them, and so this perception affects their satisfaction negatively and, in turn, their behavioural intention to use Internet banking? (3) Do customers feel satisfied with the ease of use, usefulness, and system quality provided by the banks. So this perception affects their satisfaction and, in turn, their behavioural intention to use Internet banking?

The paucity of research and the lack of knowledge of IKR customer attitude and behaviour in terms of Internet banking in this region; the importance of customer satisfaction in predicting behavioural intention to use Internet banking, and the absence of sufficient knowledge of the level of IKR customer satisfaction from Internet banking and its effect on the intention and actual use of the service; and the theoretical gap in the extant literature in terms of identifying factors influencing the adoption of Internet banking using a comprehensive model make an investigation on this subject indispensable. Therefore, this research empirically investigates antecedents of IKR customer satisfaction and customer intention and behaviour with Internet banking.

Admittedly, conducting this research is important both theoretically and practically because the antecedents of behavioural intention to use internet banking and actual usage of this service are still unclear and require more research to develop the predictive power of models such as TAM and ISS. Indeed, aside from neglecting the importance of the customer satisfaction role in predicting the adoption of Internet banking in previous research, the findings of earlier studies on determinant factors (perceived usefulness, perceived ease of use, perceived system quality, perceived cost and perceived risk) of customer satisfaction and behavioural intention to use Internet banking are still mixed and ambiguous. Besides, categorising the antecedents of Internet banking adoption in benefit and sacrifice factors is still an embryonic topic. In general, the literature is unable to introduce a holistic model of Internet banking adoption, highlighting the importance of this research's contribution to the academic context. From a practical view, this research's importance is clearly shown when reviewing the background of studies on understanding the attitude and behaviour of customers about adopting Internet banking in IKR indicates that no research has been conducted on this topic. Therefore, this research will provide essential information about potential problems concerning adopting Internet banking in IKR, which could be useful for both bank managers and scholars in this field and help them resolve any arising conflict and eventually recover the image of Internet banking service in the minds of IKR bank customers.

## 1.4 Research Objectives

This research aims to investigate the effect of benefit factors (perceived usefulness, perceived ease of use and perceived system quality) and sacrifice factors (perceived cost and perceived risk) on behavioural intention to use and, in turn, actual use of Internet banking through the mediating role of customer satisfaction in the Iraqi Kurdistan banking sector.

To achieve the research aims, the following objectives are posited:

1. To examine the effect of benefit factors (perceived usefulness, perceived ease of use, and perceived system quality) on the behavioural intention of customers toward using Internet banking in the IKR.

2. To examine the effect of sacrifice factors (perceived cost and perceived risk) on the behavioural intention of customers toward using Internet banking in the IKR.

3. To evaluate the mediating role of customer satisfaction in the relationships between benefit factors (perceived usefulness, perceived ease of use, and perceived system quality) and sacrifice factors (perceived cost and perceived risk) with the behavioural intention to use Internet banking of customers in the IKR

4. To determine the effect of behavioural intention to use on the actual use of Internet banking by customers in the IKR.

5. To develop a model of the relationships between benefit factors (perceived usefulness, perceived ease of use, and perceived system quality) and sacrifice factors (perceived cost and perceived risk) with behavioural intention to use and, in turn, actual use of Internet banking through the mediating role of customer satisfaction in the banking sector in the IKR.

## 1.5 Research Questions

The research questions to be addressed in this study are as follows:

1. Does perceived usefulness affect the behavioural intention of customers towards the use of Internet banking in the IKR?
2. Does perceived ease of use affect the behavioural intention of customers towards the use of Internet banking in the IKR?
3. Does perceived system quality affect the behavioural intention of customers towards the use of Internet banking in the IKR?
4. Does perceived cost affect the behavioural intention of customers towards the use of Internet banking in the IKR?
5. Does perceived risk affect the behavioural intention of customers towards the use of Internet banking in the IKR?
6. Does customer satisfaction mediate the relationships between perceived usefulness, perceived ease of use, perceived system quality, perceived cost and perceived risk with the behavioural intention of customers towards the use of Internet banking in the IKR?
7. Does behavioural intention to use lead to actual use of Internet banking by customers in the IKR?

## 1.6 Significance of the Study

The research presented in this thesis is significant, as there is a significant gap in the literature regarding customers' attitude and behaviour towards the adoption of Internet banking in the KRI banking sector. Accomplishing the research aim and objectives is both theoretically and practically significant.

### 1.6.1 Theoretical Significance

Theoretically, this study contributes to the services marketing literature and banking sector by identifying key factors affecting customer satisfaction, behavioural intention to use, and actual use of Internet banking and also examining the mediating role of customer satisfaction in these relationships. Several researchers have explored

the effects of customer satisfaction on behavioural intention in different contexts (Pattarakitham, 2015; Khan et al., 2017; Noronha & Rao, 2017; Phuong & Dai Trang, 2018). Some scholars have even explored the topic in the context of the banking sector, but their number is limited and their findings are mixed and ambiguous (Hammoud et al., 2018; Wardani & Riskayanto, 2019; Vetrivel et al., 2020). In addition, much research has focused on understanding the antecedents of behavioural intention towards the use of Internet banking (Aboobucker & Bao, 2018; Zaman et al., 2018; Teka, 2020). However, studies with regard to developing countries, especially IKR (Mchomba, 2018; Hamakhan, 2019; Hamakhan, 2019; Nazaritehrani & Mashali, 2020) are minimal. Furthermore, most extant works did not examine the variable of Internet banking's actual use (Xiao et al., 2017; Aboobucker & Bao, 2018; Zaman et al., 2018). Moreover, studies incorporating such variables as the perceived quality of the system, perceived cost and perceived risk, as parameters of information technology in the banking sector are limited, and their effect on customer satisfaction and behavioural intention to use Internet banking remain unclear (Marafon et al., 2018; Wardani & Riskayanto, 2019; Teka, 2020). Also, categorising the antecedents of Internet banking adoption into benefit and sacrifice factors is an embryonic topic and requires more assessment (Alsheikh & Bojei, 2014). In general, the literature is unable to offer a holistic model of Internet banking adoption, especially in developing countries such as IKR (Khan et al., 2017; Hamakhan, 2019; Teka, 2020).

The findings of this study will thus be important in filling the identified contextual gaps. This research develops a comprehensive model of Internet banking adoption based on valid models such as TRA, TAM, and ISS, which have demonstrated their ability to predict information technologies' adoption This will be achieved through investigating the effect of benefit factors (perceived usefulness, perceived ease of use and perceived system quality) and sacrifice factors (perceived cost and perceived risk) on behavioural intention to use and, in turn, actual use of Internet banking through the mediating role of customer satisfaction in the Iraqi Kurdistan banking sector, in addition to clarifying the ambiguity of the relationships between the considered variables in the literature (Ajzen et al., 2011; Al Khattab, 2005; Davis et al., 1989; DeLone & McLean, 2003; Vuković et al., 2019; Ali & Ju, 2019).

In a broad sense, as researchers turn their attention to a relational understanding of technology and the attitude and behaviour of customers, there is a paucity of knowledge about key factors that influence the adoption of Internet banking (Al-Qeisi & Hegazy, 2015; Asad et al., 2016; Aboobucker & Bao, 2018; Lin et al., 2020). In order to address this limitation, this study focuses on exploring key drivers of the intention to use Internet banking (selected based on the identified theories), along with considering the issues causing customer dissatisfaction and dissuading behavioural intention to use Internet banking in the IKR. Therefore, this investigation extends current theoretical knowledge of Internet banking and customer attitude and behaviour by developing a holistic model of Internet banking adoption and provides an increased understanding of customer attitude and behaviour towards the use of Internet banking in the IKR. Perhaps its findings will also be generalised regarding developing countries.

### 1.6.2 Practical Implications

According to the paucity of research on Internet banking in IKR, there is a lack of knowledge in terms of attitude and perception of Internet banking users in IKR (Demir & Fakhir, 2017; Hamakhan, 2020). Therefore, this study's findings will be important in assisting bank managers in the Kurdistan banking sector to enhance the performance of their firms by helping them better understand the attitude and behaviour of their customers about Internet banking. With its attempt to determine the extent and effectiveness of Internet banking adoption and its consequent implications on customer satisfaction and motivating customers' intention towards using it, the study will provide vital information needed to support IKR banks' growth. The empirical findings will also highlight the benefits and potential limitations of Internet banking for banks, thus providing a basis for improvement and fostering changes that will support further growth. Correspondingly, the research outcomes should contribute to the design of successful strategies for facilitating a positive perception of the bank and the entire banking system in Kurdistan. Moreover, the findings are expected to provide augmented insights for banks managers about customer satisfaction and their behaviour towards the use of Internet banking.

Generally, this study's empirical results will be relevant to various bodies assigned responsibility for managing the IKR's economy, especially since outcomes in the banking sector have direct implications on the IKR's development and growth.

## 1.7 Scope of the Study

As previously mentioned, this research investigates the effect of benefit factors (perceived usefulness, perceived ease of use and perceived system quality) and sacrifice factors (perceived cost and perceived risk) on behavioural intention to use and, in turn, actually using Internet banking through the mediating role of customer satisfaction in the Iraqi Kurdistan banking sector. The scope of this research can be evaluated on four central aspects: conceptual area, geographical scope, sample population and analytical process (see Figure 1). The study is categorised in IT management, which is the process of overseeing all matters related to information technology operations and resources within an organisation. IT management ensures that all technology resources and associated individuals are utilised correctly and in a manner that provides value for the organisation (Bird, 2010; Michel & Cocula, 2017). Therefore, this research focuses on understanding customers' attitude and behaviour towards the use of Internet banking and helping banks resolve and manage potential shortages of this service and satisfy customers while providing value for the IKR banking sector.

From a conceptual perspective, this research focuses on Internet banking and customers' attitude and behaviour, including perceived usefulness, perceived ease of use, perceived system quality, perceived cost and perceived risk, customer satisfaction, behavioural intention to use, and actual use of Internet banking. This investigation concentrates on the IKR banking sector; the rest of the banks operating

in Iraq—outside the Kurdistan boundaries—are not included in the study. This work's sample population comprises IKR bank customers who have used Internet banking services in the region. Structural Equation Modelling (SEM) through confirmatory factor analysis (CFA) was selected as the analytical research method.

The research scope is shown in Figure 1 below.

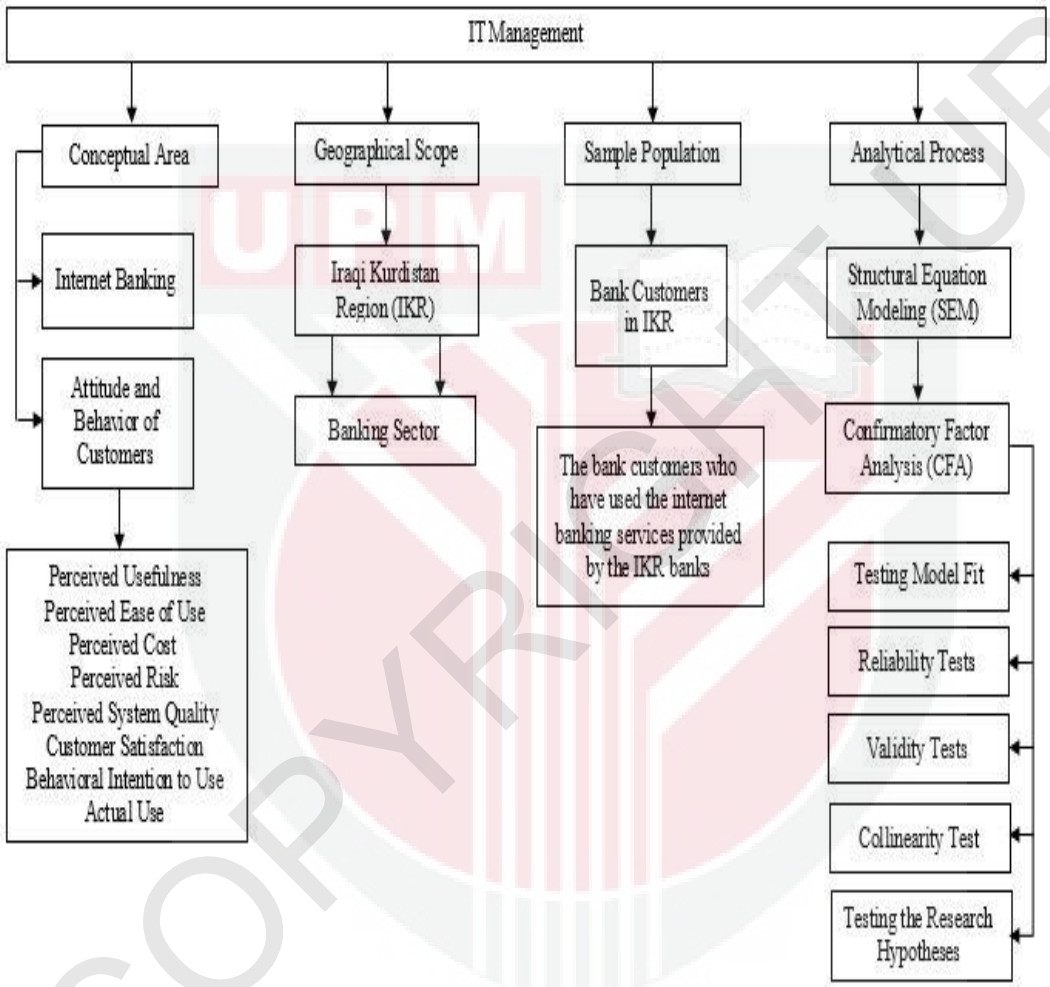


**Figure 1.1 : The research scope**

## 1.8 Definition of the Terms

### 1.8.1 Internet Banking

Internet banking, or online banking, has been defined as "the service that allows consumers to perform banking transactions using a computer with an Internet connection". Pikkarainen et al. (2004) defined Internet banking based on its utility as "an internet portal through which customers can use different kinds of services

ranging from bill payment to making investments" (Deraz, & Iddris, 2019).

### 1.8.2 Perceived Usefulness (PU)

**Theoretical Definition**

Perceived usefulness is defined as the extent to which a person believes that using a particular system will enhance their job performance (Davis et al., 1989; Vuković et al., 2019).

**Operational Definition**

From an operational viewpoint, perceived usefulness refers to the concept that bank customers tend to use or not use Internet banking to the extent that they believe it will help them make their transactions more smoothly, swiftly or effortlessly (Davis, 1989; Zaman et al., 2018).

In this study, the concept of perceived usefulness refers to the perception of Internet banking users in terms of particular features that this service provides such as being timesaving, as well as increasing productivity of banks, enhancing the effectiveness of service providing, improving overall performance, enhancing the quality of the services provided, and offering bank products and services more smoothly and efficiently, while being useful and effective in general.

### 1.8.3 Perceived Ease of Use (PEOU)

**Theoretical Definition**

Perceived ease of use is defined as the extent to which a person believes that using a particular system will be free of effort (Davis et al., 1989; Vuković et al., 2019).

**Operational Definition**

From an operational viewpoint, perceived ease of use refers to the degree to which a customer believes that engaging in online transactions via Internet banking would be free of effort (Davis, 1989; Lai, 2017). A system that is easy to use will accomplish tasks easily rather than a system that is difficult to use (Venkatesh & Morris, 2000; Xiao et al., 2017).

In this study, the concept of perceived ease of use refers to the perception of Internet banking users in terms of particular features this service provides like being easy to learn, user friendly, having clear and understandable instructions, easy to perform and execute what a user needs, and being flexible to interact with.

### 1.8.4 Perceived System Quality (PSQ)

**Theoretical Definition**

Perceived system quality is customers' perception of information retrieval and delivery of a system (Phuong & Trang, 2018).

**Operational Definition**

From an operational viewpoint, perceived system quality refers to the perceived performance of the Internet banking system in terms of reliability, convenience, and functionality (DeLone & McLean, 2003; Ali & Ju, 2019).

In this study, the concept of perceived system quality refers to the perception of Internet banking users in terms of particular features that this service provides like being up to date, easily accessible, performing accurate and efficient transactions, allowing access 24/7, guaranteeing the completion of transactions, having better overall technology performance, and in general providing quality services for customers through technology systems.

### 1.8.5 Perceived Cost (PC)

**Theoretical Definition**

Luarn and Lin (2005) defined perceived financial cost as the extent to which a person believes that using technology will cost money (Xiao et al., 2017).

**Operational Definition**

From an operational viewpoint, perceived cost refers to transaction cost, which may include transaction cost in the form of bank charges, Internet charges, and device cost (Chansaenroj & Techakittiroj, 2015).

In this study, the concept of perceived cost refers to the perception of Internet banking users in terms of the costs expended for the use of this service such as cost of the equipment used during the process (e.g., computer device, mobile device, etc.), transaction fees, communication or access fees, the effort exerted to obtain the information needed, and the likelihood of it being expensive.

### 1.8.6 Perceived Risk (PR)

**Theoretical Definition**

Dowling (1986) defined risk as "the situation where the decision maker has a priori knowledge of both the consequences of alternatives and their probabilities of occurrence". Therefore, perceived risk can be defined as lack of trust and potential side effects influencing the purchase of an article or services (Littler & Melanthiou, 2006; Lin et al., 2020).

**Operational Definition**

From an operational viewpoint, perceived risk refers to bank customers' thought and belief regarding the likelihood of having an adverse outcome and/or experience in online transactions (Kim, Ferrin, & Rao, 2008). In the Internet banking context, perceived risk is "the subjectively determined expectation of loss by an Internet banking customer in contemplating a particular online transaction". (Forsythe & Shi, 2003; Aboobucker & Bao, 2018).

In this study, the concept of perceived risk refers to the perception of Internet banking users in terms of the risks they must accept for using this service such as potential frauds, financial risks, compromised privacy, hackers, not fitting well with customer self-image, not performing well and creating problems for bank account holders, and, in general, being risky.

### 1.8.7 Customer Satisfaction (CS)

**Theoretical Definition**

Oliver (1997) defined satisfaction as "the consumer's fulfilment response. It is a judgment that a certain product or service feature, or the product or service itself provided (or is providing) a pleasurable level of consumption-related fulfilment, including levels of under or over fulfilment" (Mchomba, 2018). On the other hand, according to Yousuf (2017), customer satisfaction is a psychological state where customers are highly satisfied when the quality of a product or service exceeds their expectations. Nonetheless, customer satisfaction has been defined differently by various researchers based on the focus of their research.

**Operational Definition**

From an operational viewpoint, customer satisfaction can be defined in two ways. First, it is the fulfilment of the customers' expectations towards the current performance of a product or service. Second, it refers to the rating that a consumer gives to certain attributes that lead to their consummation (Vetrivel et al., 2020).

In this study, the concept of customer satisfaction refers to the level of satisfaction that Internet banking users have in terms of several services the Internet banking provides such as the performance of Internet banking services, being pleased with the experience, considering the use of Internet banking services as a wise decision, preferring Internet banking services over traditional banking, being satisfied with the security and privacy of transactions, maintaining good relationships between bank administrators and customers, accuracy and reliability of information, and, in general, being satisfied with the technology-based services offered by the bank

### 1.8.8 Behavioural Intention (BI)

**Theoretical Definition**

Behavioural intention indicates a person's readiness to perform the given behaviour, which is the immediate precursor of actual behaviour. In TAM, intention is a function of attitude and perceived usefulness (Ajzen, 2006, Teka, 2020).

**Operational Definition**

From an operational viewpoint, intention to use Internet banking refers to the bank customer's likelihood to use online transactions through Internet banking (Chen et al., 2002; Zaman et al., 2018).

In this study, the concept of intention to use refers to the level of desire and willingness of Internet banking users to utilise this service which reflects in feelings and attitudes such as intention to use when accessing Internet banking is possible, being willing to continue using internet banking in the future, preferring to use Internet banking over traditional banking, making a decision to use this service more often, and, in general, having intention to use Internet banking.

### 1.8.9 Actual Use (AU)

**Theoretical Definition**

Actual use refers to the manifest, observable response in a given situation with respect to a given target (Ajzen & Fishbein, 1980; Teka, 2020).

**Operational Definition**

In this study, the concept of actual use refers to the level that Internet banking users use this service for performing their bank transactions and/or operations which reflects in determinants such as considering themselves as regular users of Internet banking services, preferring to use Internet banking services when available, doing the most banking tasks online, having tendency to use Internet banking services

whenever possible, preferring Internet banking over going to a physical branch, and, in general, actually using Internet banking.

## 1.9 Structure of the Thesis

The thesis is divided into seven chapters. This first chapter discusses the study's background, followed by the problem statement, the research objectives, research questions, the significance of the research, the scope of the study, and a definition of terms used in the study. The remainder of the thesis is outlined below.

Chapter 2 describes the current status of the banking sector in the Iraqi Kurdistan Region. This chapter starts by describing the national economy of the IKR in relation to the services sector under the Development Plans. Following this, the banking sector's current condition, the issues and challenges it faces, and its prospects are discussed. Finally, the role of the technology in providing banking services and the present status of Internet banking services in IKR are explained. Chapter 2 also discusses the literature related to the key concepts and terms of the study. This chapter discusses Internet banking, behavioural intention, and actual behaviour and factors affecting Internet banking adoption. Chapter 2 also explores all the studied variables and their relationships and impacts on one another on the basis of the findings of previous studies. The chapter also aims to analyse the gap in the extant literature and proves the necessity of conducting the current study.

Chapter 3 outlines the theoretical framework used in this study. The chapter explains the theoretical foundations of this study, based on three theories: the Theory of Reasoned Action (TRA), the Technology Acceptance Model (TAM), and the Information System Success (ISS). It also discusses how the research model and hypotheses of the study were developed.

Chapter 4 describes the methodology which is used to carry out the study. This chapter involves the research design, research framework, measurement and instrument, pilot study, and the survey instrument's reliability and validity testing. It also discusses data collection procedures, sampling technique, and data analysis.

Chapter 5 is allocated to data analysis and discusses the tools, methods, and approaches implemented to analyse the data appropriately and purposefully. This chapter provides characteristics of survey respondents and the results of descriptive and inferential statistics. It also answers the research questions and achieves the research objectives by testing and analysing the hypotheses.

Chapter 6 provides an in-depth discussion of the research findings based on the research objectives and questions.

Chapter 7 is the conclusion that consists of the research implications and the limitations of the study and recommendations for upcoming studies.

## 1.10 Chapter Summary

This chapter introduced the current investigation and provided a holistic perception of the research objectives and how to accomplish them. As an entrance to the research agenda, the background of the study was comprehensively reviewed, and in the section of 'problem statement', the theoretical and practical gap of knowledge was explored and revealed. The chapter also highlighted five specific objectives and research questions of the study. The study's significance was elaborated, and the theoretical and practical contributions of the study were discussed. It has also assessed the research scope in the four taxonomies of conceptual, geographical, sample population and analytical levels, providing an enhanced understanding of the field of study. The final section of the chapter defined the key terms of the study, both theoretically and operationally.

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## LIST OF PUBLICATIONS

### Journal Articles

Rasull, A., Jantan, A. H., Ali, M. H., Jaharudin, N. S., & Mansor, Z. D. (2020). Benefit and Sacrifice Factors Determining Internet Banking Adoption in Iraqi Kurdistan Region. *Journal of International Business and Management*, *3*(1), 01-20.

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