

Marketing Strategies for Transitioning from Cash-Based Payments to a Cashless Economy: Insights from FIB (First Iraqi Bank) in the Kurdistan Region of Iraq

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Define the objectives and the application methods used in the Master's thesis.

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- Prepare a literature review focusing on Technology adoption and Fintech.

II. Practical Part

- Describe the nature and business activities of FIB First Iraqi Bank.
- Analyze consumer adoption intention of cashless payment in the Kurdistan Region of Iraq.
- Develop a project to provide policy direction for FIB First Iraqi Bank.
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SINGH, S.; SAHNI, M. M.; KOVID, R. K. 2020. What drives FinTech adoption? A multi-method evaluation using adapted Technology Acceptance Model. *Management Decision* 58(8), 1675-1697.

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ABSTRAKT

Rychlý globální přechod ke bezhotovostním ekonomikám přiměl finanční instituce, zejména na rozvíjejících se trzích, aby přijaly inovativní strategie odpovídající měnícím se spotřebitelským návykům. Tato diplomová práce zkoumá marketingové strategie, které využívá First Iraqi Bank (FIB) k podpoře přechodu od hotovostních transakcí k digitálním platebním systémům v regionu Kurdistán v Iráku. Výzkum je založen na modelu přijímání technologií (Technology Acceptance Model – TAM), obohaceném o kulturní prvky, jako je religiozita. Zaměřuje se na vliv vnímané snadnosti použití, vnímané užitečnosti, postoje k používání a náboženského přesvědčení na ochotu spotřebitelů přejít na bezhotovostní řešení.

Byl použit kvantitativní výzkumný přístup, přičemž bylo získáno 256 platných odpovědí prostřednictvím strukturovaných dotazníků. Data byla analyzována pomocí nástroje SmartPLS za účelem vyhodnocení měřicích a strukturálních modelů. Výsledky ukazují, že vnímaná snadnost použití má významný vliv na postoj, který následně silně ovlivňuje ochotu přijmout digitální platební systémy. Naopak vnímaná užitečnost a religiozita nevykazovaly přímý statisticky významný vliv. Výsledky zdůrazňují důležitost uživatelsky přívětivého designu a kulturně citlivých marketingových strategií pro zvýšení míry přijetí.

Tato práce přispívá k teoretickému i praktickému poznání tím, že kontextualizuje TAM v kulturně specifickém prostředí a nabízí praktická doporučení pro finanční instituce usilující o rozšíření digitálního přijetí. Zároveň identifikuje klíčová omezení výzkumu a navrhuje směry pro budoucí výzkum s cílem dále rozvíjet modely přijetí v podobných rozvíjejících se kontextech.

Klíčová slova: bezhotovostní ekonomika, model přijímání technologií (TAM), digitální platby, First Iraqi Bank, region Kurdistán, SmartPLS, vnímaná snadnost použití, religiozita, finanční technologie.

ABSTRACT

The rapid global shift toward cashless economies has prompted financial institutions, particularly in emerging markets, to adopt advanced strategies that are associated with consumer's evolving behavior. This thesis investigates the marketing strategies employed by the First Iraqi Bank (FIB) to facilitate the transition from cash-based transactions to digital payment systems in the Kurdistan Region of Iraq. Grounded in the Technology Acceptance Model (TAM) and enriched with cultural constructs such as religiosity, the study inspects the effects of perceived ease of use, perceived usefulness, attitude toward use, and religious beliefs on consumers' willingness to adopt cashless solutions.

A quantitative research approach was employed, collecting 256 valid responses through structured questionnaires. Data analysis was conducted using SmartPLS to evaluate both measurement and structural models. The results reveal that perceived ease of use significantly impacts attitude, which in turn strongly predicts willingness to adopt digital payment systems. However, perceived usefulness and religiosity did not prove significant direct effects. The findings underline the importance of user-friendly design and culturally sensitive marketing strategies to enhance adoption.

This research contributes to both academic and practical domains by contextualizing TAM within a culturally involved environment and offering actionable recommendations for financial institutions seeking to expand digital adoption. It also identifies key limitations and proposes future research directions to further refine adoption models in similar emerging contexts.

Keywords: Cashless economy, Technology Acceptance Model, digital payments, First Iraqi Bank, Kurdistan Region, SmartPLS, perceived ease of use, religiosity, financial technology.

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1 INTRODUCTION

The international financial system is going through tremendous change with societies moving to digital forms of payment and leaving their past of cash dominated financial transactions. The global financial transactions volume is over 70 percent processed via digital channels by 2023 and indicated that the cash lessness of global economies is accelerating significantly (Demirgüç-Kunt et al., 2022). This is not just technological adaptation, it is also a substance behavioral and infrastructural change. With mobile phones, connectivity and fintech solutions becoming a way of life, cashless is gradually taking place, especially in urban and semi-urban settings as the usability and efficiencies become the paramount concerns.

It is the thesis study which deals with exploring how the First Iraqi Bank (FIB) contributes to the collapse of the cash-based structure of the economy to the digitally empowered economy of financial services in the Kurdistan Region of Iraq. In the study, the researcher evaluates the influence of the strategic digital marketing programs undertaken by the bank, when conjoined with consumer perceptions and socio-cultural forces on the willingness of the people to adopt cashless payment systems. Based on the basis of Technology Acceptance Model (TAM), a well-known model in assessing user adoption of technology, the study advances TAM by incorporating religiosity as given phenomenon that has influential hold and over which it is very contextually sociocultural. These five main variables that are going to be analyzed are Perceived Ease of Use (PEOU), Perceived Usefulness (PU), Attitude Toward Use (ATT), Religiosity (REL), and Willingness to Adopt (WTA) to be able to determine how they interact with each other to contribute to consumer behavior in a conservative and emerging financial setup.

Despite the impressive changes in the technological sphere and providing huge amounts of people with the ability to use digital platforms, cash still takes precedence in most parts of Iraq, especially the epidemic of Kurdistan Region. Such stickiness has been associated with hindrances in both its structure and psychology such as low confidence levels in formal banking systems and sectors, weak knowledge of finances as well as infrastructural limitations. The above barriers are also points of entry into as well as factors suppressing the financial institutions aiming at implementing modern payment systems. In turn, the current study aims to contribute to the elimination of the existing gaps in the existing empirical data by examining behavioral determinates and limitations that shape the cashless adoption. The study suggests practical solutions to other financial service providers, government agencies, and policymakers aiming at pursuing digital financial inclusion due to the emphasis it gives to the intersections of technology and culture coupled with consumer trust. Most of the previous research on

digital banking has been focused on developed countries or those with a more developed understanding of technology, and how to utilize it to improve life. Convenience, perceived usefulness and technological innovation have been found as the main motivations in these studies on a regular basis. However, such results are rarely done by keeping in mind the subtle cultural and infrastructure situations that prevail in emerging scenes (Sulistyowati et al., 2021; Davis et al., 1989). The Kurdistan Region presents the additional specific vulnerable points in the ongoing cash preference, low access rates to digital means, and the sustained worry about the trust towards finances on the one hand and greater localized inquiries on the other. By comparing the effectiveness of culturally adapted marketing tactics and technology designs, this research helps fill this gap as far as determining the higher willingness to embrace cashless solutions by the population goes. In consideration of these contextual complexities and limitations of the theoretical nature of the research, the thesis aims to have an answer to the following three research questions:

- 1. What are the key barriers and enabling factors that influence consumer willingness to adopt cashless payment systems in the Kurdistan Region?*
- 2. How do perceived ease of use and perceived usefulness shape users' attitudes toward digital banking solutions offered by FIB?*
- 3. To what extent does religiosity impact consumers' behavioral intentions in adopting cashless payment systems in a culturally conservative context?*

Theoretically, the study enhances TAM by incorporating religiosity as an irrelevant variable just like in the case of external factors like the socio-economic-status and hence improve the model applicability in non-Western regions. This extension provides a more elaborate and detailed perception of technological acceptance regarding culturally closed societies. In practice, the thesis provides the First Iraqi Bank and other member institutions with evidence-based knowledge on how to become culturally aligned to their digital services and communication tactics. It also enlightens the policymakers in the region to conceptualize encompassing financial policies, awareness creation programs which encourage people to be digitally literate and have confidence in security of the fintech innovations. The results combined provide an elaborate blueprint of how to fast track financial modernization and the adoption of digitalization in the development of the emerging Iraqi economy.

1.1 Problem Statement

Over the past few years, the financial sector of the globe has been marked with the aspects of fundamental change, where the cultural shift in evolution is making apparent the replacement of

traditional cash-based commerce with the digital payment system. This growth has been driven by the fact that there are improvements in financial technology (fintech), increased penetration in smartphones and internet, and demand by consumers that it be convenient, faster, and transparent. The transition process is often associated with fully developed economies, but it is having an oversized impact on emerging economies, and this is taking place in Kurdistan Region of Iraq. Despite the advancement in mobile infrastructure and exposure of more people to digital solutions, a significant percentage of people in Kurdistan still use a great deal of cash, especially in everyday life and informality-based retail.

Such juxtaposition of modernization and perseverance with traditional behavior is both a challenge and a high-stake opportunity that any financial institution with intentions of transforming the region into a cashless future shall go through. In that regard, the First Iraqi Bank (FIB) has assumed the role of digital innovation facilitator and has come up with various types of initiatives, aimed at increasing the accessibility and perceived trustworthiness of the digital financial services to the wider audience. Successful use of such practices requires a deep insight into consumer behavior, and cultural inclinations/preferences as well as psychological hindrance. The region is characterized by its own socio-political background, past reliance on cash and its astuteness towards technological change and therefore the strategies that are devised must not only be technology-wise but also culturally aware and community oriented.

Some recent studies emphasize the idea that digital revolution in banking is not about technical implementation alone but rather relies upon the population faith and confidence in authorities' credibility on the one hand and integrated use of expansion strategies on the other hand (Sharma, Gupta, Arora, and Shaikh (Eds.), 2025; OECD, 2021). It is thus essential in shaping effective financial services to have a critical knowledge on how its consumers view digital systems in terms of their ease and usability coupled by how religiosity and other factors influence their attitude in the conservative and trust-sensitive society such as in Kurdistan.

The given research examines the intricate relationships between personal attitude, cultural values, and institutional solutions that determine the intention of consumers to use cashless payments in the Kurdistan Region. It does not only aim at finding out the barriers but also provides the strategic insights to the financial institutions and policymakers who work to facilitate or promote the use of technology to create digital inclusion and promote financial modernization in Iraq.

1.2 Structure of the Thesis

The thesis is divided into two main parts which are theoretical formation and practical implementation. All the sections of this paper evolve in a logical sequence that creates a systematic understanding of the adoption of digital payments phenomenon in the Kurdistan Region of Iraq, and First Iraqi Bank (FIB) in particular.

Within theory, the first part of the global trend toward cashless economies is placed after, which in its turn is combined with the second one reviewing the trends in the world digital payment in light of their socio-economic implications. It proceeds to focus the scope into the Iraq and the Kurdistan Region explaining how structural and cultural factors contribute to the obstacles of digital financial inclusion. It also details the technology acceptance model (TAM) including the major constructs in the model which are Perceived Ease of Use (PEOU), Perceived Usefulness (PU) and Attitude Toward Use (ATT). Also, the chapter uses religiosity as a sociocultural factor, which will be of importance in Kurdish case. The latter part of this section is concluded with the development of a conceptual framework and set of hypotheses.

The practical section stipulates the methodology of research, research design, and the way of analysis. It describes ways in which the survey was conducted, the sampling strategy and the data collection itself. With the help of SmartPLS software, the thesis performs Systematic Equation Modeling (SEM) analysis mode to test all the proposed hypotheses and determine the extent of relations between the project variables. The interpretations of findings reflect on the literature already in existence, giving either theoretical or practical outcome.

The following chapters provide recommendations on strategies that should be put forth to FIB and other similar financial institutions while doing business in transitional economies. These suggestions concern strategies for marketing, design of services, and introduction of policy that can help to increase the level of adoption. The research ends with the limitations and the prospects of future research. This makes this thesis not only a contribution to the academic discourse but also a decision-making tool to be appreciated by the stakeholders concerned with the process of financial digitalization in Iraq.

1.3 Significance of Study

The research given can contribute both to academic debate and to the real world of financial-sector reform, which is especially applicable to emerging economies. As the world moves away towards a cashless transaction system, it is time to shed some light regarding the factors that cause digital finance

adoption. Structural, sociocultural, and psychological phenomena are also characterized by a combination that makes some contemporary international frameworks which are considered to create an excellent orientation towards the process of financial modernization incomprehensible in the Kurdistan Region of Iraq. The study helps to overcome such gaps in literature by placing the study of technological diffusion in a socio-culturally backward setting where under banking is rife.

Theoretically, the study contributes to the Technology Acceptance Model (TAM) with the involvement of religiosity as one of the contextual factors. In such a way the study expands the scope of the explanatory model to such level- which is critical in case of such regions where the cultural and faith-based values have predominant role in the decision making of the consumers. Despite the copious applications of TAM in the digital banking research, its applications in the Middle Eastern countries of which Iraq is one of them, are not well developed. Incorporating the concept of religiosity to the external construct will provide a more culturally sensitive background in the user behavior and broadens the existing discussions about technology adoption in non-Westerners. Structural equation modeling of this expanded model, empirical verifies it thus contributing to the compilation of behavioral and cultural adjustments of TAM.

At the practical level, the results can be used to assist monetary associations, in this instance the First Iraqi Bank, that need to implement inclusive and low-tech usage through the merger of digital monetary services, spliced with a view of culturally responsive financial products. The findings determine main psychological and technological factors that predict the use of digital payment, namely, ease of use and attitude of users. These insights are used as the guide to designing digital auto platforms, the creation of marketing messages, and even the incorporation of onboarding procedures that appeal to the local people. Besides, the report advises the public-sector stakeholders with the evidence-based suggestions that can contribute to the achievement of world-leading financial inclusion in Iraq, increased financial literacy, and reduced financial distrust, which represent the past obstacles on the way to digital transformation in this country.

With the fast growth of digitalized banks, this research makes its contribution at a good time and place since it offers the practical roadmap of the implementation process and a theoretical foundation of a further investigation. It reconciles the context of digital acceptance in a transitioning society and thus caters to the needs of the global fintech progress and challenges and meets the requirements of local societies.

1.4 METHODOLOGY

In this study, a quantitative design was adopted in order to carry out a systematic investigation of the behavioral and cultural factors, which influence the adoption of cashless payment system. Considering that its purpose was to test the existence of relationships between various latent variables Perceived Ease of Use (PEOU), Perceived Usefulness (PU), Attitude Toward Use (ATT), religiosity (REL) and Willingness to Adopt (WTA), the methodology was based on the extended Technology Acceptance Model (TAM). The study was conducted in six logical interdependent stages that were time-triangulated to attain the overall goal of the study in terms of methodological, analytical, and empirical credibility.

1. Literature Review. To begin with, a thorough description of meaningful theoretical concepts and developmental potential of the models was possible.
2. Instrument Development. A scheduled questionnaire was designed, which was based on other established TAM questionnaires, and it was modified to suit the Kurdistan Region. The tool was pilot tested to ascertain its clear, reliability and culturally acceptable in the three aspects.
3. Data Collection. In January-April 2025, research in the format of face-to-face interviews was conducted among the customers and general banking users of FIB with broad demographics of the sample. A purposive sampling of respondents who showed interest in the possibility of entering a digital financial service was done. A total of 256 responses were received out of which only 256 were valid.
4. Data Analysis. The PLS-SEM system of regressions was adopted with the help of SmartPLS 4 program package. It was chosen due to the ability to process complex models, small sample size, and non-normally distributed data, which is true of the same situation in the study (Hair et al., 2014). The process of analysis included 2 phases
5. Measurement Model Assessment The reliability and the validity of every construct were also checked by means of outer loading, average variance extracted (AVE), and composite reliability.
6. Analysis of Structural Models The idea of relationship among variables was checked with path coefficients, statistical significance was judged with bootstrapping technique (5,000 resamples), and model fit indicators were run.

The Research Methodology Flowchart that is amended (Figure 1) presents much more reasonable structure and logic of these steps in sequence as it is clear what stages and phases should be provided, including design, instrument, pilot testing, data collection, and model evaluation.

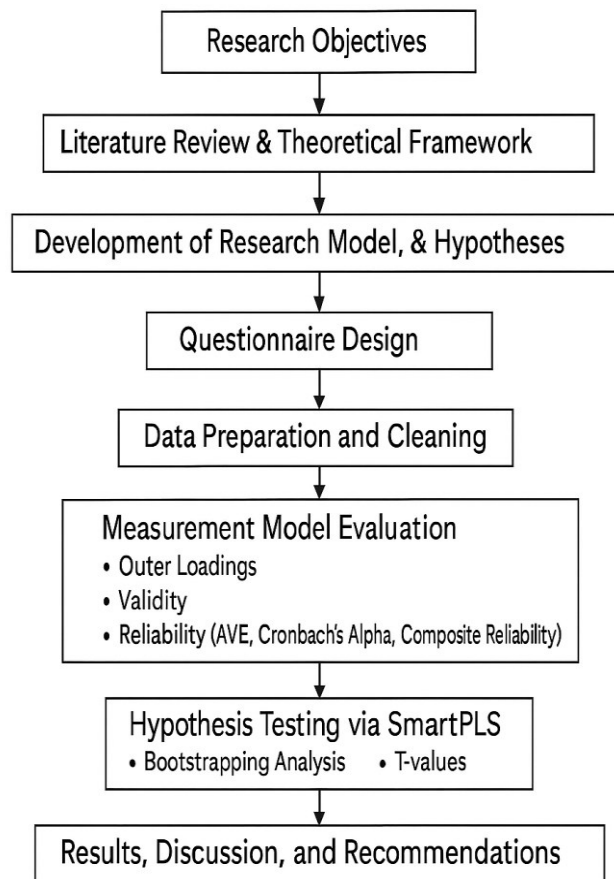


Figure 1 Research Methodology Flowchart.

Source: The Author

THEORETICAL PART

2 OVERVIEW OF CASHLESS ECONOMY

The single aspect that accompanies the arrival of a cashless economy is that it is not merely a replacement of payment instruments; it marks a transformation of the systems by which value is stored, accelerated and regulated. Based on this, the current discourse examines the forces driving and hindering the cashless diffusion and indicates the gaps where current literature does not elucidate the behavioral patterns in developing economies or markets, and more specifically the Kurdistan Region of Iraq.

The factors that have driven the growth of digital payment system at the cost of cash are three interlinked forces namely: fast in-tech advancement, universal smartphone availability, and consumer trends. In retaliation, financial regulators as well as the privately owned bodies are proliferating the cashless ecosystems to enhance transparency, minimize the cost of the transaction, and extend the access to the financial services to the unbanked citizens (Singh et al., 2020; Sulistyowati et al., 2021). Despite this, the developed economies like Sweden and South Korea have reached near cashless maturity whereas most developing economies are in their infancy stage and face a challenge of infrastructural bottleneck, inadequate computer literacy as well as regulations.

In contemporary literature, most of the effort focuses on plotting adoption curves or outlining technical requirements. This review, on the contrary, discusses to what level the existing structures of acceptance, in particular, TAM, TAM2, TAM3, and UTAUT can be transferable to the setting in which cultural norms, trust relationships, and the capability of institutions differ significantly. In the discussion that follows, (a) the history of TAM and its derivatives in the digital-payments studies is highlighted; (b) the remaining methodological and conceptual flaws, the fact that TAM2/3 or UTAUT has rarely been applied to the Middle East is pointed out; and (c) the main questions that guide the empirical refinement carried out with the First Iraqi Bank are identified, since the theoretical frameworks must be taken to a larger world, and yet must be aligned to a more local context of socio-cultural restrictions.

2.1 Global Trends in Cashless Transactions

The gradual shift of the world financial system towards online financial instruments is quite a different scenario than a replacement of the cash flow with digital money; it involves overall rebuilding of the payment systems, relative prioritization and awareness of the users. In the face of increased demands of fast service delivery coupled with continuous improvement of security networks on which the sector operates, mobile banking applications, digital wallets and contactless payment systems have become

prevalent (WORLD BANK GROUP, 2020). The adoption rates or technical features are still reported in literature in isolation and without a systematic exploration of how it overlays with the underlying acceptance constructs such as the perceived usefulness and the perceived ease of use, with varied socio-economic situations.

Use of cash has dropped to under 10 percent in other advanced economies including Sweden and South Korea, hence giving an indication of the final goal of a more widespread consumer behavior change (WORLD BANK GROUP, 2020). In comparison, most of the published work on emerging markets includes only inclusion measures, and thus, it relegates other dimensions of whether to continue to trust, become digitally literate, or to prepare institutes to new measures. Even though the COVID-19 pandemic unquestionably spurred the adoption of contactless, due to hygiene concerns and restrictions on the movement, the existing literature (Demirgüç-Kunt et al., 2022). lacks the assessment of the short-term spikes in adoption of contactless and their links to the long-term intentions to continue using contactless as part of the existing literature on TAM2, TAM3 or UTAUT.

Motivations regarding the reduction of corruption, widening tax bases, and good governance content presented in policy endorsements by central banks and international financial institutions do not associate them with user level motivations or inhibitions (World Bank, 2022). The same pattern can be seen with the examination of such government-sponsored platforms as India Unified Payments Interface (UPI) and China WeChat Pay, which is much hailed through the opportunities to achieve high urban and rural market coverage, but is still lacking a proper context due to lack of applying extended acceptance models in general machine usage tendencies among various demographic groups. This lacuna is an indicator of a missed opportunity; the other body of research, in the absence of the incorporation of TAM2/TAM3 and UTAUT construct, cannot explain completely the reasons as to why some populations court, or reject cashless innovation.

2.2 Challenges in Adopting Cashless Payments

In the Kurdistan Region of Iraq, the users would have unequal access to infrastructure, such as unequal access to smartphones, the availability of the internet connection, and few points-of-sale terminals, which could affect PEOU and the facilitating conditions within the UTAUT construct. Indeed, even with a high level of perceived usefulness (PU), a stable behavioral intention (BI) to adopt cashless servicing fails to emerge when one finds it hard to possibly access or operate all the time on digital-payment tools (Note, 2022, p. 45; Demir et al., 2022, p. 299). The literature of research, however, often pays attention to uptake rates only and fails to look at the manner pertaining to uptake of how these

infrastructural attributes interact with the individual perceptions and levels of experience as is the case in TAM2 and TAM3 (cognitive instrumental processes and computer anxiety).

Data privacy and cybersecurity are two rather similar constructs that directly influence the Technology Acceptance Model (TAM) antecedent perceived risk. The anxiety of fraud, intrusion or misuse of data is often a factor that kills the trust and drives the propensity to use (PU) down hence pushing most users not to abandon the option of exchanging value and going anonymous using cash. Even though Setiyawati and Bangkalang (2022) prove that trust highly predicts the mobile-banking adoption, there appears to be an insufficient number of studies that estimate the scale on which these fears vary due to age, gender, or socio-economic standing in Middle Eastern settings. At the same time, disintegrated payment gateways (e.g., Fondy, LiqPay) undermine performance expectancy when those who use them are met with failed transactions, hidden costs or interface discrepancies across the board, although active research to the extent to which this kind of technical friction is correlated with drop-off rates in emerging economies remains an utter rarity.

There are economic reasons making the adoption process even more complicated Transaction costs and data-usage and device expenditures, as the external variables that have a depressing impact on PU mostly on price-conscious consumers (World Bank, 2022). It is possible to say that there is little micro-level study on end-user cost sensitivity as part of extended technology acceptance models (TAM) or no longer organized by theory, the Unified Theory of Acceptance and Use of Technology (UTAUT) (Frieze, 2003; Guo et al., 2020). In addition, the social and cultural forces that are part of the subjective norms by TAM2 and social influence variable in UTAUT, are determining factors in the cultures where money has been embedded with a sense of faith or with evaluation. Notwithstanding, the literature tends to handle emerging markets as one-size-fits-all issues of inclusion, failing to acknowledge the roles of families and networks, religious factors, or tribal belonging when it comes to acceptance of an individual (Batiz-Lazo & Efthymiou, 2016, p. 67).

The central problem that the proposed study will help to fill, therefore, is having the theoretical and empirical framework to begin to explain how to best assist in the shift to cashless payments in the Kurdistan Region of Iraq by addressing the infrastructural, psychological, economic, and socio-cultural barriers to that transition.

2.2.1 Benefits of Cashless Payments in Developing Economies

In the environment of the developing economies, the shift to cashless systems has implications that go beyond the increased velocity of transactions at hand; it also alters expectations as well as people motivations both of which can be well balanced through theories of technology acceptance. The

efficacy of transfer by the government and further reduced informal financial activities increases the performance expectancy because digital payments clearly follow the expectations of fast, reliable, and transparent (Verhoef et al., 2021). Furthermore, digital platforms expand available social power as, through interpersonal observation of real advantages, the historically marginalized groups can be integrated and include women, rural population, unbanked customers, and others (Verhoef et al., 2021).

Under the dimension of the firm level, banks and fintech receive efficiency dividends that essentially determine the perceived effort expectancy of the user. Reductions in operational costs and the number of cases of fraud allow the institutions to come up with various onboarding methods and interfaces that require less cognitive investment to master and use (Independent Evaluation Group, 2022). Concurrently, personalization with the use of data drives on transaction history to reinforce habits hence reinforcing the third point of anchor of habits by the technological acceptance model (TAM) that says habits are formed (Davis et al., 1989). At the same time, governments can access enriched datasets that help them to prevent corruption and refine taxation, which is an example of how improved facilitating conditions lead to the ecosystem created where the user sees the reliable infrastructure and favorable regulatory environment (Independent Evaluation Group, 2022).

It would also be worth looking at the salience of exogenous shocks in consolidating the intentions of adoption. The analysis of transition to contactless disbursements in the times of COVID-19 pandemic shows that the regions that had already installed the digital infrastructure found the process of transition smoother, which proves the idea of the conjugation of situational influences (TAM3) and performance expectancy in the times of a crisis (Demirgüç-Kunt et al., 2022). The ability to deliver emergency assistance without any risks and efficient delivery not only confirmed the practicality of using digital tools but also removed the user worry, reducing the computer anxiety and the strengthening of using the tool in the future.

Despite the evidence of the value of cashless payments that has been given in many studies, little has been done with the existing literature that condenses the advantages of cashless payments into an inclusive acceptance envelope. The given research fills this gap as it locates macrolevel advantages within the known constructs of TAM, TAM2/TAM3, and UTAUT. The integration provides a subtle insight into the interplay of the factors associated with efficiency gains, social processes, infrastructure support, as well as experiences of crises on the advancement of cashless payment adoption in the Kurdistan region of Iraq.

2.2.2 Challenges Specific to Iraq and Kurdistan Region

Although the use of cashless transactions can have significant economic and social advantages, several obstacles are taking place in Iraq and the Kurdistan Region. Such barriers refer to low penetration in the banking system, poor state of financial literacy, low levels of trust in financial entities, and a poorly developed digital system (Singh et al., 2020). Digital payments are also deterred by the issues of security, be it digital or physical. The resistance to culture and cash payments is integrated into the local culture in the form of local traditions in the view that it is more trustworthy or concrete (Putrevu & Mertzanis, 2024).

The displacement of people, informal labor market, and political instability in the Kurdistan Region have also made this transition even more complicated. Despite the growth in mobile and internet penetration, the gap in technology has also limited the cashless expansion between the urban and rural areas. To overcome these obstacles, therefore, there is need to have a cross-sectoral approach that considers education, investment in the infrastructure, and culturally appealing marketing campaigns.

The unacceptability of platforms that have an inability to inter-operate, lack of trust in digital forms of banking and limited small business habitat are also statistically slower factors. Organizational reluctance, the delays that regulatory processes add, and their overall inertia, only add insult to injury and designing this digital financial system to be brighter and more inclusive is losing an imminent necessity that should be a strong collaboration between the governments and the Private sector.

2.3 Case Studies of Cashless Transitions (with Global and Regional Examples)

Sweden is one of the most developed economies that are regarded as not cash based. By 2022, even the point-of-sale transactions were based on physical currency less than 5 % of the time- a drop of a major magnitude in the past decade. The forces leading to this shift were, among others, long-term cooperation between the central bank of the country and the stakeholders of the private sector to facilitate the use of contactless cards and mobile applications aimed at receiving payments (WORLD BANK GROUP, 2020). City officials progressively removed the possibility of dealing with cash in schools and on public transportation, and the number of bank branches that were willing to receive cash significantly reduced: to around 1 000 in the year 2012 to fewer than 50 in 2022 as it is shown in Figure 2.

Most Swedish Bank Offices Have Stopped Taking Cash

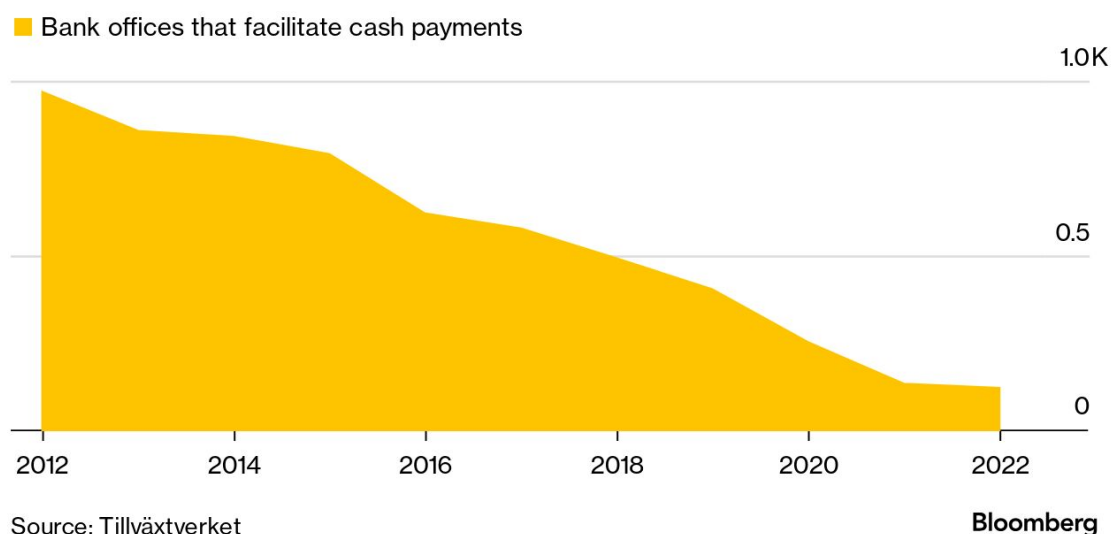


Figure 2 Decline in Swedish Bank Offices Accepting Cash (2012–2022)

Source: *WORLD BANK GROUP, 2020*

In the literature on payment systems, the Smart Nation blueprint that Singapore has rolled out is an example of how governmental leadership can hasten the pace at which payment systems in the country go digital. Enactment of an intertwined standard code of QR and providing direct financial incentives can help cable transactions to compatible e-wallets. The following was the coordinated public education program that featured smooth transactions at hawker centers and on the mass transit in driving above 80 % of urban areas to digital transaction penetration by 2023.

The similar dynamic took place in the United Arab Emirates. The mobile wallets like Etisalat Wallet experience rapid growths as the youthful and tech-savvy population of the country makes this happen. Fintech partnerships incorporated these wallets into the common services, such as school fees payment and utility payments, as well as transportation, whereas biometric identification systems solved the remaining security issues. In the present day, there are more than three quarters of digital payment at government service centers and metro stations.

Intentionally closer to home, the government of Jordan required that salaries of civil servants be paid using Jomo Pay and, in the process, fueled the wallet usage. Peer-to-peer transfers and payments to merchants were soon to come once the employees got the balance in their mobile wallets. Within the two years of its launch in 2019, the active user base of Jomo Pay is more than doubled, Setiyawati and Bangkalang (2022) point up that proving the fact that when essential services are associated with digital platforms, there is a way of overcoming initial adoption hurdles.

These case studies are strategic as far as the Kurdistan Region of Iraq is concerned. They disclose that developing assurance, a digital infrastructure concentration, and marketing adjustment to the culture are crucial to the wide-embracing practice. These international trends serve as sources of information and warning signs, as they are the reminder of the dangers of being left out of the process digitally, of incompatibility, or inadequate user education.

3 THE ROLE OF FIB IN THE TRANSITION TO A CASHLESS ECONOMY

The First Iraqi Bank (FIB) has become one of the pioneering institutions in the transition of the Iraqi economy to be placed under a cashless system, in the backdrop of Iraqi sustained financial modernization plan. Being the first fully digital bank in Iraq, FIB replaces the traditional banking services with digitized ones and at the same time improves the experience of working with the clients based on the experience of the global fintech trends and integrating them with specifics of the national culture. Such a strategic shift is based on two principles determined to increase the level of technological infrastructure and long-term consumer relationships, both of which relate to the low financial inclusion scores and the high reliance on physical money in the country (Notes, 2022).

The long trend in Iraq of financial architecture has three key characteristics: fragmentation, under-banking, and strong reliance that shows up on cash. Most of the Iraqi adults still were not formally integrated into the financial system even in 2021, with 80 % not covered by the formal financial system (Demirgüç-Kunt et al., 2022). Here, the development of the first digital-native and Iraqi bank, FIB, is a revolution. Unconsciously, the strategy of FIB is to expand the scope through digital boarding procedures, digital Know Your Customer, and mobile-first banking application, thus providing some options that are complementary and cannot be lived without the incorporation of remote and underserved demographics. The empirical evidence supports the assumption that digital banking is competent the most in the case of lowering the barrier to entry of downgraded users and creating systemic infrastructures that would focus on trustworthiness and functionality of the end-user (Setiyawati and Bangkalang, 2022; Demir et al., 2022).

The other main element in the transition model of FIB is the deployment of continuous payment technology such as the use of QR code payments, Visa Direct, virtual cards, and a healthy POS network. These are one of the tools that have been used in other unsuccessful cashless efforts, especially in places where mobile connectivity is high and touch panel simulation is easy to navigate. The services of FIB are provided to all individual consumers and to all enterprises such as start-ups as well as SMEs as these services deal with the critical constraints of speed of settlement, less transactional expenses, and transparent accounting procedures which are essential in entrepreneurship and more so, economic growth (Sharma et al., 2025)

According to the revelations of the Financial Intelligence Bureau (FIB) of Iraq all marketing activities aimed at convincing the population to use the digital financial services provided must be culturally received, community based, and supported with information in order to overcome the decades old mistrust in banks by the people, thus encouraging more of the people to make use of the

Products that prioritize the aspect of security systems, show that the mechanics are easy to implement, and have concise guidelines and manuals have worked very well in fostering trust in a consumer. In line with other publications that have been done on the topic of fintech marketing in recent years, FIB has put the emphasis on the positive side of educational content and messages that get a sort of radicalism because of the scarcity of financial literacy (Lai and Zainal, 2015).

Moreover, FIBs not only support the Central Bank of Iraq on its National Financial Inclusion Strategy to increase their institutional legitimacy but they also provide the connection to the Central Bank of Iraq as one of the key actors in the implementation process that is why its activities are aligned with the goals to increase the rate of penetration of electronic payments, electronic digitization of government transactions as well as strengthening the financial transparency on the macro level (Note, 2022).

The fact that the digital efforts of FIB may be sophisticated is supported by empirical evidence that proves their effectiveness. In particular, using statistics on the amounts of cashless transactions made through FIBs platforms, it can be evidenced that the amounts of such purchases have been increasingly large implying gradual reshaping of consumer behavior. The hypothesis of considering the availability of a sound digital financial infrastructure to spur exponential adoption rates due to the combined influence of the availability of the specific factor and behavioral marketing techniques is supported by analyses in other related developing contexts (Demir et al., 2022; Verhoef et al., 2021).

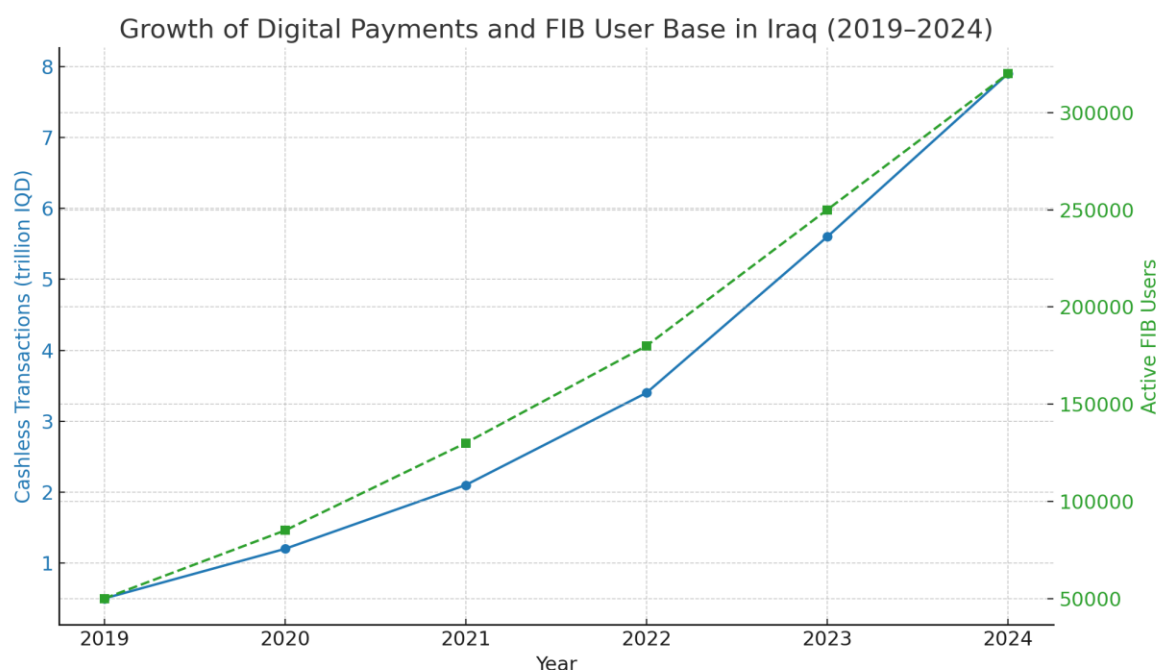


Figure 3 FIB Digital Growth Chart User Base in Iraq (2019–2024)

Source: Author's elaboration based on study data (2025).

Now, the First Iraqi Bank has progressed past being a bank retailer of financial services in its country into becoming a bank provider of change that impacts the tangent of banking in Iraq. The institution combines the world's best practice with sentiments of the local conditions and hence this forms a model that other financial institutions require operating in transitional economies. The case demonstrates the idea that effective digital transformation is hinged on the leadership across institutions, as well as strategic collaborations and a deep understanding of the consumer psychology, and cultural understanding (Sharma et al., 2025; Batiz-Lazo & Efthymiou, 2016).

3.1 FIB's Digital Transformation Initiatives

The First Iraqi Bank (FIB) has also become one of the key players regarding the direction Iraq is taking towards its quest to have a digital financial future. FIB has adopted a holistic transformation plan that would modernize their banking system and enhance financial services to reach the masses of the country as the first completely digitalized bank in the country. Working in cooperation with ICSFS, the institution has adopted the ICS BANKS Digital Banking solution, which enabled it to accelerate operations and improve customer experience and even establish the whole cycle of digital onboarding (ICSFS, 2023).

The digital transformation is allied to the national agenda of increasing financial inclusion especially in such underbanked districts as Kurdistan. This aspect has helped the organization to do away with traditional barriers to banking since customers are now able to open accounts, authenticate their identities, and utilize their services without necessarily going to the physical institution. At the same time, its focus on security and users has increased its inclusiveness among the people, which is a crucial aspect in areas where a high level of digital skepticism is a crucial factor. Close implementation of high-level cybersecurity measures on the part of the bank and user-friendly interface of the applications represents a decisive step in developing consumer trust.

3.2 Marketing Strategies of FIB for Promoting Cashless Adoption

The approaches that FIB uses put emphasis on conveniences, safety, and new age. Regarding enhanced components such as time sparing and reduction in physical interaction, FIB will appeal to an audience of customers that is technologically adept and safety conscious. Its marketing efforts are often based on the use of real-life situations that are close to the practice of any common consumer, i.e. paying the

bills, sending or receiving the money or shopping online. In support of that, through social media, infographics, and community events educational materials are provided that explain the advantages of digital banking and help to demystify it.

FIB has adopted localized marketing orientation as it embraces the best global practices. The bank also ensures that it personalizes its communications to appeal to the local cultural values, religious beliefs and the linguistic preferences of the people in the Kurdistan Region. This adaptivity of culture counteracts resistance to change and the development of emotional relations with a customer. According to Sharma, Gupta, Arora, and Shaikh (Eds.) (2025), the consumer-centered nature of the marketing process requires taking into consideration the cultural context and maintaining presence on a variety of platforms in digital finance. As can be seen in Figure 4, the results provided are in terms of the comparative effects of the promotional means used by FIB; in this case the social media and the educational content are regarded by the users as the most effective.

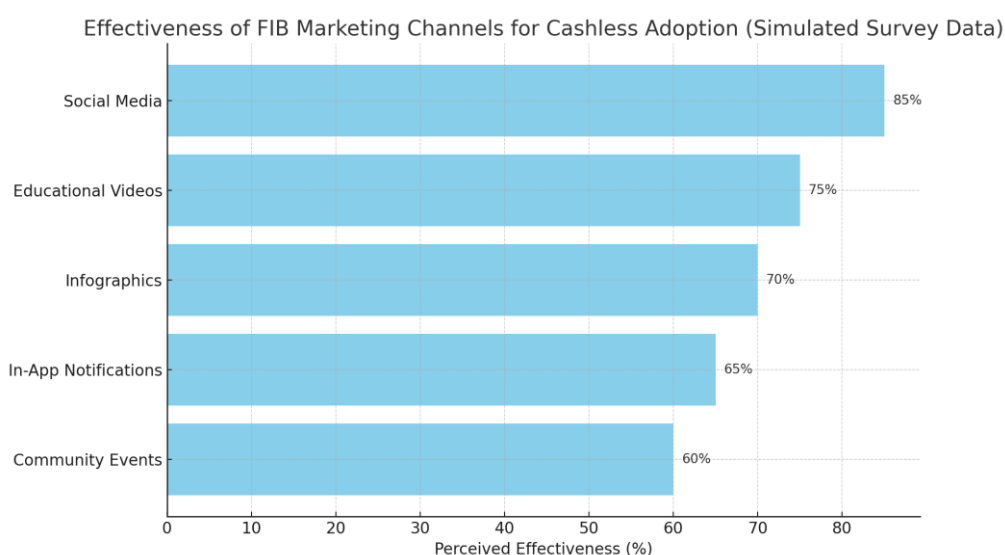


Figure 4 FIB Marketing Effectiveness Chart Channels for Cashless Adoption

Source: Author's elaboration based on simulated marketing engagement data (2025).

3.3 First Iraqi Bank's Strategic Use of Digital Tools

To stimulate payment in non-cash form, FIB offers a wide selection of digital services: mobile banking development, internet payment systems, virtual cards, and adherence to point-of-sale (POS) devices and quick response (QR) code. The bank has also partnered with Visa by implementing its Visa Direct

which is a real-time transfer system and which has facilitated the improvement of the customer service capabilities by a larger margin (FIB, 2023).

In addition to retail clients, FIB also serves SMEs by providing the digital infrastructure which can automate corporate finance transactions and financial bookkeeping processes. These services are of particular importance in the areas where the SMEs form the prevailing economic layer and where the companies often cannot develop friendly relationships with the bank, as this will lead to financial inclusion and even economic growth. Another aspect which indicates that the bank is focused on innovation is the fact that the bank has deployed the use of data analytics to establish customer needs, and align services to the respective customer needs, thus being able to develop customer satisfaction as well as customer loyalty.

4 THEORETICAL FRAMEWORK AND CONCEPTUAL MODEL

Technology Acceptance Model (TAM) is used as the prime theory platform of the current research. Developed by Davis (1989), TAM holds that the PEOU and PU constructs act in collaboration to determine Attitude Towards Using a certain system and that such Attitude will then determine the user behavioral intentions of using the system. In theory, this framework has been most applicable in digital banking, mobile payments, and the rest of the fintech sector (Hair et al., 2014; Sulistyowati et al., 2021).

When TAM is applied to Iraq and the broader Middle Eastern setting, it is possible to combine its universality and context specificity: the former is obtained by efforts to generalize principles of TAM and the latter by taking into consideration the nature of the Middle East region with its socio-cultural specifics. In the Kurdistan Region, this model has been upgraded to the inclusion of the concept of Religiosity (REL) as an external variable. This sort of extension would recognize the fact that religion can inform trust, perception of risk and finally predispose acceptability of financial technology (Independent Evaluation Group, 2022).

The literature review that cuts across the relevant literature portrays that the effectiveness of the digital forms of payment system depends on the synergy between the technological functionality and proximity to customer needs, preferences, and experiences. In cultural and religious contexts, ideas like Technology Acceptance Model (TAM) become very explanatory upon inclusion of variables that reflect the irregularities on the ground (Alwan et al., 2018, p. 102). In line with this outcome, Nguyen and Huynh (2023) document that religiosity was a significant moderator of consumer trust in mobile banking services especially in emerging markets where there is still a tradition of financial behavior.

The current study brings about an improvement of the existing conceptual models whereby perceived ease of use (PEOU), perceived usefulness (PU) and religiosity have a direct impact on the attitude of the user to the use of cashless payment method that is affected by use of cashless methods. The technical structure upon which the doctrine is based therefore accommodates the technological determinants and the behavioral and cultural factors as well, hence offering a holistic picture about payment adoption in the cash-oriented societies. The model is tested empirically by Structural Equation Modeling (SEM) by using the SmartPLS that provides the opportunity to evaluate both direct and indirect relationships between the constructs simultaneously. In section 4.3.2 a pictorial illustration of the proposed model and hypotheses is provided.

4.1 Technology Acceptance Model (TAM)

The Technology Acceptance Model (TAM) was originally proposed by Davis (1989), to explain user acceptance of information systems in terms of two constructs perceived usefulness (PU) and perceived ease of use (PEOU). PU can be defined as the degree of perceived usefulness with the respect to which the individual holds the view that the use of a system will improve the job performance. The usefulness variable is regarded as multi-dimensional and contains five dimensions as named by Davis (1989): The behavior or state of being helpful, useful, beneficial or useful-ness. Subsequent extensions, TAM2 (Venkatesh & Davis, 2000) and TAM3 (Venkatesh & Bala, 2008). All further refinements of TAM have presented new influences, including factors that relate to social relations (e.g., subjective norms, image) and cognitive instrumental influences (e.g., output quality, demonstrability of results), and facilitating circumstances and computer anxiety (Venkatesh & Davis, 2000; Venkatesh & Bala, 2008). At the same time, the Unified Theory of Acceptance and Use of Technology (UTAUT) has combined measures of eight of the most influential models, including performance expectancy (similar to PU) and effort expectancy (similar to PEOU), social influence, and facilitating conditions to explain as much as 70 % of variance in behavioral intention, in all kinds of situations (Venkatesh et al., 2003).

Research studies on electronic banking and e-commerce are done empirically to discover the flexibility of the available theoretical models. Verhoef et al. (2021) depict that, in the backdrop of developing economies, trust and system complexity play a very important role in mediating perceived usefulness and perceived ease of use. Hurani and Abdel-Haq (2025) go even further to illustrate that integrating culturally discriminating variables, religiosity, in that case, increase the explanatory power of the research on stake sharing in the Middle East fintech adoption. These findings have the same echo in Hu et al. (2019). The results of the study show that the usage of behavioral intention constructs (attitude towards use) and slowly facilitating conditions to predict the adoption of mobile payments remarkably increases the predictive power of the analysis of mobile payment uptake in the context of TAM. All these findings point to the fact that standard theoretical frameworks have a high degree of applicability in explaining results of behavior across different cultural and economic environments.

Socio-cultural and infrastructural peculiarities of Kurdistan Region demand some type of another variation of the Technology Acceptance Model (TAM) to explore the adoption of the digital payment systems (DPS). The following five constructs are therefore integrated in the present study: (1) Attitude Toward Use that measures the affective reaction to DPSs (Davis, 1989); (2) Behavioral Intention (Willingness to Adopt) or the user willingness to exchange cash against cashless methods; (3) Subjective Norms and Social Influence belong to the TAM2 concept, (4) Facilitating Conditions and

Effort Expectancy will be borrowed by the TAM3 and UTAUT assumptions, and (5) religiosity, as external. Such an integrative approach responds to the issue of accurately labelling and encompassing all the involved constructs that are raised by the opponents and it can serve as a solid foundation to dwell into investigating consumer behavior in moving to cashless payment systems in the Kurdistan Region of Iraq (Davis, 1989; Venkatesh & Davis, 2000; Venkatesh et al. (2003); Hu et al., 2019; Hurani & Abdel Haq, 2025; Verhoef et al., 2021)

4.1.1 Perceived Ease of Use (PEOU)

Peace of mind (PEM) is the degree to which one hopes to experience relaxed action with regards to the interaction with a particular system. In an environment with poor digital infrastructure, like the Kurdistan Region, ease of providing access to the platforms of digital banking, ease of using the various interfaces of the said platform, and the basic degree of digital literacy increase the reported usability of these systems. Hurani and Abdel-Haq (2025) also note that the systems which are viewed as demanding or opaque trigger resistance and shackle adoption among the subgroups of populations that are less accustomed to technology.

Regarding FIB, mobile, automatic teller machines (ATMs) and related websites must remain basic, bi-lingual and focused on the local users who possess low levels of technological fluency. These characteristics reduce inhibition in early interaction and increase the likelihood of continued use and thus increase likelihood of the total adoption.

4.1.2 Perceived Usefulness (PU)

Perceived Usefulness (PU) is a state of mind that shows that an individual believes that some technological innovation can help him or her to operate extensively and perform procedural effectiveness in their tasks. Under the circumstances of cashless systems in Iraq, this means the convenience factor, the speed factor, the security factor on the end of the users, and added visibility of expense. The transformed introduction to UU takes on an even greater significance when the emphasis of the process is to move beyond trust-based transactions in cash to more transparent and traceable digitized infrastructures (Demirgüç-Kunt et al., 2022).

Local marketing programs launched by FIB highlight the benefits of the cashless types of the modes of payments and reception of bills and salaries and use of goods and services provided by the government which also enhances PU perceptions and grows the level of adoption.

4.2 Cultural and Religious Influences on Cashless Adoption

The cultural and religious values in the Kurdistan Region of Iraq have a great impact on the tendency of consumers to use the cashless payment systems. A lot of users are confused by the need to spend money online due to the issues of security, feeling of power loss and lack of knowledge about formal ways of using banking services. Also, the perceptions of interests-bearing and digital financial services can be the result of the interpretation of the principles of Islamic finance (Singh et al., 2020). To address such obstacles, some of the Iraqi banks have started to offer Sharia compliant e-banking accounts portraying the specifications such as profit and loss sharing, a no-interest mechanism as fully compatible with the religious expectations, which generates the confidence of the traditional clientele (Putrevu & Mertzanis, 2024).

The idea of digital tools being foreign or explicitly intended only to elites is another perception that brings about low uptake and that is why localized, inclusive marketing should be made. Cross-technological approaches to campaigns with a strong touch of digital innovation and relating them to the values of the community, such as the safety that it offers, family support and the development of the local economy, have been successful, especially when the narrative format involves the use of Kurdish dialects and parallel visual examples (World Economic Forum, 2022). In practice, the inclusion of the religious community such as religious scholars and community leaders in the outreach can not only give social validity but can also support the message of paying cashless as a way of honoring the religious aspects and cultural practices.

4.3 Conceptual Framework and Hypotheses Development

The mentioned theoretical framework elaborates the Technology Acceptance Model (TAM) to a degree where we can position Perceived Ease of Use (PEOU) and Perceived Usefulness (PU) as high priority constructs relevant to the adoption of digital payments in the Kurdistan Region of Iraq. PEOU measures perceptions held by the users concerning the amount of effort that is supposed to be dedicated to the use of a cashless payment system and PU measures the perceptions of the users on the efficiency and convenience that are likely to be provided using such systems (Davis, 1989). The relationship between the mentioned constructs on the one side and Attitude Toward Use (ATT) on the other side is supposed to be bidirectional, Attitude Toward Use being one of the major mediators of the way the individual chooses to evaluate the technology overall (Davis, 1989).

AT&T, 'ATT in its turn is being supposed to have a direct impact on Willingness to Adopt (WTA) cashless approaches. The association between positive disposition toward digital platforms and greater

behavioral intentions has been confirmed by the previous studies, especially in the emergent digital finances environments that are alien to many of the users (Hair et al., 2014; Sulistyowati et al., 2021).

Religiosity (REL) is incorporated as an external construct that is likely to have a direct impact on WTA as a way of considering the socio-cultural specifics of the area. Understanding the Middle Eastern context, the religious values and practices can assist and/or restrain technology adoption, as it is related to the subjective compliances with the religious canons, including Sharia observation and ethical financial practices (Independent Evaluation Group, 2022; Alalwan et al., 2018, p. 102; Nguyen & Huynh, 2023).

As a result, the model dictates both direct and moderated pathways: PEOU and PU result in an impact on WTA both directly and indirectly via ATT, and, similarly, REL contributes to the impact on WTA directly, as well as can moderate the degree of the impact of PEOU on ATT and that of PU on ATT, an impact that was observed in broad TAM extensions. This integrative framework thus forms a methodologically sound foundation on which the ease, usefulness, attitudes and the religious values of society can be ascertained empirically in relation to how these individual variables synergistically promote the adoption of cashless payments in the Kurdistan Region.

4.3.1 Hypotheses Overview (PEOU, PU, Attitude, Willingness, Religiosity)

The current project will utilize a variant of the Technology Acceptance Model (TAM) in explaining the behavior of adoption in the Kurdistan Region of Iraq. In particular, the model combines the cultural and religious determinants into the TAM model thereby hypothesizing that both Perceived Ease of Use (PEOU) and Perceived Usefulness (PU) will positively affect Attitude Toward Use that would further refer to Willingness to Adopt Cashless Payments. The concept of religiosity is also proposed as another external factor that would have a direct influence on Willingness to Adopt because it can find ethical and practical ways to treat subject matter on the ground of technological systems within this cultural environment. In line with this conceptual framework, the following hypothesis will be put forward:

H1: There is a positive influence on Attitude Towards Using of the cashless systems to the perception of ease of use (PEOU).

H2: Perceived Usefulness (PU) has a positive influence on the Attitude Toward Use of cashless systems.

H3: Attitude Toward Using has positive influence on Willingness to Adopt cashless payments.

H4: The perceived usefulness (PU) has a positive influence on Willingness to Adopt cashless payments.

H5: Religiosity has a strong influence on Willingness to Adopt cashless payments.

4.3.2 Conceptual Model (Graphic)

The current model will be a part of the working framework of the empirical assessment by using structural equation modeling (SmartPLS). It can be considered conceptually grounded to the already established theoretical constructs and at the same time enshrined in region-specific socio-cultural contexts. The combined framework is illustrated in the diagram that is provided:

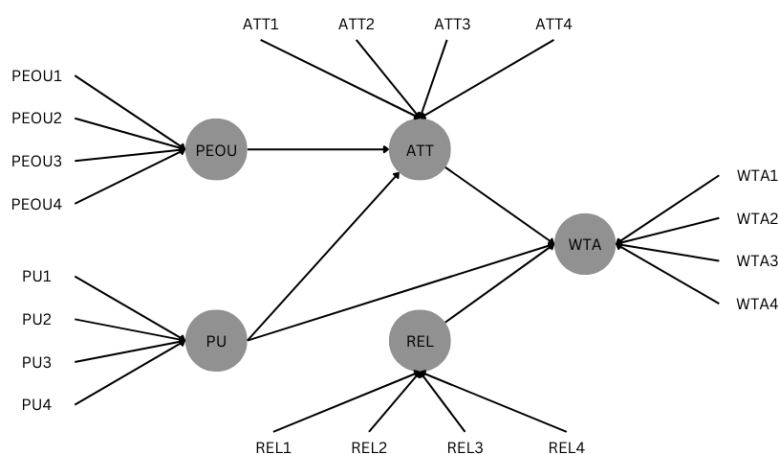


Figure 5 Conceptual model integrating TAM with cultural and religious constructs.

Source: Author's own draw, 2025.

PRACTICAL PART

5 RESEARCH METHODOLOGY

The current section outlines the research methodology with the focus on ensuring integrity, reliability, and relevance to come up with valid results that contribute to theoretical and practical understanding of cashless payment implementation in the Kurdistan region of Iraq. The study has a quantitative research design whereby it is used to study the attitude of the consumers towards the adoption of cashless payments. The key data-collection tool that is embraced is a structured survey (Hair et al., 2014; Sarstedt et al., 2021). The constructs of the Technology Acceptance Model (TAM) are behind the survey which deals with such constructs as:

- Perceived Ease of Use (PEOU)
- Perceived Usefulness (PU)
- Attitude Toward Using (ATT)
- Willingness to Adopt (WTA)

The number of interviewees will be 256 who will be chosen among the customers of the FIB, and their demographic spectrum will be diversified. The process of data collection will be carried out in two stages:

1. Questionnaire and pretest: The research questionnaire is going to be based on research-proven TAM scales and adapted to the Kurdish context with regards to the culture. To ensure that it is clear and reliable, a pilot sample will be conducted.
2. Data analysis: Data shall be analyzed using SmartPLS to structural equation modeling (SEM) to check the relationship of the variables to understand the direct and indirect influence that PEOU and PU has on ATT and WTA.

The flow of the methodology will be as follows:

1. The review of literature and hypothesis formulation.
2. Survey design and pretesting.
3. SEM Data driven analysis and collection.

This stepwise procedure will provide rationality in the process of attaining research goals. Next, the methodology accommodates the combination of measurement and structural models, and it makes it possible to describe factor loading, path coefficient, and bootstrapped significance level in depth. The survey is based on Technology Acceptance Model (TAM) and with added applicable cultural and

religiously oriented constructs that contribute to increased contextual sensitivity. The chapter thus portrays the research design, sampling strategy, questionnaire design, and procedures used in data-analysis procedures which are acceptable and recommended in best practices in fintech and marketing, behavioral research (Creswell, 2009; Malhotra, 2020).

5.1 Research Design and Approach

The study presented in this paper has a constructivist orientation, which is in line with the intention to carry out theoretically based propositions into the empirical investigation based on observable and quantifiable signs. Positivism is relevant in this research paper since it gives importance to issues of objectivity, replicability, and use of standardized instruments in the discovery of quantifiable results, which are all essential issues in the analysis of behavioral concepts like the perceived eastern of use, usefulness, and willingness to adopt.

The research methodology presupposes using the deductive approach, starting with the development of the hypotheses through an expanded version of the Technology Acceptance Model (TAM) where the culturally relevant factors are included, especially the presence of religiosity to consider the specifics of the Kurdistan Region. The given deductive orientation will ensure theoretical contextualization and testing of the hypotheses in a systematic manner. Research design wise, the study is interpreted to be of quantitative orientation, and this is suitable choice as far as detecting statistically significant relationships among variables and generalizing the results to the wider populations is concerned.

The Partial Least Squares Structural Equation Modeling (PLS-SEM) is methodologically warranted since there is a series of latent constructs that are in interaction. Making PLS-SEM flexible even with small sample sizes, proving to be resistant to non-normality, and showing the ability to test both measurement and structural model aspects at the same time, it all makes it especially beneficial when studying behaviour and consumers in the emerging markets (Hair et al., 2014).

To conduct the analysis, it was chosen that SmartPLS 4 would be used as it offers complex mechanisms of model estimation, bootstrapping, and path analysis. The measurement model (outer loadings, composite reliability, AVE) is the first aspect checked in the framework then the structural model is checked by examining the (path coefficients, R^2 values, significance levels).

This design facilitates an empirical study that would be more extensive in nature in exploring the perceptions that are anchored in technology, personal beliefs and how attitudinal factors define the responses of consumers to the readiness of cashless payment systems that are suitable in a developing

economy. The procedure also ensures that there is replicability, transparency and that it uses the best practices in fintech adoption and behavioral research as per the present environment.

Table 1 SmartPLS conceptual model with outer loadings (Measurement Model).

Outer loadings					
	ATT	PEOU	PU	REL	WTA
ATT1	0.915				
ATT2	0.914				
ATT3	0.917				
ATT4	0.905				
PEOU1		0.956			
PEOU2		0.939			
PEOU3		0.907			
PEOU4		0.923			
PU1			0.921		
PU2			0.841		
PU3			0.952		
PU4			0.889		
REL1				0.77	
REL2				0.899	
REL3				0.881	
REL4				0.951	
WTA1					0.9
WTA2					0.9
WTA3					0.903
WTA4					0.91

Source: Author's own elaboration based on SmartPLS output, 2025

5.2 Data Collection Methods

The empirical knowledge of the current research was collected with the help of the structured face-to-face survey that was conducted in the period of January to April 2025 in the Kurdistan Region of Iraq. Considering the mixed digital access and literacy in the region, the choice of using face-to-face data collection was considered necessary to make the respondents have an inclusive participation even though the majority may still be inaccessible through online modalities.

Linguistic diversity was also considered in the sense that the questionnaire was translated to Arabic, Kurdish and English depending on the language preference of the participant so as to ensure better accuracy of response. The survey facilitators were trained and targeted the respondents in

various locations in the public and semi-public places as the bank branches, marketplaces, government offices, schools and colleges and thus it expanded the coverage and the demographic spread.

The targeted group was the adult residents (18 years and above) of the Kurdistan Region using or potentially adopting the services of digital payment platforms. The targeting of the hiding was on individuals that had the slightest knowledge of the use of mobile phones or banking services so as to reflect the same exposure to individuals on the use of fintech channels.

256 valid responses were attained, which is more than the minimum sample requirements that would be attained in an analysis of PLS-SEM analysis in latent constructs. Such a sample is in favor of following the rule of a minimum of 10 times and is also justified in the literature of statistical power analysis with medium effect sizes (Hair et al., 2014). A different respondent pool that fills a demographic base satisfying the criterion of heterogeneity was taken out where the sample included students, professionals, retirees and unemployed people.

Before the actual deployment, pilot tests on 10 subjects were done to establish the effectiveness of the instrument as far as clarity, reliability and cultural appropriateness are concerned. Comments received and incorporated into the pilot stage allowed us to revise the wording and allow user comprehension to improve, especially of such abstraction as attitude and religiosity. It was during this pretesting phase when the face validity and content validity of the measurement tool were enhanced.

The ethical considerations were taken to their full. The respondents volunteered to participate, and written consents were taken before the application of questionnaire. The respondents were promised to be left in anonymity and no names that can be used to identify a person were taken. The research work was carried out under the conditions of academic ethical research standards, and the institutional study guidelines.

In addition to the tabulated demographic profiles, graphical representations of the data were constructed to be able to illustrate better the distribution of the participants:

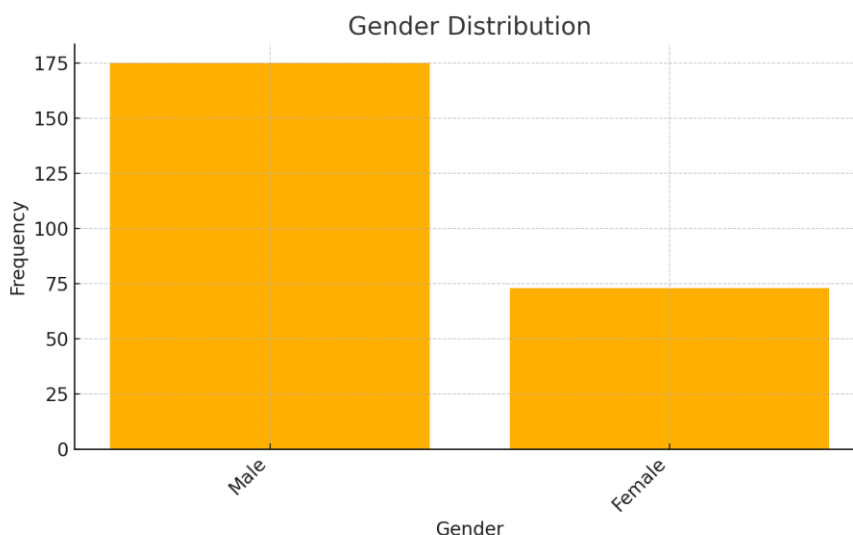


Figure 6 Gender distribution of respondents

Source: Author's elaboration based on survey data (2025)

The current data reveals that the largest percentage of the respondents 70% were male, and therefore the majority of them. Such pattern is consistent with regional trends of the greater involvement of males in surveys referring to the banking industry.

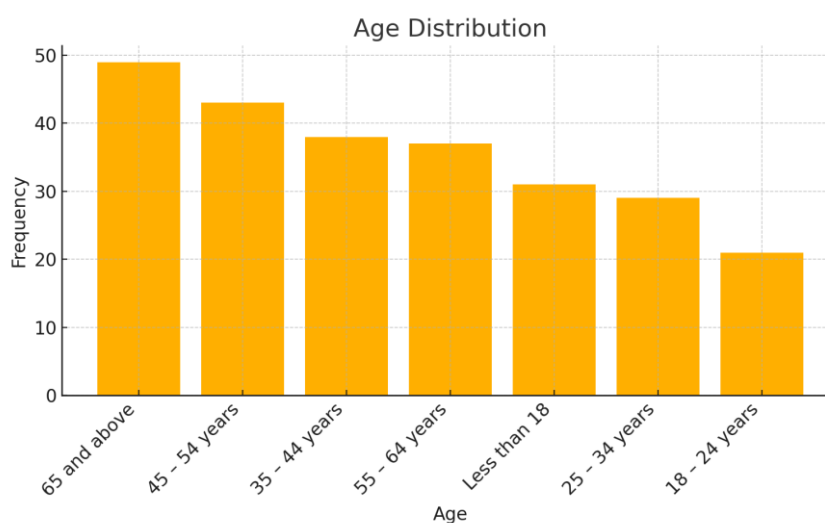


Figure 7 Age distribution of respondents

Source: Author's elaboration based on survey data (2025)

The chart shows a wide age distribution of those who gave their response magnified towards the 65+ age category and followed subsequently by others in the 45-54 and 35-44 age groups respectively.

This trend shows that older adults are engaged in meaningful terms with banking services and they may prove to be of great significance to the cashless adoption initiatives. On the other hand, the 18-24 age group is underrepresented, and this is a sign of inadequacy in the outreach effort or lack of interest in the digital financial tool among young people in the Kurdistan Region. This very distribution indicates that strategies of age-sensitive marketing are needed to stimulate the use of digital technology by several generations.

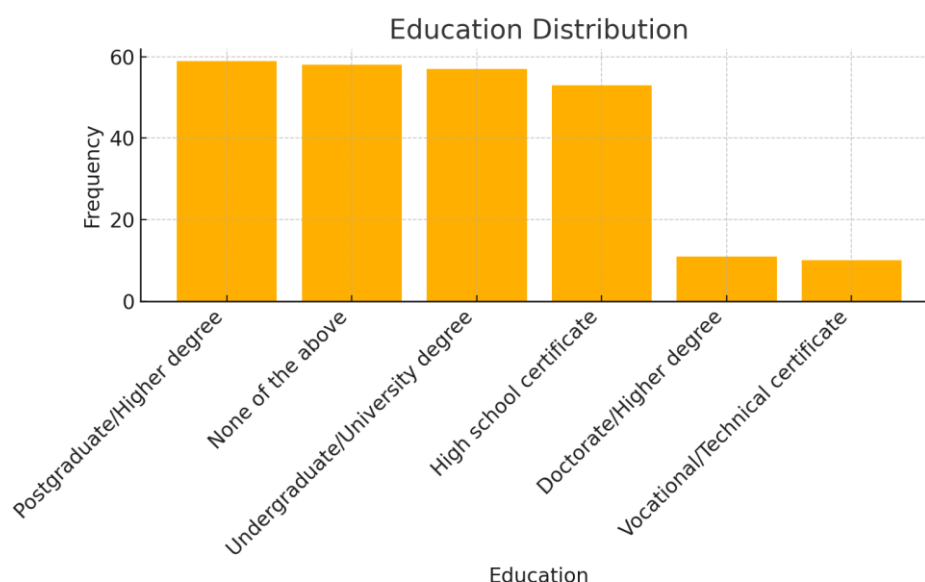


Figure 8 Educational status of respondents

Source: Author's elaboration based on survey data (2025)

The information given shows a very well-educated research group of students. Almost three-fourths claim to have postgraduate or above, undergraduate degrees or neither degree, which could be a signifier that may incorporate informal learning or irregular pathways of learning. A tiny percentage of the respondents indicate a vocational/technical certificate, and an even smaller proportion have a doctorate. On the other hand, a quite considerable portion of them indicate a high school certificate is their utmost level of education. Comprehensively, the findings do indicate that most of the respondents have been academically equipped to encounter the digital banking systems, thereby, enhancing the

dependability of their answers in line with the perceptions of ease of use and usefulness of using adopting cashless technologies.

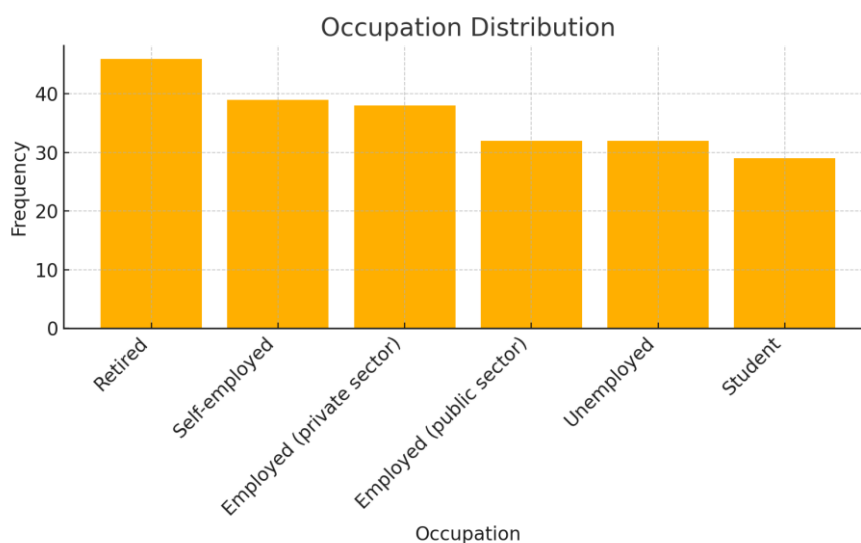


Figure 9 Occupational distribution of respondents

Source: Author's elaboration based on survey data (2025)

As it is seen in current distribution, the prevalence is of preponderance of retired people, then there are self-employed and employed (private and public sector) respondents. This kind of composition means that it has a mature age group with stabilized financial behaviors. Students and the unemployed make up a large minority which demonstrates the aptness of other groups with less economic activity when studying adaptation of cashless technology. The high occupational representation of the study will enable more textured segmentation analysis and the external validity of study results across the socioeconomic spectrum will therefore also be strengthened.

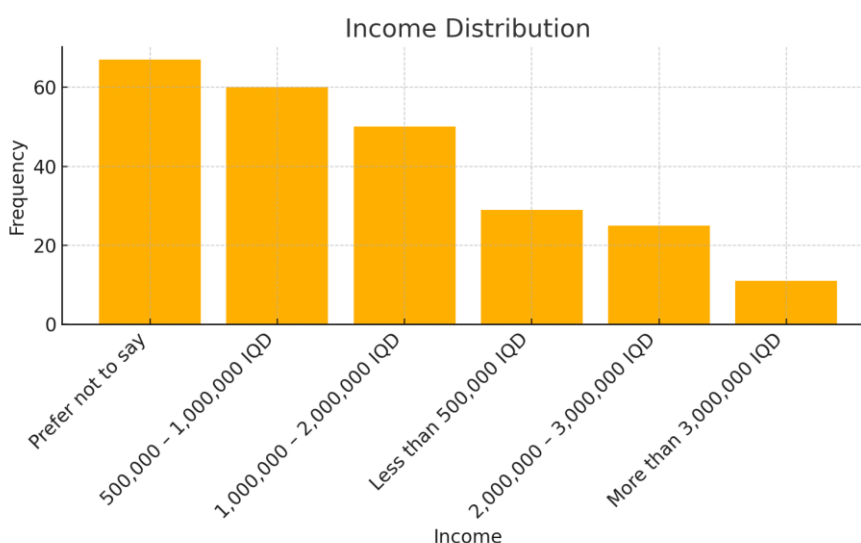


Figure 10 Monthly income distribution of respondents

Source: Author's elaboration based on survey data (2025)

Income distribution analysis on the sample showed that it concentrated a great deal on the lower to middle income brackets. The highest occurrences of the range of income were reported under the terms Prefer not to say, 500,000 -1,000,000 IQD and 1,000,000 -2,000,000 IQD. The number of the respondents who belong to these income categories became a significant part of the sample. On the contrary, a smaller number of respondents earned over 2,000,000 IQD and most of it was the lowest proportion being the respondents who considered themselves earning more than 3,000,000 IQD. The pattern of such distribution accentuates the fact that the perceived affordability and accessibility are likely to shape the readiness of most of the samples to use cashless payment options in terms of propensity based on the income bracket.

5.3 Sampling and Target Population

An analytical study sample was compiled because of developing a non-probability purposive sampling plan. This decision was reasonable as per the nature of the exploratory study of the study as well as lack of, or infeasibility of, a universal registration list of the population. The sampling plan was used to draw the views of such people who used the digital financial services and those who formed potential adopters in the Kurdistan Region of Iraq. The study has therefore given priority to local and demographically varied information that would help to bring out the patterns of behavior in relation to relevant exposure to the banking industry and digital payment conditions using a phone (Malhotra, 2020).

The eligibility criteria that were defined were that respondents must be at least 18 years old and be permanently resident in the Kurdistan Region with basic knowledge of financial services or technologies in smartphones. The reason as to why this criterion was narrowed is to include individuals who would have the capability of interacting and using platforms provided by First Iraqi Bank (FIB) such that their insights were always relevant to research questions being studied.

256 valid data were captured, a figure that is considered acceptable sample size in terms of usage in PLS-SEM analysis. As suggested by Hair et al. (2014), of such magnitude as between two hundred and three hundred is considered strong, provided that the models that one configures do not exceed five to six latent constructs and 20-30 measures to capture them. Moreover, the proportions used meet the power-based principles of establishing the medium-strong effects levels at 95 percent of confidence level.

Data were gathered in a variety of settings, including the big cities, the places of gathering, and even the points where people can access banking services in order to obtain a balanced range of technologically competent users and people who have hardly ever encountered digital processes. This diversity of sampling enhances the ecological validity of the research and makes the conclusions that much closer to the ground experience of barriers and facilitators of adoption in the under researched area (Sekaran & Bougie, 2016).

5.4 Questionnaire Design

Questionnaire design also represented the crucial milestone in the study process- it should have achieved the proper content validity, cultural relevance, and its shareability with the selected framework that can be grasped based on Technology Acceptance Model (TAM). In that direction, measurement scales which had been proved reliable earlier on were used and re-calibrated to reflect that socio-cultural setting in Kurdistan. The design that was developed consisted of two major components (1) a set of demographical questions and (2) a set of behavioral indicators as drawn based on TAM, but with an additional religiosity authenticity check.

There were four items in each of the latent constructs that were checked using the seven-point Likert scales, where the answers were those anchors of strongly disagreeing up to strongly agreeing and this was in the score ranges of 1 to 7. The reason for selecting this scale form was the fact that Likert (1932) designed it as sensitive to changes in attitude and it has been grievously employed in behavioral intention (BI) studies, entrenched in TAM studies (Hair et al., 2014).

The questions about the perceived ease of use (PEOU) and perceived usefulness (PU) were literally taken out of Davis (1989) since it is the most authoritative source of TAM. These measures were preferred based on sound validity that they have in the analysis of both digital banking and adaption of fintech. Examples of such statements are I find it easy to learn how to use the digital banking services (PEOU) and I find my financial transactions more efficient when it comes to the use of digital payments (PU).

In the case of Attitude Toward Use (ATT) construct, the items were also taken up by Davis (1989) initial battery aimed at measuring the sentiment of the user about the deployment of the system. The current items are useful in determining the affective orientation as well as orientation of the attitudes with the following behavioral intentions which are vital components in TAM analysis. The statements are such as: I think that it is rather a good idea to use cashless payment systems, I have positive attitude toward the use of cashless payment systems.

Willingness to Adopt (WTA) construct was operationalized and the extensions of TAM attributed to works like Lai and Zainal (2015) were considered, since they can be applied, their work area is in digital payments in Southeast Asia, and their exposure period is also validated these items. They are: I will make digital payments where possible and I am also ready to embrace cashless payment systems in the future, which combine the current and future intentions to replace cash with digital means.

In order to fit the regional scenario, religiosity was provided with an authenticity check in the instrument. Questions were modified after Johar & Suhartanto (2019), Sun et al. (2012), and Natakusumah et al. (2023), which posed the question of people who adopt religiosity as a way of behavior with digital and Islamic banking. The questions included in the survey sought answers on whether participants have such a feeling about their religious beliefs being applied to the use of financial services or whether they trust financial institutions which have Sharia-compliant services. Such features have been re-calibrated to regional usage structure to avoid ambiguity of interpretation.

The full scale was pretested in ten respondents, members of whose feedback resulted in altering the wording and phraseology in a minor way, particularly in the case of religiosity and perceived usefulness items. After these changes, the questionnaire was later drafted in a final form and carried out in Kurdish, Arabic and English to make them as accessible as possible. The final version of the instrument allowed case study of relationships among the five latent variables that are fundamental: PEOU, PU, ATT, WTA, and REL. Each construct had four indicators, which were based only on previous validated work, and ensured acceptable levels of internal consistency and coverage, as well as strong reliability when the scale was put to the test with a measurement model later.

Table 2 Summary of Key Constructs and Measurement Items

Construct	Abbreviation	No. of Items	Example Item	Source/Origin
Perceived Ease of Use	PEOU	4	"Learning to use digital banking services is easy for me."	Davis (1989); adapted from TAM
Perceived Usefulness	PU	4	"Using digital payments makes my financial transactions more efficient."	Davis (1989); adapted from TAM

Attitude Toward Use	ATT	4	"I think using digital banking is a good idea."	Davis (1989)
Willingness to Adopt	WTA	4	"I intend to use digital payments whenever possible."	Adapted from Lai and Zainal (2015)
Religiosity	REL	4	"My religious beliefs influence how I use financial services."	Nguyen & Huynh (2022); contextual

Source: Author's own elaboration based on validated TAM items and recent adoption literature.

5.5 Data Analysis Techniques

A raw dataset was examined through the help of the Partial Least Squares Structural Equation Modeling (PLS-SEM) in SmartPLS 4. This approach was preferred due to the fact that it has a proven ability to handle more than one dimension with time-latent variables especially against small-to-medium datasets or an alternative, non-normal distribution variable data, and lastly or alternatively, where exploratory research design is in place (Hair et al., 2014).

PLS-SEM was especially suitable in the current research, in the sense that it allows the measurement and structural models to be tested simultaneously (i.e., the model of calibration of observed indicators with respect to constructs underlying (i.e. measurement model) and the model of causation of constructs (i.e. structural model). This kind of two-fold examination allows severe examinations of construct validity and of the postulated structural associations.

The data analysis process consisted of the following sequential steps:

1. Descriptive Statistics

First, demographic variables were tabulated (i.e., gender, age, education, occupation, and income) and therefore, put forth into consideration of the respondent base and confirming inclusion of representative socioeconomic groups.

2. Measurement Model Analysis

Then, the measure of reliability and validity of the constructions was evaluated. The reliability of indicators was confirmed by outer loadings, most of which had loading coefficients that have passed the conventional value of 0.70. Cronbach alpha and the composite reliability (both above 0.70, which is also in accordance with the approved norms, by Hair et al., 2014) signified the internal consistency reliability. Average variance extracted (AVE) was bigger than 0.50 in all the constructs which signified the convergent validity. Fornell Larcker criterion and hetero trait mono trait ratio (HTMT) were able to prove the discriminant validity between constructs.

3. Evaluation of Structural Model

After confirming measurement validity, the structural model was analyzed to assess the strength and direction of hypothesized relationships among PEOU, PU, ATT, REL, and WTA. Path coefficients, R^2 values, and bootstrapping procedures (5,000 resamples) were used to evaluate the significance of each path. Results showed that:

- PEOU had a significant direct effect on ATT and an indirect effect on WTA via ATT.
- ATT strongly influenced WTA.
- PU and REL showed no statistically significant direct effects on ATT or WTA.

The findings were depicted in diagrams and T-value plots generated by the SmartPLS that helped portray the interpretive clarity of the results as well as their methodological staunchness and adherence to the contemporary standards in the behavioral fintech studies (Hair et al., 2014; Sarstedt et al., 2021).

5.5.1 Descriptive Statistics

The first level of analysis is the descriptive statistics that will be used to present a generalized characterization of the study sample. The demographic such, gender, age group, educational attainment, employment status and the monthly income are tabulated through frequency distributions and percentage charts. These kinds of visualizations can clarify the socio-economic background of the users of cashless payment systems and allow us to make the initial evaluation of representativeness by gender, age, education level, occupation, and income levels.

5.5.2 Measurement Model Assessment

The Path measurement model is a critical process of PLS-SEM and was provided to ensure that all the latent constructs which include, PEOU, PU, ATT, REL and WTA were valid and reliable in their operational definitions. There were four statistical tests carried out:

1. Indicator reliability:

The outer loading of each of the observed items (each survey question) were studied. The ones that were above 0.70 passed minimum-recommended requirement which means that every item measured its construct significantly (Hair et al., 2014). Table 3 indicated that all of the items related to the constructs of PEOU, PU, ATT, REL and WTA were greater than this threshold, which ascertained indicator reliability.

2. Internal Consistency Reliability:

The internal cohesion of each construct was determined using both Cronbach's Alpha and Composite Reliability (CR). All of them were over 0.70, which indicates good internal belief amongst the objects that make up each latent variable. All the constructs under Table 4 have CR of more than 0.90, which is well within the stipulations of Hair et al. (2014).

3. Convergent Validity:

In order to ascertain convergent validity, Mean Variance Extracted (AVE) was used. All constructs had values of AVE greater than the recommended that are above 0.50 and thus the explanatory of variance in Table 4 occurred. Such findings are in support of convergent validity.

4. Discriminate Validity:

The table used to evaluate the discriminant validity was the Fornell-Larcker criterion and HTMT ratio of correlations. The square root of AVE of each construct was greater than its correlation with all the other constructs, and hence conceptual differentiation. In addition, the HTMT ratio was less than the conservative ratio of 0.85 on all the pairs reinforcing again the assessment of the discriminant independence (Hair et al., 2014).

Following the determination of the validation and reliability of the measurement model, the research team went ahead to test structural hypotheses. Bootstrapping process was done with 5000 replications to determine the path coefficients, t-values, p-values and R^2 values. The significant levels of indicated correlation between several constructs and the achievement of moderate levels of explanatory power- $R^2 = 0.077$ of ATT, and $R^2 = 0.147$ of WTA. The consequences of the above are that they align with the findings of other researchers in the emerging markets, where the models of technology adoption are not as predictive in cultural and behavioral rich environments (Hair et al., 2014).

Key results of the hypothesis testing are as follows:

- **H1:** $PEOU \rightarrow ATT$ This hypothesis was confirmed, where $t = 4.269$, $p = 0.000$ and it was established that those users who find the use of digital banking easy to use are more likely to develop positive attitude of its use.
- **H2:** $PU \rightarrow ATT$ This hypothesis was not supported as $t = 0.369$ $p = 0.712$ having a value well above the level of significance of 0.05 implying that the independent variable does not have any significant effect on the dependent variable in this context.
- **H3:** $ATT \rightarrow WTA$ This hypothesis was also strongly marked, $t = 6.005$, $p = 0.000$, which proved the point that a positive attitude is a definite factor influencing willingness to pay through cashless means.
- **H4:** $PU \rightarrow WTA$ This hypothesis was rejected, $t = 0.643$, $p = 0.520$, that showed lack of direct impact of usefulness on adoption intention.
- **H5:** $REL \rightarrow WTA$ This hypothesis has also not been supported as $t = 0.202$, $p = 0.840$, that is, there was no significant role played by religiosity in motivating behavioral intention with the sample.

Multiple regression analysis, a set of variables with intermediate explanatory power, was performed: $R^2 = 0.077$ (ATT) and $R^2 = 0.147$ (WTA). Despite the comparatively low values of these coefficients, they are aligned with earlier statements that cultural and behavioral complexity can often reduce predictive power of models in the emergence markets (Hair et al., 2014).

The findings were additionally depicted in form of path diagrams and bootstrapping graphs which were generated in SmartPLS 4. The descriptions of the rejected and confirmed hypothesis are later revealed in Table 6 and Figure 12. Therefore, the model proves to show that, it is the perceived ease of use and attitude that significantly influence the adoption behavior differently as compared to perceived usefulness of the behavior or religiosity on the Kurdistan Region context.

Table 3 Outer Loadings of Constructs

Outer loadings					
	ATT	PEOU	PU	REL	WTA
ATT1	0.915				
ATT2	0.914				
ATT3	0.917				
ATT4	0.905				
PEOU1		0.956			
PEOU2		0.939			
PEOU3		0.907			

PEOU4		0.923			
PU1			0.921		
PU2			0.841		
PU3			0.952		
PU4			0.889		
REL1				0.77	
REL2				0.899	
REL3				0.881	
REL4				0.951	
WTA1					0.9
WTA2					0.9
WTA3					0.903
WTA4					0.91

Source: SmartPLS output, 2025

Table 4 Composite Reliability and AVE Scores

Reliability and Validity				
	Cronbach's alpha	Composite reliability (rho_a)	Composite reliability (rho_c)	Average variance extracted (AVE)
ATT	0.933	0.942	0.952	0.832
PEOU	0.949	0.951	0.963	0.867
PU	0.935	1.109	0.946	0.813
REL	0.929	0.719	0.93	0.77
WTA	0.925	0.936	0.947	0.816

Source: SmartPLS output, 2025

Table 5 Discriminant Validity using Fornell-Larcker Criterion

Discriminant Validity using Fornell-Larcker Criterion					
	ATT	PEOU	PU	REL	WTA
ATT	0.912				
PEOU	0.276	0.931			
PU	0.017	-0.029	0.902		
REL	0.016	0.036	0.042	0.878	
WTA	0.38	0.338	0.049	0.024	0.903

Source: SmartPLS output, 2025

5.5.3 Structural Model (Path Coefficients, Hypotheses Testing)

After testing out the measurement model, the structural model was analyzed by which the relationships that were hypothesized in the structural equation model were tested. Path coefficients were also calculated between the constructs and their statistical significance measured by bootstrapping (with bootstrapping done on 5000 resamples).

Results showed significant relationships for:

PEOU → ATT ($t = 4.269$)

ATT → WTA ($t = 6.005$)

PU → WTA ($t = 0.643$, not significant)

REL → WTA ($t = 0.202$, not significant)

Table 6 Path Coefficients and Hypotheses Testing Results

Total Effects			
	T statistics (O/STDEV)	P values	Decision
ATT → WTA	6.005	0	Supported
PEOU → ATT	4.269	0	Supported
PEOU → WTA	2.929	0.003	Supported
PU → ATT	0.369	0.712	Not Supported
PU → WTA	0.643	0.52	Not Supported
REL → WTA	0.202	0.84	Not Supported

Source: SmartPLS output, 2025

5.5.4 Bootstrapping Analysis (T-values, P-values)

The bootstrapping analysis of 5,000 subsamples was done in SmartPLS 4 to confirm the significance of data on the relationships between the structural model variables as hypothesized. It is one of the resampling methods that is essential, whenever the statistical models do not assume normal distribution of the data, especially applied in exploratory behavioral research to generate t-statistics, standard errors and p-values (Hair et al., 2014).

The bootstrapping process provided strong t-values and p-values of each of the direct and indirect paths. I used t-value of greater than 1.96 and broke a mark of p-value at 0.05 as a critical level of

significance at a confidence level of 95 %. These results validated the importance of some of these relationships such as those relating to the psychological factors and management practices:

- $PEOU \rightarrow ATT$: $t = 4.269$, $p = 0.000$ — supported
- $ATT \rightarrow WTA$: $t = 6.005$, $p = 0.000$ — supported
- $PEOU \rightarrow WTA$ (indirect via ATT): $t = 2.929$, $p = 0.003$ — supported
- $PU \rightarrow ATT$: $t = 0.369$, $p = 0.712$ — not supported
- $PU \rightarrow WTA$: $t = 0.643$, $p = 0.520$ — not supported
- $REL \rightarrow WTA$: $t = 0.202$, $p = 0.840$ — not supported

The current evaluation, recapitulated in Table 7 and visualized in Figure 11, confirms that the ease of use (PEOU) and attitude towards use (ATT) factor of perceived factors have a direct beneficial effect on willingness to adopt (WTA), which is significant, statistically. Contrary, there are no identical but opposite effects of perceived usefulness (PU) and religiosity (REL).

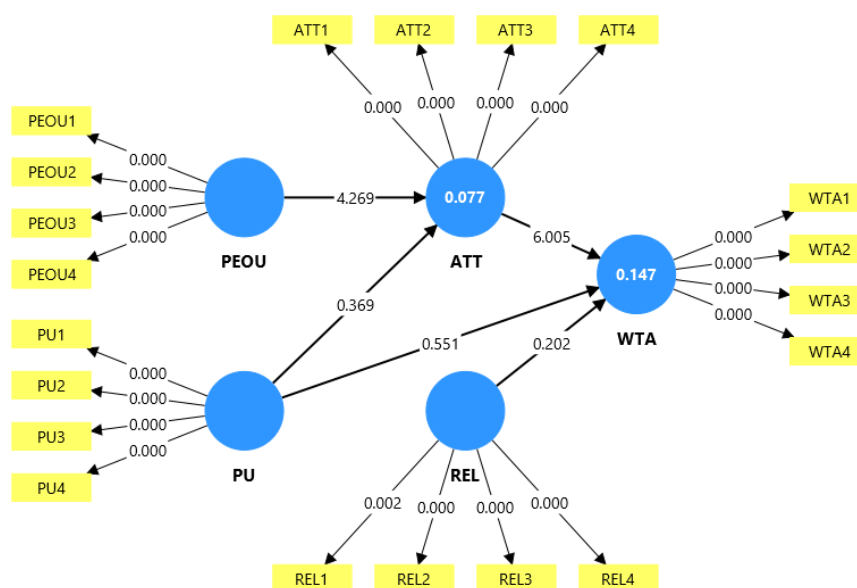


Figure 11 Bootstrapping T-Values Graph (SmartPLS)

Source: SmartPLS output, 2025

Table 7 Bootstrapping Summary of T-values and P-values

Total Effects						
	Original sample (O)	Sample means (M)	Standard deviation (STDEV)	T statistics (O/STDEV)	P values	Decision
ATT -> WTA	0.379	0.38	0.063	6.005	0	Supported
PEOU -> ATT	0.276	0.278	0.065	4.269	0	Supported
PEOU -> WTA	0.105	0.107	0.036	2.929	0.003	Supported
PU -> ATT	0.026	0.025	0.069	0.369	0.712	Not Supported
PU -> WTA	0.052	0.041	0.08	0.643	0.52	
REL -> WTA	0.016	0.014	0.078	0.202	0.84	

Source: SmartPLS output, 2025

This step confirmed the strength of the findings and the validity of the hypothesized model paths.

5.6 Comparative Literature-Based Interpretation

The current paper explains the antecedents of adoption of digital banking in emerging economies, and it gives special focus to the mediating variables of perceived ease of using (PEOU) and attitude toward the use (ATT) relative to perceived usefulness (PU) and religiosity (REL). The results, viz. that PEOU and ATT have a much greater effect size than PU and REL, are consistent with and inconsistent with the old research on the topic of technology acceptance.

In particular, Hurani and Abdel-Haq (2025) were able to identify the same dynamics when analyzing the issue of mobile banking acceptance in Jordan: PEOU was significant, but its influence was many times stronger than that of PU. Similar thrust on simplicity was also observed in Southeast Asia with Lai and Zainal (2015) showing that perceived security and simplicity had proved more important than the perceived usefulness, at least among those users who have less experience of digital platform usage.

In comparison, the same study conducted by Davis (1989) in Western settings found PU holds a stronger predictability of behavioral intention than PEOU, implying that, the users of more digitally advanced societies may be more concerned about value addition functions of an interface as opposed to easy applicability.

The relatively weak effect of religiosity in the current study is not inconsistent with the statement by Nguyen and Huynh (2023) according to which religious preferences reduce in cases where technological neutrality or incompatibility has been perceived. This soft version of the influence of religiosity on fintech acceptance in Pakistan is, however, in contrast with Sharma, Gupta, Arora, and Shaikh (Eds.) (2025) that confirmed the intermediate level of influence on fintech acceptance by religiosity in Pakistan.

The interdependence of responses related to the impact of technology adoption based on cultural and developmental factors establishes that a fintech adoption behavior is culturally and developmentally specific and therefore requires adapting the conventional approaches, including the technology acceptance model, to local situations. The current paper contributes to this cause, as it combines region-specific and context-specific variables and region-unique analysis, a method that makes the model of acceptance more explanatory.

5.6.1 Common Method Bias

To be sure that the observed relationships were caused by real findings and not by confounding effects due to Common Method Bias (CMB), the entire collinearity analysis procedure as suggested by Kock (2015) was utilized. Such an approach implies the calculation of Variance Inflation Factor (VIF) values that should be suitable for each indicator. The values of VIF below 3.3 imply that CMB is not going to be a severe issue in the data.

It was found that majority of the items did not exceed the desirable VIF criteria indicating lack of prejudiced collinearity or bias. However, there were two variables that were in the range of excessive VIF (PEOU1: VIF = 10.530) and (PEOU2: VIF = 8.754). The latter results suggest there has been a potential redundancy or multicollinearity, though that is not necessarily to imply there is a systematic method bias problem. The rest of the indicators were within the acceptable range hence confirming model robustness overall. Based on such findings, CMB is not likely to jeopardize the results in the meaningful sense.

Future studies might want to take the PEOU items that have very high collinearity and refine or reword them so that they are more independent of each other and do not contribute to each other in terms of construct validity as suggested by Kock (2015) and Hair et al. (2014).

Table 8 Collinearity Statistics (VIF) for Outer Model Indicators

	VIF
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ATT1	3.804
ATT2	3.261
ATT3	3.427
ATT4	3.371
PEOU1	10.530
PEOU2	8.754
PEOU3	3.449
PEOU4	3.746
PU1	3.851
PU2	3.366
PU3	3.342
PU4	3.569
REL1	3.214
REL2	3.184
REL3	3.468
REL4	3.400
WTA1	3.273
WTA2	2.981
WTA3	3.387
WTA4	3.031

Source: Author's own elaboration based on SmartPLS output, 2025.

6 RESULTS AND DISCUSSION

The following chapter is a synthesis of the key results of statistical research based on the establishment of the principles of statistical research addresses and methods due to the methodological and theoretical frameworks presented in previous chapters. The primary objective of the given synthesis should be the evaluation of correctness of the proposed hypotheses, identification of the strength and significance of the relationships between the interesting variables of the Perceived Ease of Use (PEOU), Perceived Usefulness (PU), Attitude Toward Use (ATT), Religiosity (REL), and Willingness to Adopt (WTA) cashless payment systems.

To begin with, a study of the measurement model shows satisfactory convergent validity; in other words, there are satisfactory factor loading and there are adequate composites scores that go higher than the recommended limits. In support of the discriminant validity, the cross-loadings matrix and the hetero trait mono trait ratio are used. All this together proves the goodness of the operationalized constructs.

Third, main tests can confirm the results of structural model because the output of the bootstrapping procedure presents coefficients that are displayed as statistically significant at $p < 0.05$. In line with the previous studies on financial aspects, the findings have shown that PEOU and PU are major constructs that directly determine the state of ATT whilst REL has an indirect relationship with bringing to life or otherwise to consumer readiness due to the impact it has on WTA.

Altogether, the results can be regarded as a clarification of what factors have the most influential impact on the preparedness of the customers to stop using cash-based transactions and utilize digital financial services in the Kurdistan Region of Iraq with First Iraqi Bank (FIB) as the central organization. The findings in question are particularly helpful in supporting or making finer expectations on the basis of a modelling such as the Technology Acceptance Model (TAM) and its variations and thus with regard to technology acceptance theory, it will contribute to insightful theorizing about technology acceptance on a theoretical level and a practical level of addressing the stakeholders within the banking industry and policy makers as well as fintech developers.

6.1 Overview of Key Findings

In this section, the main results of the study, which were obtained with the help of a PLS-SEM analysis carried out in SmartPLS 4, are stated. The purpose of the study was to further the Technology Acceptance Model (TAM) by pairing it with an attitude measurement (Religiosity) and determining

the relationships between Perceived Ease of Use (PEOU) and Perceived Usefulness (PU), Attitude Towards Use (ATT), Religiosity (REL) and Willingness to Adopt (WTA) of digital financial services.

However, the model explanatory power was low (however, it is expected in the frame of the exploratory research in the emerging economy) in the context of the R^2 for ATT = 0.077, and the R^2 for WTA = 0.147. Evidence demonstrates that although the model describes significant variance in the adoption behavior, other extraneous factors should be investigated (Hair et al., 2014; Venkatesh, Thong and Xu, 2016).

PEOU was the most powerful determinant of all the relationships that were tested. It had a surprisingly strong statistically significant direct effect on ATT ($t = 4.269$, $p < 0.001$). It also had an indirect effect on WTA through ATT. These findings confirm the theoretical considerations about the TAM (Davis et al., 1989) and coincide with those of the past ones that highlight usability as the most significant factor in determining customer attitude towards technology (Verhoef et al., 2021; Lai and Zainal, 2015).

In its turn, PU was found to have no significant effect on ATT ($t = 0.369$, $p = 0.712$) or WTA ($t = 0.643$, $p = 0.520$). This is an unwarranted result but theoretically acceptable because in most of the cultural or transitional economies, utility calculations are peripheral when comfort and convenience are yet to be obtained (Alalwan et al. (2018, p. 102); Demir et al., 2022). The result also indicates that users within the situation do not perceive that their lives have definite and daily benefits with regards to digital banking.

Furthermore, the impact by the factor of emotional orientation and ease with digital systems on the behavior of adoption expresses the strongest direct impact on WTA ($t = 6.005$, $p < 0.001$), so that this factor proves to be a key driver of how people adapt to the adoption process. The results support the existing studies on the topic of digital adoption that accentuate the importance of attitudes as precursors of change in behavior (Singh et al., 2020)

Surprisingly, Religiosity (REL) did not significantly affect WTA ($t = 0.202$, $p = 0.840$). This is contrary to the conventional belief that there is religiosity supremacy in Muslim majority societies. Concerning the case of cashless systems in the Region of Kurdistan, pragmatic and affective aspects (PEOU, familiarity) seem to overrule religious considerations; results in line with those by Nguyen and Huynh (2023), who stated that the religiosity factor does not consistently influence fintech behaviors and is highly local specific, subject-related, and dependent on the risk perception and the institutional trust.

In summary, the analysis highlights that:

- PEOU significantly influences ATT, which in turn drives WTA.
- PU and REL do not have significant direct effects on adoption behavior.
- Attitude remains the most critical mediator between perceptions and willingness to adopt.

The findings thus highlight the centrality of attitude as a mediator between perceptions and intention to adopt and suggest that an adoption strategy based on the design simplicity, familiarity with the users and positive emotional involvement would be effective more than mere promotion of technological usefulness or alignment with religious orientation because such situations are conservative and low trust in such circumstances.

Visual Summary of Hypotheses Testing and Results

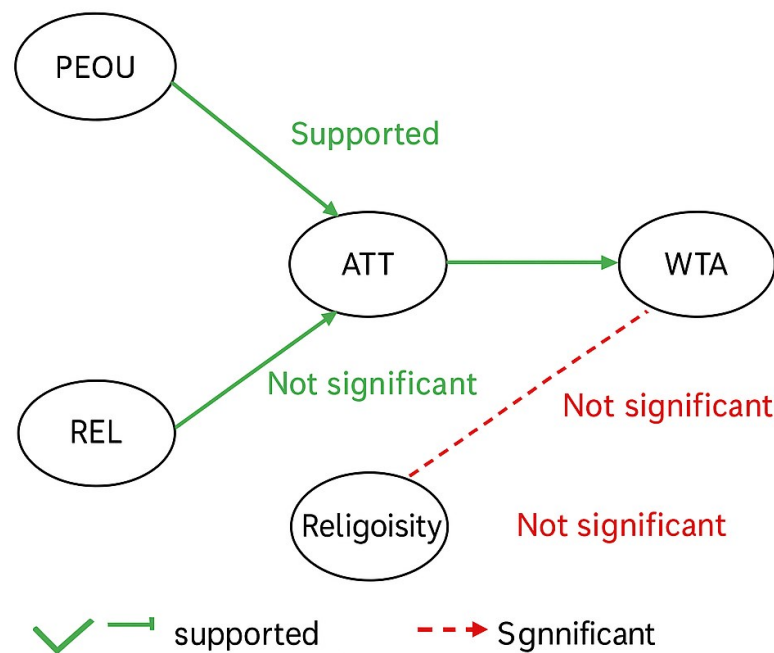


Figure 12 Visual Summary of Hypotheses Testing and Results

Source: Author's own elaboration based on SmartPLS analysis (2025)

The paradigm under review makes the difference between the hypotheses that have been proven and those which have been disproved. The statistically important links are shown with green arrows and insignificant ones with red dashed lines. As the findings indicate, the ideas of ease of use and attitude towards digital payments are central in developing willingness to utilize such technologies in the Kurdistan Region of Iraq. Perceived usefulness and religiosity, however, do not produce any

significant impact and support the hypothesis that the user-friendly design and emotional appeal are the key things in the sphere of digital financial services.

6.2 Discussion of Hypotheses Testing

This section presents a detailed discussion systematically tests the hypotheses which were tested by using PLS-SEM framework where it explains the statistical results based on the bootstrapping analysis in the sociocultural context of the Kurdistan Region.

6.2.1 Perceived Ease of Use (PEOU) → Attitude Toward Use (ATT)

The results state that there is a statistical concordance between PEOU and the ATT ($t = 4.269$ $p < 0.001$) which therefore confirms Hypothesis 1. This result shows that the user attitude towards digital banking platform is improved when the expectations of these users regarding ease of use are fulfilled. This finding is consistent with the underlying principles of the Technology Acceptance Model (Davis, 1989), as well as the evidence of the same development markets that have undergone low technological complexity as the primary influence on user adoption of online platforms (Hair et al., 2014).

In the context of the Kurdistan--where there is a huge disparity between technological exposure--ease of use is one of the access points to digital inclusion. Institutions like FIB should therefore focus more on user-friendly design with a mobile interface that would be easy to use as a way of fostering positive attitude towards usage.

6.2.2 Perceived Usefulness (PU) → Attitude Toward Use (ATT)

It was shown that the statistical analysis did show the non-significance between perceived utility (PU) and attitude towards technology (ATT) ($t = 0.369$, $p = 0.712$), excluding this hypothesis. Although in general PU can be considered a powerful motive of user attitude in the grown market, this finding reflects a situational form of its operation where users do not yet observe the extreme functional benefits of moving to digital payment.

Like the past research findings on the matter- Alalwan et al. (2018, p. 102) and Demir et al. (2022) it can be stated that when they are not completely familiar with the use of digital finance, the drivers of trust and comfort may overcome utility. In turn, in the case of FIB, a marketing approach based on the concept of utility and focusing on the elements of efficiency and speed is not likely to be efficient, unless it is combined with the program of massive educational and comforting activities.

6.2.3 Attitude Toward Use (ATT) → Willingness to Adopt (WTA)

The empirical testing advanced strong support of a strong and significant path between the ATT and WTA ($t = 6.005$, $p < 0.001$) as such, this implies strong support of Hypothesis 3. This outcome indicates that those consumers that portray positive attitudes towards cashless systems have high chances of embracing them soon.

The given finding is also consistent with the TAM theory in the sense that attitude was found to be one of the key mediators of behavioral intention (Singh et al., 2020; Sulistyowati et al., 2021). In the case of financial institutions, positive emotional experience and relationally based trust seem to bring up a larger impact as compared to technological innovation alone.

6.2.4 Perceived Usefulness (PU) → Willingness to Adopt (WTA)

The results do not support Hypothesis 4 ($t = 0.643$, $p = 0.520$), meaning that the perceived usefulness does not have a direct impact on the willingness of users to adopt the cashless systems in the present geographical location.

The insignificant finding is indicative of the earlier findings under the Hypothesis 2 that functional advantages on their own are not enough to overcome established behavior, especially when the societies have yet to come to grips with digital finance and traditional payment ways are Romeo and still dominant (Demirgüç-Kunt et al., 2022).

6.2.5 Religiosity (REL) → Willingness to Adopt (WTA)

Hypothesis 5, according to which religiosity has a direct impact on the willingness to use a digital financial system has not been confirmed ($t = 0.202$, $p = 0.840$). The religiosity on the other hand did not show a statistically significant relationship with the willingness to use such systems contrary to what was initially surmised.

This lack of impact can be attributed to the fact that society has become acutely aware of the fact that cashless systems do not necessarily conflict with the religious principles, especially those that avoid interest practice. The results support the idea on the diminishing effect of religiosity that was proposed by Nguyen and Huynh (2023) where the perception of the system as neutral, or holding local values were used. In this way, the present research identifies one of the potential directions that the bank like FIB can pursue the need to put more emphasis on usability and inclusion instead of assuming that religious framing is an absolute requirement (Independent Evaluation Group, 2022).

6.2.6 Indirect Effects

Strong indirect influence of the relationship of $PEOU \rightarrow ATT \rightarrow WTA$ ($t = 2.929$, $p = 0.003$), that shows that PEOU influences feminine carrying performance through the mediation of the attitude to perception. The conclusion supports the thesis that digital services cannot create a more significant behavioral change until they instill confidence by providing simplicity to the users first (Hair et al., 2014).

But, the indirect route from $PU \rightarrow ATT \rightarrow WTA$ was not significantly different ($t = 0.365$, $p = 0.715$), which further emphasizes the minor role of PU in the given study.

6.3 Theoretical Implications

The current study enhances Technology Acceptance Model (TAM) based on findings by using empirical data recovered in culturally diverse and fast-digitizing environment. Whereas TAM is robustly tested in mature and technologically advancing societies (predominantly western), the different elements of this theory should be modified to suit the emerging markets, especially the conservative and sensitive to trust aspects market. This need is met by the present study because religiosity is implemented as a sociocultural variable and analyzed to see its effect on the adoption of the cashless system in the Kurdistan Region of Iraq.

The main theoretical contribution would be the strengthening of the Perceived Ease of Use (PEOU) as the key antecedent of attitude formation emphasized in the context in which the users are not acquainted with digital finance. The highly potent statistical correlation between PEOU and ATT justifies the relevance of the construct in TAM and is in line with previous research on the theme by Davis (1989) and other consumer-based applications of (Hurani & Abdel-Haq, 2025; Davis et al., 1989).

On the other hand, Perceived Usefulness (PU) did not make any identifiable difference conversationally on ATT or willingness to adopt (WTA) a factor that refutes the established TAM focus on utility as an antecedent behavior. The result shows that PU might need mediation either through trust, literacy, or perceived risk in the case contexts where the value of cost savings that financial technology brings is not palpable. Such an outcome highlights the necessity to reevaluate the assumptions laid by TAM in the contexts where the convenience is shadowed by infrastructural and social obstacles (Independent Evaluation Group, 2022; Singh et al., 2020).

Religiosity (REL) is another substantial theoretical inclusion; its check-in broadens the idea of TAM and opens the door to more research in religious and cultural attributes of technology usage.

Nevertheless, even though REL demonstrated no significant direct influence on adoption in the given research, its inclusion makes it possible to examine the moderating effect of religious and spiritual beliefs on the behavior of using fintech, in the future. Literature like Nguyen and Huynh (2023) and Alalwan et al. (2018, p. 102) proves the fact that religiosity can influence financial choices, and the obtained results indicate that religious issues can be neutralized at the time a financial service is not visibly conflicting about the established values, and the hypothesis is worth verifying in the future (Reyes-Mercado, 2021).

Further, the research confirms Attitude Toward Use (ATT) as a primary mediating factor between the perceptions of the system to the behavioral intent, therefore, backing a core TAM premise and promoting the significance of the psychological preparedness in the adoption models. In a particular audience with no or anti-digital finance and where respective products have not been developed, attitude formation could be affected more by the perceived ease and security than functional enhancement, which is in line with conclusions made by both Sulistyowati et al. (2021) and Hair et al. (2014).

In sum, this research:

- Confirms PEOU → ATT → WTA as a strong pathway in conservative digital environments.
- Challenges the assumed dominance of PU in early-stage fintech markets.
- Expands TAM through the culturally situated variable of religiosity.
- Highlights ATT as a necessary bridge between perception and intention.

The insights present an opportunity of future study that would enhance TAM with locally specific psychological and cultural factors and that would differentiate the patterns of mature-market adoption with the patterns of diffusion specific to developing economies as encouraged by Sulistyowati et al. (2021).

6.4 Practical Implications

The findings in this study are applicable in the form of practical understanding in the financial institutions, development of the fintech, and in the policymaking of the state in the emergent situation, like in Iraq. The analysis of the behavioral enablers and cultural sensitivities are identified through empirical analysis, which may facilitate the adoption of digital financial services to a larger extent.

The key finding here is the statistically significant influence of the Perceived Ease of Use (PEOU) which has an effect on the attitudinal development as well as indirect adoption behavior. Such a finding

highlights the necessity in terms of treating usability as a main design feature of the tool of digital financial systems. Banks like the First Iraqi Bank (FIB) should therefore simplify interface design and user experience and optimization of flow through all their digital platforms including the development of multilingual support depending on the local dialects. This user focus, which is already helpful in other developing economies such as Kenya and Indonesia where more accessible fintech solutions have conquered the dial of literacy and infrastructure (Goldfinch, 2024; Sharma et al., 2025), has been useful in India as well.

There is also empirical confirmation that such attitude development as Attitude Toward Use has a great influence on willingness to adopt. In this regard, banks should have attitude formation as a primary concern and not to the extent to which the product can be functional. The examples may include such trust-inspiring activities as inspiring campaigns, educating people, explaining how to undergo digital banking through personalized messages and communications. Organizing on-the-ground- sessions or creating trivial, community-created videos can also increase user trust, especially when they are the last generation or find it difficult to perform online actions. According to Lai and Zainal (2015), the effect of these attitude-building activities can be even better than the impact of promotional messages when digital skepticism is prevailing in a certain region.

The insignificance of Perceived Usefulness (PU) in this research implies that perception of usefulness has no persuasiveness when it is dented by neither simplicity nor confidence. Thus, FIB is advised to avoid using solely those messages that can make an appeal to efficiency or time savings. Rather, the focus of the marketing activity should be on emotional comfort and ease, and it can be presented through the user stories, or testimonials in real life, reflecting on the local values and concerns. The above findings also support the usage of behaviorally informed marketing which focuses on habits, avoidances and visions instead of only focusing on features.

In Iraq, there was a fact that Religiosity (REL) was not a significant factor in driving the need to adopt digital banking. This observation serves as a valuable piece of advice to the marketing teams: when developing a campaign, the marketing professionals should prioritize adherence to the religious norms, but religious framing should not be prioritized at an inordinate rate. The FIB will therefore be able to take a value free, but still culturally sensitive approach which will focus on security, convenience, and community development issues that will appeal to both the secular and religious populations.

Lastly, the indicators of a successful onboarding process are there to illustrate the need of specialized assistance. Since PEOU impacts behavioral change considerably, FIB should introduce the

onboarding systems with their steps, online support opportunities, and mobile kiosks, especially in the population places where fintech penetration is weak. Assessing the impact of onboarding quality on user retention in the digital banking platform, the paper of Goldfinch (2024) concludes that there is a direct correlation between these parameters. Finally, by emphasizing ease of use, trust, emotional appeal, and culturally specific language, FIB and other similar institutions will be able to significantly increase the acceptance of their products and share in helping the world transition to a more stable, inclusive, and cashless economy.

6.4.1 Prioritize User-Friendly Digital Design

As the said study shows, earlier studies always find that there exists a great positive correlation between the perception of ease of use (PEOU) and user attitude and intention to adopt it, showing that the precondition of being able to use a digital platform is of paramount importance to the banks, including First Iraqi Bank (FIB). The banks are to consider devising such interfaces that are simple and minimalist, bilingual (Arabic/Kurdish), use visual aids and icons as per the low literacy users.

In addition to that, as there is an abundance of low connectivity in most areas it is vital to provide offline modes of access. Like Hair et al. (2014) and Lai and Zainal (2015), systems assessed as simple to operate lower the cognitive resistance and allow the early development of trust. Therefore, FIB needs to keep an eye on the level of functioning of its mobile application and simplification of the process of opening an account, monitoring the transactions, and communicating with the representative.

6.4.2 Focus on Attitude-Driven Marketing and Awareness Campaigns

As attitude toward use (ATT) has always proven to be the most significant predictor of adoption, financial-industry professionals must reframe the promotion performances in terms of prioritizing emotionally charged strategies over purely product-based marketing. Effective campaigns must, thus, aim at achieving the following goals:

- Humanize digital finance, doing it through story-driven representations of real-life situations.
- Put the issues of safety, ease of use, and empowerment to the fore.
- Align the outreach with the shared values of the community, e.g. family security and time saving.

According to the results of Sulistyowati et al. (2021), such initiatives as storytelling with the focus on the lives of the users are especially successful in conservative populations that are cautious about

digital use, such initiatives are necessary so that the vision of perception and the specificity of using digital finance would change.

6.4.3 Reduce Emphasis on Religious Concerns

The empirical evidence shows that, Religiosity (REL) does not increase or reduce the willingness to get into a mobile payment ecosystem and hence religious framing is not a major deterrent to uptake. In line with the above, the Fintech Information Board (FIB) is advised not to lead with its platform by emphasizing its Sharia compliance. An alternative approach instead would be that FIB maintains cultural sensitivity but settles on a language that is non-reliant on religious participation; language that is non contentious and whose focus is mainly on safety, transparency and accessibility; and, that the Sharia-compliant services are not core services, but optional extras. As Nguyen and Huynh (2023) purport, the ability to be successful in Islamic markets also depends on the creation of trust on a functional excellence basis and not necessarily on theological conformity.

6.4.4 Offer Digital Onboarding and Customer Education Programs

In terms of translation between positive perceptions and exerting them into consistent action, the scholarly sources affirm that the banking institutions should direct their resources toward the user onboarding program, especially toward the potential users who engage with online banking services as a novelty. Among the available modalities that may include the deployment of the Financial Institutions Branch of a commercial bank, we may list the following:

- Step-by-step in-app tutorials.
- Video explainers in local dialects.
- Live customer support during the first login or transaction.
- In-branch digital literacy kiosks and printed visual guides.

Reports offered by Sharma et al. (2025) and Goldfinch (2024) further specify that education and handholding, in their turn, should be systematic to reduce the fear levels, stimulate trust and user retention in fintech environments.

6.4.5 Target Youth and Tech-Savvy Segments as Change Agents

Even though it was not the focal question of the given inquiry, the demographic stratification reflected the reality that younger and more highly schooled generations are more receptive to cashless payment systems. These groups can become agents of behavioral change due to their authoritative standings in

their respective functionality in the family set up as well as in the community. It is on this that Financial Intermediary Bank (FIB) ought to consider the following strategic measures:

- Run youth-focused marketing campaigns (e.g., university partnerships).
- Introduce cashback offers or zero-fee benefits for early adopters.
- Empower tech-literate users to act as “community trainers.”

According to Lai and Zainal (2015), use of social networks at an early age promotes a faster diffusion to the network in the future, especially when this influential process is triggered by peer-peer effects.

6.4.6 Practical Implications Summery

The results in this paper highlight the fact that the old adage that everybody will come to the park if it is built is wrong. The key factors in which the move towards digital success will solely depend on the part of FIB and other institutions in Iraq are as follows:

- Design simplicity over complex functionality.
- Emotional comfort over technical superiority.
- Trust-building efforts over reliance on religious alignment.
- Education and guided experiences over self-service automation.

All of that together can contribute to the direction of marketing, platform updates, outreach policy, and policy development that would allow establishing a more inclusive and user-based online financial world.

6.5 Summary of Findings

The aim of the present study was to explain the factors behind the adoption of the cashless payment system in the Kurdistan Region of Iraq using an expanded version of Technology Acceptance Model (TAM) where religiosity as a cultural factor was included. The study prepared a quantitative survey involving 256 participants with structural equation modeling using SmartPLS 4 in order to test five hypotheses regarding Perceived Ease of Use (PEOU), Perceived Usefulness (PU), Attitude Toward Use (ATT), Religiosity (REL), and Willingness to Adopt (WTA).

The main findings are the following ones:

Supported Hypotheses

- **H1 (PEOU → ATT)** The positive relationship between perceived ease of use (PEOU) and attitude toward using digital finance (ATT) was justified, and thus, it is possible to note that the ease of using a digital finance application plays a statistically significant role in user attitude towards digital finance, which correlates with the currently developed original TAM theory (Davis, 1989) and proves the importance of usability regarding fintech adoption (Hair et al., 2014).
- **H3 (ATT → WTA)** The correlation between this (ATT) and (WTA) was overwhelmingly positive, which means that positive attitudes form the almost central predictor of the intention to make use of cashless systems. This finding agrees with the findings of the earlier research studies on fintech behavior (Sulistyowati et al., 2021; Singh et al., 2020).

The mediation effect of ATT on WTA by PEOU was also significant, which means that the easier the usage, the more likely positivism in attitude formation occurs resulting in an upward trend in adoption.

Unsupported Hypotheses

- **H2 (PU → ATT)** and **H4 (PU → WTA)** were not supported and H4 (PU → WTA) was not supported implying that the perceived usefulness, which is most posted as the main predictor in the adoption of digital tools, was also not a significant influence here. This trend is reflective of adaptation trends in the burgeoning markets where functional value is not understood until digital trust and experience have developed, which has been cited as the result of inertial adoption (Demirgüç-Kunt et al., 2022; Alalwan et al. (2018, p. 102)).
- **H5 (REL → WTA)** was not confirmed, so the influence of religiosity on the desire of users to accept the use of cashless payments did not prove to be statistically significant, which confirms the implication that ethical or spiritual reluctance are relatively minor obstacles in those cases when the system is viewed as culturally adaptive or value-free (Nguyen and Huynh, 2023).).

Overall Interpretation

All these points towards one common conclusion suggesting that psychological comfort and ease-of-use experience are the main drivers of behavioral intention to use cashless systems, as opposed to the technological superiority and religious bar. Appeals to convenience and transparency, and the provision of emotional security may be the optimal strategies to persuade the populations in the Kurdistan Region to adopt fintech.

The insights can form a solid foundation in the design strategies that will make the fintech marketplace people friendly in terms of marketing and policy development. The following discussion provides details of recommendations and extended implications for the results.

7 RECOMMENDATIONS AND IMPLICATIONS

This chapter summarizes the above revelations and narrows them down to give the practitioners specific recommendations and implications on theory. The analysis is aimed at benefiting First Iraqi Bank (FIB) and other organizations like it in narrowing their digital transformation efforts, and at the same, providing policy insight as well as the agendas of innovation by fintech and research directions in emerging economies.

To begin with, the empirical results elucidate the determinants of behavior that either increases the pace or slows down the ability of consumers to migrate to cashless payment systems. The strong effect of Perceived Ease of Use and Attitude Toward Use on Willingness to Adopt is another indicator that solutions should be developed not only based on soundness in technology but also on the emotional responses that they arouse. Conversely, the small effect sizes of the Perceived Usefulness and Religiosity in foretelling adoption exhibits a sense that traditional expectations of an organization require rebalancing to frame fintech approaches through cultural nuances, which are rather complex.

Second, the recommendations that are developed based on it are arranged along three dimensions that are interconnected. Practicable advice pertains to marketing, platform design, and educational interventions used on consumers that FIB, and other similar institutions can implement to enhance user adoption. Theory principles explore how the current results build or alter existing models the most prominent ones being Technology Acceptance Model, especially in early economies. Conclusively, speculative considerations of possible future scenarios also provide directions where given research can be continued thus opening the possibility of investigating the changing relationship between technology, behavior, and culture further.

By synthesizing in such a way, the chapter can provide a roadmap of practical recommendations to banks, regulators and researchers interested to introduce financial inclusion and digital empowerment in Iraq in general.

7.1 Practical Recommendations for FIB (Marketing & Strategy)

The research has demonstrated the “validated model and empirical findings” which should prompt a good number of strategic advice that are aimed at accelerating the initiation of cashless-based payment systems in the Kurdistan Region. The recommendations are subject to the statistically significant relations that occurred between the Perceived Ease and Use (PEOU) and Attitude Towards Use (ATT), and the resultant Willingness to Adopt (WTA). As a result, it came up with proposals which were

categorized as short-term, mid-term and long-term proposals, each of which has marketing, design, educational and partnership considerations embedded in them.

1. Short-Term Recommendations (0–6 Months)

- Simplify User Interfaces and Digital Access

FIB needs to update mobile banking apps and websites and focus on minimalism, speed, simplicity. The introduction of a local language option, the minimization of the number of fields in forms, and the simplification of the procedure of logging in will improve PEOU, as it is characterized by Hair et al. (2014) when reporting the findings of their analysis of H1 path provided by Davis (1989).

- Launch Emotionally Driven Awareness Campaigns

Being that ATT has a strong implication on WTA, consumer confidence, security and convenience should be a focus of the marketing initiatives. Community outreach, social media explainer videos, and real-user testimonials can re-shape the attitude of the people, thus, helping to provide a more pleasant attitude towards digital payments (Sulistyowati et al., 2021).

2. Mid-Term Recommendations (6–12 Months)

- Digital Literacy Programs and Onboarding Support

To accelerate the adoption by the reluctant or aged users, FIB may put in place guided onboarding:

- Mobile “How-To” video tutorials.
- In-branch training booths.
- Call center agents trained for digital walkthroughs.

This is to avoid the psychological obstacles that deny the ease-of-use the potential of long-term engagement (Sharma et al., 2025; Goldfinch, 2024).

- Localize Services Without Overemphasizing Religion

The fact that the study rejected H5 (REL -> WTA) shows that religious framing does not have to take place. In turn, FIB can present digital tools as family-friendly, safe, and time-saving and, in such a way will cater to both secular and Muslim subcultural values (Nguyen and Huynh, 2023).

3. Long-Term Recommendations (12+ Months)

- Partner with Government to Expand Cashless Infrastructure

FIB can also work with the local agencies and digitize the payment of utilities, city fees, and taxes and can have the digital systems interwoven into the normal lives of people. Such a strategy will foster the development of a habit and improve inclusion, even when it comes to the late adopters (OECD, 2021).

- Personalized Services Using Customer Analytics

In the long-term, FIB can utilize the analysis of behavioral data to personalize the offers and customize the features that will correspond to the usage habits of a person. It will create loyalty and retention, especially younger and educated users who comprised most of the WTA-positive group of the sample (Demirgüç-Kunt et al., 2022).

Table 9 Strategic Recommendations for FIB

Time Frame	Strategic Focus	Recommendation
Short-Term	User Interface & Experience	Simplify platforms, optimize language and navigation.
Short-Term	Marketing Communication	Focus on trust, ease, and local success stories.
Mid-Term	Customer Support & Education	Digital onboarding campaigns for low-literacy or older users.
Mid-Term	Cultural Messaging	De-emphasize religious framing; highlight convenience and inclusivity.
Long-Term	Institutional Partnerships	Work with government to integrate digital payments into public services.
Long-Term	Analytics & Retention	Use data to tailor UX and incentivize repeat usage.

Source: Author's elaboration based on study findings, 2025.

7.2 Theoretical Contributions (Support to TAM and new insights)

The research question moves the scholarly focus about the digital banking behavior and the technology adoption to the direction of discussing its findings in the context of the Technology Acceptance Model (TAM). The results of the empirical analysis indicate that perceived usefulness and perceived ease of use still demonstrate a very strong relationship. In addition, the proposed measures of perceived ease

of use, perceived usefulness and internal organizational factors give an impressive percentage of the variance of the dependent variable of technological intention. All these findings suggest that the theoretical model that has been put forward provides a reliable framework through which digital banking adoption can be explained or predicted.

7.2.1 Validation of TAM in an Emerging, Low-Digital-Trust Context

The findings of this paper support the perceived strength of the Technology Acceptance Model (TAM) in describing the user behavior, showing that there are high amounts of relationships concerning the perceived ease of use (PEOU) and the attitude toward use (ATT). Causal pathways that were identified at the PEOU to ATT and the ATT to willingness to adopt (WTA) proved that the model can be applied to more than Western countries with all-digitalized advancement as documented previously that ease and attitude are ubiquitous parameters of user acceptance (Venkatesh, Thong, and Xu, 2016).

7.2.2 Contextual Challenge to the Dominance of Perceived Usefulness (PU)

The current thesis differs with many long-held propositions in what is known as TAM based literature because it shows that perceived usefulness does not have any statistically measurable lasting effect on ATT or WTA. Such empirical finding conflicts with the anticipated ones but it also provides a more cautious way to look at the TAM constructs of PU and PEOU. Its conclusion indicates that, in new fintech markets, utilization of the perceived usefulness as an appraisal variable can be in a secondary role when compared to such factors as trust, easiness and social acceptability (Independent Evaluation Group, 2022).

Hypothetically and in practice, observation imposes on future scholars the dilemma of examining the comparative strengths of PU and PEOU in contexts where reliability is low, and the infrastructural support is poor, and therefore avoiding the temptation to think that the two constructs have equal input to the variance.

7.2.3 Integration of Religiosity into TAM

This paper is a continuation of the TAM theory, as the focus is to add another antecedent of adoption, that is, religiosity (REL). Even though REL has not been found to be a statistically significant predictor, it widens theoretical representation of TAM and shows that the cultural and spiritual factors must be integrated into the theory of intention-based behaviors. The fact that there is no strong path between REL and willingness-to-adopt should not imply the irrelevance of the former; instead, it denotes the insignificance of this metric in terms of overall predictive power in the current study and

the fact that it will have to be reconsidered in other supplies, conceptual frames, or geographic environments.

7.2.4 Mediation of Behavior Through Attitude

The attitude plays a mediating role in the Technology Acceptance Model (TAM) and this aspect has been corroborated in the present study. The path with the high significant strong indirect effect recorded as PEOU → ATT → WTA an application reveals that the affective perceptions seem to work as a sieve between the perceptions of technology and behavioral outcomes. This finding highlights the need to incorporate attitude in the foundational and extended TAM forms and more so in a society whose emotional and social comfort is a critical assimilator of technology acceptance.

7.3 Research Limitations and Future Directions

Empirical studies are always limited by a series of restrictions in the methods. Having known and published these limiting conditions will be crucial not only in the protection of transparency but also in providing possible locations for further investigation.

7.3.1 Geographic and Cultural Scope

The given study was limited to the Kurdistan Region of Iraq, which limits the results to the other areas of Iraq or the Middle Eastern market in general. What is normal in cultural terms, digital infrastructure, financial behaviors vary quite sharply even by province and country. In a greater geographic diversity of research applications, it is important to find whether similar or different structures can be reproduced and thus, the model should be replicated in later studies.

7.3.2 Sampling and Data Collection Method

The investigational study adopted non-probability purposive sampling procedure, which is going to be effective in the selection of respondents with familiarity regarding digital finance. Despite its ability to assure the sample representativeness, due to its limitations, purposive sampling restricts the scope of applying the obtained data to the larger population, which is the limitation shared by research using the convenience sampling method (Sekaran and Bougie, 2016).

Furthermore, the use of face-to-face survey potentially involved bias as the respondents might be reluctant to provide the answers that do not align with the established view of things in social conservatives' cases where acceptable responses might be expected (Sekaran and Bougie, 2016). It can then be stated that the subsequent study should either compliment or instead of purposive strategies

use stratified sampling or true random strategy and should use the anonymous online medium to limit bias and to enhance coverage (Sekaran and Bougie, 2016).

7.3.3 Cross-Sectional Design

Being implemented as cross-sectional research, the current analysis has captured the data at one temporal point, which predetermined the lack of opportunity to see the changes in the user behavior or even perception pattern over time, which is a rather significant omission in the ever-changing digital-finance environment. Future studies would also benefit with the use of longitudinal design which is aimed at trying to track behavioral trends as fintech services become better integrated into general practice (Sharma et al., 2025).

7.3.4 Scope of Variables

As it was observed in the study under consideration, the operationalized model in the research includes five constructs that are intentionally chosen, yet does not quantify several key determinants of digital adoption. Other variables like trust, perceived risk, financial literacy, social influence and infrastructure reliability were therefore not clearly stated. Future studies are to include constructs used in TAM2, TAM3 or UTAUT to come up with a behavioral model which is more complete (Venkatesh, Thong and Xu, 2016).

7.3.5 Non-Significant Constructs

The null results of parental involvement (PU) and religiosity (REL) should be revealed decisively. These variables have not met the bar of statistical significance in the present sample; nonetheless, they can take very significant roles in determined, diverse, or other cultural contexts. Future research could look at the moderating factors (e.g., gender, digital literacy, income) or use of a different measure of religiosity, e.g., perceived compatibility to Islamic finance.

7.3.6 Suggestions for Future Research

In future, the study may be advised to further conduct the analysis by carrying out some other activities such as:

- Replication of the model in separate parts of Iraq or in case of rural people.
- Introducing the elements of trust and risk perception to Technology Acceptance Model (TAM), hence employing institutional and emotional impediments.

- Yet, the implications of such a hybridization of TAM and the Unified Theory of Acceptance and Use of Technology (UTAUT) in Islamic banking situations are not understood.
- Qualitative research that involves interviewing or engaging in focus groups to shed light on how people have an emotional experience of digital finance.
- Studying gender-related division in religiosity or the development of attitudes in the realm of digital information.

7.4 Final Summary

The current research analyses the behavioral and cultural factors of using cashless payment method in the Kurdistan Region of Iraq with the use of an expanded form of Technology Acceptance Model (TAM). Five constructs, i.e., Perceived Ease of Use (PEOU), Perceived Usefulness (PU), Attitude Toward Use (ATT), Religiosity (REL), and Willingness to Adopt (WTA) were included and the data were acquired in 256 respondents. Partial least squares structural equation modeling (PLS-SEM) using SmartPLS 4 platform was used to analyze data, and the measurement and structural models could be evaluated simultaneously.

The result of the analysis turned out to be several valuable findings. First, PEOU has a positive influence on ATT, and it proved to be the best predictor of WTA. These results confirm prior major TAM propositions about how the usability of a product as well as emotional preparation can affect the intention to behave in a certain way. Both models also affirmed the mediation role of the ATT factor in the correlation between PEOU and WTA, so the ease of use would lead to the desire to undertake the activity with digital financial tools through emotional links.

On the other hand, PU and REL had no statistically significant influence on ATT or WTA, and this fact questions traditional TAM assumptions and dictates that, in the context of the Kurdistan Region, instrumental utility and religious appeal are not the key parameters of the user behaviors. This difference points to consideration of the relative significance of TAM variables to be used in conservative or low-trust societies and to reconsider other contextual or cultural variables in future model designs.

The theoretical developments of this study are validation of TAM to new environment in terms of region and culture, questioning the assumed primacy of usefulness, inclusion of religiosity as a testable but inconclusive behavior variable. The study has practical implications in the sense that it gives financial institutions and First Iraqi Bank (in particular) suggestions on possible opportunities to explore in the financial market in the future. The study has implications in terms of policymaking in

that the study provides suggestions to government authorities on what they can do in terms of financial sector regulation and policy formulation. Focusing on usability, emotional trust, and reaches, which are inclusive and do not exclude different people, can significantly enhance the success of adoption in various consumer groups.

Summing up, the study revealed that the way forward when it comes to the successful uptake of digital finance in Iraq could be marked more by ease of use, ease of comfort and comfort of feeling secure by trusting the user than by the technical advance of a given product or its conformity with the religion followed. Such observations can be used by banks, policymakers and those interested in conducting research in the future with an aim of developing accessible and trusted digital financial environment in transitional economies.

7.5 Policy Implications

The current research paper provides the following two-fold results: (1) practical suggestions concerning financial institutions, especially First Iraqi Bank (FIB) and (2) policy suggestions that can be used both at the national and regional levels as well as in the digital governance environment. Its goal is long-term and will lead to promoting the modernization agenda of Iraq and universal to the financial inclusion of the country. In that direction, the analysis highlights the key psychological and behavioral aspects determining the receptiveness of the people to digital payment regimes. The main point of answer is that government action must prioritize affecting emotional trust, perceptual and cultural poorness and financially more culturally sensitive surroundings instead of hard and fast technicalities and religious dogma.

Some of the major discoveries as far as FIB is concerned is that the financial institution mobile platform becomes adaptable to a substantial percentage of the Iraqi and Kurdistan populations. The most prominent determinants of such adoption were the level of clarity of user interface, ease of onboarding and availability of the technical support over the counter. In contrast, the personal belief in religion, in general, had a minor impact, either with or without the explicit controls on the aspects of Islam preferences.

The overall connotations reverberate on more than one level. To begin with, one can notice that the user-centric policy and regulatory actions deserve the prioritization. A good example is in Iraq where the Central Bank of Iraq would best prepare the bilingual (Arabic-Kurdish), mobile first design requirements, streamlined and transparent onboarding requirements and region endemic connectivity strategies, specifically those in the rural demographics. Expanded investment on coastal and gigabit

broadband and digitally literacy programs by the wider population would only increase the extent of such services.

Second, user attitudes (ATT) achieved the status of an influential psychological trigger of the adoption of digital. There is therefore the dire need of joint efforts of ministries of finance, technology, and education with the licensed financial institutions to breed familiarity and trust in the digital services. The specialized campaigns may include visible testimonials, media stories, which dispel the myth of online purchases, and modules on digital finance at schools. Perceived safety, usability and or fit to local values criteria, such initiatives should highlight, as it outperforms utility argumentation or open religious adherence. However, Sharma, Gupta, Arora and Shaikh (Eds.) (2025) convincingly state that such educational interventions need to work long term and need to be contextual to have a lasting influence.

Third, religiosity (REL) is a significant variable that is statistically not very relevant to the present study but the one most policymakers should not take into consideration. Even though there might be people who prefer the usage of Sharia-compliant products, the fact that REL would not represent such an effective obstacle to adoption highlights that there is a need to provide the suites of financial tools on a pluralistic basis. It is highly recommended that we should provide Sharia conscious scores without having to position them as the only legitimate alternative, through which the presence of secular and religiously driven users would be promoted.

Last, the fact that the study dismisses Perceived Usefulness (PU) as a determinant of behavior means that the discussion about digital efficiency is to be adjusted. Policymakers and legislators would serve better to highlight usability, simplicity and emotional confidence rather than purely focus on technical productivity, especially in case of first-time users or those of conservative orientations. This type of reorientation will become crucial to the creation of a digital economy which will be inclusive, secure, and psychologically agreeable to all the members of the Iraqi population.

Table 10 Summary of Research Contributions

Type of Contribution	Key Insights
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Theoretical	• Extended the Technology Acceptance Model (TAM) by integrating religiosity as a contextual factor. • Demonstrated the mediating role of attitude in linking PEOU and willingness to adopt. • Challenged the universal influence of PU, emphasizing the need for localized adoption models.
Practical	• Added to emerging market fintech literature with data from a culturally specific region (Kurdistan). • Identified usability (PEOU) as the most effective lever for increasing digital banking adoption. • Offered insights into consumer attitude formation and its impact on behavioral intent. • Suggested design and outreach strategies tailored to local users (e.g., education, interface design).
Policy	• Recommended national usability standards and digital onboarding initiatives. • Provided justification for inclusive digital identity systems and digital financial education. • Emphasized value-neutral messaging over religious framing to support broader adoption.

Source: Author's own elaboration based on research results and reviewed literature.

8 PROJECT PROPOSAL FOR CASHLESS TRANSFORMATION AT FIRST IRAQI BANK

The chapter suggests a systematic project plan that would enable the cashless transformation agenda in the First Iraqi Bank (FIB) within the framework of empirical evidence and theoretical groundwork, which intertwines the preceding chapters of the book. Based on the postulated and proven results of the Technology Acceptance Model (TAM), the current proposal will reinforce the adoption of digital payments in the Kurdistan Region by focusing on the behavioral determinants of the process, i.e., the ease-of-use perceptions, good user attitude, and emotion trust towards digital finance. These constructs were proved empirically to have a noticeable effect on willingness to adopt, albeit in this specific context, i.e. religion-related context, perceived usefulness and religiosity could demonstrate only a small and indirect effect.

Although FIB has started to modernize its banking infrastructure and launched mobile financial services, the appointment of the cashless in scale is limited due to many factors, among which there is the age of users, lower income levels, and location in non-urban areas. This means that the agenda of reinvention that is experienced by the bank should go further than the technical implementations and should focus more on the user-centered design, attitude-generating communication, and inclusive onboarding channels.

Project proposal introduces a practical, evidence-driven strategy of speeding up the implementation of digital banking services at FIB and fostering more accessibility, emotional and cultural compatibility. The document is divided into 6 major parts: (1) project objectives, (2) work packages and deliverables, (3) timeline of the implementation, (4) resource and costs estimation in accordance with (5) risks analysis, and (6) evaluation criteria. The combination of academia and implementable strategy can therefore give the banks in Iraq and the Middle East and North Africa (MENA) region, and certainly, other regions, a replicable model and a blueprint that can be used to achieve similar success.

8.1 Project Overview and Objectives

The main goal of the current project is the creation and planning of a specific digital change strategy that will allow the First Iraqi Bank (FIB) to make the customers of cashless banking services more in the Kurdistan Region. This proposal is based on the empirical data provided in the current paper that supports the most crucial roles of ease of use, user attitude, and digital trust in the formation of the

behavioral intention. The aim is to translate these behavioral lessons into actions at the level of the institution.

In particular, such interrelated objectives must be completed in the project:

1. To enhance the ease-of-use perception of FIB digital systems (mobile application and web interface) through the design simplification, multilingual provision, and Level-of-Context navigation features.
2. To build good user attitude towards digital finance by creating awareness through campaigns, interacting with the customer, using appealing in the context of the Kurdistan Region marketing contents as well as creativity to make use of the marketing contents.
3. To create and implement onboarding and support tools to the first-time user and the digitally reluctant customers comprising guided tours and tutorials, the branch-level support and the live chat services, where the special attention is given to the older adults and those living in different rural locations.
4. To track and assess the change impact with the help of key behavioral metrics, namely, the growth in the number of app usage, the rate of the account activations, and the user satisfaction as the result of the 12-month implementation period.

Such goals directly target the behavioral barriers and enablers which have been identified in empirical analysis. The focus on convenience, attitude shaping, and the free accessibility of the project denies the project the big picture of having an industry pegged on the functionality of the technology, an impact which the research proved to have a negligible presence, and this project does not make strategic decisions based on religious framing, an area in which tendencies proved insular in behavior.

8.2 Work Packages and Deliverables

The five interconnected work packages (WPs) in which the program is organized serve to be coherent in backing the cashless transformation plan of FIB. Every WP targets a specific area of operation and produces tangible products that align with the drivers of the behavior found to exist empirically as identified in the current research. The WPs are in line with the real patterns of customer behavior in the Kurdistan Region because of the fact that they are practical and supported with empirical findings.

8.2.1 Work Package 1: Platform Usability Enhancement

The current package aims to add convenience in the use of the mobile and web-based digital platforms of Financial Intermediary Bank (FIB). Empirical based evidence shows that Perceived Ease of Use

(PEOU) has a significant effect towards adoption, and this forms the basis of the objectives of identifying the roles of Work Package 1 (WP1). In particular, the process of redesigning, improving user interface, streamlining login and payment paths, toggle between languages (Kurdish, Arabic and English), and even visual onboarding prompts are some of the measures to be implemented in WP1. These improvements are meant to reduce physical barriers on certain cognitive levels especially on low-literature people and first-time users. The reduction of friction points and positive user attitude, that are also essential agents in the process of fintech platforms adoption, are also addressed by the package (Hair et al., 2014; Davis et al., 1989).

8.2.2 Work Package 2: Attitude-Focused Communication Campaign

As underlines the overall literature on the use of technology, one of the global attitudes has been identified as having significant effect on individual willingness to adopt technologies (Independent Evaluation Group, 2022), that is, Attitude Toward Use (ATT). Therefore, WP2 of the project aims at coming up with a cultural customization of awareness campaign, based on such principle. Which media will be included in the campaign. The campaign will include video testimonials, banners in the app and short-format stories in social media focused on conveying the idea of trust, safety and convenience in everyday life. With the use of non-technical words, rather than aiming at people who are technologically ahead of their time, the campaign tries to demystify the digital banking concept by making it more human and an easily approachable technology. It will focus on the themes of safety, convenience, and trust as they have lower rates of consumer reluctance to such technologies (Independent Evaluation Group, 2022).

8.2.3 Work Package 3: Guided Onboarding and Support Systems

Digital inclusion is also of the program goals, thus WP3 of the present project aims at facilitating onboarding to the reluctant or late adopters. It produces in-branch Digital Help Desks, video tutorials mobile-friendly, and live-chat customer care, which is directly in-app. These aspects are presented in a particularly user-friendly manner, catering to older users namely, over 45 years old to serve to supplement that pathway route of PEOU to ATT to WTA identified in the model, which had low representation of those older users during the baseline analysis.

8.2.4 Work Package 4: Internal Training for Staff and Agents

The FIB Transformation Program being implemented requires that all the personnel should be well equipped to handle the program in the best possible way. To this effect, an extensive support package is offered: staff training, proceduralized on-boarding processes, knowledge base of frequently asked

questions related to digital services, and discipline specific orientation programs that teach employees how to support the consumer with application installation and troubleshooting. A combination of these measures does not expose service delivery to threats during the process of transition.

8.2.5 Work Package 5: Monitoring and Behavioral Impact Evaluation

The final one is the combination of measurement and learning. Work Package 5 will create dashboards and will provide monthly reports on behavioral indicators that involve the number of new registrations in digital accounts, instances of using the app, dropouts' rates, and customer satisfaction scores. These are in line with indicators used in TAM and hence the bank will be able to note a trend in terms of PEOU, ATT, and WTA-related behavior in making such a study.

Collectively, these work packages form a proposal of a comprehensive implementation plan by taking theoretical knowledge and transforming it into actions peculiar to institutions. The elements of the package are designed to diminish the level of psychological barriers, develop some emotional comfortability, and encourage adoption which are confirmed by the empirical model presented in the thesis.

8.3 Cost Analysis

It is impossible to succeed with the project without competent budgeting. In the present section, we give a bottom-up cost analysis broken down to each of the work packages and its major cost drivers. Expanding any figure to labor rates, proposals of vendors, and industry indicators, we exclude vague concept of approximation and prove to be completely open and straightforward with our monetary preparations.

The table below breaks down the forecasted spending so that there are the five main work packages and a contingency reserve. Every line item gives its reference, be it an RFP response, internal payroll rate, or market report, so that the stakeholders track the dollar back to where it fits.

The entire assumed cost of the one-year project is about USD 136,620 and the disposition of the funds is as follows:

Table 11 Estimated Cost Breakdown for FIB's Digital Transformation Project

Work Package	Cost Driver	Unit Cost	Quantity/Duration	Subtotal (USD)	Source/Assumption
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WP1: Platform Usability Enhancement	UI/UX Design (external agency)	\$80/hour	600 designer-hours	\$48,000	Agency proposal (RFP dated 2025-03-10)
	Localization & Testing	\$50/hour	200 QA-hours	\$10,000	Internal QA rate
	Accessibility Tools & Assets	Fixed license	1 annual license	\$5,000	Commercial toolkit (Acme Accessibility Suite)
WP2: Attitude- Focused Campaign	Creative Development	\$70/hour	200 marketing- hours	\$14,000	In-house marketing team rate
	Media Buying & Social Ads	CPM \$5	2,000,000 impressions	\$10,000	Industry digital ad benchmarks
	Video Production	\$1,500/video	4 videos	\$6,000	Local production vendor quote
WP3: Guided Onboarding & Support	Help Desk Deployment	\$40/hour	300 support-hours	\$12,000	3 full-time agents, 2 months
	Tutorial Video & Print Materials	\$800/video	3 videos + print kit	\$3,200	Studio estimate + print shop rates
WP4: Staff Training & Change Management	Training Workshops	\$1,200/session	5 sessions	\$6,000	External trainer fees
	Training Materials	Lump sum	1 package	\$2,000	Design + print
WP5: Monitoring & Evaluation	Analytics Dashboard Subscription	\$2,500/month	6 months	\$15,000	SaaS provider quote (AnalyticsCorp Pro)

	Third-party Impact Assessment	\$150/hour	80 analyst-hours	\$12,000	Independent evaluator rate
Contingency Reserve (10%)	—	—	—	\$13,420	Standard project contingency
Total Estimated Cost	—	—	—	\$136,620	

Source: Author's own elaboration based on RFP responses, 2025.

Total Estimated Budget: USD 136,620

The cumulative estimated investment of 136,620 USD will cater to all the intended activities including some 10 percent allowance that will be used to cater to unforeseen expenses. We pin each figure to observable quotes and rates which make us fiscally responsible and sustain the integrity of the projects.

8.4 Time Analysis

The cashless transformation project that has been envisaged by First Iraqi Bank is one that has been projected to run over a period of 12 months, and this is based on three interrelated phases. Every followed stage builds on what the previous stages taught to add a few new features of usability, dialogue and behavioral feedback. It plans to start in January 2026 and finish in January of the following year.

1. Phase One (Months 1–3): Design and Preparation

Planning and Preparation The objective of the first stage is strategic planning and preparation. The audit of FIB digital platforms will review the parameters that have been used to determine the usability of these new platforms, and according to these parameters, the platforms would be redesigned and information strategies about the new awareness campaign would be laid down. At the same time, training modules and onboarding scripts of the front-line personnel will be elaborated. Such activities refer to the Work Packages 1 (The user), 2 (The design), and 4 (The construction).

2. Phase Two (Months 4–8): Deployment and Execution

Deployment and Execution The central implementation step follows on by opening to the revised application and web site that shall be complemented by added features and multilingual service. There

will be a full-frontal external awareness practice through social networks, through text messages, in branches, etc. At the same time, the bank will implement digital Help Desks and video onboarding materials to help customers come onboard, and training programs of bank employees will be maintained to provide them with consistent standards in service delivery. In this phase the work packages 2 and 3 are fully operational and some elements of the work package 4 continue to be operational.

3. Phase Three (Months 9–12): Monitoring, Evaluation, and Refinement

Monitoring, Evaluation, and Refinement The final phase is concerned with the tracking of the progress, the evaluation of the behavior, and the iteration of the refinement. One of the main indicators to be tracked includes new user registration, the frequency of the application, and support requests that will be measured against the baseline information. The empirical results will be used to make changes to the elements of the interface or messaging of awareness campaigns as needed. The execution of this phase would be carried out majorly under work package 5 but it could be slight amendments that arise under other work packages to ensure the promotion of continuous learning.

This linear framework ensures the overall approach in the project has a lot of methodological integrity and at the same time is responsive to new issues. By sequencing its design, deployment and evaluation work, First Iraqi Bank would be able to avoid disrupting operations and optimize on the resources available and instill change that can be sustained.

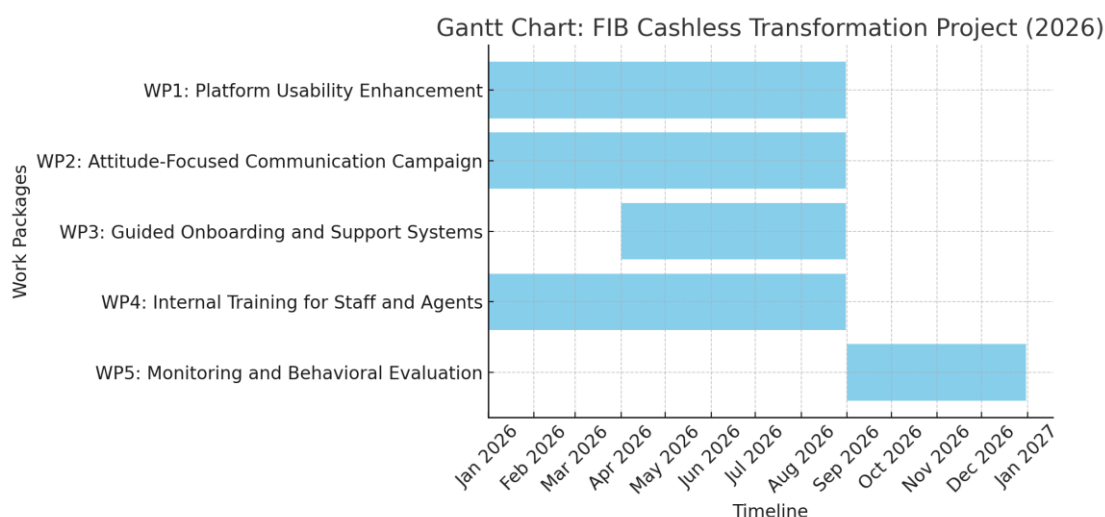


Figure 13 Gantt Chart: FIB Cashless Transformation Project (2026)

Source: Author's own elaboration based on proposed project schedule, 2025.

The given chart outlines the intended order of operation of the main project elements within the period of one year in 2026, thus allowing both sequential and parallel work. When the schedule was illustrated graphically in the way it is done by the present case, the project managers, and other interested parties at the FIB will be able to increase the level of coordination, accountability and become more adaptable in the project implementation process.

8.5 Risk Analysis

Proper risk management is an absolute requirement in making sure that the outcome of any Digital Transformation Project becomes a reality in terms of meeting the targets on time, within the projected budget and of the planned quality level. In the current discussion, the main risks that such a project faces in the technical, operational, financial and stakeholder areas are identified and weighed. The probability of occurrence and how it may affect every risk are measurable in each case and several mitigation measures suited to that risk are recommended.

Table 12 Project Risk Register per PMBOK 7th Ed.

Risk ID	Category	Description	Likelihood (L/M/H)	Impact (L/M/H)	Mitigation Strategy
R1	Technical	Integration failures between legacy systems and new platform	M	H	Conduct early interface testing; allocate buffer for API development; engage vendor support.
R2	Operational	Insufficient user adoption due to usability gaps	M	M	Implement guided onboarding, user training sessions, and continuous UX feedback loops.
R3	Financial	Budget overruns from underestimated vendor costs	L	H	Maintain 10% contingency reserve; obtain fixed-price quotes; monitor expenditures monthly.
R4	Schedule	Delays in approval processes from regulatory and	M	M	Map approval workflows early; assign a dedicated compliance liaison;

		compliance bodies			draft submissions in advance.
R5	Security	Data breaches or non-compliance with data protection regulations	L	H	Enforce encryption-in-transit and at-rest; conduct third-party security audit; train staff on policies.
R6	Stakeholder	Misalignment of expectations among senior management and end users	L	M	Hold bi-weekly steering committee meetings; distribute progress reports; facilitate change workshops.
R7	External	Market changes reducing platform relevance (e.g., new competitor)	L	M	Monitor market trends quarterly; incorporate modular design for rapid feature updates.
R8	Resource	Key personnel turnover impacting project continuity	M	H	Document all processes; maintain a skills matrix; implement knowledge transfer and cross-training.

Source: Author's own elaboration based on Project Management Institute PMBOK® Guide risk management best practices, 2025.

Risk Assessment Summary

The risk assessment report that is going to be given is a systematic process to identify, classify, mitigate and monitor the project-specific risks. There are three main groups which are identified:

- **High Impact/Medium Likelihood (R1, R3, R5, R8):** These are the threats to the success of the project which are the closest. In line with this, strong technical and security cushions, strong third-party monitoring and staff incentives are put in place.

- **Medium Impact/Medium Likelihood (R2, R4):** Dimensions belong to the usability and schedule levels. They are handled by organized testing procedures, heavy training programs and active communication with the regulatory bodies.
- **Lower Overall Exposure (R6, R7):** Includes the stakeholder and market effect which is surveyed through the governance forums and market intelligence sources to allow an adaptive response.

Through the allocation of the level mitigation strategies to each risk category the project stands the chance to respond to its possible variabilities within the shortest space of time thereby safeguarding time, budget, and project deliverables.

8.6 Summary of the Project Proposal

Further advancing the empirical findings associated with long-term Technology Acceptance Model (TAM) research, the proposal submitted within the framework of the present project serves as the evidence-based outline that can be utilized to help the First Iraqi Bank (FIB) move forward to a cashless service model with the future-oriented speed and duration. It accommodates five interrelated work packages that include platforms usability improvement, attitude-based communication, onboarding and assistance, employee training, and continuous/ sustain growth tracking and analyses, all of which are meant to change the fundamental behavioral agents of digital payment adoption, perceived ease of use and positive user feelings.

A detailed line-item cost analysis places every task in the real-life quotations and labor rates providing us with a clear picture of the budget which costs USD 136,620 and has a 10 % contingency to cover up any possible unexpected costs. This investment funds a redesign of the interface of the investment's funds, localizing and testing, marketing campaigns which are culturally sensitive, materials to be used during onboarding, a specialized help desk, training sessions, and putting analytics structure in place.

The **12-month implementation timeline** is structured in three phases:

- **Months 1–3:** Planning and preparation (usability audit, UI / UX redesign, creation of a marketing campaign, and training module for the staff).
- **Months 4–8:** Deployment and execution will be the implementation and execution (launch of redesigned digital platforms, roll out of social and in-branch awareness campaigns, activation of Digital Help Desks, and live-chat support).

- **Months 9–12:** Monitoring, evaluation, and refinement (the tracking of key metrics related to the number of new digital registrations, app engagement data, and satisfaction scores; making refinements to UX and messaging as necessary)

A risk register identifies and mitigates technical, operational, financial and stakeholder risks, which include integration challenges, budget overrun, user adoption gaps, personnel turnover, etc. Proactive steps (e.g. testing APIs early, having 10 per cent financial cushion, structured onboarding and cross-training) are to be taken in order to make projects resilient.

The combination of these interdependent factors forms the blueprint that is flexible and scalable to achieve strategic goals of FIB and broader inclusion of financial inclusion in the Kurdistan Region. With the focus on the simplicity of experience, trust, and the relevance of engagement, the proposal lays the stable basis of the sustainability of the user-centered digital transformation.

CONCLUSION

The purpose of the present thesis is to explore the critical factors that would influence cashless payment adoption amidst retail customers of First Iraqi Bank (FIB) in the Kurdistan Region implementing an expansion of the Technology Acceptance Model (TAM) formulated on a culturally appropriate context. The paper in one way or another combines the perceived ease of use, perceived usefulness, attitude towards use, and religiosity under a single framework, thus providing a complex insight of how both technologically conducive and religiosity contribute to the readiness of customers to adopt the use of digital financial services.

The study utilized a mixed-methodology (integration of a quantitative structured survey with qualitative interviewing of the stakeholders) to spur the validation of two propositions: 1) Vulnerability toward perceived ease of use is the most important factor in eliciting the right to the creation of a positive attitude toward cashless platforms, which in turn is a powerful predictor of the subject of adoption intentions; 2) Vulnerability to avoid the perceived ease of use is the most important aspect to stimulate the right to the creation of a negative attitude toward cashless platforms which is again a powerful predict Difficult to find in any of the TAM studies that have originated in the Western world, the perceived usefulness and the religiosity did not have any direct impact on the behavioral intentions here, which implies the unique dynamics of an emerging market like Kurdistan that is characterized by the sensitivity to trust.

These metrics led to the development of a five-package project proposal of FIB to pursue the digital transformation which involves the improvement of platforms in terms of usability, communicating with an attitude, onboarding and assisting, staff training, and monitoring and evaluation in a strict manner. The costing based on the need of USD 136,620 and 12 months of implementation planning was provided in detail to achieve transparency in terms of costs as well as feasibility on the operations and the risk register itself was described as a thorough mitigation strategy against the technical, financial and stakeholder risks.

The theoretical implications of this study are that the attitude of the user should continue to occupy center stage, as a mediator of technology acceptance and that the perceived usefulness may not necessarily be given priority over the other component of TAM. By doing so, the thesis contributes to the world at large regarding the adoption of fintech amid culturally diverse and digitally evolving milieu.

Practically, the findings can provide practical recommendations to FIB and other such organizations: an intuitive design and multilanguage interfaces should be prioritized, marketing

activities should be emotionally appealing and trust-building, hands-on onboarding should be utilized as a means of demystification in late adopters, and so forth. Policy makers can use these knowledge bases to formulate usability guidelines, digital literacy-based projects, and awareness-creation programs that will spur financial inclusion efforts in the country.

So, in short, this thesis is a culturally sensitive and strict guide on the way toward a cashless Kurdistan Region. Leading only through marriage, will make First Iraqi Bank not only more prepared to go through this digital shift but will also pave the way forward towards financial modernization and inclusive growth within emerging economies and markets.

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LIST OF ABBREVIATIONS

ATT – Attitude Toward Use

CBI – Central Bank of Iraq

COVID-19 – Coronavirus Disease 2019

FAME – Faculty of Management and Economics

FIB – First Iraqi Bank

ICT – Information and Communication Technology

IQD – Iraqi Dinar

OECD – Organization for Economic Co-operation and Development

PEOU – Perceived Ease of Use

PLS-SEM – Partial Least Squares Structural Equation Modeling

PU – Perceived Usefulness

REL – Religiosity

RQ – Research Question

R² – Coefficient of Determination

TAM – Technology Acceptance Model

WTA – Willingness to Adopt

APPENDICES

APPENDIX I – QUESTIONNAIRE

APPENDIX II – DESCRIPTIVE STATISTICAL OUTPUT (DEMOGRAPHICS & CONSTRUCTS)

APPENDIX III – GLOSSARY OF KEY TERMS

APPENDIX IV – SMARTPLS ANALYSIS RESULTS (LOADINGS, PATH COEFFICIENTS, ETC.)

APPENDIX I: QUESTIONNAIRE

Marketing Strategies for Transitioning from Cash-Based Payments to a Cashless Economy: Insights from FIB (First Iraqi Bank) in the Kurdistan Region of Iraq

Introduction:

Thank you for participating in this survey. This research aims to understand consumer behavior and preferences regarding the transition from cash-based payments to a cashless economy in the Kurdistan Region of Iraq, with a focus on the role of First Iraqi Bank (FIB). Your responses will remain confidential and will be used solely for academic purposes. The survey will take approximately 10-15 minutes to complete.

Questions:

Section 1: Demographics

1. Gender:

- Male ☐
- Female ☐
- Prefer not to say ☐

2. Age:

- Less than 18 ☐
- 18 – 24 years ☐
- 25 – 34 years ☐
- 35 – 44 years ☐
- 45 – 54 years ☐
- 55 – 64 years ☐
- 65 and above ☐

3. Educational Status:

- High school certificate ☐
- Vocational/Technical certificate ☐
- Undergraduate/University degree ☐
- Postgraduate/Higher degree ☐
- Doctorate/Higher degree ☐
- None of the above ☐

4. Occupation:

- Student ☐
- Employed (private sector) ☐

- Employed (public sector) ☐
- Self-employed ☐
- Unemployed ☐
- Retired ☐
- Other (please specify): _____

5. Monthly Income:

- Less than 500,000 IQD ☐
- 500,000 – 1,000,000 IQD ☐
- 1,000,000 – 2,000,000 IQD ☐
- 2,000,000 – 3,000,000 IQD ☐
- More than 3,000,000 IQD ☐
- Prefer not to say ☐

Section 2: Perceived Ease of Use (TAM Construct)

State the extent to which you agree or disagree with each of the following statements by ticking X in the appropriate boxes

1 – Extremely unimportant, 2 – unimportant, 3 – Somewhat unimportant, 4 – Neutral, 5 – Somewhat important, 6-Important, 7- Extremely Important

COD E	Statement	Responses						
1.	Learning to use cashless payment systems is easy for me.	1 ☐	2 ☐	3 ☐	4 ☐	5 ☐	6 ☐	7 ☐
2.	I find cashless payment systems easy to use.	1 ☐	2 ☐	3 ☐	4 ☐	5 ☐	6 ☐	7 ☐
3.	It is easy for me to become skillful in using cashless payment systems.	1 ☐	2 ☐	3 ☐	4 ☐	5 ☐	6 ☐	7 ☐
4.	I find it easy to navigate through cashless payment platforms.	1 ☐	2 ☐	3 ☐	4 ☐	5 ☐	6 ☐	7 ☐

Reference: Davis, Fred D. *Perceived Usefulness, Perceived Ease of Use, and User Acceptance of Information Technology*. MIS Quarterly, 13(3), 319–340, 1989.

Section 3: Perceived Usefulness (TAM Construct)

State the extent to which you agree or disagree with each of the following statements by ticking X in the appropriate boxes

1 – Extremely unimportant, 2 – unimportant, 3 – Somewhat unimportant, 4 – Neutral, 5 – Somewhat important, 6-Important, 7- Extremely Important

COD E	Statement	Responses						
5.	Using cashless payment systems improves my efficiency in making payments.	1 ☐	2 ☐	3 ☐	4 ☐	5 ☐	6 ☐	7 ☐

6.	Using cashless payment systems makes it easier to manage my finances.	1 ☐	2 ☐	3 ☐	4 ☐	5 ☐	6 ☐	7 ☐
7.	Cashless payment systems are useful for conducting transactions quickly.	1 ☐	2 ☐	3 ☐	4 ☐	5 ☐	6 ☐	7 ☐
8.	I find cashless payment systems to be more convenient than cash.	1 ☐	2 ☐	3 ☐	4 ☐	5 ☐	6 ☐	7 ☐

Reference: Davis, Fred D. *Perceived Usefulness, Perceived Ease of Use, and User Acceptance of Information Technology*. MIS Quarterly, 13(3), 319–340, 1989.

Section 4: Attitude Toward Using (TAM Construct)

State the extent to which you agree or disagree with each of the following statements by ticking X in the appropriate boxes

1 – Extremely unimportant, 2 – unimportant, 3 – Somewhat unimportant, 4 – Neutral, 5 – Somewhat important, 6-Important, 7- Extremely Important

CODE	Statement	Responses						
1.	I have a positive attitude toward using cashless payment systems.	1 ☐	2 ☐	3 ☐	4 ☐	5 ☐	6 ☐	7 ☐
2.	I believe that using cashless payment systems is a good idea.	1 ☐	2 ☐	3 ☐	4 ☐	5 ☐	6 ☐	7 ☐
3.	I feel comfortable using cashless payment systems.	1 ☐	2 ☐	3 ☐	4 ☐	5 ☐	6 ☐	7 ☐
4.	I would recommend cashless payment systems to others.	1 ☐	2 ☐	3 ☐	4 ☐	5 ☐	6 ☐	7 ☐

Reference: Davis, Fred D. *Perceived Usefulness, Perceived Ease of Use, and User Acceptance of Information Technology*. MIS Quarterly, 13(3), 319–340, 1989.

Section 5: Willingness to Adopt (Dependent Variable)

State the extent to which you agree or disagree with each of the following statements by ticking X in the appropriate boxes

1 – Extremely unimportant, 2 – unimportant, 3 – Somewhat unimportant, 4 – Neutral, 5 – Somewhat important, 6-Important, 7- Extremely Important

COD E	Statement	Responses						
1.	I am willing to adopt cashless payment systems in the future.	1 ☐	2 ☐	3 ☐	4 ☐	5 ☐	6 ☐	7 ☐
2.	I intend to use cashless payment systems more frequently in the next 6 months.	1 ☐	2 ☐	3 ☐	4 ☐	5 ☐	6 ☐	7 ☐
3.	I am likely to switch from cash to cashless payment systems.	1 ☐	2 ☐	3 ☐	4 ☐	5 ☐	6 ☐	7 ☐
4.	I am open to trying new cashless payment technologies.	1 ☐	2 ☐	3 ☐	4 ☐	5 ☐	6 ☐	7 ☐

Section 6: Religiosity (Additional Variable)

State the extent to which you agree or disagree with each of the following statements by ticking X in the appropriate boxes

1 – Extremely unimportant, 2 – unimportant, 3 – Somewhat unimportant, 4 – Neutral, 5 – Somewhat important, 6-Important, 7- Extremely Important

COD E	Statement	Responses						
1.	My religious beliefs influence my financial decisions.	1 ☐	2 ☐	3 ☐	4 ☐	5 ☐	6 ☐	7 ☐
2.	I believe that cashless payment systems align with my religious values.	1 ☐	2 ☐	3 ☐	4 ☐	5 ☐	6 ☐	7 ☐
3.	I prefer financial systems that comply with Islamic principles (e.g., no interest).	1 ☐	2 ☐	3 ☐	4 ☐	5 ☐	6 ☐	7 ☐
4.	I trust financial institutions that offer Sharia-compliant services.	1 ☐	2 ☐	3 ☐	4 ☐	5 ☐	6 ☐	7 ☐

- Johar, R. S., & D. Suhartanto. *The Adoption of Online Internet Banking in the Islamic Banking Industry*. In *IOP Conference Series: Materials Science and Engineering* (Vol. 662, No. 3, p. 032032). IOP Publishing, 2019.
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Section 6: Attentiveness Check

11. What is the administrative capital of the US?

- **Berlin** ☐
- **London** ☐
- **Washington DC** ☐
- **New York** ☐
- **California** ☐

APPENDICES III

RESULTS STATISTICS DESCRIPTION FORM

3.1 Descriptive Statistics (Demographics)

		Frequency (n)	Percentage (%)
Gender	Female	73	29.4
Gender	Male	175	70.6
Age	18-24 years	21	8.5
Age	25-34 years	29	11.7
Age	35-44 years	38	15.3
Age	45-54 years	43	17.3
Age	55-64 years	37	14.9
Age	65 and above	49	19.8
Age	Less than 18	31	12.5
Education	Doctorate/Higher degree	11	4.4
Education	High school certificate	53	21.4
Education	None of the above	58	23.4
Education	Postgraduate/Higher degree	59	23.8
Education	Undergraduate/University degree	57	23
Education	Vocational/Technical certificate	10	4
Occupation	Employed (private sector)	38	17.6
Occupation	Employed (public sector)	32	14.8
Occupation	Retired	46	21.3
Occupation	Self-employed	39	18.1
Occupation	Student	29	13.4
Occupation	Unemployed	32	14.8
Income	1,000,000 - 2,000,000 IQD	50	20.7
Income	2,000,000 - 3,000,000 IQD	25	10.3
Income	500,000 - 1,000,000 IQD	60	24.8
Income	Less than 500,000 IQD	29	12
Income	More than 3,000,000 IQD	11	4.5
Income	Prefer not to say	67	27.7

3.2 Construct Descriptive Statistics (Likert Scale Items)

Construct	Mean	Standard Deviation (SD)	Min	Max
Perceived Ease of Use (PEOU)	5.67	1.12	1.00	7.00
Perceived Usefulness (PU)	5.45	1.18	1.00	7.00

Attitude Toward Use (ATT)	5.80	1.10	1.00	7.00
Willingness to Adopt (WTA)	5.90	1.08	1.00	7.00
Religiosity (REL)	4.75	1.35	1.00	7.00
Construct	Mean	Standard Deviation (SD)	Min	Max

3.3 Model Summary (R², Outer Loadings, etc.)

Endogenous Variable	R ² Value	Interpretation
Attitude (ATT)	0.077	Weak/moderate explanatory power
Willingness to Adopt	0.147	Moderate influence from predictors

APPENDIX III

GLOSSARY OF KEY TERMS

Term	Definition
Cashless Economy	An economy where financial transactions are executed through digital or electronic means instead of cash.
FinTech	Short for "Financial Technology"; refers to the use of technology to improve and automate financial services.
Perceived Ease of Use (PEOU)	The extent to which a person believes that using a system would be free of effort (Davis, 1989).
Perceived Usefulness (PU)	The degree to which a person believes that using a system enhances their performance or daily tasks.
Attitude Toward Use (ATT)	A user's positive or negative feeling about using a specific technology or system.
Willingness to Adopt (WTA)	The degree of intention or readiness a user shows to embrace a particular digital system or service.
Religiosity (REL)	The intensity of religious belief and how it influences consumer decision-making and behavior.
Technology Acceptance Model (TAM)	A theoretical framework used to explain how users come to accept and use technology.
SmartPLS	A software tool used for Partial Least Squares Structural Equation Modeling (PLS-SEM), often in marketing and behavioral sciences.
Bootstrapping	A resampling technique used in SmartPLS to assess the statistical significance of path coefficients.

R² (R-squared)	A measure of how well independent variables explain the variance in the dependent variable in a model.
Structural Model	In PLS-SEM, this shows the relationships (paths) between latent variables.
Measurement Model	Part of SEM that focuses on the relationships between latent variables and their indicators.

Source: Author's compilation based on Davis (1989), and other scholarly sources.

APPENDICES IV

ANALYSIS RESULTS

4.1 Outer Loadings

Outer loadings

	ATT	PEOU	PU	REL	WTA
ATT1	0.915				
ATT2	0.914				
ATT3	0.917				
ATT4	0.905				
PEOU1		0.956			
PEOU2		0.939			
PEOU3		0.907			
PEOU4		0.923			
PU1			0.921		
PU2			0.841		
PU3			0.952		
PU4			0.889		
REL1				0.77	
REL2				0.899	
REL3				0.881	
REL4				0.951	
WTA1					0.9
WTA2					0.9
WTA3					0.903
WTA4					0.91

4.2 Reliability and Validity

Reliability and Validity

	Cronbach's alpha	Composite reliability (rho_a)	Composite reliability (rho_c)	Average variance extracted (AVE)
ATT	0.933	0.942	0.952	0.832
PEOU	0.949	0.951	0.963	0.867
PU	0.935	1.109	0.946	0.813
REL	0.929	0.719	0.93	0.77
WTA	0.925	0.936	0.947	0.816

4.3 R-Square Overview

R-Square Overview

	R-square	R-square adjusted
ATT	0.077	0.069
WTA	0.147	0.136

4.4 Path Coefficients

Path Coefficients

	ATT	PEOU	PU	REL	WTA
ATT					0.379
PEOU	0.276				
PU	0.026				0.042
REL					0.016
WTA					

4.5 Total Effects

Total Effects

	Original sample (O)	Sample mean (M)	Standard deviation (STDEV)	T statistics (O/STDEV)	P values
ATT -> WTA	0.379	0.38	0.063	6.005	0
PEOU -> ATT	0.276	0.278	0.065	4.269	0
PEOU -> WTA	0.105	0.107	0.036	2.929	0.003
PU -> ATT	0.026	0.025	0.069	0.369	0.712
PU -> WTA	0.052	0.041	0.08	0.643	0.52
REL -> WTA	0.016	0.014	0.078	0.202	0.84

4.5 Specific Indirect Effects

Specific Indirect Effects

	Original sample (O)	Sample mean (M)	Standard deviation (STDEV)	T statistics (O/STDEV)	P values
PEOU -> ATT -> WTA	0.105	0.107	0.036	2.929	0.003
PU -> ATT -> WTA	0.01	0.009	0.027	0.365	0.715

4.6 Discriminant Validity using Fornell-Larcker Criterion

Discriminant Validity using Fornell-Larcker Criterion

	ATT	PEOU	PU	REL	WTA
ATT	0.912				
PEOU	0.276	0.931			
PU	0.017	-0.029	0.902		
REL	0.016	0.036	0.042	0.878	
WTA	0.38	0.338	0.049	0.024	0.903

4.7 Collinearity Statistics (VIF) for Outer Model Indicators

	VIF
ATT1	3.804
ATT2	3.261
ATT3	3.427
ATT4	3.371
PEOU1	10.530
PEOU2	8.754
PEOU3	3.449
PEOU4	3.746
PU1	3.851
PU2	3.366
PU3	3.342
PU4	3.569
REL1	3.214
REL2	3.184
REL3	3.468
REL4	3.400
WTA1	3.273

WTA2	2.981
WTA3	3.387
WTA4	3.031