

Adaptability of Mobile Applications in the Kurdistan Region of Iraq

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Abstract

The use of mobile phones and mobile applications is growing significantly due to its ease of use and easy access, so we need continuous and new research to keep up with changes and meet user expectations. All this can change the way marketing, education and all other sectors. This study will generally investigate the use of applications in the Kurdistan Region, and several sectors have been identified for this study such as, restaurant, hospital, jewelry, dress shop, bank. How easy they are for people to use and how they work. We also refer to the switching costs in the sections, how much the user stays on the choice of product or service, and for which product or service the customer stays longer depending on the location or brand chosen.

Keywords: mobile application, switching costs, TAM model, UTAUT model, formative and reflective

1. Introduction

It is impossible to overstate how important mobile applications have become in our daily lives. Smartphone users can quickly access mobile applications, making it simpler for them to use your products or services. Mobile devices accounted for 54.8% of website traffic globally in the fourth quarter of 2020, according to a Statista poll. Customers have a more involved and engaging experience thanks to mobile applications, which makes it simpler for businesses to build relationships with them. Businesses can communicate with customers using mobile applications by sending push alerts, customized messaging, and other forms of contact (Budur, 2018). By offering a direct route to clients, mobile applications give businesses a competitive edge. A Clutch poll found that 42% of US small businesses presently have a mobile app, and this percentage is anticipated to rise as more companies grasp the value of having a mobile presence. By giving users an easy way to access a business's goods or services, mobile applications can aid companies in growing brand awareness. Users that contact with the application more regularly grow more accustomed to the brand, which increases brand loyalty and recognition. Applications on mobile devices can also be utilized to generate income. Companies can monetize their mobile applications through in-app advertising, sponsorships, and other methods in addition to using them to offer goods or services.

The "Technology Acceptance Model," or (TAM), is a teaching framework that entails modifying instruction to suit the requirements of particular pupils. The ATM model has been applied in several research investigations in a range of academic contexts. Here are some studies about the adaptability of mobile applications using TAM model.

The first research example is "Application of Technology Acceptance Model" (TAM) in M-Banking Adoption in Kenya). This article investigates the adoption of mobile banking (M-banking) in Kenya by applying the Technology Acceptance Model (TAM). The study involved a survey of 214 participants from various backgrounds to identify the factors influencing their adoption of M-banking. The findings indicate that perceived usefulness, ease of use, and credibility are the critical factors that influence M-banking adoption in Kenya, while perceived risk acts as a significant barrier. To encourage more Kenyans to adopt M-banking, service providers need to increase the perceived usefulness and ease of use while addressing concerns around perceived risk. Policymakers can also use the findings to develop policies that promote M-banking adoption and enhance financial inclusion in the country. Finally, researchers can use the TAM to investigate the adoption of other technology-based services in developing countries. The study highlights the importance of understanding the factors that influence M-banking adoption, which has the potential to improve financial

inclusion in Kenya. The TAM provides a useful framework for analyzing the adoption of technology-based services in developing countries, such as M-banking in Kenya. The study recommends that service providers focus on increasing the perceived usefulness and ease of use of M-banking while addressing concerns around perceived risk. Policymakers can use the findings to design policies that promote M-banking adoption and enhance financial inclusion in the country. Researchers can also apply the TAM to investigate the adoption of other technology-based services in developing countries. Overall, the study contributes to the understanding of M-banking adoption in Kenya and provides insights that can be useful for service providers, policymakers, and researchers interested in enhancing financial inclusion through technology-based services.

In the second example of research using the TAM model, (Would you like to shop via mobile app technology? The technology acceptance model, social factors and purchase intention). This article investigates the impact of mobile app technology on consumers' purchase intention, using the technology acceptance model (TAM) and social factors as a framework. The authors examine the attitudes and perceptions of consumers towards mobile app technology and its impact on their intention to purchase. The results indicate that perceived usefulness and ease of use have a significant positive impact on consumers' purchase intention. Additionally, social factors such as subjective norms and perceived behavioral control also influence purchase intention. The study suggests that retailers can enhance consumers' acceptance of mobile app technology by improving their perceived usefulness and ease of use, and by leveraging social factors to encourage adoption. In summary, the article provides insights into the factors that influence consumers' acceptance of mobile app technology and their purchase intention. The authors suggest that retailers can improve adoption by enhancing the perceived usefulness and ease of use of mobile apps while leveraging social factors to encourage acceptance (Vahdat, et al., 2020).

In the third article, the Technology Acceptance Model (TAM) and its relevance to comprehending the dynamics of adaptability in online purchases are discussed in the essay. Theoretical models like TAM are frequently used to describe how people accept and use technology. The study explores the connection between online purchase adaptability and the TAM components. According to the study, perceived usefulness and perceived ease of use have a big impact on how adaptable internet purchases are. The study also discovered the moderating role of trust in the relationship between perceived utility and adaptability of online purchases. Overall, the article emphasizes the significance of comprehending the variables that influence the adaptability of online purchases and how TAM may be used to research consumer behavior in the context of e-commerce. According to (Muhammad Hassan et al. 2019), the Technology Acceptance Model (TAM) is a valuable tool

for understanding how users accept and adopt technology. They found that perceived usefulness and perceived ease of use significantly impact online purchase adaptability. The researchers also noted that trust moderates the relationship between perceived usefulness and online purchase adaptability. In their study, (Hassan et al. 2019) examined the applicability of TAM in understanding the dynamics of online purchase adaptability. They concluded that TAM is an effective theoretical model that can help researchers better understand user behavior in the context of e-commerce. The study conducted by (Hassan et al. 2019) showed that perceived usefulness and perceived ease of use are crucial factors that impact online purchase adaptability. The researchers also identified trust as a moderator of the relationship between perceived usefulness and online purchase adaptability.

In the fourth article, the research project "Applying the (UTAUT) Model to Explain the Students' Acceptance of Mobile Learning System in Higher Education" investigates the factors that influence university students' acceptance and adoption of mobile learning systems (MLS). The authors looked at how students interacted with MLS using the UTAUT model, or Unified Theory of Acceptance and Use of Technology. A survey questionnaire was distributed to 300 students from several faculties at a university in Malaysia as part of the research. According to the study's findings, students' behavioral intention to use MLS is favorably influenced by how helpful, easy, and accepting they think MLS is. Students' behavioral intention to use MLS is also highly influenced by social influence and encouraging circumstances. The study emphasizes how crucial it is to create MLS that are practical and user-friendly in higher education. The authors advise colleges to think about implementing MLS in order to increase the caliber of teaching and learning experiences and to raise student interest and participation in their studies. Overall, the study offers helpful insights into the elements that affect university students' adoption and acceptance of MLS.

In the fifth article, the result shows that this article discusses a study that analyzes the factors influencing consumer adoption of mobile payments in India. The study uses an extended version of the Unified Theory of Acceptance and Use of Technology (UTAUT) model to analyze the factors that affect consumer adoption behavior. The extended model includes four additional factors: personal innovativeness, anxiety, trust, and grievance redressal. The study found that performance expectancy, effort expectancy, social influence, and facilitating conditions are the key factors influencing consumer adoption of mobile payments in India. Personal innovativeness was also found to be a significant factor in determining consumer adoption behavior. Additionally, the study found that anxiety and trust significantly affect consumer adoption behavior, while grievance redressal had no significant impact. The study suggests that to increase consumer adoption of mobile

payments in India, service providers should focus on improving the perceived usefulness and ease of use of the technology, building consumer trust, and reducing consumer anxiety. The study highlights the importance of understanding the unique cultural, economic, and social.

According to the statement, there is not much research done in the Kurdistan region that looks at what makes people utilize a particular program. As a result, it is unclear whether or not residents of the area actually use the application. Since there is little information available about the factors that motivate or deter people from using the application, Businesses in the area are also unsure of how to develop effective strategies to encourage people to use it. Or, to put it another way, there is a gap in our knowledge of the application's popularity in Kurdistan and the elements that may impact its adoption or rejection due to the absence of research into the variables that influence people's use of the app. Businesses looking to create efficient marketing or promotional plans for the application in the area should consider the preferences and backgrounds of the people in the region (Demir and Budur, 2022; Mohammed et al., 2020; Poturak et al., 2020). Without this information, they can find it difficult to interact with potential customers and fall short of their goals. More study is required to close the knowledge gap regarding the factors influencing Kurdish users' use of technology (Demir et al., 2019). Such research can be used to pinpoint elements that may influence adoption rates, such as user preferences, demographics, and cultural attitudes (Budur and Poturak, 2021). Additionally, businesses can modify their marketing and promotional strategies to better suit the needs and preferences of the target audience by gaining an understanding of what elements might be impeding the adoption of the application. As a result, the application's user satisfaction and adoption rates may both rise. Overall, more research is required in Kurdistan to better comprehend the variables that affect application use and to create efficient promotional strategies.

The purpose of this study is to analyse how users in a particular group adopt mobile applications, with an emphasis on finding the kinds of applications that are often used as well as the ones that are viewed as being difficult to use. In order to help inform the creation of effective strategies for encouraging the adoption of new applications, the study intends to provide insights into the elements that influence users' adoption of mobile applications, including user preferences, demographics, and cultural attitudes. The study's second goal is to pinpoint the major factors that consumers consider when deciding whether to acquire and frequently use mobile applications. This entails looking into elements including the application's perceived utility and usability, social influence, and the user's prior experience with similar programs. To assist in the creation of successful marketing and promotion plans for mobile applications, the study seeks to provide a thorough understanding of the variables that influence user behavior and drive adoption. The results of this study can assist companies

and developers in creating applications that cater to user wants and preferences, thereby improving the possibility that they will be adopted and used over time.

The gap in this study is that the questions were only asked in Suleimani and its surroundings. We need to collect data from other Kurdish cities to get a larger result. Also ask questions about other sections to expand the survey such as education, game applications, language learning and many other sectors.

2. Literature

2.1. Adaptability of Mobile Application

Laptop and desktop sales have fallen sharply in recent years due to the high sales of smartphones, which is a factor in the decline in the price of smartphones in the market, as well as greater purchase and availability by consumers. These have led to more sales of mobile applications, but have also led to a greater focus on improving applications and redesigning applications to be optimally ready for use by users. (Mahlaeva, 2023). Due to the widespread use of mobile phones, a large number of applications are created annually by users, applications in all fields of health, business, education, online marketing, and many other things that facilitate all sectors, and due to technological advances . These applications have millions of users. Generally, applications are software and are used for games, email, and other applications designed for that purpose. To develop ready-made applications, a number of factors must be considered, such as power constraints and the size of the device or manual. Applications do not stay the same because the user movement is constantly changing and moving towards innovation and progress for new ideas and innovations. Therefore, programs must be constantly changed and innovated to adapt to the new environment. Applications must adapt to user changes. They must know what the user's needs are or what features they expect from the application that can meet the user's expectations. Applications need to reassure users that their data is secure, and users shouldn't be afraid of what kind of data to entrust to whom, and how secure and reliable it is.

Mobile applications are now available wherever customers can easily access them through retailers or through their tablets and smartphones. Continuous use of applications by users encourages applications to improve. In order to enhance the customer experience and shopping, retailers use mobile applications or programs and allocate a lot of budget to the marketing department (WARC, 2015). Over time, many vendors that have competed in the market have tried to adapt their strategies to use technology, applications, and online commerce to win the competition (Martin et al, 2015). In today's world, the Internet plays a significant role in promoting sales, and retailers have generally taken advantage of selling through applications (Klaus and Nguyen, 2013). The advantages of online sales include expanded and easy access to goods, reduced space and

geographical constraints for selling goods, and continued sales availability for a long time 24/7 (Christodoulides et al., 2012; Rashid et al., 2020). A mobile application, more commonly abbreviated as an “app,” is a class of application software specifically designed to run on smart devices such as smartphones and tablets. Services similar to those accessed on computers are routinely made available to users through mobile applications. Apps are often small, discrete software modules with limited functionality. There are thousands of applications for the iPhone, iPad and iPod Touch available in the App Store, where this use of app software first gained popularity. The factors that affect the customer experience in the online market and the ability to change the opinion and decision of the customer are some of the main points in the online market, namely, ease of use of applications, beauty and web design, enjoyment of use Time limit for use and customization.

2.2. TAM & UTAUT model

TAM is a system for determining the consent of the information sent to the use of technology. It is a reason that tries to lead and attract people more to technology. The system of TAM was obtained from another system which is (TRA) the theory of reasoned action (Fishbein & Ajzen, 1975). To investigate and learn about the development of systems based on the use of IS due to the impact of user participation, (Hartwick and Barki, 1994) used TRA. TAM, the technology acceptance model can reliably and well explain the behavior of our users. It can work reliably and legitimately. TAM has received much and considerable attention in the exploration and research literature (Davis, Bagozzi & Warshaw, 1989).

In 2003 a model has been developed named, the Unified Theory of Acceptance and Use of Technology. This system pays attention to what users use the information system for and tracks user behavior. In UTAUT model there are four constructs are organized in this theory: expectations for performance, social influence, expectations for effort and facilitating conditions. It is a very popular theory for is widely used to predict behavioral intentions and technology knowledge. The main variables that affect technology purposes and uses of information technology are age, experience, volunteerism, and gender. UTAUT Although has a good reputation and has its own variables, but the model has changed and several new variables are added to the model and in this section our model is known as UTAUT 2 and the variables are gender, age and experience.

2.3. Switching Costs

Switching, according to (Nwakanma et al. 2018), is a decision to transmit data from one source to another. Poor quality, fluctuating costs, a lack of contentment, and personnel failure at the current service provider are the causes of this choice (Kim, 2019; Oyeniyi and Joachim, 2008; Polo et al., 2011). When a customer decides to switch from a product or service that he or she has already used, there are switching costs that the customer faces when switching from one product to another in terms of cost, search, and difficulty (Budur et al., 2019).

This term refers to the obstacles that customers face when deciding to change the brand they have previously used, while this term is used in the field of commerce and economics. It also discusses the switching costs of using mobile applications in Kurdistan, how customers decide on an application to become a user, and how they decide to switch to another application, and how they make decisions according to the type of application. Understanding switching costs depends on the relationship between customer satisfaction, loyalty to a brand, and customer trust, and this conclusion has been accepted by marketing academia and professionals who agree on the same conclusion (Torlak et al., 2019; Demir et al., 2015). Marketing practice captivated much of awareness becoming of switching costs (Deighton et al. 1994; Lam et al, 210; Wang 2010; Demir, 2019). Customer satisfaction is considered as the main criterion for customer loyalty and purchase decisions from its supporters (Anderson and Sullivan, 1993; Demir et al., 2020; Kandampilly and Suhartanto, 2000; Demir, 2015; Demir & Aydinli, 2016). However, whenever a change in customer opinion leads to a change in loyalty and purchase intention, a customer who is satisfied with a product may not be satisfied with it, or if the customer is dissatisfied, this may not lead to change again (Han et al., 2009; Jones et al., 2000). According to the few switching costs studies the results have shown that the role of switching costs is in the loyalty-satisfaction relationship. In one study, some of the researchers believed that the loyalty-satisfaction relationship was positive (Chang and Chen, 2008; Lee et al., 2001); Other researchers believed that the loyalty -satisfaction relationship is weak and negative in switching costs (See Aydin et al., 2005; Matos et al., 2013). Depending on (Picón et al. 2014), information's loyalty is going to be determined by determining the advantages and disadvantages of switching costs. Customers perceive opportunity costs or raised loss of satisfaction while switching, while the rate of satisfaction is high. According to this result, switching costs can be set both as a mediator on the one hand and as a moderator on the other hand.

In general, in this article, we will focus on mobile applications, which have become an important part of every individual's daily life in recent years and have grown significantly. According to (Grajek 2009), who analyzed price elasticity in the Polish markets, the elasticity of consumer demand could be greatly exaggerated if network effects are not taken into account. We can find similar results in many other studies on the spread of mobile communication. As an example, the network effects were important to the introduction of mobile service in markets in the German, that the estimated cost elasticity of demand would be greatly distorted if network effects were excluded, as demonstrated by (Doganoglu and Grzybowski, 2007). The meaning of network affects customer's decisions among mobile carriers in the United Kingdom (Birke and Swann, 2006). Here we see that even when there is a price difference inside and outside the network, we see some direct effects in the networks.

When switching costs are high, customers are less likely to switch from one brand, service, or product to another. The higher the switching cost, the better the chances of reducing the customer's product switching rate. When switching costs are low, the customer is more likely to switch from one product to another, or we can say that the customer is more likely to move to competitors. Therefore, the best solution is for brands to be able to raise the switching costs for loyal customers and new customers as well. Customers decide on switching costs according to the time they need to buy the goods, the amount of money they spend, and the effort they expect, in order to distinguish between old and new purchases (Klemperer, 1995). Therefore, the projected expenses of migrating from one online service to another are captured by online users' perceived switching costs. The two primary kinds of switching-cost factors—artificial costs, also known as vendor-related costs, and actual social costs, also known as user-related costs—are the cornerstones of switching-cost theory as it is understood in economics (Klemperer 1987; Gultinan 1989).

2.4. Online Application in Kurdistan

This article is about online learning language. Technology development has created a wide range of potential for use in education, including language acquisition. Due to the division of time and space in an online environment, educators and students must rely on technology to interact with one another synchronously or asynchronously for various teaching and learning purposes. Interaction has grown into as one of the most important components of educational experiences. Due to the requirement for non-verbal interaction in an online setting, social presence plays a crucial role in helping students feel less alone and get to know one another (Volery, 2001; Astute et al., 2004). (Yildiz, 2009). Learners gradually develop a more solid feeling of community by using a variety of tools to effectively model (Ernest et al., 2013). In addition, as it was mentioned, this has provided an option for modest pupils to connect more successfully in online platforms, giving the learner greater opportunity to express his own thoughts online better than in the course.

In the second article example is online shopping. The goal of this study is to comprehend the variables that influence adolescent Sulaymaniyah city girls' online shopping behavior. The study will use 100 young females as its sample size. The results of this study demonstrate that the primary factors influencing teenage girls' online buying are the lack of certain products in stores and the accessibility of product reviews online. Another study finding reveals something that is extremely distinct from previous findings. Despite the fact that the majority of participants are unemployed, many of them purchase online at least once every month. Consequently, marketing managers and supervisors can benefit from the study's findings by incorporating them into their online marketing plans. Using internet shopping habits to establish a presence. The success of certain e-retailers and the failure of others underscores the need for behavioral study, despite the fact that the proportion of female

customers buying goods and services online in Kurdistan is steadily growing. Kurdistan is a place where online purchasing is impacted by numerous variables. In the area, some of these factors can be modified as follows: One factor that turns off customers is a lack of knowledge about how to make an online buy or how to carry out the procedure, which could result in a mistake while making a purchase, for example, during online checkout. (Othman & Ruandzy, 2020).

In the adoption in online banking, it is crucial to create a clear path before introducing Internet banking to a nation, which might be accomplished by offering users the chance to become accustomed to the system's new features during adaptation sessions (Oruç and Tatar, 2016). According to research, using online banking requires less work from the user because of the system's dependability and security. The quality, on the other hand, determines how trustworthy and beneficial the website is to the user, increasing their propensity to use and adapt it. ((Ali Reza and Hamed Qahri-Saremi, 2014). There are some factors that positively and negatively effect on the research: One of the most important factors that influences behavioral intention was discovered to be anxiety in the study. One of the key factors influencing the behavioral intention of potential users of internet banking is Internet Quality, which was only included in this study. The perceived facilitating conditions, which attempted to account for part of the variable in (Abushanab, Pearson, and Setterstrom, 2010). This outcome demonstrates that potential online banking clients do not place much value on the services offered by this industry. It is most likely the case that society is unfamiliar with online banking and is unaware of the precise contribution that it makes to the questionnaire. Innovativeness of self and perceived.

3. Methodology

A quantitative research approach was used to carry out the objectives of the study. Based on the literature research, a questionnaire was created and utilized as the main tool for gathering data. The people in the region who might use mobile applications made up the target population. Regression analysis was used to examine the data gathered from the questionnaire and test the hypotheses. Regression analysis was chosen because it can be used to examine the connections between variables and pinpoint the elements that affect how mobile applications are adopted and used. Conclusions and recommendations for companies and developers looking to encourage the adoption of mobile applications in the area were made using the analysis's findings.

To collect information about the mobile application, 16 questions were asked of residents of Suleimani and its surroundings, including different ages, both genders equally, and different educational levels. The questions include age, gender, and education. The basic questions are divided to two sections. Firstly, switching cost includes 10 questions which evaluate how hard to make first selection of the concerning product or service and

how hard to change them for another. Secondly, perception of use section includes 5 questions but each measures the intention to use and application from a distinct sector.

4. Research Finding

In This section, the regression analysis was used to test the hypotheses. To do this, IBM SPSS software was utilized.

Table 1 - Regression analysis results of model I

		Coefficients			t	Sig.	Adjusted R Square
Independent Variable	Dependent Variable	Unstandardized Coefficients	Standardized Coefficients	Beta			
		B	Std. Error				
Difficulty of First Selection (Restaurant)	Difficulty to change (Restaurant)	0.232	0.040	0.245	5.761	0.000	6%
Difficulty of First Selection (Restaurant)	Difficulty to use restaurant application	0.146	0.044	0.147	3.344	0.001	6%
Difficulty to change (Restaurant)		0.178	0.046	0.171	3.891	0.000	

Table 1 shows the simple regression result, which shows the affection of the users while they use mobile application, how difficult for them to select the restaurant for first time, also, the difficulty to use an application for restaurant, and the difficulty to change the application to another one. There are independent and dependent variable to know how they affect each other. In this case, difficulty of first selection restaurant is an independent variable, depend on the result is realize that. In the first the positive coefficient of first selection restaurant is 0.232, which specify that difficulty to change restaurant is positively effects difficulty of selection restaurant. In the result of t-value with the rate of 5.761, shows a very strong and a significant connection between difficulty to change restaurant and difficulty of first selection of restaurant. In the section of standardized coefficient that the rate of 0.245 shows that the well of difficulty of first selection of restaurant on difficulty to change restaurant. Adjusted R square shows the effect of difficulty of firs selection restaurant on difficulty to change, with the rate of 6% on adjusted R square its moderately effect, it means difficulty to select restaurant first explains 6% of difficulty to change a restaurant. In second variable, the coefficient of difficulty of first selection restaurant to difficulty to use restaurant application is 0.146, also, difficulty to change restaurant to difficulty to use restaurant application is 0.178, it means both of difficulty of first selection restaurant and

difficulty to change restaurant to difficulty to use restaurant application are moderately impact. It shows a good relationship between them. If it is difficult to people to select the first restaurant and difficult to change it, it is difficult to use restaurant application as well. the coefficients are not significant because the rate is 0.001. In the standardized coefficient of difficulty of first selection on difficulty to use restaurant application is 0.147 it is low. And the adjusted r-square is 6%. For the difficulty to change on difficulty to use restaurant application also standardized coefficients is low as well by range of 0.171.

Table 2 - Descriptive statistics of parameters in model I

Descriptive Statistics			
	Mean	Std. Deviation	N
Difficulty to use restaurant application	2.12	1.215	521
Difficulty of First Selection (Restaurant)	2.60	1.224	521
Difficulty to change (Restaurant)	3.06	1.166	521

Table 2 is descriptive statistics of parameter for (restaurant). Firstly, the mean of difficulty to use restaurant application is 2.12. It seems that difficulty of use restaurant application is relative the low which means it is easy for people to use application of the restaurant. Secondly, mean of the difficulty of first selection is 2.60, which means difficulty to first selection is also low, and it is easy for people to select first option. But for difficulty to change the mean is 3.06, it shows changing is relatively difficult, it is not because it is hard, may they cannot change it because of some factors. Secondly, standard deviation for all of them are similar, the are all above 1. It means there are more than one group, they are not similar to each other. difficulty of use restaurant application is 1.215. it shows that a group of participants is easy, and for another group is hard. The same for difficulty to first selection 1.224, also, difficulty to change 1.166. there are more than one group of participants, for some of them easy, for some of them hard.

Table 3 shows the regression analysis of (jewelry). Firstly, difficulty to change is the dependent variable, and difficulty to first select the id independent variable. Depending on the coefficient result difficulty of the first selection has a positive effect on the difficulty of change with the range of 0.131. For the standardized section, the range is 0.13, which shows a low impact of difficulty to first selection on difficulty to change, and a strong impact negatively. It means when it is difficult for people to first select, it is also difficult to change. There are strong and significant relationship between difficulty to first selection and difficulty to change in t-value depending on the range 2.98.

Table 3 - Regression analysis of model 2

		Coefficients					Adjusted R square
		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	
Independent Variable	Dependent variable	B	Std. Error	Beta			
Difficulty of First Selection (Jewelry)	Difficulty to change	0.13	0.04	0.13	2.9	0.0	15%
Difficulty to change (Jewelry)	Difficulty to use Jewelry application	-0.05	0.04	-0.056	-1.3	0.2	14%
Difficulty of First Selection (Jewelry)		0.13	0.04	0.128	2.9	0.004	

The p-value is 0.003 shows it is more significant because it is less than 0.05. Secondly, difficulty in changing strongly negative effects. The range is -0.059 means it means when it is difficult for people to change jewelry shops, it is not difficult to use jewelry applications. The standardized coefficient section range is -0.056, which shows a strongly low standardized coefficient. The t-value is -1.282 means the relation between difficulty to change on difficulty to use jewelry applications is very strongly low. And p-value is 0.2 which shows that is not significant. Thirdly, in coefficients, the positive difficulty of the first selection is an effect on the difficulty of using jewelry application with the range 0.134. standardized coefficients positively impact, because the range is 0.128. The t-value result explains the strong relationship between the difficulty of first selection and the difficulty of using jewelry applications. Moreover, 0.004 means it is significant. Adjusted R square shows the effect of the difficulty of first selection jewelry on the difficulty to change, the difficulty is 15% when they select a jewelry store, they can slightly change it. Also, difficulty to change and difficulty for first selection on difficulty of use application is 14%.

Table 4 descriptive statistics of parameter for jewelry. Firstly, mean 3.59 manifests it is strongly hard to people to use jewelry application. For second section, difficulty to first selection is hard as well for people, the range shows that 2.73. third one is difficulty to change is hard for people as well. But as a result of standard deviation there are more than one group, means they are not satisfying with same answer. And the result is similar for all of them.

Table 4 - Descriptive statistics of parameters in model 2

Descriptive Statistics			
	Mean	Std. Deviation	N
Difficulty to use (jewelry) application	3.59	1.232	520
Difficulty of First Selection (Jewelry)	2.73	1.174	520
Difficulty to change (jewelry)	3.12	1.185	520

Table 5, regression analysis for dress shop. Primarily, difficulty for first selection is very strongly positive impact on difficulty to change depend on the range 2.83. it measures that, if it is easy to first selection, it is easy to change as well. standardized coefficient is moderately positive, the range is 0.130. t-value result indicates a very strong relationship between difficulty to first select and difficulty to change.

Table 5 - Regression analysis of model 3

Coefficients ^a							
Independent Variable	Dependent Variable	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Adjusted R square
		B	Std. Error	Beta			
Difficulty of First Selection (DressShop)	Difficulty to change	2.83	0.044	0.130	2.991	0.003	15%
Difficulty to change (DressShop)	Difficulty to use DressShop application	0.059	0.046	0.057	1.288	0.198	0%
Difficulty of First Selection (DressShop)		0.009	0.047	0.008	0.183	0.855	

Also, depend on the clear result this section is significant 0.003. In the second section, difficulty to change if moderately positive effect on difficulty to use dress shop application 0.059. standardized coefficient is positively effect, it is 0.057. t value indicate there are a good relationship between them, depend on the result 1.288. but it is not significant because, the range is more than 0.05. Third section is difficulty of first selection moderately positive effect on difficulty to use dress shop application 0.009. standardized coefficient is positive effect by 0.008. t-value shows that there is natively good relationship between them, it is 0.183. but not significant, 0.855. Adjusted R square shows the effect of difficulty of first selection on difficulty to change, is 15%, means changing first selection is not difficult. Also, difficulty to change and difficulty for first selection

on difficulty of use application is 0%. The result shows that people in Kurdistan can easily use dress shop application because difficulty is 0%.

Table 6 - Descriptive statistics of parameters in model 3

Descriptive Statistics			
Descriptive Statistics	Mean	Std. Deviation	N
Difficulty of First Selection (DressShop)	3.03	1.299	523
Difficulty to change (DressShop)	3.05	1.252	523
Difficulty of use application (DressShop)	2.65	1.221	523

In the table 6, Descriptive statistics of parameters for dress shop. Firstly, result appear difficulty of first selection for dress shop is high with the range 3.03. second section as well, difficulty to change is high, the rate is 3.05. but difficulty to use application is low, they can easily use it, the range shows 2.65. standard deviation is similar for all, here again the answers are different, there are different group of answers. 1.299, 1.252, 1.221.

Table 7 - Regression analysis of model 4

Coefficients							
Independent Dependent Variable Variable		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Adjusted R square
		B	Std. Error	Beta			
Difficulty of First Selection (hospital)	Difficulty to change	0.129	0.042	0.133	3.051	0.002	16%
Difficulty to change (hospital)	Difficulty to use Hospital application	0.099	0.041	0.108	2.444	0.015	12%
Difficulty of First Selection (hospital)		0.05	0.042	0.053	1.194	0.233	

Table 7 regression of hospital. Difficulty of first selection relatively positive effect on difficulty to change depend on the rate 0.129. it positively effect in standardized coefficient 0.133. this section is significant depend on result which is 0.002. t-value represent that there is a strong relationship between difficulty of first selection and difficulty to change. Difficulty to change moderately positive effect on difficulty to use hospital application with the range of 0.099. standardized coefficient is positive ass well, it is 0.108. t-value indicates a good

relationship between difficulty to change and difficulty to use hospital application, the range is 2.444. the result is significant by range 0.015. Lastly, difficulty of the first selection is moderately positive effect on difficulty to use hospital application, the range is 0.05. t-value shows there is good connection between difficulty of first selection and difficulty of use hospital application, and the range is 1.194. standardized coefficient is 0.53 which is impact positively. But it is not significant because the range is more than 0.05, it is 0.233. Adjusted R square shows the effect of difficulty of first selection on difficulty to change, is 16%, Also, difficulty to change and difficulty for first selection on difficulty of use application is 12%.

Table 8 - Descriptive statistics of parameters in model 4

Descriptive Statistics			
	Mean	Std. Deviation	N
Difficulty of First Selection (hospital)	3.30	1.146	518
Difficulty to change (hospital)	3.04	1.246	518
Difficulty of use application (hospital)	3.56	1.214	518

Table 8 descriptive statistics of hospital. The result shows that difficulty to first select of a hospital is high, the rate is 3.30. Changing hospital is hard for people as well with the rate 3.04. difficulty to use hospital application is too high 3.56. there are some groups of participants depend on standard deviation 1.146, 1.246, 1.214. this result indicates that generally people are more careful about hospital, rather than others.

Table 9 represents regression analysis for bank. In the first variable difficulty of first selection is relatively positive on difficulty to change, depend on the rate 0.143. the standardized coefficient 0.151 indicates it is positive effect. It is significant with the rate of 0.00. in the end, t-value result explains the strong relationship between them. Secondly, difficulty to change is positively effect on difficulty to use bank application, the rate is 0.273. The rate shows that it is positive of standardized coefficient, rate is 0.250. But the result of t-value indicates that, there are a very strong relationship between difficulty to change and difficulty to use bank application, it is 5.827. and it is significant depend on 0.00. Third and last one, difficulty of first selection on difficulty to use bank application is positively and moderately effect 0.065. it is positive standardized coefficient 0.057.

Table 9 - Regression analysis of model 5

Coefficients							
Independent Variable	Dependent Variable	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Adjusted R square
		B	Std. Error	Beta			
Difficulty of First Selection (Bank)	Difficulty to change	0.143	0.041	0.151	3.503	0.000	66%
Difficulty to change (Bank)	Difficulty to use Bank application	0.273	0.047	0.250	5.827	0.000	21%
Difficulty of First Selection (Bank)	Difficulty to use Bank application	0.065	0.050	0.057	1.320	0.187	

Depend on t-value there are a relationship between them in the range of 1.32. but it is not significant, because the range is 0.187. Adjusted R square shows the effect of difficulty of first selection on difficulty to change, is 66%, it shows that changing first selected bank is highly difficult to change from people. Also, difficulty to change and difficulty for first selection on difficulty of use application is 21%. The result shows that using application applications is a bit difficult to use, depend on previous sections.

Table 10 - Descriptive statistics of parameters in model 5

Descriptive Statistics			
Descriptive Statistics	Mean	Std. Deviation	N
Difficulty of First Selection (Bank)	3.18	1.304	521
Difficulty to change (Bank)	3.55	1.195	521
Difficulty of use application (Bank)	3.51	1.129	521

Table 10 is descriptive statistics of bank. difficulty of first selection is high, people hardly can select depend on 3.18. Also, difficulty to change is high with range 3.55. And 3.51 is rate of difficulty to use bank application that like others high rate is there. Standard deviations are similar to each other in having a group of answering.

5. Conclusion

In conclusion, the use of mobile phones has grown unlimited in our daily lives and continues to grow, and because of this rapid development, products and services are easily available in many uses with a variety of options that satisfy the customer. Through the use of mobile phones, tablets and smart devices, there are countless applications available globally for the purpose of gaming, trading, communicating, competing and building global relationships. Unified Theory of Acceptance and Use of Technology (UTAUT) and Technology Acceptance Model (TAM) have been used in research projects to shed light on factors impacting the adoption and usage of mobile applications in diverse situations. To understand the level of mobile application use in the Kurdistan Region, we conducted a survey by collecting 540 data from Suleimani and its surroundings, and analyzed through SPSS that 18 questions were asked to participants about the use of mobile applications in different areas such as restaurant, jewelry, dress shop, hospital, bank in Kurdistan.

The result shows that, firstly, changing the first selected restaurant, is easiest for people, however, using the restaurant application is easy as well. as a suggestion, here if you invest on restaurant application, you will have benefit. Because if you make a good application people it will attract them to use it, they are satisfying with using restaurant application. It is a good opportunity of application investment. Secondly, changing the first selected dress shop is also easy for people in Kurdistan, and the interesting result shows that the difficulty of using the dress shop application is not high. In Kurdistan, there are not dress shop application yet, so this field is a very interesting field to work on and adopt people for. Thirdly, in the jewelry section changing the first selection is slightly hard. also, using the jewelry application is slightly hard. It might be because of people in the reality most of the people they are not purchasing jewelry in the society, so it is hard to evaluate from online. It seems in the reality it is hard for people to purchase jewelry, so it is also hard to purchase from application. Fourthly, changing hospitals is hard for people, using the application for hospitals is hard as well. it is as hard as jewelry, but still people are going to hospital, they know which doctor is good but still they do not know which tests they should do. That is why they afraid of using hospital application because they do not know what to do with the application. Lastly, the result is for bank and bank application, the result shows that changing the first selected bank is difficult to change, and using the bank application is not easy depending on other results. Generally, among all the sections, using bank and hospital application is more difficult than others. The results found that the switching cost to the bank and hospital also jewelry by the people is much higher than other sections. For other sections, the switching cost is low and it is easier for the user to change the selected places. The results are modeled reflectively, because the answers are generally far apart, for example, for the same question asked in the same group, half chose the easy answer and half chose the difficult

answer, reliability cannot be used in the formative, because of that the reflective model is used. To understand the use of mobile applications and the factors that affect them, the development of applications and be aware of changes in Kurdistan, we need more research in this area. Research is aimed at the success of mobile applications, so we need to gather more information more widely in the Kurdistan Region, so that we can use it now and, in the future, to strengthen business, user experience, develop strategies, and relationships.

Appendix I

Demographics

1. Ages
2. Gender
3. Education

Switching cost includes

1. I have difficulty to select a good restaurant to eat quality food.
2. I have difficulty to select a good shop for purchasing a quality jewelry for me.
3. I have difficulty to select a good shop for purchasing a quality dress for me.
4. I have difficulty to select a good doctor or hospital when I or my family members are sick.
5. I have difficulty to select a reliable bank to work with or open an account for myself.
6. When I find a good restaurant, it is difficult for me to change it.
7. When I find a good jewelry shop, it is difficult for me to change it.
8. When I find a good dress shop, it is difficult for me to change it.
9. When I find a good doctor or hospital, it is difficult for me to change it.
10. When I find a reliable bank, it is difficult for me to change it.

Intentions to use

1. I think I comfortably can use online food ordering applications (Such as Talabat, Lezzo...etc.).
2. I think I comfortable can use online jewelry ordering applications.
3. I think I comfortably can use online dress ordering applications.
4. I think I comfortably can use online health applications (Such as Dr. Online ...etc.).
5. I think I can comfortably can use online banking applications.

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