THE MODERATING EFFECT OF DEMOGRAPHIC FACTORS IN THE USAGE OF E-BANKING SERVICES AMONG JORDANIAN STUDENTS

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Abstract: **This study aims to identify and understand factors that affect to acceptance e-banking among Jordanian. This study unified theory of acceptance and use of technology (UTAUT) Characteristics, Service Quality, Culture Factor with moderating effect of demographic factors. The primary data were collected from 436 valid questionnaires, which were distributed, to random Jordanian students in five universities. The analyses of the gathered data employed the Partial Least Squares Structural Equation Modeling (PLS-SEM). The validity of the final overall model was evaluated using the statistics and acceptable fit of the measurement model to the data has been demonstrated. Based on the outcomes, the factors with the highest direct effect on Intention to use e-banking appeared to be Attitude toward using e-banking, while the factor with the highest indirect effect on Intention to use e-banking appeared to be Compatibility. The main findings of the study are: Quality, Culture and Unified theory of acceptance and use of technology (UTAUT) Characteristics factors with demographic factors as moderating has a positive and significant impact on behavioral intention.**

Keywords: **Service Quality, Culture and Unified theory of acceptance and use of technology (UTAUT) Characteristics.**

1. INTRODUCTION

1.1 RESEARCH BACKGROUND

The success or failure of E-banking services has so far been mainly investigated post trial (El-Qirem, 2013). As such, before E-banking services is implemented, it is necessary to probe into the factors that might impact the acceptance by students such as factors of acceptance, limitations and requirements (AlKailani, M. (2016). This is done to help ensure that the money and time invested into the implementation of the system are well-spent and further, generate success (students' acceptance). Apart from that, the investigation could assist banking in aligning their strategic planning with the demands of the students and thus, will lead to better investment in technology.

However, as indicated by Al-Shbiel and Ahmad, (2016), E-banking services service is a significant alternative platform, and owing to that, having the knowledge on the influencing factors of E-banking services acceptance among students in Jordan is crucial. However, as stated by Talafha and Abu-Shanab, (2015), individual's subjective willingness and cognitive engagement in E-banking services service activities is one of the success key factors of E-banking. Furthermore, when factors associated with the acceptance of E-banking services are identified, the bank implementing this service can improve the delivery of services to the students. Apart from that, when these factors are incorporated into the business process, pedagogy and users will be more efficient and students's loyalty will be increased (Akinyemi, et al., 2013: Alzubi et al., 2017). However, according to Alalwan et al. (2017), it is better to recommend to the banking sector to expect the potential factors that would influence the intention of students to encourage them to use E-banking services in order to invest in the developments of E-service and content properly. Nonetheless, it would be hard for the students to get the

information if they fail to accept a new technology. However, factors such as service quality and cultural factors may impede the involvement of users in E-banking services (Zakarya & alqaralleh, 2017). This necessitates an investigation that identifies the factors considered vital in the acceptance of E-banking services from the perspective of bank users.

Based on the discussions above, it is evident that there are two issues that prevail in the implementation of E-banking services in Jordan. These issues are: disparity with regard to the perceptions of technology between users and the bank, and insufficient knowledge and incorporation of students' acceptance when deciding on technology investment. This is why it is important to look into the factors, limitations and requirements influencing acceptance of E-banking services among students in Jordan. Based on the abovementioned, ascertaining the underlying factors or dimensions that influence the acceptance of students towards E-banking services becomes the aim of this study, besides to formulate a model of E-banking services acceptance.

Among the factors that are found to be affecting the acceptance of students towards E-banking services are, service quality and cultural differences. Additionally, service quality also affects users' acceptance intention. Further, according to Zakarya & alqaralleh, (2017) its service quality also shows a positive causal relationship between the satisfaction of user concerning a web portable as well as the perceived overall quality of service. Also, according to Solomon et al., (2013) service quality has an effect on users' acceptance intention. Therefore, the service quality is an important determinant of user's attitude towards using E-banking. Furthermore, understanding of the services quality factor will help banking deliver high quality services to users and improve their pedagogical and services strategic plans.

However, the most questioned aspect of users' interest of E-banking services is the understanding of cultural factors, as described by Al-Hawary & Hussien (2016), is an extent to which an individual views significant others who believe he or she should utilize the new system. Hence, previous studies have demonstrated that a student's decision is normally influenced by peer users or by other people such as instructors and parents (Mahfuz et al., 2016).

Nonetheless, the aim of this research is to ascertain the impact of usage behaviour on the behavioural intention of E-banking services. In addition, the moderating effect of demographic factors in accordance to variables including Performance expectancy (PE), Social Influence (SI), Facilitating Conditions (FC), Effort Expectancy (EE), Service Quality (SQ), and Culture (C) on the usage behaviour of E-banking services which may considerably affect the internet banking adoption in Jordan is also explored.

In accordance with the research questions above, this study aims to achieve the primary research objectives as follows:

1) To identify the impacts of the variables such as Performance Expectancy (PE), Social Influence (SI), Facilitating Conditions (FC), Effort Expectancy (EE), Service Quality (SQ), and Culture (C) on the usage behaviour of E-banking services .

2) To identify the impact of usage behaviour on the behavioural intention of E-banking services.

3) To identify the moderating effects of demographic factors (education and age) on Performance Expectancy (PE), Social Influence (SI), Facilitating Conditions (FC), effort expectancy (EE), Service Quality (SQ), and Culture (C) in its relationship with E-banking services in Jordan

1.2 LITERATURE REVIEW

Daniel (1999) defined e-banking services as the provision of banking services distribution on channels of technologies such as internet technology, video /TV banking Technology, telephone banking technology and WAP Technology. (Daniel, 1999 Krjaluoto, 2002). In e- banking, internet technology is the main electronic distribution channel in the banking industry which e-banking services that involves the provision of banking services such as accessing accounts, transferring funds between accounts and offering online financial services. Therefore e-banking services is also defined as electronic connection between banks and customers in order to prepare, manage and control financial services offered by the banks. E-banking services is the latest delivery channel for retail banking services. E-banking services refers to a variety of services through which bank customers can request information and perform most retail banking services, such as balance reports, account transfers, bill payments, without leaving their home or organization, (Mols, 1998 and Sathye, 1999). E-banking services is defined as the use of banking services through computer networks (the internet) (Aladwani, 2001). E-banking services is an evolving process and there is no single measure to assess the strength of e-banking services (Nielsen & Tahir, 2002). The speed of e-banking services connections is an important factor for e-banking

services adoption. E-banking services is a technological innovation (Lin et al., 2008). E-banking services can be defined as a service that allows customers to perform bank transactions using a computer with an internet connection (Loyd, 2007). In addition, e-banking services is described by Pearce & Robinson (2000) as a banking transaction type in which people transfer funds, determine account balances, pay bills and manage online stock equity. Therefore, e-banking services is considered a new and innovative way to reach customers and enhance banking products and services. While e-banking services is still a relatively new phenomenon in developing countries, there is an agreement that the provision of this service will have a considerable impact on the banking sector in these countries (Alzubi et al., 2017). E-banking services is defined in the context of this study as a new service to help customers conduct their banking transactions from anywhere in the world via the internet.

1.3 RESEARCH MODEL AND HYPOTHESIS DEVELOPMENT

This study has chosen to use UTAUT by Venkatesh and Davis (2003) and this decision is factored by several reasons. First of all, the formulation of UTAUT was based upon eight established models as follows: TAM, TRA, TPB, the Motivational Model (MM), the combined TAM and TPB (C-TAM-TPB), the Model of PC Utilization (MPCU), IDT, in addition to Social Cognitive Theory (SCT). The use of all these eight theories together in one model namely UTAUT is viewed as more apt and UTAUT will be the base of this study.

The fact that UTAUT model is more lenient in measuring behaviour and acceptance as opposed to the preceding eight theoretical models becomes the second reason for its usage in this study. Apart from that, UTAUT appears to have the capacity in foreseeing the IT adoption in roughly 70% of instances, whereas other models of adoption particularly TRA, TAM, and TPB, were only able to forecast roughly 40% of the instances (Venkatesh *et al*., 2003).

Furthermore, UTAUT comprises the combination of four key factors deemed essential to this study. The factors are as follows: Effort Expectancy (EE), Performance Expectancy (PE), Social Influence (SI), and Facilitating Conditions (FC). Additionally, four moderating variables are included and they are: age, gender, experience, and use voluntariness. These variables are viewed to be the key determinants of users' behavioural intentions and usage behaviour towards technology, and as indicated in some studies (e.g., Venkatesh *et al*., 2003; Al-Shafi & Weerakkody, 2009) this is successfully integrated with the moderating variables. Likewise, the theories that underpin UTAUT are reviewed. According to Genuardi (2004), this is to better understand the role that these constructs play in the adoption of user of new technology. Also, this is equally a considerable part seeing that this study attempts to gauge the adoption and behavioural intention of employees of new technology (E-banking services).

1.4 HYPOTHESIS DEVELOPMENT

This thesis attempts to establish a hypothetical model with the capacity to elucidate and predict the acceptance of students, alongside E-banking services' usage in website environment. Pertaining to the construction of the model, the relationship of UTAUT, belief - intention – behaviour will be applied. The relationship specifically suggests that behavioural intention of E-banking services utilization is directly governed by their Use Behavior (Venkatesh *et al.,* 2003).

In this work, the facet of student's acceptance of E-banking services is scrutinised. For the purpose, the intent of students to use as well as Behavioural intention of E-banking services will be examined. This study aims to examine acceptance along with its level. Hence, evaluation would be made on the Behavioural intention and Use Behavior data. Furthermore, the Behavioural intention data can be a good indicator for future usage continuation, and in the context of E-banking, this is important. Relevantly, Parthasarathy and Bhattacherjee (1998) reported in their study that use of online service denotes continuation in service adoption. As such, the intention to use and behaviour usage constructs will be applied in this study to measure the acceptance of students towards E-banking.

UTAUT is applied in this study but with the addition of three extra constructs. Hence, the overall constructs employed in this study are as follows: behavioural intention (BI), Computer Self-Efficacy (CSE), effort expectancy (EE), Facilitating Conditions (FC), Performance expectancy (PE), social influence (SI), social influence (SI), Trust Factor (TF), and Use Behaviour (UB). Furthermore, age and education are the Moderator variables. The hypotheses that this study intends to test are thus as follows:

1.4.1 Performance Expectancy and Usage Behaviour

It is postulated by the Unified Theory of Acceptance and Use of Technology (UTAUT) that performance expectancy and effort expectancy are critical constructs that have an impact upon attitudes towards the acceptance and adoption of technology.

The definition of performance expectancy is the degree that an individual believes that using the system will help to achieve job performance gains (Venkatesh et al., 2003). The definition of effort expectancy is the degree of ease associated with the use of a system (Venkatesh et al., 2003, p. 450). The salient role of perceived usefulness and perceived ease of use to determine individual attitudes to use e-banking services systems was affirmed by Wangpipatwong et al. (2008) It was commented by Shareef et al. (2011) that inclusion of compatible variables taken from other theories might hinder the effect of other included variables. One example quoted is the Performance Expectancy factor, which is based upon. The culture of Arab countries could encourage its students to adopt e-banking, as it offers better flexibility, which supports the defining factors of sense of time and planning constraints. Performance expectancy is a strong variable that can predict intention to use new technology (Venkatesh et al., 2003). This is particularly relevant in Jordan, because men are more focused on achievement than women, as men have more dominant social roles. This is challenged by Venkatesh and Zhang (2016), who suggest that a more important variable is effort expectancy, as at the stages of early experience, this has an influence on adoption of technology by women. As a result, the following hypotheses are proposed:

H1: Performance Expectancy of E-banking services has a direct effect on Behavioural Intention to use E-banking services.

H7: Performance Expectancy of E-banking services has a direct effect on Behavioural Intention to use E-banking services in Jordan, moderated by Experience.

H13: Performance Expectancy of E-banking services has a direct effect on Behavioural Intention to use E-banking services in Jordan, moderated by Age.

H19: Performance Expectancy of E-banking services has a direct effect on Behavioural Intention to use E-banking services in Jordan, moderated by gender.

1.4.2 Social Influences and Usage Behaviour

In previous studies, changing attitudes towards e-banking services have revealed influence of society as a critically important factor that influences personal belief. The degree of the perception of an individual that others believe that they should use new systems defines the level of social influence (Venkatesh et al., 2003). This factor is defined differently with different models, so that in UTAUT it is social influence, in DOI it is image, in MPCU it is social factors and in TPB and TRA it is subjective norm. The intention to adopt e-banking services from perceived usefulness of e-banking services is affected by subjective norm (Horst et al., 2017).

Social influence could also be moderated by age and education, demonstrate more sensitivity to other opinions, as well as the factor of age, as younger students would be more likely to copy the behaviour of others. This contrast with individuals with levels of education or those with experience of using the Internet who tends to follow the norm at an early stage (Al-Gahtani et al., 2007). Therefore, the following hypotheses are presented:

H2: Social Influence of E-banking services has a direct effect on Behavioural Intention to use E-banking services.

H8: Social Influence of E-banking services has a direct effect on Behavioural Intention to use E-banking services in Jordan, moderated by Experience.

H14: Social Influence of E-banking services has a direct effect on Behavioural Intention to use E-banking services in Jordan, moderated by Age.

H20: Social Influence of E-banking services has a direct effect on Behavioural Intention to use E-banking services in Jordan, moderated by Gender.

1.4.3 Facilitating Conditions and Usage Behaviour

Facilitating conditions are the degree to which an individual believes that an organisational and technical infrastructure exists to support the system (Venkatesh et al., 2003). Facilitating conditions in the UTAUT comprises perceived

behavioural control, facilitating conditions, and compatibility from the TPB, TAM, MPCU, and IDT models (Venkatesh et al., 2003). Researchers in the field of technology studies (Foon & Fah, 2011) found that the facilitating conditions construct has a significant effect on innovation user. They also found that it is a significant predictor of the technology use. In contrast, they found that it did not predict intention to use IT when both constructs, performance expectancy and effort expectancy are used in the same model.

Facilitating conditions could also be moderated by age and education, as demonstrate more sensitivity to other opinions, as well as the factor of age, as younger students would be more likely to copy the behaviour of others. This contrast with individuals with levels of education or those with experience of using the Internet who tends to follow the norm at an early stage (Venkatesh and Zhang, 2010). Therefore, the following hypotheses are presented:

H3: Facilitating Conditions of E-banking services has a direct effect on Behavioural Intention to use E-banking services.

H9: Facilitating Conditions of E-banking services has a direct effect on Behavioural Intention to use E-banking services in Jordan, moderated by Experience.

H15: Facilitating Conditions of E-banking services has a direct effect on Behavioural Intention to use E-banking services in Jordan, moderated by Age.

H21: Facilitating Conditions of E-banking services has a direct effect on Behavioural Intention to use E-banking services in Jordan, moderated by Gender.

1.4.4 Effort Expectancy and Usage Behaviour

DOI complexity, perceived ease of use in TAM and effort expectancy in UTAUT encapsulates perceptions of previous experiences of ICT usage and the ability of individuals to use it. These factors are considered as potential indicators of the acceptance and adoption of e-banking services and, as Rogers (2003) commented, the degree to which an innovation is perceived as difficult to understand and use is regarded as complexity.

Agarwal and Prasad (1997) argued that a system that has high visibility has complexity ignored. TAM considers that perceived usefulness is impacted by perceived ease of use, because the system that is less complex will be more useful (Wangpipatwong et al., 2008).

Venkatesh and Zhang (2011) consider that effort expectancy is a stronger variable, which has an impact upon age acceptance of technology during the early education stages. Therefore the following hypotheses are proposed:

H4: Effort Expectancy has a direct effect on Behavioural Intention to use E-banking services.

H16: Effort Expectancy has a direct effect on Behavioural Intention to use E-banking services in Jordan, moderated by Age.

H10: Effort Expectancy has a direct effect on Behavioural Intention to use E-banking services in Jordan, moderated by Experience.

H22: Effort Expectancy has a direct effect on Behavioural Intention (BI) to use E-banking services in Jordan, moderated by Gender.

1.4.5 Service quality and Usage Behaviour

Wang and Wang (2009), reported a direct positive influence of service quality on the user satisfaction construct. In another study, Gianluca (2006) had a similar outcome, proving that creating awareness and providing support will instantly affect user's satisfaction. Similarly, Lin (2007) explained that a vital link connects service quality with user satisfaction. In his research, Lin (2007) contended that service quality had a positive impact on the intention to use technology including m-learning programs. Wang and Wang (2009) explained in their study that an immediate impact of service quality on use construct also was a vital factor. In their study, Fernández and Rodríguez Illera (2009) analyzed the impacts of users learning based on E-Portfolios, looking at the positive effects of user's intentions to use on users' views and improving their learning process as net benefits. This leads to the following hypothesis

H5: Service quality factor has a direct effect on Behavioural Intention to use E-banking services.

H11: Service quality Factor has a direct effect on Behavioural Intention to use E-banking services in Jordan, moderated by Experience.

H17: Service quality Factor has a direct effect on Behavioural Intention to use E-banking services in Jordan, moderated by Age.

H23: Service quality Factor has a direct effect on Behavioural Intention (BI) to use E-banking services in Jordan, moderated by Gender.

1.4.6 Culture and Usage Behaviour

Previous literature has proven that learning modes are a vital influence on educational factors (Lim *et al.,* 2007). In shaping an education institution, learning modes often center on technology, culture, processes and individuals as they are deemed to be significant aspects (Goel, Sharma, & Rastogi, 2010).

Scollon, Diener, Oishi, and Biswas-Diener (2004) mentioned that the cultural setting in which an individual is reared plays a major role in shaping his thoughts, emotions and professional ethics. Americans and Hispanics are generally calmer and usually express positive emotions. Whereas their Asian counterparts are mostly inclined to rigidity, as their cultural setting and surroundings expose them to more negative energy. As such, cultural variability takes a toll on users 'anticipations, demands and their need to training (Blanchard & Frasson, 2005). The dividing line that sets users and teachers apart is also shaped by cultural influences (Hannon & D'Netto, 2007). The utilization of Information Technology (IT) contributes greatly to solving users 'needs as well as the needs of the online learning portal designer (Richard, 1995). Motivation differs from one culture to another (Hsu, 2006). In reference to Hofstede's (1991) cultural aspects, those from a different culture have significantly different ways of perceiving things. In this context, culture serves as the collective programming of the mind which distinguishes the members of one group or category of people from another‖ (p. 180). In short, users from various cultural backgrounds receive and understand newer learning technologies through the lens of their cultural leanings and values.

Moreover, culture has a great influence on learning methods and the need for knowledge among users. Their reception of knowledge, manner of communication, perceived use and usefulness of technology, interaction with teachers, acknowledgment of the course syllabus and the extent of computer literacy are subject to the environment . Learning the differences in cultures may not be useful for those who engaged in online or long-distance education, but such knowledge proves crucial when learning organizations intend to apply modern technologies and learning platforms in a variety of cultures. Such understanding would maximize the opportunities to establish e-learning success (Blanchard & Frasson, 1998). This leads to the following hypothesis.

H6: Culture has a direct effect on Behavioural Intention to use E-banking services.

H12: Culture has a direct effect on Behavioural Intention to use E-banking services in Jordan, moderated by Experience.

H18: Culture has a direct effect on Behavioural Intention to use E-banking services in Jordan, moderated by Age.

H24: Culture has a direct effect on Behavioural Intention (BI) to use E-banking services in Jordan, moderated by Gender.

1.4.7 Use Behaviour and Continued Usage Intention

This study has the Usage to examine the aspect of student's acceptance of e-banking services by looking into the students' Use Behaviour besides the Continued Usage Intention of e-banking services. This notion is selected because this study seeks to scrutinise the acceptance as well as its level, and to achieve this, both data of Continued Usage Intention and usage behavioural will be assessed. Another reason for using these data is that, the data of Continued Usage Intention gives good indication of use continuation in the future, and this is crucial when concerning e-banking. As indicated by Parthasarathy and Bhattacherjee (1998), online service utilization implies continuance in service adoption and for this reason, this study uses the construct of intention to use in addition to that of behaviour usage for gauging user's acceptance of e-banking. This leads to the following hypothesis.

H25: Use Behavior to use E-banking services has an effect on Continued Usage Intention of E-banking.

The hypotheses become the constituents of the proposed model and these hypotheses are all interrelated. The proposed model is called the E-banking services Acceptance Model.
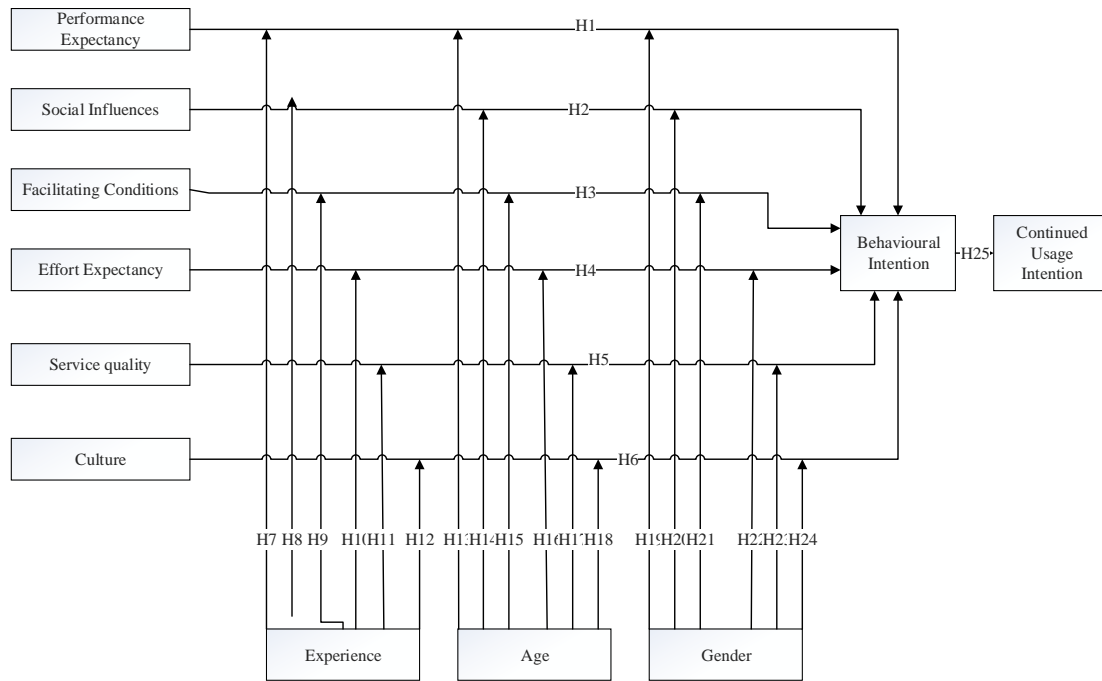
Figure 1.1: CONCEPTUAL FRAMEWORK

1.5 Data analysis

Considering the measurement model, the assessment of the structural model was the subsequent step in the PLS Analysis; an analysis was performed towards the inner model. Hair et al.'s (2011) proposed requirements were perused. Thus, for the testing of hypotheses, the researcher employed bootstrapping to measure the significance level of the path coefficients. The researcher applied the PLS-SEM structural model for testing the hypothesized relationships. Here, the PLS algorithm and bootstrapping algorithm in SmartPLS 2.0 3M were used. The path coefficients show high level of significance in PLS analysis.
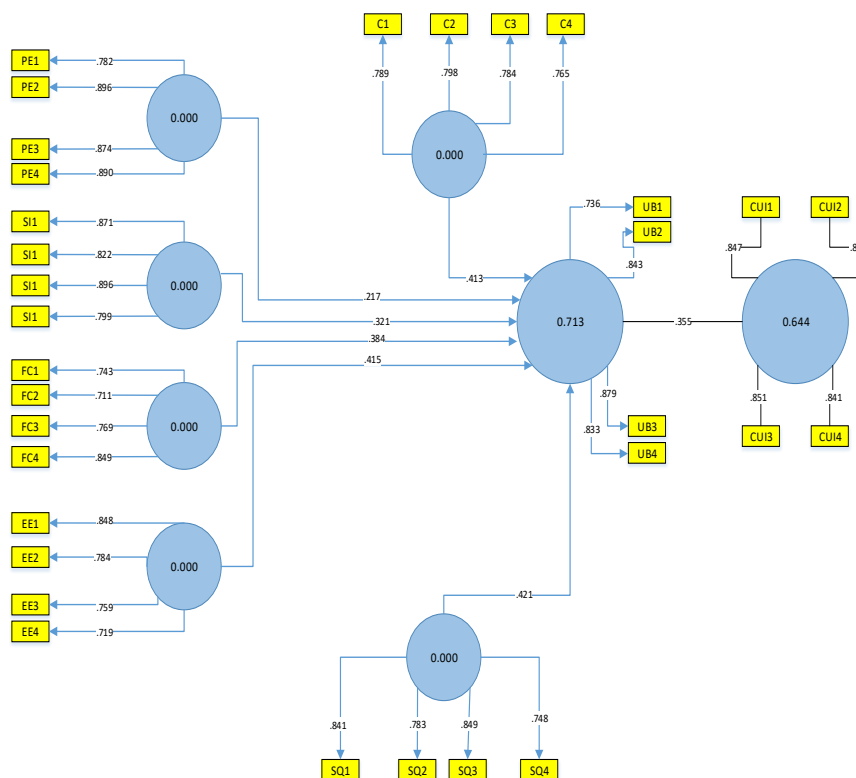

Figure 1.2: Items Loadings, Path Coefficient, and R² Values

1.6 Hypotheses Testing

The final step in PLS-SEM structural model is executing test on the hypothesized relationships. For this purpose, the researcher executed the PLS algorithm and bootstrapping algorithm in Smart PLS 2.0 3M. Although path coefficients are very important in PLS analysis, Hair et al. (2011) confirmed that in the situation where paths are non-significant or reveal signs that are against the direction conjectured, the prior hypothesis should be rejected. On the other hand, in the situation where significant paths that exhibit the hypothesized direction, the causal relationship projected is empirically supported. Further, the authors stated that, similar to the weights and loadings of the indicators, the significance of each path coefficient is assessable with the application of a bootstrapping procedure. In the previous Figure 4.3, the loadings, path coefficient, and R^2 values of items are exhibited.

Moreover, for a two-tailed test, the critical t-values appear to be at 1.65 (at 10% degree of significance), 1.96 (at 5% degree of significance), and 2.58 (at 1% degree of significance). Along this vein, the researcher set 500 re-samplings with a replacement number from the bootstrap cases equal to the original number of sample (436). This will result in standard errors and t-statistics.

Hypothesis 1: The result revealed that the proposed relationship between Performance Expectancy and Use Behavior to use e-banking services shows association (β =0.217, t = 1.080), and hence, the hypothesis was supported.

Hypothesis 2: The Social Influence of e-banking services shows association with a direct effect on Use Behavior to use e-banking services (β =0.321, t = 2.83), and hence, the hypothesis was supported.

Hypothesis 3: The result revealed that the proposed relationship between Facilitating Conditions of e-banking services has a direct effect on Use Behavior to use e-banking services (β =0.384, t = 4.551), and hence, the hypothesis was supported.

Hypothesis 4: Effort Expectancy has a direct effect on Use Behavior to use e-banking services ($\beta = 0.415$, $t = 3.541$), and hence, the hypothesis was supported.

Hypothesis 5: Culture Factor has a direct effect on Use Behavior to use e-banking services ($\beta = 0.413$, $t = 2.541$), and hence, the hypothesis was supported.

Hypothesis 6: Service Quality has a direct effect on Use Behaviour to use e-banking services ($\beta = 0.421$, t = 2.847), and hence, the hypothesis was supported.

Hypothesis 7: Service Quality on Use Behaviour to use e-banking services in Jordan is moderated by Education. t = 1.9769 P-value = 0.0486 significant different since t-statistics is higher than 1.96

Hypothesis 8: The influence of Culture on Use Behaviour to use e-banking services in Jordan is moderated by Education.

t = 2.1141 P-value = 0.03507 significant since t-statistics is higher than 1.96.

Hypothesis 9: The influence of Effort Expectancy (EE) on Use Behaviour to use e-banking services in Jordan is moderated by Education.

t = 2.3537 P-value = 0.01909 significant different since t-statistics is higher than 1.96.

Hypothesis 10: The influence of Facilitating conditions (FC) on Use Behaviour to use e-banking services in Jordan is moderated by Education.

t = 0.84315 P-value = 0.3996 Not significant different since t-statistics is lower than 1.96.

Hypothesis 11: The influence of Social Influence (SI) on Use Behavior to use e-banking services in Jordan is moderated by Education.

t = 1.7956 P-value = 0.07334 Not significant different since t-statistics is lower than 1.96.

Hypothesis 12: The influence of Performance Expectancy (PE) on Use Behaviour to use e-banking services in Jordan is moderated by Education.

t = 0.12938 P-value = 0.8971 Not significant different since t-statistics is lower than 1.96.

Hypothesis 13: The influence of Service Quality on Use Behaviour to use e-banking services in Jordan is moderated by Age.

t = 1.3252 P-value = 0.1857 Not significant since t-statistics is lower than 1.96.

Hypothesis 14: The influence of Culture on Use Behaviour to use e-banking services in Jordan is moderated by Age.

t = 2.1120 P-value = 0.0352 significant since t-statistics is higher than 1.96.

Hypothesis 15: The influence of Effort Expectancy (EE) on Use Behaviour to use e-banking services in Jordan is moderated by Age.

t = 2.19088 P-value = 0.02899 significant since t-statistics is higher than 1.96.

Hypothesis 16: The influence of Facilitating Conditions (FC) on Use Behaviour to use e-banking services in Jordan is moderated by Age.

t = 3.34035 P-value = 0.0007 significant since t-statistics is higher than 1.96.

Hypothesis 17: The influence of Social Influence (SI) on Use Behaviour to use e-banking services in Jordan is moderated by Age.

t = 0.079696 P-value = 0.9365 Not significant since t-statistics is lower than 1.96.

Hypothesis 18: The influence of Performance Expectancy (PE) on Use Behaviour to use e-banking services in Jordan is moderated by Age.

t = 2.1389 P-value = 0.03299 significant since t-statistics is higher than 1.96.

Hypothesis 19: The influence of Service Quality on Use Behaviour to use e-banking services in Jordan is moderated by experience.

t = 1.4151 P-value = 0.1745 Not significant since t-statistics is lower than 1.96.

Hypothesis 20: The influence of Culture on Use Behaviour to use e-banking services in Jordan is moderated by experience.

t = 2.5247 P-value = 0.02147 significant since t-statistics is higher than 1.96.

Hypothesis 21: The influence of Effort Expectancy (EE) on Use Behaviour to use e-banking services in Jordan is moderated by experience.

t = 3.5147 P-value = 0.03999 significant since t-statistics is higher than 1.96.

Hypothesis 22: The influence of Facilitating Conditions (FC) on Use Behaviour to use e-banking services in Jordan is moderated by experience.

t = 1.34035 P-value = 0.0007 not significant since t-statistics is lower than 1.96.

Hypothesis 23: The influence of Social Influence (SI) on Use Behaviour to use e-banking services in Jordan is moderated by experience.

t = 0.09658 P-value = 0.87491 Not significant since t-statistics is lower than 1.96.

Hypothesis 24: The influence of Performance Expectancy (PE) on Use Behavior to use e-banking services in Jordan is moderated by experience.

t = 1.1121 P-value = 0.01758 significant since t-statistics is lower than 1.96.

Hypothesis 25: The Use Behaviour of e-banking services shows association with a direct effect on Continued Usage Intention to use e-banking services (β =0.355, t = 2.83), and hence, the hypothesis was supported.

1.7 Conclusion

The current chapter (chapter 4) reported the findings obtained in this study. It also presented findings on the response rate and characteristics, techniques employed in measurement refinements, and analysis run to examine the instrument validity and reliability tests, among others. Descriptive statistics showed that in general, respondents indicated that the respondents of this study have expertise and good experience with using e-banking services in Jordan. More importantly, this chapter has offered results of PLS-SEM analysis that was obtained from the evaluation of the measurement model, structural model, and hypotheses testing. Lastly, as indicated in the various analyses above, 25 of 17 key hypotheses were supported for being significant. 8 hypotheses were rejected because of insignificant findings.

REFERENCES

[1] Aladwani, A. M. (2001). Online banking: a field study of drivers, development challenges, and expectations. *International Journal of Information Management*, *21*(3), 213-225.

[2] Alalwan, A. A., Dwivedi, Y. K., & Rana, N. P. (2017). Factors influencing adoption of mobile banking by Jordanian bank customers: Extending UTAUT2 with trust. *International Journal of Information Management*, *37*(3), 99-110.

[3] Al-Gahtani & G. S. Hubona 2007. The effects of gender and age on new technology implementation in a developing country: Testing the theory of planned behavior (TPB). Information Technology & People 20(4): 352-375.

[4] Al-Hawary, S. I. S., & Hussien, A. J. (2016). The Impact of electronic banking services on the Customers Loyalty of Commercial Banks in Jordan. *International Journal of Academic Research in Accounting, Finance and Management Sciences*, *7*(1), 50-63.

[5] AlKailani, M. (2016). Factors affecting the adoption of internet banking in Jordan: An extended TAM model. *Journal of Marketing Development and Competitiveness*, *10*(1), 39.

[6] Al-Shbiel, S. O., & Ahmad, M. A. (2016). A theoretical discussion of electronic banking in Jordan by integrating technology acceptance model and theory of planned behavior. *International Journal of Academic Research in Accounting, Finance and Management Sciences*, *6*(3), 272-284.

[7] Alzubi, M. M., Al-Dubai, M. M., & Farea, M. M. (2018). Using the technology acceptance model in understanding citizens' behavioural intention to use m-marketing among Jordanian citizen. *Journal of Business and Retail Management Research*, *12*(2).

[8] Alzubi, M. M., Alkhawlani, M. A., & El-Ebiary, Y. A. B. (2017). Investigating the factors affecting University students'-commerce intention towards: a case study of Jordanian universities. *Journal of Business and Retail Management Research*, *12*(1).

[9] Alzubi, M. M., Farea, M. M., & Al-Dubai, M. M. (2017). The Mediating Role of Awareness in the Intention to Use Internet Banking Among SMES in YEMEN. *The Journal of Internet Banking and Commerce*, *22*(2), 1-10.

[10] Blanchard, E., Razaki, R., & Frasson, C. (2005, October). Cross-cultural adaptation of e-learning contents: A methodology. In *E-Learn: World Conference on E-Learning in Corporate, Government, Healthcare, and Higher Education*(pp. 1895-1902). Association for the Advancement of Computing in Education (AACE).

[11] El-Qirem, I. A. (2013). Critical factors influencing E-banking services service adoption in Jordanian commercial banks: a proposed model. *International business research*, *6*(3), 229.

[12] Foon, Y. S., & Fah, B. C. Y. (2011). Internet banking adoption in Kuala Lumpur: an application of UTAUT model. *International Journal of Business and Management*, *6*(4), p161.

[13] Goel, A. K., Rana Sharma, G., & Rastogi, R. (2010). Knowledge management implementation in NTPC: an Indian PSU. *Management Decision*, *48*(3), 383-395.

[14] Hair, J., Black, W., Babin, B., Anderson, R., & Tatham, R. (2011). Multivariate Data Analysis (6th ed.). New Jersey: *Pearson Prentice Hall*.

[15] Hannon, J., & D'Netto, B. (2007). Cultural diversity online: student engagement with learning technologies. *International journal of educational management*, *21*(5), 418-432.

[16] Mahfuz, M. A., Khanam, L., & Hu, W. (2016, September). The influence of culture on m-banking technology adoption: An integrative approaches of UTAUT2 and ITM. In *Management of Engineering and Technology (PICMET), 2016 Portland International Conference on* (pp. 824-835). IEEE.

[17] Parthasarathy, M., & Bhattacherjee, A. (1998). Understanding post-adoption behavior in the context of online services. *Information systems research*, *9*(4), 362-379.

[18] Parthasarathy, M., & Bhattacherjee, A. (1998). Understanding Post-Adoption Behavior in the Context of Online Services. Information Systems Research, 9(4), 362-379. doi: 10.1287/isre.9.4.362.

[19] Richard, P., & Cheyrezy, M. (1995). Composition of reactive powder concretes. *Cement and concrete research*, *25*(7), 1501-1511.

[20] Rogers, E. M. (1995). *The Diffusion of Innovations* (4th ed.). New York: Free Press.

[21] Samovar, L. A., Porter, R. E., & McDaniel, E. R. (2009). Communication between cultures. Belmont, CA: *Wadsworth Publishing Company*.

[22] Scollon, C. N., Diener, E., Oishi, S., & Biswas-Diener, R. (2004). Emotions across cultures and methods. *Journal of cross-cultural psychology*, *35*(3), 304-326.

[23] Solomon, O., Shamsuddin, A., & Wahab, E. (2013). Identifying factors that determine intention to use electronic banking: a conceptual study. *Middle-East Journal of Scientific Research*, *18*(7), 1010-1022.

[24] Talafha, H., & Abu-Shanab, E. (2015). Would gender, education and age influence internet banking adoption constructs in Jordan?. *Aides International Journal on WWW/Internet*, *13*(2).

[25] Venkatesh, V., & Davis, F. D. (2000). A theoretical extension of the technology acceptance model: Four longitudinal Field Studies. *Management Science, 46*(2), 186-204

[26] Venkatesh, V., Morris, M. G., Davis, G. B., & Davis, F. D. (2003). User acceptance of information technology: Toward a unified view1. *MIS Quarterly*, 27(3), 425-478.

[27] Venkatesh, V., Sykes, T. & Zhang, X. (2011). Just what the doctor ordered: A revised UTAUT for EMR system adoption and use by doctors. Proceedings of the 44th Hawaii International Conference on System Sciences, Kauai, HI., USA. 1-10.

[28] Wang, Y.-S. (2002). the adoption of electronic tax filing systems: an empirical study. *Government Information Quarterly, 20*, 333-352.

[29] Wangpipatwong, S., Chutimaskul, W., & Papasratorn, B. (2008). Understanding Students‟s Continuance Intention to Use e-Government Website: a Composite View of Technology Acceptance Model and Computer Self-Efficacy *the Electronic Journal of e-Government 6*(1), 55 - 64.

[30] Wangpipatwong, S., Chutimaskul, W., & Papasratorn, B. (2008). Understanding Students‟s Continuance Intention to Use e-Government Website: a Composite View of Technology Acceptance Model and Computer Self-Efficacy *the Electronic Journal of e-Government 6*(1), 55 - 64.

[31] Zakarya alksasbeh, m. A. L. E. K., & alqaralleh, b. A. (2017). Integrating quality features into technology acceptance model for examining the acceptance of mobile banking. *Journal of Theoretical & Applied Information Technology*, *95*(16).