



A Review of Theories Relevant to E-banking Usage Continuance

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ABSTRACT

The study emphasizes on extending a model about personality attributes as a moderator on the relationship between contentment and the persistent utilization of electronic banking services (e-banking). Furthermore, the recommended model expounds the dependent aspects based on the technology continuance theory which moulds the e-banking continuance intention. This paper takes forward the evolving corpus of research on e-banking by stretching the theoretic precincts of the e-banking continuance model, and contributes to research on e-banking.

Keywords: E-banking, Big Five Personality Attributes, Satisfaction, Continuance Intention

JEL Classification: G21

1. INTRODUCTION

The majority of studies have deliberated the use of e-banking from diverse viewpoints. For instance, Al-Rfou (2013) emphasizes on the use of e-banking from the perspective of electronic services staff and the aspects which impact it, such as the endorsement of e-banking by consumers, and how consumers can be convinced to utilize e-banking. Furthermore, e-banking offers the following competitive advantages: Cost reduction; better customer service; lesser paper work; and better visibility and elasticity. The study indicates that three aspects, namely user-friendliness, quality, and confidentiality, directly affect use of e-banking services. Moreover, e-banking services were not quite prevalent in emerging nations like Jordan (Al-Rfou, 2013). According to Ernovianti et al. (2012), in Malaysia, the objective of utilizing internet banking was guided by self-efficacy, and some relationship existed between effectiveness, user-friendliness, trustworthiness, and self-efficacy. As per a study conducted in China by Jinggang et al. (2011), the main aspects such as subjective norms, self-efficiency, and motive of usage, have a considerable impact on actual utilization of information resources on the Internet. A study made in Yemen by Al-Ajam and Nor (2013) showed that the seeming comparative advantage, user-friendliness and faith in e-banking impacted the attitude of people towards it. An Iranian study indicated that the

effectual security aspects, the degree of complication of means, know-how, and risk had a favorable impact and encompassed the majority of the attributed which allowed consumers to utilize e-banking (Ghods et al., 2014).

A study conducted in Jordan by Al-Muala et al. (2012) showed that subjective norms, consumer behavior, and the intent to espouse the internet banking services (IBS) are primarily associated with one another since the use of the theory of reason action (TRA) relies on the estimation of behavioral intent. Both hypotheses put forth in the study advocate the theory that if there is a favorable stance towards e-banking services, then it is quite rational that such services would be utilized. In view of this, it is the banks' obligation to endorse its utility, image, user-friendliness, and value compatibility to positively draw patrons and steer them towards using IBS. According to Khrais (2012), aspects such as user-friendliness and utility, as well as various features and functions of e-banking had significant impacts on its espousal and could endorse its adoption among banking consumers in Jordan. A study conducted in Canada by Montazemi and Saremi (2013) inferred that faith was more evident compared to assumed utility and user-friendliness in drawing customers to the primary stage of e-banking utilization. A Taiwanese study showed that the motive of users to continue the use was driven by the perceived

utility (PU) and compatibility as well as extent of contentment (Tsai et al., 2014b). According to a study by Lim et al. (2012), in Manila, PU and user-friendliness favorably impacted the motive to utilize e-banking.

Although the abovementioned research reasonably estimated utilization of e-banking, none of it inspected its continuance intention through the technology continuance theory (TCT). We have tried to bridge this gap in the literature on information system (IS) by putting forward an extended model of the online continuance intention from the Jordanian perspective. In view of this, we need to carry on studying the dependent aspects in e-banking continuance intention, and extend the TCT by considering individual difference variable (i.e., personality) as an arbitrator between contentment and continuous intention to utilize e-banking.

2. TCT

The TCT put forward by Liao et al. (2009) emphasizes on the continuance intention of users of technology. The theory is an amalgamation of three renowned models related to ISs and technology: The cognitive (COG) model by Oliver (1980), the technology acceptance model (TAM) by Davis (1989), and the expectation confirmation model (ECM) by Bhattacharjee (2001). Two essential constructs, i.e., attitude and contentment, were made part of the TCT, whereas PU and user-friendliness as well as confirmation are the other constructs.

3. RELATIONSHIP BETWEEN TAM AND TRA AND THEORY OF PLANNED BEHAVIOR (TPB)

The TAM (Davis, 1989) was specifically formulated to exhibit user acceptance of an IS with the intention of identifying the behavioral intents to utilize the system. TAM was connected with the TRA (Fishbein and Ajzen, 1975) as well as TPB (Ajzen, 1991). The following internal variables associated with the actual utilization of technology were examined by TAM: Approach towards use, PU, perceived ease of use (PEU), and behavioral intent to use.

Conviction, attitude, intent, and conduct are the constructs of TRA. These are entrenched in social psychology. TRA hypothesized that behavioral intent is determined by the viewpoint of a person and the influence wielded on this person by those who hold in high regard. Even though academics emphasize that the TRA has been efficaciously utilized to estimate a person's motive in different technological subjects (Ajzen and Fishbein, 1980; Grandón et al., 2011; Korzaan, 2003), the theory is believed to be a poor estimator of actual conduct in circumstances where the subjects under review have no mindful control on behavioral performance or where the accessible information is inadequate (Ajzen, 1991; Ajzen and Fishbein, 1980). A drawback of TRA is based on the presumption that conduct is within the mindful control of a person. Thus, the theory is applicable to conduct which is intentionally considered beforehand.

As per Ajzen (1991), the TPB is an annex of the TRA, in which a conception is added to include the toil or simplicity of carrying out a behavior. Perceived behavioral control has been formulated as a robust estimator of intent, outclassing approaches, and subjective norms. Ajzen extended the TRA because it was restricted to conducts wherein individuals lack total conscious control (Ajzen, 1991). It is quite impracticable that colossal belief structures (noted in the TPB) symbolizing different dimensions would be constantly associated with the precursors of intention (Teo and Pok, 2003). Furthermore, the TPB entails a distinctive operationalization in every situation where it is utilized (Mathieson, 1991). As per (Taylor and Todd, 1995), the TPB model requires persons who are determined to execute specific conducts.

The TAM, which is based on the TRA, is renowned as a model, which is focused on the approaches and conducts of people towards technology (Davis, 1989). Even though numerous academics have examined this model, reformed its parts, and simulated it as per different settings and circumstances, only trivial modifications have been made to the actual TAM. The genuine TAM comprises three main constituents: PU, perceived user-friendliness, and use of computer. Davis noted "usage" as a measure of technology espousal and carried out a research to formulate an authenticated tool for PU and user-friendliness.

Legrís et al. (2003) conducted an appraisal of TAM literature and concluded that even though it is a beneficial model, it needs to be integrated into a broader context. The scope of appraisal spanned 80 articles published in six journals during the 1980-2001 period. The results indicated the altering form and coverage of the model. In view of this, it was concluded that conflicting and contradictory results started emerging once the model was progressively examined. Furthermore, a meta-analysis of 26 studies conducted by Ma and Liu (2004) concluded that robust and substantial relationships existed between PU and espousal, as well as PEU and PU. However, a weak link between perceived user-friendliness and acceptance was noted, and its importance did not pass the fail-safe test.

Tsai et al. (2014a) deployed the TAM by circulating a survey data to 304 participants. The research aimed to recommend an extended TAM to examine the impact of system usability and contentment on users' intent to carry on the usage of e-banking services. According to the results, the users' intent to carry on the usage is jointly driven by the level of contentment, as well as PU and compatibility. As the sample was sourced from a specific industry in Taiwan, the observations might be limited in scope. According to other studies, TAM aspects, utility, user-friendliness, and attitude directly impact the use of e-banking (Al-Ajam and Nor, 2013; Al-Rfou, 2013; Ali El-Qirem, 2013; Khrais, 2012; Lim, et al., 2012; Montazemi and Saremi, 2013). Figure 1 shows the TAM.

4. COG MODEL

Oliver (1980) formulated the COG model to elucidate and estimate the conduct of the user in terms of IS espousal and continuance. This model was engaged to expand the ECM and widely deployed

to assess consumer contentment and post-buying conduct. According to the COG, contentment is a function of expectancy and disconfirmation, and expectancy is a precursor of attitude. The COG unambiguously outlines the rational process of how these variables impact the viability of a product/service offering during various phases of adoption.

This model hypothesizes contentment as a precursor to post-exposure approach. The model features three key constructs: Confirmation, contentment, and attitude. To come up with an improved model of IS continuance, i.e., the TCT, this model was blended with two other models: The ECM and the TAM (Liao et al., 2009). Figure 2 shows the COG model.

5. ECM

The ECM by Bhattacharjee (2001b) was based on Oliver's expectation-confirmation theory (ECT). It integrated a customer behavior model to determine and estimate contentment and repurchase intents. As per this model, user contentment is impacted by two key elements: Post-espousal expectations pertaining to the IS and inconsistencies between pre-espousal expectations and actual IS performance. Whether the users intend to carry on with the use of IS was ascertained mainly by their contentment with previous use. The ECT hypothesizes that user contentment was driven by expectation of the IS and validation of expectation after actual usage. Based on the users' level of confirmation and the expectations, which formed the foundation of this confirmation, users then determined their level of contentment. Lastly, content customers made the intent to repurchase intention whereas discontented one stopped the usage. Expectation formed the reference point, against which validation was evaluated by users to ascertain their response (Bhattacharjee, 2001b). ECM substituted expectations before consumption with expectations after consumption. The model hypothesizes that contentment was a function of expectations and validation (Liao et al., 2009). Figure 3 depicts ECM.

6. TCT

This theory was stated by Liao et al. (2009) as a concept on estimating whether users intend to continue using a technology. The theory blended three renowned models in the domain of technology and IS research: The COG model by Oliver (1980), the TAM by Davis (1989), and the ECM by Bhattacharjee (2001). TCT was a three-tier model and its ultimate dependent variable was continuance intention with IS. TCT blended two essential constructs: Contentment and attitude, as well as three first-tier precursors: Validation, perceived user-friendliness, and PU. The TCT encompassed all the hypotheses put forth in ECM, TAM, and COG (Liao et al., 2009).

Researchers have put in hard work for over a decade to formulate hypothetical models, which encompass ECM and TAM to define and predict the espousal and continuance conduct of users in terms of IS. Conceived for the research on continuance behavior, the COG model is a mix of different variables from ECM and TAM.

Figure 1: Technology acceptance model. Source: Davis (1989)

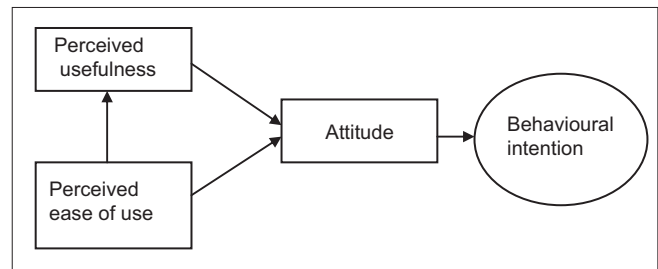


Figure 2: Cognitive model. Source: Oliver (1980)

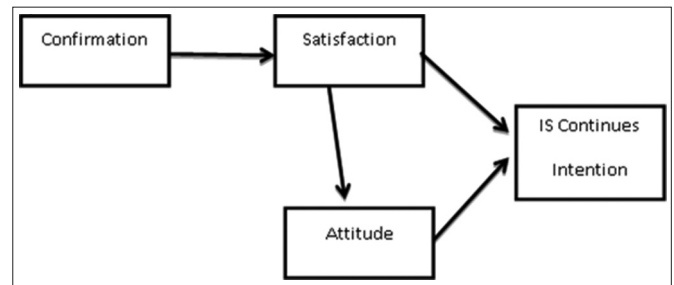
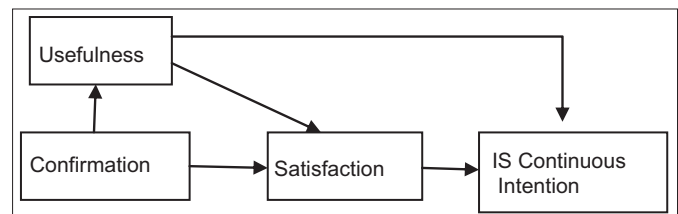


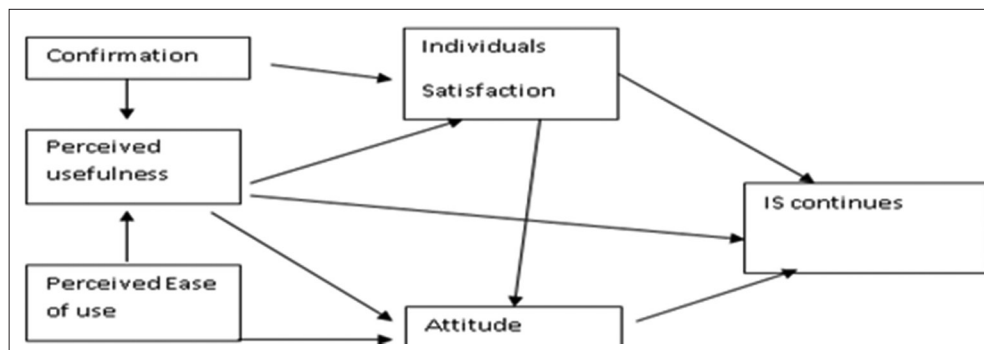
Figure 3: Expectation confirmation model. Source: Bhattacharjee (2001)



The TCT can be deployed at different stages of usage: Preliminary, short-term and long-term. TCT is a significantly improved model in comparison to ECM, TAM, and COG with respect to the breadth of applicability and descriptive strength (Liao et al., 2009).

Liao et al. (2009) explored the creation of an enhanced model for continuance with respect to IS, which can be harnessed all through the usage stages. To start with, an analysis of the ECM, TAM, and COG models was carried out. These models vary in their opinions on the essential notions that affect user conduct. The analysis indicated differences among the three models with respect to the explanatory power, advantages, and obstructions. Furthermore, ECM, TAM, and COG have good explanatory power in the domain of continuous intention (Ho, 2010). The new TCT was formulated by amalgamating six conceptions obtained from ECM, TAM, and COG (Liao, et al., 2009).

A basic feature of the TCT is its configuration - A blend of the attitude and contentment conceptions into a particular continuance model (Figure 4). The authenticated conceptions of perceived user-friendliness and PU were encompassed in the theory to function as first-level precursors. Experiments carried out to ascertain the efficacy of models inveterate the supremacy of the TCT. The theory distinguishes itself from other models in qualitative as well as quantitative terms, and with respect to the various stages of using new technology (Liao et al., 2009).

Figure 4: Technology continuance theory. Source: Liao et al. (2009)

Furthermore, Liao, et al. (2009) conducted a research of three hypothetical models to elucidate the differences in user usage conduct throughout the different stages of using IS. The research indicated that the decisive aspects and thought processes associated with a user's choice pertaining to usage are driven by usage experience. The outcome possibilities are the key precursors of first-time consumer attitude and contentment, and this significantly affects the motive to use and the continuity of usage. As far as short-term users are concerned, the motivation to continue is influenced by contentment, which is a forthright function of the validation between expectations and perceived output. Although contentment could have a brief impact on behavioral intent, this incidence can still drive a rebuff or a readiness to carry on with a short-term utilization of the system. The decisive and long-term attainment of the IS depend on the user's viewpoint. Attitude supposedly tracks its roots to the adopters' post-expectations that are the results obtained from rational dissonance and integration (Liao, et al., 2009).

According to Liao et al. (2009), contentment and attitude considerably impact usage conduct. Contentment is mostly termed as a brief issue, considering it is mainly an assessment of a pre-consumption attitude, which limits it to a specific experience. Attitude is depicted as a person's overall assessment of an available product/service offering. It is therefore more lasting and goes further than each prior experience. Several issues affect attitude and contentment. To make sure the IS is successful, the management should emphasize on both conceptions.

This study deployed the TCT model as ECM, TAM, and COG had quite dissimilar theories about elucidating the constructs that controlled user conduct. The six constructs from the three models were sorted out and merged to form the TCT (Figure 4). According to Liao et al. (2009), the TCT's key contribution was that it amalgamated two essential constructs, i.e. contentment and attitude, into a single continuance model. Furthermore, it was appropriate for users in different phases of the adoption life cycle - preliminary, short-term, and long-term. TCT was deemed as a key correction over the ECM, TAM, and COG models with respect to the extensiveness of applicability and descriptive strength.

From the above-mentioned models, the author could outline the key variables which would be utilized in the study's research

outline, and add the big five personality attributes as a moderator between contentment and the continuous use of e-banking. Personality reveals the outstanding characteristics of a person which then reflect his/her beliefs and deeds (Devaraj et al., 2008). Several researchers Devaraj, et al. (2008), Landers and Lounsbury (2006), Sahney et al. (2010) have investigated the impact of personality attributes on the use of technology. Nonetheless, analyses on the impacts of personality on the intent to carry on the use have not drawn significant attention. Thus, this study would attempt to determine the impact of personality attributes (directness to experience, amicability, meticulousness, extraversion, and neuroticism) as a moderator on the connection between contentment and the continuous use of e-banking.

Furthermore, the authors intends to extend the TCT by involving personality as moderator between contentment and the continuous use of e-banking. Some studies have noted that contentment and the intent to continue are positively related (Akter et al., 2010; Chen et al., 2010; Ho, 2010; Yen and Tsai, 2011). On the other hand, some others have noted that the two aspects are negatively related (Ang and Soh, 1997; Mawhinney, 1990; Mawhinney and Lederer, 1990). Other studies have not been able to determine a relationship between the two (Bikson and Gutek, 1983; Lawrence and Low, 1993; Schewe, 1976). Thus, it is important to encompass a third variable, which functions as a moderator between customer's contentment and their intent to continue using technology to address this inconsistency in literature according to the proposal by Baron and Kenny (1986).

According to Baron and Kenny (1986), a moderating variable can be taken into consideration when there is a feeble or erratic relationship between the dependent and independent variables. According to Lindley and Walker (1993), a moderator variable might enhance or reduce the power of the relationship between the dependent and independent variables, or it might alter their relationship from positive to negative or from negative to positive. Thus, allowing for a moderator between the predictor and outcome variable facilitates more accurate elucidation of this association (Bennett, 2000). This study considered individual difference variables, especially the big five personality attributes, as moderators, which can address the inconsistency in literature about the relationship between customers' contentment and their intent to continue using e-banking services. Personality pertains to a suite of steady features and propensities which drive

the cohesions and dissimilarities in views, state of mind, and deeds (Maddi, 1989). Furthermore, personality is defined as a person's character or leanings which convert into the exhibition of particular features and conducts under specific situations (McCrae and Costa, 1987). Personality reveals the outstanding characteristics of a person which then reflect his/her beliefs and deeds (Devaraj et al., 2008). A typical personality is based on different human conducts and actions such as romantic liaisons (Shaver and Brennan, 1992), psychological character (Lilienfeld and Andrews, 1996), job achievements (Salgado, 1997), fruitful career (Seibert et al., 2001), and job contentment (Judge et al., 2002). Furthermore, different studies have opined that the personality is quite a vital attribute in the virtual environments (Devaraj et al., 2008; Lin and Ong, 2010).

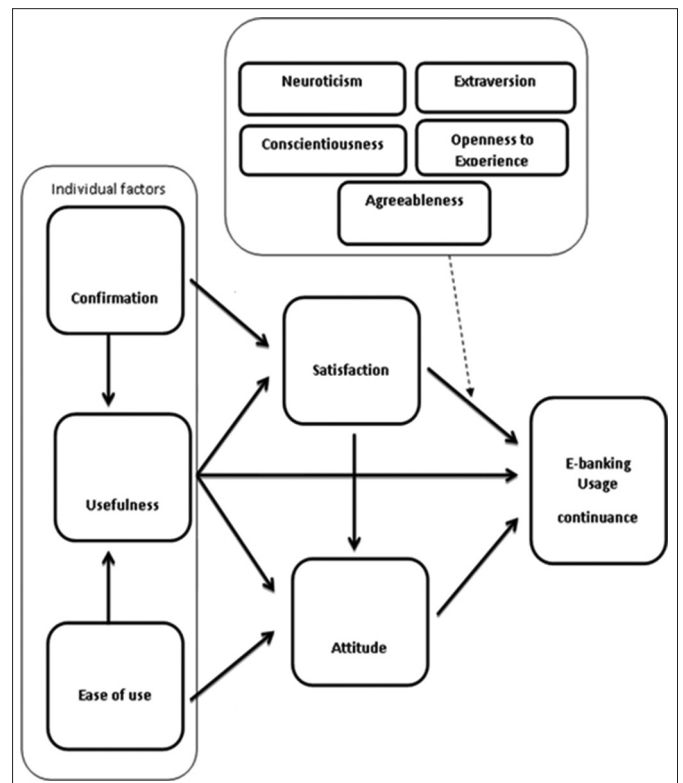
Prior studies have shown that personality could play a crucial part as moderator with respect to customers' attitude. For instance, Roy et al. (2013) noted that the constituents of personality with respect to amicability, frankness, and, to some extent, thoroughness were the key arbitrators of customers' attitudes. Zweig and Webster (2003) investigated whether personality diluted the relationship between workplace monitoring system attributes, fair-mindedness, confidentiality, and approval. According to the results, emotional steadiness and extraversion transformed the relationships between the courses in a model of monitoring approval. Especially, individuals who did not score much in emotional steadiness and extraversion were less expected to promote positive approaches towards monitoring, even when they have confidentiality and impartiality safeguards. A study by (Skarlicki et al., 1999) observed that personality involves enacting a crucial part as a moderator between worker attitude with respect to justice and worker's conduct with regards to the retaliation at the place of work. As a result, and based on the theoretic contention and pragmatic evidence already deliberated, this study argues that the big five personality attributes, i.e., amicability, thoroughness, emotional steadiness, extraversion, and frankness are expected to moderate the relationship between customers' contentment and their intent to continue using e-banking.

7. CONCLUSION

This paper offers few key aspects, which affect the persistent use of e-banking. These include the personality aspects, which have a major impact on individual intents. The study uses the big five personality attributes as a moderator between contentment as an individual factor and the persistent use of e-banking. Furthermore, it uses individual aspects such as validation, user-friendliness, utility, and attitude as independent variables, and elucidates the link between these aspects and the dependent variable, i.e., continued use of e-banking (Figure 5).

This framework addresses the research gap of the three models, the COG model by Oliver (1980), the TAM by Davis (1989), and the ECM by Bhattacherjee (2001). However, the framework need to be tested empirically to ascertain the validity of measuring the continuous usage of e-banking on the individual factors, and the mediating effect of satisfaction and attitude as well as personality traits as moderators.

Figure 5: Proposed framework



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