

Message framing and acceptance of branchless banking technology



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ABSTRACT

Mobile communication technologies are ubiquitous and span a wide range of applications. The present study assessed the effects of message framing on the public acceptance of branchless banking applications using the unified theory of acceptance and utilization of technology (UTAUT). Adult holders of an active bank account were randomly assigned into three message framing conditions (gain frame, loss frame, and control condition), and completed structured anonymous questionnaires on technology acceptance variables derived from the UTAUT. Analysis of variance (ANOVA) showed that message framing manipulations did not influence directly self-reported scores on technology acceptance variables. However, linear regression analyses showed that message framing differentiated the interrelationships between usage intentions and related UTAUT variables between conditions. Moderated regression analysis further showed that gender interacted with performance expectancy in predicting usage intentions in the control group condition. Message framing manipulations influence the way intentions to use technology relate to technology acceptance beliefs. This effect should be further examined in the context of technology acceptance models in e-commerce applications, and more especially in the branchless banking domain. Efforts to promote branchless banking applications would benefit from assessments of potential users' technology acceptance beliefs and intentions.

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1. Introduction

1.1. Online banking technologies

As technology evolves, mobile communication technologies become widespread and ubiquitous, and permeate different domains of social, private, and economic life. The banking sector has followed the recent trends in mobile communications by adopting wireless banking applications for financial transactions and bank account management (Luarn and Lin 2005, Zhou et al. 2010). Mobile banking can be seen as an important aspect of e-commerce that can improve revenues for both banking and telecom providers, generate added value, and give a significant competitive advantage to financial institutions (Kim et al. 2009, Roth 2013). However, several studies have shown that while customers sign up for mobile banking services, only a small fraction actually uses these services (Luarn and Lin 2005). To illustrate, although 1.5 million people signed up for mobile banking services in Taiwan in 2009, less than 2.3% banking transactions were realized through mobile banking (Lin 2011).

Another study from Germany showed that while Internet use is widely prevalent among the population, only a small number of Internet users signed up for and used internet-based banking services (Röcke and Kaulen 2014). Nevertheless, the multi-million investments made in mobile banking services can hardly pay off unless customers utilize those services effectively (Luarn and Lin 2005, Zhou et al. 2010). Researchers have called for greater attention to the psychological processes that underlie customers' attitudes and intentions to use mobile banking services, as doing so can lead to greater insights into the factors that motivate customer engagement with, and effective utilization of mobile banking applications (Laforet and Li 2005, Zhou 2012, Zhou et al. 2010).

1.2. Online banking in Albania

The present study was conducted in Albania, an economically developing country with 16 commercial banks, most of which are offering e-banking services, but with a considerably low utilization of e-banking among customers. Accordingly, mobile banking initiatives are at their early stage and related technological applications are not yet adopted by customers. One reason that explains low adoption of mobile banking in Albania relates to Internet use among the population. More specifically, Albanian

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bank customers are required to have a smartphone, a tablet or a PC in order to access e-banking or mobile banking services.

However, Internet use in Albania is low (62.7%) as compared to European Union's average (78.5%; [Internet World Stats 2015](#)). Another reason that explains the low adoption of mobile banking applications in Albania is the limited range of services offered by Albanian banks, and the low efficiency of some online operations. For example, it takes up to 3 days for an interbank money transfer initiated through e-banking to complete, whereas the time required for this operation in conventional banking (visiting a branch) is much shorter. In this cultural context, Albanian customers are reluctant to use online or mobile banking applications, and are more likely to resort to more conventional banking services that require physical presence.

1.3. Banking omni-channels

From ATMs to e-banking and mobile banking, banks are striving to provide multi access channels for customers. The omni-channel experience is evaluated to be a key improvement area for banks. Smart (or branchless) banking is another way of providing high quality banking services to customers with the use of the next-generation ATMs that were introduced in 2013 by Citibank as 'Citibank Express Machines', and provide nearly all the services of a conventional bank branch ([Holley 2013](#)). The next-generation ATMs are the forerunners of the smart banking industry and, in contrast to e-banking and mobile banking, offer almost all of the banking services without physically visiting a branch and without requiring any special mobile devices and Internet access. The customers can open an account and apply for loans, cards and cashier's checks, make video conference with the bank, and fully complete a transaction through the next-generation ATMs. The deployment of the Citibank Express Machines was preceded by empirical research in customer behavior ([Holley 2013](#), [Singapore Business Review 2013](#)).

2. Theory

2.1. Technology acceptance and utilization

Concerns about the acceptance and utilization of technology over the last two decades has spawned research on technology acceptance, with the technology acceptance model (TAM; [Davis 1989](#)) being the most prominent theory in this area ([Bagozzi 2007](#)). This model suggests that technology acceptance is a volitional process, and usage intentions and attitudes will determine actual utilization of the technology in question. Attitudes represent a proxy predictor of usage intentions. In turn, attitudes towards the technology are driven by two main factors: the user's perceptions about the expected utility or usefulness (how the acceptance of the technology will make a difference in the user's life), and the perceived easiness of using the technology (whether it will be easy/effortless or difficult/effortful to use the technology). Empirical support for the TAM model comes from a wide range of studies on diverse technological innovations, from e-commerce, to e-health and smart phone use ([Holden and Karsh 2010](#), [King and He 2006](#), [Koufaris 2002](#), [Pavlou 2003](#)).

The TAM has undergone several reformulations ([Davis et al. 1989](#), [Venkatesh and Bala 2008](#), [Venkatesh and Davis 2000](#)), and this line of research led to the development of the unified theory of acceptance and utilization of technology (UTAUT; [Venkatesh et al. 2003](#)), a model that is built on the premises of TAM but describes a different process for linking perceptions towards technology to actual usage. Alike the original TAM approach, the UTAUT emphasizes the role of usage intentions as the more im-

mediate predictor of actual technology acceptance and utilization. However, the variables that determine usage intentions in UTAUT comprise effort expectancy (how easy or difficult it will be to use the technology), performance expectancy (the anticipated benefits in performance from using the technology), facilitating conditions (external factors or personal characteristics that facilitate the use of the technology), and social influence (normative perceptions about the use of technology by referent groups).

It is noteworthy that performance and effort expectancies within the UTAUT are similar to perceived usefulness and ease of use in the original TAM ([Dwivedi et al. 2011](#)). [Venkatesh et al. \(2003\)](#) further argued that these determinants of intentions interact with a range of personal characteristics, such as demographic variables (age and gender), past experience with using the technology or similar technological applications, and voluntariness of use (the extent to which technology acceptance is a voluntary vs. mandatory action). The UTAUT has received empirical support with respect to diverse technological innovations, including, e-health and mobile banking, and is currently considered one of the most prominent theories of technology acceptance and utilization ([Abu Shanab and Pearson 2007](#), [Gruzd et al. 2012](#), [Holden and Karsh 2010](#), [Im et al. 2011](#), [Zhou et al. 2010](#)).

2.2. Message framing and technology acceptance

Theories of technology acceptance, like the UTAUT, can provide a better understanding of attitudes and intentions towards technology use among customers, and of the underlying decision-making process. However, decision-making is also influenced by heuristics, such as the framing of information that is presented to a target audience ([Gallagher and Updegraff 2012](#), [Tversky and Kahneman 1986](#)). In the domain of new technologies, technology acceptance is partly determined by the potential users' perceptions of potential benefits (gains) or risk (loses; [Bruhn 2007](#)). Research on prospect theory has shown that framing information in terms of potential gains (what one will gain by using a service) or losses (what one will lose from not using a service) can have differential effects on decision-making (whether the service will eventually be used).

When a gain frame is used, the expected benefits of making a choice are made salient, and when loss framing is used the anticipated negative consequences of the choice are highlighted ([Salovey and Williams-Piehot 2004](#)). Research in marketing has shown that gain framing led to more positive attitudes and intentions to purchase whitening products ([Arora 2007](#)). In a study of e-commerce, online shoppers reported more positive attitudes and higher purchase rate when gain framing was used, compared to loss framing ([Wu and Cheng 2011](#)). Although, message framing has been examined in relation to purchase attitudes and intentions, and customer perceptions about products, there is limited research on the effects of message framing in the context of acceptance of branchless banking technologies, and especially in the context of smart banking services, such as Citibank Express Machines.

3. The present study

So far, the UTAUT has been successfully applied in the context of e-banking technologies ([Abu Shanab and Pearson 2007](#), [Zhou 2012](#)). However, no study has yet addressed the influence of message framing manipulation on technology acceptance variables, such as usage attitudes and intentions. If users' acceptance tendencies are influenced by the framing of a new technology attributes, then message framing manipulations should accordingly influence the way users decide to use or discard emerging technologies

(Bruhn 2007, Wu and Cheng 2011). Accordingly, the present study aimed to assess the effects of message framing on customers' acceptance of branchless banking services.

More specifically, it was examined if gain and loss messages had a different impact on technology acceptance intentions and related beliefs derived from the UTAUT. Given the positive influence of gain framing on customer intentions and perceptions of products (Arora 2007, Wu and Cheng 2011), the following hypotheses were formed (see Table 1):

Hypothesis 1. Relative to loss framing, gain framing will yield stronger intentions to use branchless banking, and more positive technology acceptance beliefs as measured through the UTAUT.

Hypothesis 2. Relative to loss framing, gain framing will accentuate the positive features of branchless banking (higher scores in performance expectancy), and downplay the negative features (effort expectancy).

In addition to the aforementioned hypotheses, it is noteworthy that in the present study we were not only interested in the mean score differences between framing conditions as is the typical case in other message framing studies. Rather, we were mostly interested in the integration of persuasive appeals (message framing) with intention-formation models, and more especially if message framing influenced the process underlying the formation of usage intentions and related technology acceptance beliefs as it is described in the UTAUT. Thus, we further hypothesized that:

Hypothesis 3. Message framing will influence the ways UTAUT variables relate to usage intentions.

4. Methods

4.1. Participants

A convenience sample of adults from Albania was used. Eligibility criteria for participation in the study included being aged

18 years or over, holding an active bank account, and having access to banking facilities. Overall, 265 adults eligible for participation were contacted online through emails and social media, and no incentives for participation were given. Of them, 147 agreed to participate in the study (response rate = 55.4%) (see Table 1).

The mean age of participants was 29.9 years ($SD = 6.4$), and 45.6% were females. The majority (85.7% or $n = 126$) of respondents were highly skilled professionals working as information technology specialists (38.8% or $n = 57$), engineers (23.1% or $n = 34$), economists (15% or $n = 22$), medical doctors (4.8% or $n = 7$), college professors (2% or $n = 3$), and architects (2% or $n = 3$). Following international ethics guidelines for behavioral research, participants were informed about the purpose of the study (assessment of personal beliefs towards new banking technological innovations) and about their participation rights (voluntary participation, anonymity and confidentiality of the responses, and freedom to withdraw from the study without prior notification and without any penalty for doing so).

4.2. Measures

An online survey was developed through Google Forms and was based on the UTAUT questionnaire by Venkatesh et al. (2012). The survey assessed performance expectancy, effort expectancy, facilitating conditions, social influence, and behavioral/usage intentions. Demographic variables (age, gender), voluntariness of use, and past experience were also included. The questionnaire was translated into Albanian using the translation/back-translation method (Hambleton 2001).

A pilot study was conducted with a sample of 10 participants to assess the comprehensibility of the information about the Express machines, the relevance of the questionnaire items, and to explore any possible language barrier (spelling, grammar and syntax). The participants reported that the presentation was clear and they got a good idea about the Express machines. Following the participants' feedback, minor linguistic revisions were performed and the measures of voluntariness of use and social influence were removed from the final version of the questionnaire, because they were deemed irrelevant to the topic of smart banking. The remaining measures are described in detail as follows.

Age was assessed with a single open question (How old are you?) and participants marked their age in years. Gender was assessed with a single item where participants denoted if they were males or females. Past experience was assessed with a single item asking participants to report how often they used e-banking technology, and responses ranged from 1 (=never/almost never), to 6 (=many times a day).

Performance expectancy (PE) was assessed with the mean of three items ('using smart banking will help me accomplish things more quickly'). Internal consistency reliability of the translated Albanian version was at acceptable levels (Cronbach's $\alpha = .71$). Effort expectancy (EE) was assessed with the mean of four items reflecting the anticipated easiness of use or effort to accomplish banking transactions with smart banking ('learning how to use smart banking applications will be easy for me'; Cronbach's $\alpha = .82$).

Facilitating conditions (FC) were assessed with the mean of two items ('I have the necessary resources to use smart banking' and 'I have the necessary knowledge to use smart banking') which displayed acceptable internal consistency reliability (Cronbach's $\alpha = .61$). Finally, usage intentions were assessed with the mean of three items ('I intend to use smart banking when it becomes available' and 'I plan to use smart banking when it becomes available') in response to the stem proposition: 'Suppose that the smart banking technology (Express machines) becomes available in Albania. How willing will you be to use this smart banking technology?'

Table 1
Research questions and hypotheses of the study.

Research question	Hypothesis	Description
Does message framing influence usage intentions and UTAUT variables with respect to the use of branchless banking?	Hypothesis 1 (H1): relative to loss framing, gain framing will yield stronger intentions to use branchless banking, and higher scores in EE, PE, and FC Hypothesis 2 (H2): relative to loss framing, gain framing will accentuate the positive features of branchless banking (higher scores in PE), and downplay the negative features (EE)	Message framing manipulations will yield differences in mean scores in usage intentions, EE, PE, and FC
Does message framing influence the relationships between usage intentions and UTAUT variables with respect to the use of branchless banking?	Hypothesis 3 (H3): message framing will influence the ways EE, PE, and FC relate to usage intentions	Usage intentions, EE, PE, and FC will correlate in different ways to each other between the message framing conditions

Note: PE = performance expectancy, EE = effort expectancy, FC = facilitating conditions.

Internal consistency reliability was high (Cronbach's $\alpha = .86$). All the UTAUT measures (PE, EE, FC, and intentions) used 7-point continuous scales (1 = strongly disagree, 7 = strongly agree), and higher mean scores reflected more on the variable in question.

4.3. Design and procedure

A between-subjects experimental design was used. Participants were randomly assigned to the control, gain (positive) framing, and loss (negative) framing groups. Framing condition (control, negative framing, and positive framing groups) was the independent variable, whereas responses in the UTAUT questionnaire reflected the dependent variables of the study. Prior to completing the UTAUT questionnaire, participants of each group were presented with factual information about Express machines:

"Express machines allow customers to open accounts, apply for loans, cards and cashier's checks outside of the branch. The machine is equipped with an online banking connection, video-conferencing and biometric capabilities for customer identity authentication. The ATM has a screen that can display personalized promotions and allows users to make instant videoconference with a customer service representative. The machine supports Near Field Communicator, scanning and embossing functions so that it is able to instantly print credit cards and ATM cards. A customer can start a transaction on a computer or mobile device and complete it on Citibank Express Machines and vice versa. In other words, this new ATM machine provides nearly all the services of a traditional branch".

This information was accompanied by a picture of a Citibank Express Machines. After reading the passage about Express machines, participants in control group were requested to complete the online UTAUT survey. Accordingly, participants in the negative (loss) framing condition were presented with the following message, and then asked complete the UTAUT survey:

"Think about what you will lose by not using the new smart banking technology: by not using smart banking you waste precious time by having to wait in long queues; by not using smart banking you will lack effective and effortless banking operations; if you do not use smart banking, you lose more trees as more paper will be produced".

The same message, but framed in a 'gain' manner, was read by participants in the positive framing group before completing the UTAUT questionnaire:

"Think about what you will gain by using the new technology: by using smart banking you can save precious time from having to wait in long queues; by using smart banking you will enjoy effective and effortless banking operations; if you use smart banking, you save more trees as less paper will be produced".

5. Analysis

The means, standard deviation scores, reliability coefficients and intercorrelations among the study variables are presented in Table 2. Overall, PE, EE, FC and usage intentions were significantly correlated with each other. Specifically, the correlations of intentions with the other UTAUT variables were all positive and significant and their effect sizes (indicated by Pearson's r) ranged from .40 to .48, thus attesting to the construct validity of the translated Albanian measures. With respect to past experience in using e-banking, almost all participants (90.5%) had some experience with e-banking.

Table 2

Mean scores, intercorrelations and internal consistency reliability of the measures used in the study.

	1	2	3	4	5
1. Intentions	–	.00	.48*	.45*	.40*
2. Age		–	.08	.08	.05
3. Performance expectancy			–	.61*	.38*
4. Effort expectancy				–	.53*
5. Facilitating conditions					–
Mean	5.83	29.90	5.76	5.75	5.56
Standard deviation	1.13	6.45	0.95	0.97	1.17
Cronbach's α	.86	–	.71	.82	.61

Note. * $p < .05$.

5.1. Effects of message framing on UTAUT variables

One-way analysis of variance (ANOVA) was used to assess Hypotheses 1 and 2, namely the effects of message framing on UTAUT variables (performance expectancy, effort expectancy, facilitating conditions, and usage intentions). No significant differences were found ($p > .05$) in UTAUT variables scores between the three experimental conditions (control group, positive and negative framing). This means that customers displayed the same level of usage intentions and technology acceptance beliefs independently of the message framing conditions.

5.2. Effects of message framing on UTAUT processes

Three linear regression analyses were used to assess if the intention–formation process assumed by the UTAUT differed between the experimental conditions in our study. In all three regressions predictor variables included demographic characteristics (age and gender), past experience with web technologies (use of email, social media, and e-banking applications), and the UTAUT variables assessed in the present study: performance expectancy, effort expectancy, facilitating conditions, and intentions to use smart banking applications. The results revealed differences in the ways UTAUT variables related to usage intentions between the three experimental conditions.

In particular, in the first regression analysis (control group, no message framing used) the overall model predicted (adjusted R^2) 56% of the variance in usage intentions ($F = 9.55$, $p < .001$). Significant predictors of intentions to use smart banking in the control group included past experience with e-banking technology ($\beta = .385$, $p = .001$), performance expectancy ($\beta = .522$, $p < .001$), and facilitating conditions ($\beta = .383$, $p = .002$). Accordingly, in the second regression analysis (positive/gain framing) the model predicted (adjusted R^2) 27.2% of the variance in usage intentions ($F = 3.72$, $p = .003$), and only past experience with e-banking technology significantly predicted intentions ($\beta = .396$, $p = .005$).

Finally, in the third regression analysis (negative/loss framing) the model predicted (adjusted R^2) 45.4% of usage intentions ($F = 6.47$, $p < .001$), and only performance expectancy was a significant predictor ($\beta = .460$, $p < .05$). In summary, these findings indicate that intentions to use Express machines are associated with different technology acceptance beliefs and background variables (past experiences with online banking technologies) depending on the type of message framing that is used.

5.3. Moderated effects by age, gender, and experience

In line with the assumptions of the UTAUT (Venkatesh et al. 2003) and with more recent research on this model (Venkatesh et al. 2012), the effects of performance expectancy on usage intentions should be moderated by age and gender, and the effects of

facilitating conditions should be moderated by age and past experience with technology use. Accordingly, we conducted moderated regression analyses to test these hypotheses. Based on the results from the linear regression analysis, two moderated regression analyses were conducted with the data from the control group to respectively assess (a) if age and gender moderated the effects of performance expectancy on intentions, and (b) if age and past experience moderated the effects of facilitating conditions on intentions. Accordingly, one moderated regression analysis with the data from the negative framing group was used to assess if age and gender moderated the effect of performance expectancy on usage intentions.

In line with the recommendations provided by Aiken and West (1991), the predictor variables in each regression were mean-centered to avoid multicollinearity. Each regression analysis was completed in two steps, the first step including the main effects and the second step including the interaction term (predictor variable \times moderator). Unstandardized coefficients (B) were reported, and a significant moderation effect was evidenced if the addition of the interaction term significantly added variance in the prediction of intentions, on top of the variance predicted by the main effects.

With regards to the control group, the results showed that gender significantly moderated the effects of performance expectancy on usage intentions ($B_{\text{gender} \times \text{PE}} = -.252, p < .05; \Delta R^2 = 5.9\%; F_{\text{change}} = 5.17, p < .05$), so that when no message frames was used, performance expectancy was a stronger predictor of intentions to use smart banking applications among male participants (see Fig. 1). No other significant moderation effect were found for the control and the negative framing groups. These findings suggest that background demographic variables, such as one's gender, may interact with technology acceptance beliefs in predicting intention to use smart banking applications, such as Express machines.

6. Discussion

The present study employed the UTAUT (Venkatesh et al. 2003, 2012) to investigate the effects of message framing on technology acceptance intentions in the context of branchless banking in Albania. More specifically, it was assessed if message framing manipulations (gain vs. loss frames) would have a different impact on the intention-formation process described in the UTAUT model. The results showed that message framing did not influence the absolute mean scores of self-reported intentions, or any other technology acceptance variable described in the UTAUT, such as

performance and effort expectancies, and facilitating conditions. These findings are similar with previous research integrating message framing with intention-formation models that did not find effects of framing manipulations on intentions and related technology acceptance variables (Jones et al. 2004), but are incongruent with studies that found effects of message framing on intentions and beliefs towards the target behavior (Arora 2007).

However, past research was focused on the absolute mean differences caused by message framing manipulations and did not look to potential effects in the intention-formation process, such as the patterns of associations between usage intentions and technology acceptance beliefs described in the UTAUT (performance and outcome expectancies, facilitating conditions). In the present study, there was a significant effect on the intention-formation process assumed by the UTAUT, as different variables predicted usage intention in each framing condition. Specifically, in the control group, where no message framing was used and participants only read the factual information about express (smart) banking machines, usage intentions were predicted by performance expectancy, facilitating conditions, and past experience with e-banking.

Accordingly, in the positive framing condition only past experience was a significant predictor of usage intentions; and in the negative framing condition, the only significant predictor was performance expectancy. These findings suggest that when considering the integration of message framing manipulations with technology acceptance models, such as the UTAUT (Venkatesh et al. 2003, 2012), we should go beyond differences in absolute mean scores and investigate in more detail if the framing manipulations have a different impact the intention-formation process suggested by those models. In the present study it was clearly shown that intentions were predicted by different sets of variables in each experimental condition.

6.1. Managerial implications

Many successful organizations globally try to improve customer experience by offering digital solutions and services (KPMG 2014). Important milestones in the financial services' landscape include the introducing of ATMs, e-banking and mobile banking applications. Lately, the next-generation of ATMs has become a new banking channel that is defining its position in the financial landscape. Banks can take competitive advantage by providing omni-channels. Actually, a key improvement area for banks is to provide omni-channel experience, with 24/7 real time banking access. Based on a study, traditional banks base their activity on branches and ATMs and they are not competitive on e-banking and mobile banking. Clearly, there is a chance that innovative technology companies can provide banking services which in turn could change the bank's position in the marketplace for worse. This is why the traditional banks must consider this threat and provide innovative solutions which enhance the customer experience and give the opportunity to strengthen their position in the marketplace (Ernst and Young 2014).

Smart (branchless) banking can revolutionize the banking experience. From the customer point of view, the smart banking channel means 24/7 banking, less bureaucracy in completing a financial transaction, no need for personal devices (smartphone, tablet, PC), high-tech and accurate services. Next-generation ATMs are not meant to substitute branches, but since they are capable of offering almost all of the services offered at the branch, they can perhaps decrease the need for branches in the long run if the customer uptake is sufficiently high. From a financial perspective, this will reduce the overall administrative, operational and maintenance costs of banking institutions.

Furthermore, the present study suggests that bank managers may integrate message framing manipulations in their marketing

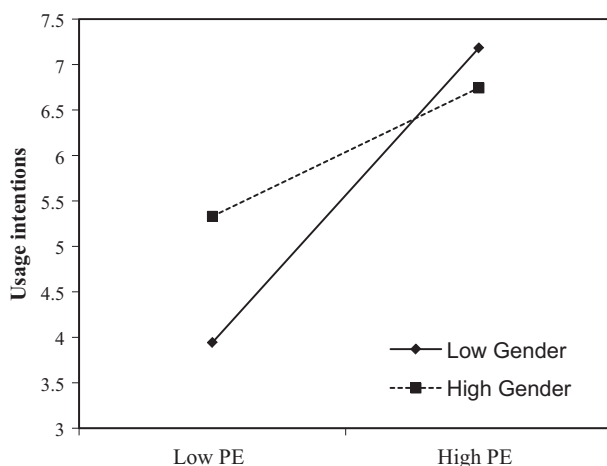


Fig. 1. Interaction between gender and performance expectancy. Note: low gender = males, high gender = females.

strategies to promote branchless banking in Albania. In doing so, they should carefully consider the factors that influence acceptance of branchless banking acceptance by customers when message framing is used. Below are mentioned some practical managerial implications for the more effective promotion of branchless banking through message framing – yet, it should be noted that these implications reflect only the findings of the present study and cannot be generalized to other cases or cultural contexts.

Managers directly involved in promotion strategies of new banking product and services should address performance expectancy beliefs among customers when they consider using negative framing as a way to promote Express machines. Performance expectancy is a perception of expected utility (what customers can gain from using the target technology) and our findings showed that performance expectancy beliefs are more strongly associated with usage intentions when a loss frame is used. For instance, a negatively framed message could mention that not using Express machines may lead to losses in expected benefits, such as experiencing more waiting time for the execution of a transaction.

If positively framed messages are considered for the promotion of branchless banking (Express machines) then past customer experience with e-banking should be taken into account. Our study showed that when a positive frame was used the only significant predictor of usage intentions was past experience with e-banking applications. At a practical level this may mean that creating a pool of active users of branchless banking can provide a basis for further expansion of marketing campaigns to persuade other customers to use branchless banking. Research from the behavioral sciences has shown that when people are presented with normative information about similar others (how many and similar others perform a given behavior) they are motivated to act accordingly (Cialdini 2007). Thus, creating normative messages indicating that many other bank customers use branchless banking (based on the information about the use of branchless banking by existing e-banking users) can motivate greater adoption of branchless banking services.

6.2. Conclusion

Overall, the aforementioned findings suggest that the integration of message framing with technology acceptance models, such as the UTAUT, can be useful in understanding the process of technology adoption among customers, and reveals different aspects of a reflective and deliberate thinking process in the context of branchless banking acceptance. The UTAUT describes processes whereby individuals may be motivated to adopt and use a technological innovation relevant to banking (Zhou et al. 2010), and message framing represents an alternative way to motivate the use of online services (Wu and Cheng 2011).

Our study is the first that integrated the UTAUT with message framing with respect to branchless banking acceptance, thus, our findings should be examined by future research. Important variables that may further explain message framing influences on intentions and decision-making, such as personal involvement (Gamliel and Herstein 2013) and mental construal (White et al. 2011), were not taken into account in the present study, and should be more carefully assessed in future research.

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