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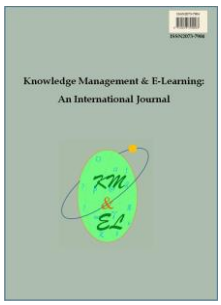

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The determinants of the online banking adoption behavior by the theory of trying in developing countries: The case of Pakistani banks

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Abstract: The theory of trying postulates that in the less technologically advanced developing countries, online banking adoption behavior is a function of three attitudes rather a single attitude. These three attitudes are attitudes towards successes, failure, and learning that are expected to determine online

banking adoption. These three attitudes, in turn, are dependent upon two crucial individual traits, overall self-confidence, and cynicism. However, the previous literature has not provided conclusive empirical evidence about this issue particularly in the less technologically advanced context of South Asia. Consequently, the purpose of this study was to test the role of these three attitudes and two traits as the determinants of the online banking adoption behavior. The data was collected from 215 customers who were already using the online banking in the District Attock, Pakistan. Structural equation modeling with partial least squares was applied for hypotheses testing. The results point that in the developing context of Pakistan, all the factors - attitudes and traits - are significant predictors of online banking adoption behavior.

Keywords: Adoption behavior; Online banking; Internet banking; Mobile banking; Theory of trying

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1. Introduction

The predominant models in technology adoption literature, such as the technology acceptance model (Venkatesh et al., 2011; Venkatesh & Davis, 2000; Davis, Bagozzi, & Warshaw, 1989; Davis, 1985) and the theory of planned behavior (Ajzen, 1991), generally pose the online banking adoption behavior as a non-problematic behavior which is a function of various deliberative processes and decisions, with relatively no roles of external and internal impediments or restraints. However, these models have not performed well in explaining technology acceptance and adoption in the less technologically advanced developing countries (e.g., Smeda, Shiratuddin, & Wong, 2017; Doleck, Bazelais, & Lemay, 2017; Baleghi-Zadeh, Ayub, Mahmud, & Daud, 2017; Ahmed & Ward, 2016; Abdullah, Ward, & Ahmed, 2016; Sarwar, Yong, Khan, & Oh, 2016). The common attributed reason is that technology acceptance behavior in such countries is more a function of internal impediments/restraints (e.g., less knowledge and skills of new technological services) as well as external restraints (e.g., low speed of internet service and poor telecom infrastructure) (Benamati & Serva, 2007), thereby making the technology adoption behaviour a "problematic behaviour" which is influenced or hindered by the internal and external factors. Therefore, the theory of trying has been proposed as an alternative model and conceptualization for the better explanation that why and how the technology adoption behavior is subject to the internal and external impediments in the developing countries, and is thus a problematic behavior (Chaouali, Souiden, & Ladhari, 2017; Benamati & Serva, 2007; Bagozzi & Warshaw, 1990).

The theory of trying postulates that in less technological advanced developing countries, new technological service adoption is a function of three dimensions of attitudes including learning, failure, and success. These attitudes, in turn, then form a general attitude that influences the adoption behavior through the bridging influence of intention to adopt (Bagozzi & Warshaw, 1990). Unlike other models, such as the theory of reasoned action, planned behavior, and technology acceptance model, this theory considers attitude as a multi-dimensional concept, consisted of attitude towards failure, success, and learning, which in turn determine general attitude towards online banking to predict the likely outcome of adoption/non-adoption behavior (Venkatesh et al., 2011;

Venkatesh & Davis, 2000; Ajzen, 1991; Davis et al., 1989; Davis, 1985). Using the theory of trying, relatively few studies (e.g., Chaouali et al., 2017; Ahuja & Thatcher, 2005) have tested the impact of three attitudes on the intention to adopt IT services. However, these studies are inconclusive because of their focus on the intention to adopt because the theory of trying aims to explain behavioral adoption, which, in turn, requires empirical data from current actual customers who have had used the online banking service. Moreover, the anecdotal evidence shows that the customers in developing countries, such as Pakistan, tend to use either or both mobile and computer-based internet banking (together known as online banking) subject to the context. However, earlier studies have either focused on mobile banking adoption or information system acceptance (Chaouali et al., 2017; Ahuja & Thatcher, 2005).

Moreover, in the developing countries, an uncertain environment prevails which correlates with the internal and external impediments. Therefore, two individual traits - overall self-confidence and cynicism – can be expected to impact the three attitudes through their relations with external and internal impediments (Chaouali et al., 2017; Bagozzi & Warshaw, 1990; Bagozzi, Davis, & Warshaw, 1992). The reasons are as follows. First, the more a customer has overall self-confidence about one's self as well as about technology learning and usage, the more likely that customer is to form positive attitudes towards success and learning, and negative attitude towards failure. Second, customer cynicism – the disbelief of a customer in the integrity and motivation of banks regarding the online banking services – is more present in the developing countries. Cynism can impact the attitude towards failure positively while attitude towards success and learning negatively (Ketron, 2016; Helm, Moulard, & Richins, 2015; Chylinski & Chu, 2010; Benamati & Serva, 2007; Andersson & Bateman, 1997; Regoli, 1976). However, there is no such conclusive evidence to evaluate the roles of these two individual traits primarily in the relatively low technologically advanced context of South Asia.

To fill these research gaps, the purpose of this study was to empirically test the impact of the three attitudes and two traits as the predictors of online banking adoption behavior. The data were collected using self-administered survey questionnaires from 215 customers in the banking sector of Pakistan who were already using the online banking service. Structural equation modeling through partial least squares was employed for analyzing the data.

The remaining paper is organized as follows. The second part reviews literature for hypotheses formulation. The third part focuses the methodology. The fourth section presents data analysis results. Finally, fifth section winds up the study with the discussion and conclusion.

2. Literature review

2.1. Theory of trying

The fundamental tenets of the theory of trying are summarized as in the following (Bagozzi & Warshaw, 1990; Bagozzi et al., 1992).

1. In contrast to other theories in consumer behavior in technological services literature, such as the theory of planned behavior (Ajzen, 1991), the theory of trying postulates consumer behavior as a "problematic behavior" rather than a "non-problematic behavior." The problematic behavior refers to the action or

behavior that is affected or hindered by the internal and external environmental impediments.

For example, the theory of planned behavior postulates that customer's technology adoption behavior is a result of some conscious deliberations (subjective norms and a general attitude) which is not affected or hindered by external and internal impediments, such as the skills to learn new technology and infrastructural support provided for service usage. In contrast, problematic behavior in the theory of trying refers to an action or behavior which is impacted by the internal and external impediments a customer face. For example, if a customer has not got the sufficient skills to use a new technological service, then it is likely that he/she may not use it.

2. The problematic behavior is a function of multidimensional attitudes rather a single one-dimensional attitude. Specifically, a problematic behavior is a function of a general attitude towards a consumer service (try or not to try) which, in turn, is dependent upon three other attitudes: attitude towards learning, attitude towards success, and attitude towards failure.

It appears that there is a shortage of literature that treats the online banking adoption as a problematic behaviour and thus draws on the theory of trying (e.g., Ahuja & Thatcher, 2005; Chaouali et al., 2017). However, there is a predominance of literature that conceptualizes the online banking as non-problematic behaviour while drawing on the other theories, such as the theory of planned behaviour (e.g., Kesharwani & Bisht, 2012; Yousafzai, Foxall, & Pallister, 2010; King & He, 2006). It has been maintained in the literature that in the developing and least-developed countries, the adoption or consumer behaviour (e.g., online banking adoption behaviour) is restrained by the internal and external impediments (e.g., Benamati & Serva, 2007; Bagozzi & Warshaw, 1990; Bagozzi et al., 1992). Therefore, the theory of trying seems a more promising approach to study the online banking adoption behaviour in the context of the developing and least-developed countries.

Also, the past empirical studies on online banking basing in the theory of trying have primarily focused on the impact of three learning attitude on intention to adopt (Chaouali et al., 2017; Ahuja & Thatcher, 2005). However as addressed above (Bagozzi & Warshaw, 1990; Bagozzi et al., 1992), the theory of trying is more a matter of adoption behaviour rather than the intention. Therefore, the relationships between three learning attitudes and adoption behaviour basing in the theory of trying are discussed as in the following.

2.2. Learning attitudes and online banking adoption as a problematic behaviour

The deduction from the theory of trying and past studies on the relationships between attitudes and intention to adopt online banking helps to deduce that the three learning attitudes act as antecedents of the intention to adopt online banking and problematic-behaviour of online banking adoption in the developing countries (Bagozzi & Warshaw, 1990; Bagozzi et al., 1992; Ahuja & Thatcher, 2005; Benamati & Serva, 2007; Chaouali et al., 2017). Basing in the past empirical studies, according to the theory of trying, in the context of developing and least-developed countries, the online banking adoption behaviour is a problematic behaviour that is subject to internal and external restraints (Alalwan et al., 2017; Roy, Balaji, Kesharwani, & Sekhon, 2017; Al-Ajam & Md Nor, 2015; Chemingui & Ben lallouna, 2013; Benamati & Serva, 2007; Bagozzi & Warshaw, 1990; Bagozzi et al., 1992). There are a number of studies (Kesharwani & Bisht, 2012; King & He, 2006; Al-Ajam & Md Nor, 2015; Chemingui & Ben lallouna, 2013) that

found that the theories of non-problematic behaviour (e.g., technology acceptance model, the theory of reasoned action, and theory of planned behaviour) have less explanatory power in relation to online banking adoption behaviour of consumers in the less technologically advanced developing countries because in these countries online banking adoption is affected by the external and internal impediments and is thus a problematic behavior. Therefore, it is argued here that in less developed contexts, the theory of trying can better conceptualize online banking adoption behaviour.

There are internal impediments (strong offline banking behaviour, risk aversion trait, few skills to learn new technology, mistrust with the companies and banks, and low level of income etc.) and external impediments (e.g., poor telecom infrastructure and low speed and unreliability of internet services etc.) that make the online banking adoption behaviour as problematic in the less technologically developing countries (Ahuja & Thatcher, 2005; Chaouali et al., 2017; Alalwan et al., 2017; Roy et al., 2017; Al-Ajam & Md Nor, 2015; Akhlaq & Ahmed, 2013; Chemingui & Ben lallouna, 2013; Benamati & Serva, 2007). Hence, the three attitudes towards online banking as outlined in the theory of trying (attitude towards failure, attitude towards learning, and attitude towards success) are strongly influenced by these sorts of external and internal impediments which, in turn, result in the overall or general attitude towards the online banking. This general attitude towards the online banking then, in turn, ultimately determines the adoption of online banking behaviour (Benamati & Serva, 2007; Ahuja & Thatcher, 2005; Bagozzi & Warshaw, 1990).

To the best of authors' knowledge, Chaouali et al. (2017) and Ahuja and Thatcher (2005) attempted to test the impact of these attitudes on intention to adopt mobile banking/information system acceptance while basing in the theory of trying. Chaouali et al. (2017) collected data from the banks' customers from Tunisia, relatively a developing country. However, this study is inconclusive because of the following reasons. First, this studies only focused on the online banking adoption intention while the theory of trying pivots around the behaviour rather more intention (Bagozzi & Warshaw, 1990). Therefore, sampling the customers who have had already used the online banking could have been more appropriate. Second, Chaouali et al. (2017) addressed the mobile banking adoption. However, anecdotal evidence suggests that in developing countries customers use either of the mobile or computer banking or both subject to the context. Therefore, it could make more sense if the online banking customers (encompassing mobile and computer banking both) could have been targeted. Finally, Chaouali et al. (2017) conducted their study in Tunisia, the part of African continent. However, like African continent, the majority countries in Asia are also developing. Ahuja and Thatcher (2005) used the theory of trying to explain the innovation diffusion through IT. Consequently, it is deduced here that examining the behavioural adoption of online banking using the lens of the theory of trying based on the data collection from the customers using the internet banking service already, in the developing countries context of South Asia is worthwhile.

Based on above rationale, following hypotheses are posited.

H1: *Attitude towards success impacts attitude towards online banking positively and significantly*

H2: *Attitude towards failure impacts attitude towards online banking adoption positively and significantly*

H3: *Attitude towards learning impacts attitude towards online banking positively and significantly*

H4: *Attitude towards online banking impacts online banking behavior positively and significantly*

This discussion indicates that internal or individual and external factors are the primary determinants of online banking adoption behavior. Specifically, these are the external impediments that impact the internal factors, thereby making the internal factors much more significant for attitude formation. In this regard, there are two internal/individual factors, overall self-confidence, and cynicism, which are likely to have significant impacts on the three attitudes.

2.3. Overall self-confidence and learning attitudes

Self-confidence refers to the positive or negative feelings and attitudes a person has about one's self (Chuang, Cheng, Chang, & Chiang, 2013; Paridon, Carraher, & Carraher, 2006; Bearden, Hardesty, & Rose, 2001; Locander & Hermann, 1979). General and specific self-confidence are its two key dimensions (Chaouali et al., 2017; Bearden et al., 2001; Locander & Hermann, 1979). Specific self-confidence refers to the confidence or certainty about a question or problem about which one has prior knowledge and experience to handle it. In contrast, the general self-confidence refers to the one's own belief in the ability to make sound decisions. The current study focuses on the general or overall self-confidence. The literature points that the overall self-confidence plays a decisive role in increasing the attitude towards success and learning and decreasing failure, through nurturing the risk-taking behavior, learning behavior, self-efficacy, and certainty (Chuang et al., 2013; Locander & Hermann, 1979; Clark, Goldsmith, & Goldsmith, 2008; Chelminski & Coulter, 2007; Meuter, Ostrom, Bitner, & Roundtree, 2003; Dabholkar & Bagozzi, 2002; Bearden et al., 2001).

H5: *Overall self-confidence impacts attitude towards success positively and significantly*

H6: *Overall self-confidence impacts attitude towards failure negatively and significantly*

H7: *Overall self-confidence impacts attitude towards learning positively and significantly*

2.4. Cynicism and learning attitudes

Cynicism refers to the disbelief in the sincerity of other human beings' behaviors and motives (Ketron, 2016; Chaouali et al., 2017; Helm et al., 2015; Chylinski & Chu, 2010; Dean, Brandes, & Dharwadkar, 1998; Andersson & Bateman, 1997; Regoli, 1976). It is usually manifested in the doubts, distrustfulness, and mocking disbelief. In the context of less technologically advanced developing countries, consumers tend to disbelief in the new products and services especially when they are unaware of the methods to use them. They distrust the integrity of the banks regarding the new services (Chaouali et al., 2017; Chylinski & Chu, 2010; Benamati & Serva, 2007). They tend to perceive the new services as a tool to increase the service charges instead of their facilitation (Benamati & Serva, 2007). Hence, consumers with cynical attitude might judge the new technology services and organization as unreliable while doubting the integrity of the organizations or banks such that it impacts their attitude towards failure positively while impacting the attitude towards success and learning negatively.

H8: *Cynicism impacts attitude towards success negatively and significantly*

H9: *Cynicism impacts attitude towards failure positively and significantly*

H10: *Cynicism impacts attitude towards learning negatively and significantly*

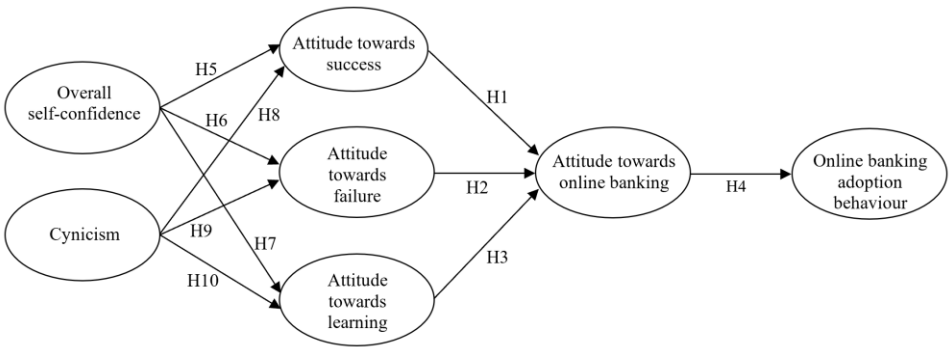

Fig. 1. Conceptual model

Fig. 1 represents the conceptual model of the study.

3. Methodology

This study collected 215 usable responses from the banks' customers from Attock District in Pakistan who were already using the online banking services (mobile and/or computer banking). This target group was chosen because the study consistent with the other studies (e.g., Bourrie, Jones-Farmer, & Sankar, 2016; Castaneda, Fernández Ríos, & Durán, 2016; Ullah et al., 2016; Budiardjo et al., 2017; Doleck et al., 2017; Escobar-Rodríguez & Carvajal-Trujillo, 2014; Martins, Oliveira, & Popovič, 2014; Lassar, Manolis, & Lassar, 2005; Zhou, Lu, & Wang, 2010) was interested in the determinants of adoption behavior rather mere behavioral intention to adopt online banking (e.g., Chaouali et al., 2017; Chong, Ooi, Lin, & Tan, 2010; Al-Somali, Gholami, & Clegg, 2009). The demographics of these 215 respondents are given in Table 1. A self-administered survey questionnaire was provided to the customers by the lead author and the banking professionals through purposive sampling. The customers were asked if they use online banking service. Those customers who reported that they were not a user of online banking in verbal before administering the questionnaire or in the survey questionnaires were not considered in the usable responses for data analysis. The study used the structural equation modeling through partial least squares (PLS-SEM) technique to analyze the collected data. This technique has been employed in the SmartPLS 3 Version 2.7 software. The very rationales to choose the PLS-SEM were relatively a low sample size and interest in the prediction power of endogenous construct – the online banking adoption behavior (Hair, Sarstedt, Ringle, & Gudergan, 2017).

The seven constructs were measured using the adapted instruments on seven points Likert scale. The detail of instruments is as follows: Online banking adoption behavior (Venkatesh, Morris, Davis, & Davis, 2003), attitudes towards failure, learning, and success (Taylor, Bagozzi, & Gaither, 2001), general attitude towards online banking (Taylor et al., 2001), general self-confidence (Bell, 2016), and cynicism (Tan & Tan, 2007).

Table 1
Demographic evaluation of respondents

Demographic Variable	Classification of Demographics	Frequency	%
Age	18-20	16	7.4
	21-25	47	21.8
	26-30	28	13.0
	30-40	85	39.5
	40-50	39	18.1
Gender	Male	189	87.9
	Female	26	12.09
Occupation	Public sector	122	56.7
	Private sector	79	36.7
	Student	14	6.5
Monthly Income	Less than Rs.15,000	30	13.9
	Between 15,000-30,000	47	21.8
	Between 30,000-50,000	85	39.5
	Above 50,000	53	24.6

4. Results

For the assessment of the measurement model, outer loadings, reliability or internal consistency reliability of the constructs, and convergent validity are examined (Hair et al., 2017; Wong, 2013), as shown in Table 2. In this regard, all indicators or items are found with outer loadings greater than 0.7 as shown in Table 2 (Hair et al., 2017; Wong, 2013; Hulland, 1999). The liberal measures of internal consistency reliability or construct reliability is composite reliability which is preferred and found consistent in PLS-SEM research (cutoff criterion value=0.7; Wong, 2013; Bagozzi & Yi, 1988). The values of composite reliability for all the constructs exceed the threshold value of 0.7 (Table 2). Hence, all constructs are found to have reliability. Similarly, the value of average variance extracted for each construct is above than the threshold value of 0.5, thereby indicating the convergent validity of each construct (Fornell & Larcker, 1981).

Table 2
Measurement model evaluation

Indicator	**Outer loadings**	**Composite reliability**	**Average variance extracted**
OS1	0.84	0.89	0.69
OS2:	0.87		
OS3	0.87		
OS4	0.84		
OS5	0.87		
OS6	0.87		
OS7	0.83		
OS8	0.78		

OS9	0.82		
GS10	0.73		
CY1	0.75	0.84	0.59
CY2	0.87		
CY3	0.74		
CY4	0.76		
CY5	0.71		
CY6	0.78		
AS1	0.92	0.945	0.84
AS2	0.90		
AS3	0.94		
AL1	0.80	0.83	0.62
AL2	0.83		
AL3	0.73		
AF1	0.93	0.90	0.73
AF2	0.89		
AF3	0.73		
AOB1	0.74	0.89	0.74
AOB2	0.94		
AOB3	0.89		
OBAB1	0.95	0.96	0.82
OBAB2	0.84		
OBAB3	0.93		

Note. OS=Overall Self-confidence; CY=Cynicism; AS=Attitude towards Success; AF=Attitude towards Failure; AL=Attitude towards Learning; Attitude towards Online Banking=AOB; OBAB=Online Banking Adoption Behaviour

Table 3
Research model for hypotheses testing

Hypothesis	Relationship	Path coefficient	P-value
H1	AS →AOL	0.346	p<0.001
H2	AF →AOL	-0.269	p<0.001
H3	AL →AOL	0.197	p<0.001
H4	AOL →OBAB	0.687	p<0.001
H5	OS →AS	0.587	P=0.00
H6	OS →AS	-0.579	p<0.001
H7	OS →AL	0.270	p<0.01
H8	CY →AS	-0.356	p<0.001
H9	CY →AF	0.315	p<0.001
H10	CY →AL	-0.225	p<0.001

After the establishment of the measurement model, the research model can be assessed for hypotheses testing. The hypotheses are tested by assessing the regression (R^2), and the path coefficients and corresponding p-values (Hair et al., 2017; Wong, 2013), as shown in Table 3. The central endogenous construct in which the study was interested was the online banking adoption behavior. The results reported that all the exogenous constructs explain 47% of the variance in the online banking adoption

behavior. Concerning the path coefficients and their significance levels, Table 3 shows that all the predictors are found significant with the nature of path coefficients (positive/negative) as postulated in the literature review (Table 3). Hence, all the hypotheses are accepted (Fig. 2 and Table 3).

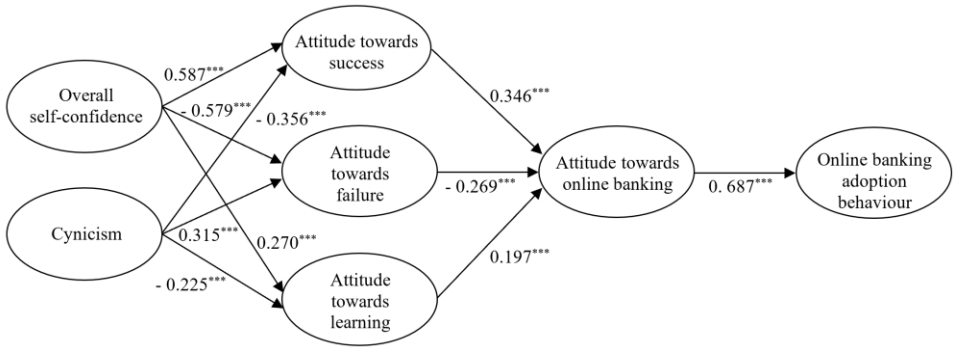

Fig. 2. Structural model results

5. Discussion and conclusion

This study postulated that in the less technologically advanced developing countries, such as Pakistan, the online banking adoption behavior is not determined by some individual deliberative processes like the predominant models of technology acceptance suggest. It was proposed that in such contexts, the online banking adoption behavior is subject to the internal and external impediments. Hence the theory of trying that maintains that online banking behavior is subject to the internal and external barriers is more a promising theoretical alternative in such contexts (Bagozzi & Warshaw, 1990). The internal and external impediments impact the adoption behavior via influencing the attitudes towards success, learning, and failure. Moreover, it was also postulated that the two individual traits - overall confidence and cynicism - can impact the three attitudes in the context of developing countries. Consequently, a model on the determinants of the online banking adoption behavior in which two traits influence the three attitudes to form an overall attitude and adoption behavior, respectively was formed and empirically tested.

The empirical findings indicated that all the proposed determinants are the significant predictors of the online banking adoption behavior. The results indicate that in the context of the developing countries, such as Pakistan, the theory of trying is a more promising theoretical approach or conceptualization of new technological services adoption behavior, such as online banking adoption behavior, because there are many internal and external impediments which in combination influence the customers' attitudes and traits in such contexts.

The results of this study are in line with other studies which tested the theory of trying attitudes and intention to adopt online banking relationships (e.g., Chaouali et al., 2017; Benamati & Serva, 2007). However, the study extends these previous works by making the following contributions. First, the previous studies while using the theory of trying focused the intention to adopt online banking. However, this study considered the actual adoption behavior and collected the data from the customers who were already using this new service. The theory of trying is about the behavior rather the intention to

adopt. Second, the impact of the overall self-confidence rather general self-confidence on the three attitudes is another relative novelty. Third, this study targeted the customers online banking behavior rather just mobile or computer-based banking as in the developing countries customers tend to use either or both services subject to the contexts. The previous literature was limited to the mobile banking service adoption behavior in the context of the developing countries (Chaouali et al., 2017). Finally, the context of the Asian developing countries in the theory of trying was found relatively ignored in the literature. However, this study highlighted this context too by conducting this study in Pakistan. This study suggests to the practicing managers especially in the banking sector that the customers in the developing countries can be more likely to adopt online banking if the internal and external impediments which influence their attitudes and traits are addressed. Therefore, service management operations, including promotion strategies, should take into account the different types of attitudes and customers traits.

The limitations and recommendations are as follows. First, the sample size for this study was relatively low. Second, the data were collected from Pakistan, and thus generalizability of the findings may be limited to similar contexts. Finally, the future researches should conduct additional analyses while controlling for the demographics and other contingency issues.

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