







# “Adoption and commitment to online banking in Pakistan using the technology acceptance model”

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# ADOPTION AND COMMITMENT TO ONLINE BANKING IN PAKISTAN USING THE TECHNOLOGY ACCEPTANCE MODEL

## Abstract

The paper proposes a model for quantitatively analyzing the link between Privacy, Usability, Government Support, Perceived Ease of Use, Perceived Usefulness, Intention to Use and Commitment in the online banking context in Pakistan. In Pakistan (comparing to the size of bank accounts open), few people benefit from online banking and prefer the physical approach. This study analyzes how conventional banking users can be converted to online users, thus reducing the crowds at banks for menial tasks, giving banks more time to focus on corporate clients. For this purpose, an online survey was distributed via social messengers and websites. Out of the collected data, 310 normalized samples were analyzed using correlation and multiple linear regressions. The findings showed that except "Privacy", "Usability" and "Government Support" had a relationship with "Perceived Ease of Use" where "Privacy" showed no significant impact. "Privacy" had a significant relationship with "Perceived Usefulness", as did "Perceived Ease of Use", and "Perceived Usefulness" and "Perceived Ease of Use" had a significant relationship with "Intention to Use"; "Intention" also had a significant relationship with "Commitment to Use Online Banking". Thus, it is concluded that banks need to realize that bank customers require ease of access and use in order to successfully adapt to the use of online banking, despite the users not being very cautious about online privacy that banks require to ensure on their end, regardless of the user's thought process.

**Keywords** online banking, technology adoption model, intention to use, commitment

**JEL Classification** M10, M15, M30, G2

## INTRODUCTION

Online banking is a platform that allows access to bank accounts at the comfort of their own locations (Gautam & Khare, 2014). It saves time and reduces work load, since customers can access it from all the places where internet facility is available, either to check their bank balances, or to avail any services that the bank provides (Liu, 2008).

Online banking was initiated in Pakistan by foreign banks in the mid of 1990's. Domestic banks followed soon after by providing online banking service like debit cards and ATM cards (Abid & Noreen, 2006). Implementation of using banking services online in Pakistan has been considered as an issue for the masses due to their unfamiliarity with technology, unfriendly website settings, fear of government agencies and the security risks associated with online banking to name a few. Since, the rate of adopting the online banking is low among the end users, banks are eager to invest more in this field of banking (Montazemi & Qahri-Saremi, 2015; Nasri & Charfeddine, 2012; Szopiński, 2016).

Around the globe, researchers and scholars have worked on the determinants of Adopting the Internet banking according to the custom-

er's perspective. For example, the Technology Acceptance Model (Davis, 1989) along with the Theory of Planned Behaviour (Ajzen, 1985) explain how perceived usefulness and ease of use are important to customers when they adopt internet banking (Al-Somali et al., 2009; Alwan & Al-Zu'bi, 2016; Cheng et al., 2006; Montazemi & Qahri-Saremi, 2015; Yiu et al., 2007).

Online Banking Platform(s) offer a myriad of features that facilitate bank account holders while also helping a bank to focus on other activities such as focusing on corporate clients. Almost all banks provide this feature, but due to the lack of awareness or personal preference, banks have to deal with an excessive amount of traffic of people who come for very menial tasks (CCI, 2020; Yahya et al., 2011).

As time progresses, different services have moved online, and have seen a rapidly increasing audience, even arguing internet addiction (Weinstein & Lejoyeux, 2010). Internet Banking is no different, and although the adoption of Internet Banking across the globe accelerated during COVID-19 lockdowns were in effect (Lemenager et al., 2021; Lukovic, 2021), at the same time some people either find it too cumbersome due to illiteracy, or distrust the idea of online banking.

According to the TAM, i.e. Technology Acceptance Model, proposed by Davis (1989) and its revisions (Venkatesh & Bala, 2008; Venkatesh & Davis, 2000), it studies the degree to which a technological system is perceived useful or is useful in enhancing the performance of an individual person based on its 'Perceived Usefulness'. Referencing the Theory of Reasoned Action (Hale et al., 1967), it studies and relates as to how a technology's perceived usefulness and ease of use can lead to a potential technology user to first form an intention to use and subsequently adopt a certain technology, and then furthermore committing to use it in the future as well. If people believe that using any online banking service can enhance their day-to-day activities, they are more likely to adopt it and commit to using it.

This study will help the banking sector understand their customers with further clarity so banking technology providers can tweak their applications to their users liking, since banks in Pakistan aspire to provide effective services as compared to their rivals (Rahimuddin & Bukhari, 2010). This will also help in decreasing paper-based transactions in Pakistan lowering paper wastage (Dar, 2006; Meena, 2013). This study also aims to understand to what extent the variables in the Technology Acceptance Model are applicable and significant in the context of Pakistan (a developing country).

Although online banking is increasing in Pakistan, a lot of disparity in the actual use and willingness to use online banking (State Bank of Pakistan, 2019) is found, since there are many more bank account holders, but only a mere fraction of them seem to be using online banking. Rising speed and quality of internet speed also suggest that the rate of online banking adoption among potential bank users should in fact increase (Al-Somali et al., 2009).

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## 1. LITERATURE REVIEW

In the original model of TAM proposed by Davis (1989), research work regarding the adoption of technologies has been an undergoing process. Published works and studies were done to explore the behaviors of netizens (O'Cass & Fenech, 2003), while some explored entire different aspects of it in order to further refine the TAM (Venkatesh & Bala, 2008) to build upon the original and some reevaluating the revised model to better explain it (Szajna, 1996).

The Technology Acceptance Model works by exploring the factors that are required for the online banking sector to work (Chong et al., 2010) and defining the other aspects that are connected in order to sustain it (Casaló et al., 2007).

This study's background is based of taking concepts from the original and then the updated TAM models and the understandings derived from them, whereas TAM itself was a derivative of the original model of Theory of Reasoned Action (Hale et al., 1967) and then it was revised contin-

uously in order to keep it updated with other connected research models (Wikipedia, n.d.).

The key concept of the TAM is that for any technology to be considered acceptable by the masses, its usefulness has a positive effect on helping people. And if the technology is not as useful as it may seem, or it is difficult to use, people will not adopt it (Davis, 1989). One of the main research areas pertaining to TAM was expansion on the 'External Variables' by Venkatesh and Bala (2008), which focused on anchors and other adjustment variables such as experience and the voluntariness of respondents towards a certain technology acceptance (Venkatesh & Bala, 2008). Discussions related to the variables in context of the TAM are as follows.

*Privacy (PRI)* became questionable when online banking was introduced, since all the transactions are now taking place electronically, which also can be hijacked if not secured properly (Benassi, 1999; Debatin et al., 2009). Online Banking and Privacy go hand in hand, and are a big factor in deciding whether any online banking user will even start using online banking if privacy is not present (O'Cass & Fenech, 2003). Online Banking customers are also willing to trust the portal if they perceive that their privacy is intact (Cheung & Lee, 2001). Privacy and Security play a key role in convincing a potential technology adopter to see whether a certain technology is useful to him/her or not (O'Cass & Fenech, 2003). Privacy, especially when opting to use Online Banking is also crucial, since it makes the experience of using any new technology very calming, since the user will have confidence in his/her transactions that they will in fact remain private and secure (O'Cass & Fenech, 2003)

*Usability (USE)* is defined as the nature of a system that makes it comparable based on the effort it requires for completing a predefined task (Venkatesh & Bala, 2008), or can also be defined as the effort required to use a particular technological system (Casaló et al., 2007). For Online Banking to be adoptable, it needs to be easy to navigate through, even if the user has just started using it for the first time (O'Cass & Fenech, 2003). At the same time, users will sometimes opt to stick to the websites, technologies, methods, options they are comfort-

able with using and/or navigating through even if they could adopt a better but a difficult to navigate procedure (Casaló et al., 2007; Flavián et al., 2006). This also suggests that a user will opt for an easy-to-use technology over a useful one instead.

*Government Support and Infrastructure (GSAI)* is critical in maintaining any system that can help the adoption of new technology easy, and even make it popular through advancements in laying down infrastructures for high speed internet access, and also self-advertising its own services to promote online services (Chong et al., 2010). The possibility of good online banking experience will not be possible without a proper internet infrastructure to support it (Pikkarainen et al., 2004; Zahid et al., 2010). Most governments already ask their citizens to pay their taxes and various bills online, and even have portals that any citizen can use to either check various forms of information, or ask for services. But the efficacy of any citizen that will come back a second time to use any online services provided or backed by the government should be easy to use. On the flip side, if the government makes policies for online banking institutions to make sure that the relevant rules and regulations are followed while online banking is taking place and laydown the basic framework for all the activities, it will become far easier and comfortable to use – giving the user a perception of external control (Venkatesh & Bala, 2008).

*Commitment (COMM)* (Casaló et al., 2007) is the act of continual intention, or to keep on performing an activity. Any technology to become mainstream requires general commitment from the public so that it becomes a new norm, or might die out if an alternative provides more facilities for the public to reroute their commitment towards the other (Wang & Datta, 2009).

*Perceived Usefulness (PUSE)* is the notion how much a potential technology user feels a certain technology is useful for him/her (Davis, 1989; Szajna, 1996). This is part of the TAM that dictates to accept or to reject a certain technology, or to what degree the user of that technology believes that using that technology will help him/her to enhance their performance at job (Davis, 1989). TAM and Perceived Usefulness is one of the common literature works that are being used in order

to implement technologies (Chong et al., 2010), and also have been found to be in the most dominant in 26 out of 29 studies to be a significant factor, when considering the studies done from 1992–2003 (Jeyaraj et al., 2006). During a study in Vietnam, it was identified that PUSE is the main contributor to affect the customers' intention to adopt online banking (Pikkarainen et al., 2004). And the same was noticed in Turkey (Celik, 2008) and in Vietnam (Jaruwachirathanakul & Fink, 2005). When PUSE was studied considering the post TAM1 (Davis, 1989), the mediating effect of perceived usefulness was investigated and identified (Szajna, 1996), which was initially thought of as a direct effect to linking it to the Intention to Use in TAM. Later, when work was underway on TAM2 (Venkatesh & Davis, 2000), perceived ease usefulness was reconfirmed to have a mediating effect. The reason put forth by all is that when adopting technology, its usefulness is key to being adopted, and until a potential user finds any new technology useful, he/she will not bother adopting it.

*Perceived Ease of Use (PEOU)* dictates that even if a system might be very useful (high perceived usefulness), it can still be too much work to use it, hence it is not worth the effort (Davis, 1989; Szajna, 1996). Hence, when we compare PEOU and PUSE, it is the extent to which a customer or user finds that system/technology is helpful to him (Davis, 1989). If a technology is easy to use, it will help the potential user to find the newer technology more 'user friendly' and will highly likely start using it, otherwise revert back to the method the user is more familiar with (Lehoux, 2004; Szajna, 1996; Venkatesh & Bala, 2008). PEOU is also proven to exist as per TAM and its updated models (Davis, 1989; Szajna, 1996; Venkatesh & Davis, 2000). This also shows a significant link that the degree of ease of use of a certain technology helped in its adoption very much (Chong et al., 2010; O'Cass & Fenech, 2003). Perceived Ease of Use has also played a significant role in other studies (Pikkarainen et al., 2004; Shih & Fang, 2004), and has also shown that the more complex the system, the more difficult it will be to adopt. In all the models proposed with respect to TAM1, TAM2 and then TAM3 (Venkatesh & Bala, 2008; Venkatesh & Davis, 2000), the mediating effect of Perceived Ease of Use exists. This is akin to the case with the mediating influence of perceived

usefulness: until a potential adopter of a new technology will not find the new technology easy to use, he/she will not bother adopting it, and even go as to discard the use of technology if it is easy to use, but not useful to him/her.

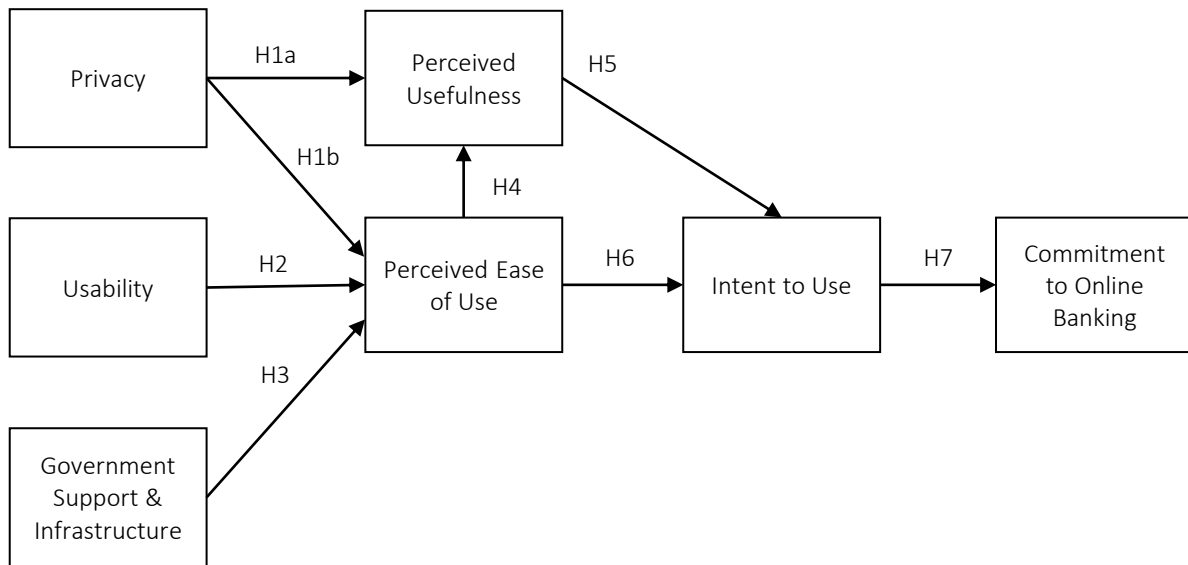
*Intention to Use (ITT)* is one step ahead of perceived usefulness and perceived ease of use, which is behavioral intent or the intent to adopt a new technology (Davis, 1989). When the criteria of perceived usefulness and Perceived Ease of Use are fulfilled, there is a very high chance that a potential technology adopter might develop an intention to adopt the technology. For any technology to become mainstream, it requires a lot of people committing to it, and without it this is impossible (Casaló et al., 2007; Wang & Datta, 2009). People lead by example, and once there is a measurable number of people committed and advocating for using online banking, more people will also feel that they might find themselves better off using it (Chandio, 2011; Chandio et al., 2013; Kozinets et al., 2010; Morgan & Hunt, 1994). Unless and until a potential technology does not form an intention to use a certain product, Online Banking in this case, he/she cannot form a commit to it. It is also important to notice that the commitment follows intention, and not the other way round (Morgan & Hunt, 1994; Venkatesh & Davis, 2000).

Based on the review of different articles mentioned above, this study will focus on finding different relationships between the constructs, and determining what factors are significant in adopting online banking specifically in Pakistan.

## 2. AIM AND HYPOTHESES DEVELOPMENT

According to the literature mentioned in the previous section, this study tests the relationship and significance of PRI for PUSE and PEOU, USE for PEOU, GSAI for PEOE, PUSE and PEOU for ITT, and then finally ITT for COMM. This study also conceptualizes the mediating effect of PUSE, PEOU and ITT in the conceptual mode to test whether the effect is mediating or non-mediating. Therefore, based on the previous research, the following hypotheses are formulated:





**Figure 1.** Proposed hypothesized conceptual framework

*H1a: Privacy (PRI) will positively affect Perceived Usefulness (PUSE).*

*H1b: Privacy (PRI) will positively affect Perceived Ease of Use (PEOU).*

*H2: Usability (USE) will positively affect Perceived Ease of Use (PEOU).*

*H3: Government Support (GSAI) will positively affect Perceived Ease of Use (PEOU).*

*H4: Perceived Ease of Use (PEOU) will positively affect Perceived Usefulness (PUSE).*

*H5: Perceived Usefulness (PUSE) will positively affect Intent to Use (ITT).*

*H6: Perceived Ease of Use (PEOU) will positively affect Intent to Use (ITT).*

*H7: Intent to Use (ITT) will positively affect Commitment (COMM) to using Online Banking.*

Based on the above, the following conceptual model is drawn (see Figure 1).

### 3. METHODOLOGY

All data were collected using a questionnaire distributed through online social channels. Therefore, all collected data are classified as primary data. Data

that sourced from outside of Pakistan were filtered out. Convenience sampling was opted, since all respondents were reached out via online means (email and social media accounts) (Clark, 2017).

The approach of this study is theory testing by putting forward a hypothesis and checking it against the collected data to see whether if they reject/they fail to reject (Walpole & Myers, 2012). This is a cross-sectional study as the previous theory is being tested to check its credibility on a different setting.

To establish a certain guideline, it is necessary to have 30 respondents per variable (Sekaran, 2003), which puts this study at 210 respondents in order to conduct a successful multivariate analysis. Since a total of 310 respondents were selected, excluding all outliers, the requirement for sizeable sample is met.

The instrument developed for the study comprises 7 constructs. “Perceived Usefulness” (5 items), “Perceived Ease of Use” (5 items), “Government Support & Infrastructure” (4 items), “Intention to Use” (4 items) were adopted from Chong et al., (2010) and “Privacy” (7 items), “Usability” (7 items), “Commitment” (5 items) were adopted from Casaló et al. (2007).

As referenced earlier, “Privacy”, “Usability” and “Government Support & Infrastructure” are independent variables; “Perceived Ease of Use” and “Perceived Usability”, “Intention (ITT)” are mediating variables; and “Commitment” is the depend-

ent variable. All the constructs adopted (Casaló et al., 2007; Chong et al., 2010) had a reliability of 0.7 (Cronbach's Alpha), which is the minimum criteria for any construct to be considered reliable (Santos, 1999).

## 4. RESULTS

310 samples were chosen based on their standardized scores (between -2.5 to 2.5). Where respondents skipped the questions entirely, in those specific scenarios the percentage does not add up to 100% (Table 1).

**Table 1.** Demographics of the data collected

	Frequency	Percentage
<b>Gender</b>		
Male	215	69.35%
Female	95	30.65%
<b>Age</b>		
Less than 20 years	10	3.23%
21-30 years	185	59.68%
31-40 years	62	20.00%
41-50 years	0	0.00%
51 and above	25	8.06%
<b>Qualifications</b>		
Matriculation or below	4	1.29%
Intermediate	13	4.19%
Diploma	13	4.19%
Bachelors	153	49.35%
Masters and above	127	40.97%
<b>Employment Status</b>		
Yes	228	73.55%
No	78	25.16%
<b>Income Level</b>		
50,000 PKR or below	106	34.19%
50,001-1,00,000 PKR	79	25.48%
1,00,001-1,50,000 PKR	47	15.16%
1,50,001-2,00,000 PKR	31	10.00%
2,00,001 PKR and above	15	4.84%
<b>Internet Experience</b>		
Less than 5 years	87	28.06%
5-10 years	115	37.10%
11-15 years	69	22.26%
16-20 years	19	6.13%
21 years and above.	18	5.81%
<b>Internet Usage Frequency</b>		
Logging on several times a day	152	49.03%
Few times a day	42	13.55%
Once a day	32	10.32%
Once every couple of days	49	15.81%
Greater than a week.	34	10.97%
<b>Mode of Access of Online Banking</b>		
Website	37	11.94%
Mobile Application	192	61.94%
Both	74	23.87%
I do not use Online Banking at all	4	1.29%

Regression analysis requires the data to meet normality conditions. The collected dataset meets the skewness (-1 to +1) and kurtosis (-3 to +3) requirements to deem normality conditions.

For any construct to be reliable when measured, its Cronbach's alpha must be greater than 0.7 (Santos, 1999). The constructs were adopted from previous studies (Casaló et al., 2007; Chong et al., 2010), making sure that the value of Cronbach's alpha of all constructs was greater than 0.7, and then rechecked below to make sure that the constructs proved reliable when tested in the implementation (Hair et al., 2006). Table 3 depicts the reliability analysis. The Cronbach's Alpha of Usability ( $\alpha = 0.945$ ,  $M = 3.553$ ,  $SD = 1.006$ ) was the highest, and for Intention (ITT) ( $\alpha = 0.839$ ,  $M = 3.585$ ,  $SD = 0.827$ ) the lowest.

Correlation analysis checks whether two variables have any relationship with each other or not, and whether the relationship is positive or negative.

Considering the relationship values, all the selected variables in this study are significantly correlated with each other. The value of  $r$  between Privacy and PEOU is the lowest, i.e. 0.1, and the relationship value of  $r$  between PUSE and Intentions is the highest, i.e. 0.577. Hence, the entire model is positively correlated from weak to moderate levels.

To check the validity of the construct and its data points contained within the dataset, the value of KMO should be greater than 0.7, and its BToS should be significant or greater than 0.01 (Hair et al., 2006). Besides, the Cumulative Factor Loading Extraction should be greater than 40%.

The discriminant validity test checks whether the variables for which all data were collected are indeed unique and distinct, by calculating the variance's square root and then checking whether the calculated value is the highest in its specific column or not (Fornell & Larcker, 1981). Table 6 shows that all values satisfy the discriminant validity conditions.

Smart PLS 3.0 was used to conduct SEM. Table 7 depicts the hypotheses and their results. The results suggest that all the hypotheses could not be rejected, except for the effect of Privacy on PEOU (Montgomery & Runger, 2014; Walpole & Myers, 2012).

**Table 2.** Descriptive statistics

Constructs	Mean	Std. Deviation	Variance	Skewness	Kurtosis
Intention_to_Use	3.585	0.827	0.683	0.589	-1.077
Perceived_Usefulness	3.81	0.972	0.944	-0.626	-0.427
Perceived_Ease_of_Use	3.828	1.002	1.005	-0.753	-0.23
Government_Support & Infrastructure	3.428	0.978	0.957	-0.192	-0.724
Privacy	3.548	0.956	0.914	-0.397	-0.73
Usage	3.553	1.006	1.012	-0.489	-0.415
Commitment	3.597	0.937	0.878	-0.422	-0.578

**Table 3.** Reliability analysis

Constructs	Cronbach's alpha	No. of Items	Mean	Std. dev.
Intention_to_Use	0.839	4	3.585	0.827
Perceived_Usefulness	0.886	5	3.81	0.972
Perceived_Ease_of_Use	0.922	5	3.828	1.002
Government_Support & Infrastructure	0.858	4	3.428	0.978
Privacy	0.914	7	3.548	0.956
Usability	0.945	7	3.553	1.006
Commitment	0.862	5	3.597	0.937

**Table 4.** Correlation analysis of the data collected

Constructs	ITT	PUSE	PEOU	GSAI	PRI	USE	COMM
Intention_to_Use	1	-	-	-	-	-	-
Perceived_Usefulness (PUSE)	.577**	1	-	-	-	-	-
Perceived_Ease_of_Use (PEOU)	.523**	.410**	1	-	-	-	-
Government_Support & Infrastructure	.224**	.216**	.270**	1	-	-	-
Privacy	.250**	.214**	0.10*	.324**	1	-	-
Usability	.460**	.264**	.322**	.172**	.179**	1	-
Commitment	.334**	.216**	.282**	.225**	.373**	.297**	1

Note: \*\* Correlation is significant at the 0.01 level 2-tailed.

**Table 5.** Construct validity analysis

Constructs	No. of Items	KMO	BToS	CFL
Intention_to_Use	4	0.745	544.452	58.389
Perceived_Usefulness	5	0.879	786.698	60.979
Perceived_Ease_of_Use	5	0.898	1109.056	70.428
Government_Support & Infrastructure	4	0.803	549.76	60.293
Privacy	7	0.927	1320.432	60.98
Usability	7	0.932	1852.693	71.059
Commitment	5	0.840	691.255	56.224

Note: KMO = Kaiser-Meyer-Olkin Measure of Sampling Adequacy, BToS = Bartlett's Test of Sphericity.

**Table 6.** Discriminant validity test

Constructs	ITT	PUSE	PEOU	GSAI	PRI	USE	COMM	Variance Explained
Intention_to_Use	0.764	-	-	-	-	-	-	58%
Perceived_Usefulness	0.577	0.781	-	-	-	-	-	61%
Perceived_Ease_of_Use	0.523	0.41	0.839	-	-	-	-	70%
Government_Support & Infrastructure	0.224	0.216	0.27	0.776	-	-	-	60%
Privacy	0.25	0.214	0.104	0.324	0.781	-	-	61%
Usability	0.46	0.264	0.322	0.172	0.179	0.843	-	71%
Commitment	0.334	0.216	0.282	0.225	0.373	0.297	0.75	56%



**Table 7.** SEM coefficients and direct effect checks

Hypothesis	Direct Effects	Coefficient	t-statistic	Result
H1a	Privacy → Perceived_Usefulness	0.221	3.610	Supported
H1b	Privacy → Perceived_Ease_of_Use	-0.045	-0.704	Rejected
H2	Usability → Perceived_Ease_of_Use	0.291	5.269	Supported
H3	Government_Support → Perceived_Ease_of_Use	0.246	3.832	Supported
H4	Perceived_Ease_of_Use → Perceived_Usefulness	0.449	6.991	Supported
H5	Perceived_Usefulness → Intention_to_Use	0.345	7.650	Supported
H6	Perceived_Ease_of_Use → Intention_to_Use	0.284	6.449	Supported
H7	Intention_to_Use → Commitment	0.485	5.867	Supported

**Table 8.** Mediation analysis via bootstrapping

Pathways	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	T Statistics ( O/STDEV )	P Values
GSA → COMM	0.047	0.048	0.013	3.730	0.000
GSA → ITT	0.124	0.124	0.029	4.208	0.000
GSA → PEOU	–	–	–	–	–
GSA → PUSE	0.092	0.093	0.025	3.658	0.000
ITT → COMM	–	–	–	–	–
PEOU → COMM	0.200	0.203	0.028	7.237	0.000
PEOU → ITT	0.169	0.169	0.027	6.217	0.000
PEOU → PUSE	–	–	–	–	–
PRI → COMM	0.025	0.028	0.014	1.741	0.082
PRI → ITT	0.066	0.071	0.035	1.870	0.062
PRI → PEOU	–	–	–	–	–
PRI → PUSE	-0.009	-0.010	0.023	0.374	0.709
PUSE → COMM	0.165	0.168	0.022	7.616	0.000
PUSE → ITT	–	–	–	–	–
USE → COMM	0.058	0.059	0.015	3.978	0.000
USE → ITT	0.151	0.152	0.030	5.089	0.000
USE → PEOU	–	–	–	–	–
USE → PUSE	0.113	0.114	0.026	4.412	0.000

Mediation was checked using Smart PLS 3.0 via bootstrapping (500 samples) as shown in Table 8.

The mediator “Intention (ITT)” takes “PEOU” and “Perceived\_Usefulness (PUSE)” as independent variables, and “Commitment” as a dependent variable. From the results calculated, both “PEOU” and “Perceived\_Usefulness (PUSE)” are significant, hence showing that “Intention (ITT)” acts as a partial mediator is suppressed by both “PEOU” and “Perceived\_Usefulness (PUSE)”.

“PEOU” lies between “Intention (ITT)” and all the independent variables (“Privacy”, “Usability”, “Government Support & Infrastructure”). The direct effect of these variables on “Intention (ITT)” shows that “Privacy” is significant in the absence of the mediating variable, and upon its introduction becomes insignificant indicating that “PEOU” has a full mediating effect on “Intention (ITT)”. In both the other cases of “Usability” and

“Government Support” are both significant in the presence and absence of the mediating variable, indicating the partial mediating effect of “PEOU”.

“Perceived\_Usefulness (PUSE)” also has a mediating effect between “PEOU”, “Privacy” and “Intention (ITT)”. When “Privacy” is measured indirectly, it is insignificant, which indicates full mediation of “Perceived\_Usefulness (PUSE)”.

The last mediating variable “PEOU” lies between “Privacy”, “Usability” and “Government Support & Infrastructure” as independent variables and “Perceived Usability” as the dependent variable.

For all the independent variables, the impact of “Privacy” during the presence of the mediating variable is insignificant, which shows that “PEOU” has full mediation between “Privacy” and “Perceived Usability”. In the remaining two cases, “Usability” and “Government Support &

Infrastructure”, it has partial mediation, since they are all significant both with and without the mediating variable.

## 5. DISCUSSION

Considering the online banking, “Privacy” has a significant effect on “Perceived\_Usefulness (PUSE)” and is supported by the collected data. It can be concluded that when customer realizes that a banking website or a portal is secure, it will positively impact the perceived usefulness, that is, when respondents use online banking, they want it to yield results that make them feel accomplished, which is in line with previous research (Dhagarra et al., 2020; Lallmahamood, 2007).

“Privacy” has an insignificant ( $p < 0.05$ ) effect on “Perceived\_Ease\_of\_Use (PEOU)”, thus respondents do not find privacy concerns of much importance when it comes to ease of use of a technology. This phenomenon is inverse as commonly found in different studies (Dhagarra et al., 2020; Lallmahamood, 2007; O’Cass & Fenech, 2003) but backed by Abdul-Hamid et al. (2019) who highlight that most people are focused on the job at hand, which negates the importance of Privacy.

“Usability” also significantly affects the “Perceived\_Ease\_of\_Use (PEOU)” and mimics the same result that is also seen in other studies (Burney et al., 2017). This shows that online banking needs to be easy to use to make it acceptable for everyone to use.

“Government Support & Infrastructure” has a significant effect on the “Perceived\_Ease\_of\_Use (PEOU)” as per the collected sample size. Pakistan is a country where the telecom sector is growing and the government is also trying to catch up the worldwide standards of internet delivery (PTA, 2019) with testing and rollout of 5G communication in progress. The same behavior is seen leading to Intention (ITT) (Casaló et al., 2007), and one can also observe the predicted behavior of external factors in the technology acceptance model (Venkatesh & Bala, 2008) leading to Perceived\_Ease\_of\_Use (PEOU).

Considering the online banking, “Perceived\_Ease\_of\_Use (PEOU)” has a significant effect on

“Perceived\_Usefulness (PUSE)”. The concept is noticeable in daily life when an individual will tend to prefer using a service based on its ease of use and user-friendliness. Interestingly, when the Technology Acceptance Model was first coined (Davis, 1989), the author did not find a significance, but predicted it, and in later revisions they were present (Szajna, 1996; Venkatesh & Bala, 2008; Venkatesh et al., 2003).

“Perceived\_Ease\_of\_Use (PEOU)” has a significant effect on “Intention (ITT) Online Banking”. Previous works, which used the TAM models with different technologies (Al-Somali et al., 2009; Alwan & Al-Zu’bi, 2016; Alsajjan & Dennis, 2010; Cheng et al., 2006; Huser et al., 2010; Jaruwachirathanakul & Fink, 2005; Lowry et al., 2013; Moon & Kim, 2001; Nasri & Charfeddine, 2012; Abid & Noreen, 2006; O’Cass & Fenech, 2003; Shih & Fang, 2004; Tan & Teo, 2000; Wong & Zhou, 2015; Wu & Wang, 2005; Yeow et al., 2008), have also found this significance of “Perceived\_Ease\_of\_Use (PEOU)” with the “Intention (ITT)” a certain technology.

“Perceived\_Ease\_of\_Use (PEOU) has a significant effect on “Intention (ITT)” as per the collected data, which is consistent with other similar studies (Al-Somali et al., 2009; Alwan & Al-Zu’bi, 2016; Alsajjan & Dennis, 2010; Cheng et al., 2006; Huser et al., 2010; Jaruwachirathanakul & Fink, 2005; Lowry et al., 2013; Moon & Kim, 2001; Nasri & Charfeddine, 2012; Abid & Noreen, 2006; O’Cass & Fenech, 2003; Shih & Fang, 2004; Tan & Teo, 2000; Wong & Zhou, 2015; Wu & Wang, 2005; Yeow et al., 2008). This shows that if a technology is easy to use, it will also be easily accepted by people and will likely start depending on it to get their share of results from the activity they intended to perform.

“Intention (ITT) of Online Banking” has a significant effect on “Commitment”, which again coincides with previous works such as Morgan and Hunt (1994), Szajna (1996), and Venkatesh and Bala (2008). Therefore, once a person realizes the advantages of a particular technology, he/she will intend to use it more often. And once people start relying on it, they will progressively commit it while ignoring its flaws, sometimes in lieu of their commitment.

## CONCLUSION

The premise of the study was to determine how the concept of online banking translates into a Pakistani or developing country context. Several studies have been done in this context, and this study has been able to capture an extra element of the COVID crisis – a slight inclusion of a time-period that people started heavily relying on using all online services due to the fear of infection.

In this study, it has been observed that in order for an online banking platform to work and be successful, it must be user-friendly so that the user feels comfortable in performing their activities. And even if most users may not be conscious of their online privacy (as this study points out), banks need to ensure to provide it irrespectively.

Using this information, banks can improve by adding user feedback to their mobile apps/website portals to come as close as possible to their users' needs ensuring their commitment to using their apps more often. This will automatically ensure that users prefer their online counterparts providing a semblance of automation on the bank's part, which may also lead to bringing more customers on board to further increase the banks' profits.

Since all the data collected for this study were obtained through electronic means (Facebook, WhatsApp, Reddit), an opportunity to redo the study also exists, but it was focused on rural areas of Pakistan where the ratio of Online Banking Users is very low due to illiteracy or lack of access, thus limiting this study. To ensure that all the construct items are properly translated into the rural languages for an accurate measure, special help will be required. Further experiments will be needed to test the usability of what people think about Online Banking.

The Technology Acceptance Model interacts with several other independent, mediating and moderating factors. So, redoing the entire study to include these factors can help to better define the online banking market in Pakistan.

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