The Frequency of Mobile Banking Use during COVID-19

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Abstract

The purpose of this paper is to examine the frequency of mobile banking use during COVID-19. Data were collected from 226 respondents. Data have been analyzed by applying the two-stage structural modeling technique through Partial Least Squares-Structural Equation Modeling (PLS-SEM). This study has found a significant positive impact of attitude towards mobile banking, subjective norms, and perceived behavior control on behavior intention mobile banking adoption. However, the risk perception of COVID-19 has no effect on the intention of mobile banking adoption. Based on the findings of this research, some theoretical and practical implications have been provided.

Key Words: Theory of Planned Behavior (TPB), COVID-19, Mobile Banking, Perceived Control of Behavior, Smart-PLS

JEL Classification: M30

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I. INTRODUCTION

In the wake of the deadliest Coronavirus pandemic of 2019, hundreds of thousands of human lives have been lost or severely infected. According to the World Health Organization, one factor of transmission of Corona virus has been coins and paper money exchanged between buyers and sellers. Comparatively, many people died in the second wave of COVID-19. The measure to contain the spread of the virus could be a mobile payment system for exchanging goods and services as a means of transactions. The report published by Nepal Rastra Bank claims that the number of mobile banking and internet banking increased by 35.46, 12.41 percent, and reached 11,306,797 and 1,031,227 respectively in FY 2019/20. There is a global trend of consistent increase in mobile banking adoption during COVID-19. Thus, it would be logical to study the adoption intention of Mobile Banking among consumers during COVID-19.

The phenomenon of mobile banking is not new among researchers. It has been extensively studied by several researchers such as Baabdullah et al., (2019); Giovanis & Athanasopoulou, (2017); Khasawneh & Irshaidat, (2017); Koul & Eydgahi, (2017). Although there are several theories that explain the adoption of mobile banking, Koul, and Eydgahi (2017) reported that the technology acceptance model (TAM) and theory of planned behavior (TPB) are most extensively applied in different countries, cultures, and contexts. Since the root of both theories is in the theory of reasoned action (TRA) and TPB is the logical extension of TRA. Therefore, this study adopted TPB as a theoretical base for the understanding intention of mobile banking adoption. The TPB postulates that the more favorable attitudes and subjective norms about the behavior, and the greater extent of perceived behavioral control lead to a greater intention to perform a behavior (Ajzen, 1991).

In the TPB, Ajzen (1991) relaxed the assumption of including additional predictors in the model if the additional variance can explain the behavioral intention. Based on the research gap, several researchers have applied extended theory of planned behavior in various contexts including online context, electronic word of mouth communication, social networking sites, service co-creation in social media, online game playing (Alzahrani et al., 2017; Cheung, & To, 2016; Fu et al., 2015; Harb et

al., 2019). In the banking transaction context, the impact of Attitude Towards Mobile Banking (ATT), Subjective Norms (SN), and Perceived Behavioral Control (PBC) on potential customers' Behavior Intention (BI) to use technology-based self-service are empirically validated (Giovanis & Athanasopoulou, 2017; Khasawneh & Irshaidat, 2017). More specifically, researchers applied the theory of planned behavior and with additional variables to predict the behavioral intention of using mobile banking (Aboelmaged & Gebba, 2013; Ayudya, & Wibowo, 2018; Frimpong et al. 2020; Luarn, & Lin, 2005). However, there is a dearth of research that comprises the additional variables in existing TPB during COVID-19. Hence, it is logical to include additional explanatory variables to study the adoption intention of mobile banking among consumers during COVID-19.

There is growing research interest in the adoption of M-Banking during COVID-19. As a result, considerable research attention has been generated to study the adoption of M-Banking during COVID-19 (Baicu et al. 2020; Sreelakshmi, & Prathap, 2020; Tonuchi, 2020). In Nepali Context, Pokhrel (2021) examined the role of risk perception of COVID-19 on the continuance intention of mobile banking adoption. However, there is a shortage of literature applying TPB to explain the roles of risk perception of COVID-19 on the intention of mobile banking adoption. Thus, it is rational to undertake this study of the adoption of mobile banking during COVID-19 in Nepali customers. Thus, the purpose of this study is to study the adoption intention of mobile banking during COVID-19 among Nepali customers.

The major contributions of the study can be classified into theoretical and managerial. Theoretically, the role of risk perception of COVID-19 on the intention of M-banking adoption has been studied for the first time. This would provide a new avenue for future research. Managerially, this study could help bank managers and relevant stakeholders such as Nepal Rastra Bank and financial institutions for designing and implementing operational strategies related to mobile banking.

This paper is composed of six different sections. It starts with the general background of mobile banking adoption. The next section deals with a literature review of several constructs and their relationship among constructs. The following section deals with the research method in which describes the measurement and

structural model. The final section deals with the discussion and the direction for future research.

II.   LITERATURE REVIEW AND HYPOTHESES DEVELOPMENT

2.1   Attitude towards M-Banking and Behavior Intention of M-Banking Adoption

Attitude toward mobile banking refers to the extent to which mobile banking is favorably or unfavorably valued by a customer (Schierz et al., 2010). In the mobile banking context, attitude towards M-banking refers to the favor of using mobile payment systems (de Luna et al., 2019; Schierz et al., 2010). In the study of internet banking adoption in India, Yadav, Chauhan, and Pathak (2015) found a significant positive relationship between subjective norms and behavioral intention. Several researchers in different contexts found a significant positive relationship between attitude towards M-Banking and Intention of M-Banking Adoption (Chaouali, & Hedhli, 2019; Glavee-Geo, Shaikh, & Karjaluoto, 2017; Hong, 2019; Wessels, & Drennan, 2010; Yadav, Chauhan, & Pathak, 2015). Therefore, this paper hypothesized that;

Hypothesis 1: Attitude towards M-Banking has a significant positive effect on Behavior Intention of Mobile Banking Adoption.

2.2   Subjective Norms and Behavior Intention of M-Banking Adoption

Subjective norms are used interchangeably with the terms social norm that is derived from the Theory of Reasoned Action (Fishbein & Ajzen, 1975). In the context of mobile payment, the subjective norm is the degree to which a social environment perceives mobile payment as desirable (Schierz et al., 2010). In the study of internet banking adoption in India, Yadav, Chauhan, and Pathak (2015) found a significant positive relationship between subjective norms and behavioral intention. Several researchers have found a significant relationship between subjective norms and intention to adopt mobile banking (de Luna et al., 2019; Jin et al., 2012; Martins et al., 2014; Okocha, & Adibi, 2020). Therefore, this paper hypothesized that;

Hypothesis 2: Subjective Norms have a significant positive effect on Behavior Intention of Mobile Banking Adoption.

2.3   Perceived Behavior Control and Behavior Intention of M-Banking Adoption

In the green information technology adoption, Dezdar (2017) found a positive significant relationship between perceived behavior control and behavior intention. Previous studies found a significant positive relationship between perceived behavior control and Intention of M-Banking Adoption (Glavee-Geo, Shaikh, & Karjaluoto, 2017; Hong, 2019; Yadav, Chauhan, & Pathak, 2015). Therefore, this paper hypothesized that;

Hypothesis 3: Perceived Behavior Control has a significant positive effect on Behavior Intention of Mobile Banking Adoption.

2.4   Risk Perception of COVID-19 and Behavior Intention of M-Banking Adoption

Researchers have investigated the effect of risk perception of COVID-19 on behavior intention in diverse contexts. In the study of healthcare personnel, Krok and Zarzycka, (2020) found a significant negative relationship between risk perception of COVID-19 on psychological wellbeing. Likewise, in the study of 6,991 samples, Dryhurst et al. (2020) found that risk perception is significantly correlated with the reported adoption of preventative health behaviors in ten countries. With the application of the theory of reasoned action, Long and Khoi, (2020) found that there is a significant positive effect of risk perception COVID-19 on behavior intention of using Zoom for online learning. In the technology acceptance model, Al-Maroof et al. (2020) found that there is a significant positive effect of perceived fear from COVID-19 on the adoption of Google Meet (GM). It implies that risk perception or perceived fear leads to intention to adopt the technology.

To investigate influence the risk perception of COVID-19 on behavior intention of M-Banking adoption, the protection motivation theory (PMT) of Rogers (1975) has adopted. This theory posits that individuals are motivated to react in a self-protective

way towards a perceived health threat. In the information system domain, several researchers have found PMT as a significant explanatory variable in explaining human behavior (Menard, Bott, & Crossler, 2017; Tsai et al., 2016). This paper assumes that mobile banking users could intend to adopt mobile banking if they are motivated to protect their health from the infection of COVID-19. They could intend to use mobile banking rather than lining up in the bank or using cash for daily shopping to protect their health. Based on the assumption, the paper hypothesized that;

Hypothesis 4: Risk Perception of COVID-19 has a significant positive effect on Behavior Intention of Mobile Banking Adoption.

Based on the empirical and theoretical findings, this research has proposed the following conceptual framework for studying the phenomena of the interest.

Figure 1: Conceptual Framework
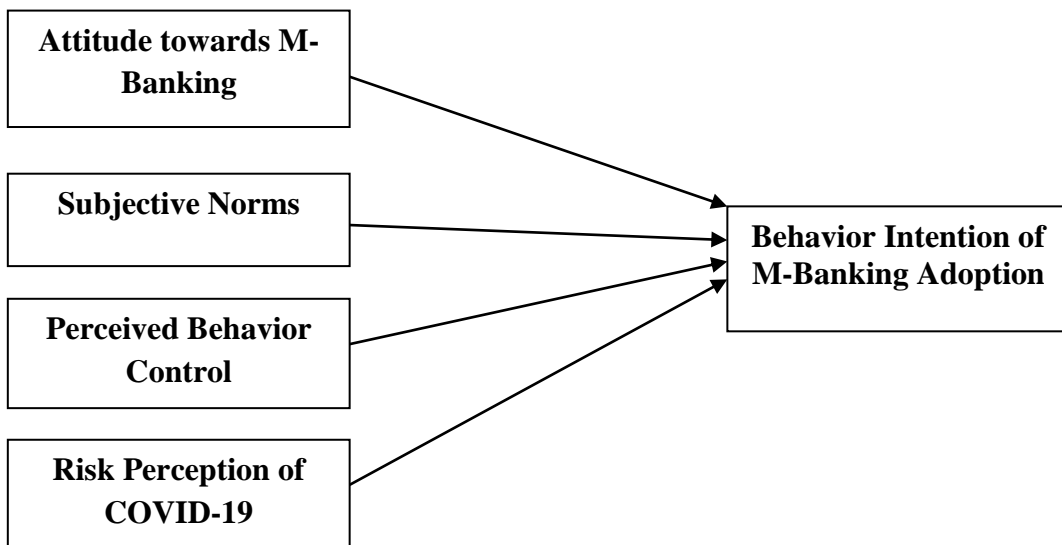
III. RESEARCH METHODOLOGY

3.1 Sample and Procedure

Mobile banking users are the population of this study who had used at least once mobile banking for personal purposes. Since the active list of mobile banking users is not available, this research applied convenience sampling for collecting data. The

unit of analysis is individual mobile banking users. The sample size for the study has been determined by applying Hair et al. (2016) criteria who claimed that the sample size should be five-time greater (minimum) or ten times greater than the items that are used to perform advanced multivariate tools such as the structural equation model. In this research, there are 18 items to capture the response of five variables. This paper has aggregated the variables applying PLS-algorithm. It applied latent variable aggregation method to reduce different items into single variable by considering error terms in the each latent construct (Ringle et al., 2015).

The sample size could be range from 90 to 180 based on the recommendation of Hair et al. (2016). Thus, a sample size of 226 is just more than the required sample size. Due to the COVID-19 crises, this research collected data from a digital questionnaire created in Google Forms. Due to the chance of non-response, the researcher requested to fill questionnaire from 350 respondents.

3.2   Measures/Questionnaires

Before main survey, pilot test was done with questionnaires with 40 potential respondents. Apart from filling the questionnaire, respondents were requested to provide feedback on the completion time and the ease of understanding. The individual constructs scored over Cronbach's alpha value of 0.60 (Pallant, 2020). The individual score of the measurements was Attitude towards mobile banking (Alpha=0.839), Perceived behavior control (Alpha=0.854), Subjective norms (Alpha=0.844), Behavior intention (Alpha=0.908), Risk perception COVID-19(Alpha=0.703). The detail about measurements is provided below;

Theory of Planned Behavior Scale

This theory was measured on a 5 point Likert scale. Respondents were asked to answer using a scale from 1 to 5 (1 = "strongly disagree", 5= "strongly agree") higher scores representing a higher likelihood of using M-Banking. To avoid common source biases, the paper has adopted a scale from two research works (e.g. Giovanis et al., 2019; Hong, 2019). It has been measured by the four dimensions with 15 items.

Attitude towards M-Banking has been measured by 4 items. The sample item includes: "I believe using Mobile Banking is a good idea." This scale has been adopted from Giovanis et al. (2019). Cronbach's Alpha and Composite Reliability values of all measures included in the study exceed 0.78 and 0.89 respectively.

Perceived Behavior Control has been measured by 3 items. The sample item includes: "If I wanted it I could use the Mobile Banking." This scale has been adopted from Giovanis et al. (2019). Cronbach's Alpha and Composite Reliability values of all measures included in the study exceed 0.78 and 0.89 respectively.

Subjective norms are measured by 4 items. The sample item includes: "My acquaintances would find it reasonable for me to use mobile banking." This scale is adopted from Hong (2019) who reported Cronbach's Alpha and Composite Reliability values of all measures range from 0.94 and 0.95 respectively.

Behavior Intention of M-Banking is measured by 4 items. The sample item includes: "Given the opportunity, I will use Mobile Banking." This scale has been adopted from Giovanis, et al. (2019). Cronbach's Alpha and Composite Reliability values of all measures included in the study exceed 0.78 and 0.89 respectively.

Risk Perception of COVID-19 Scale

Risk Perception of the COVID-19 scale has been adopted from Dryhurst et al. (2020). This scale was originally 6 items anchored in a 7 point and a 5 point Likert scale. During the pilot testing, many respondents could understand the question and lower Cronbach alpha value. This research has shorted the scale and applied a 5 point Likert scale. Respondents were asked to answer using a scale from 1 to 5, with (1 = "strongly disagree", 5= "strongly agree") higher scores representing the higher perception of risk. The sample item includes: "How worried are you personally about the following issues at present". Dryhurst et al. (2020) reported that Cronbach's alpha across countries 0.72 and per country 0.60-0.82.

IV. RESULTS

A total of 226 respondents participated in the research. The demographic characteristics are gender, age, education, occupation, frequency of mobile banking

and duration mobile banking uses. The following table presents the respondents' profile.

Table 1
Demographics profile

Characteristics	Frequency	Percentage
Gender		
Male	106	46.9
Female	120	53.1
Age		
Below 20	3	1.3
21- 30	176	79.2
31- 40	47	20.8
Education		
Bachelor	171	75.7
Master	44	95.1
Above Master	11	4.9
Occupation		
Unemployed	155	68.6
Employed (Not self-employed)	40	17.7
Self employed	31	13.7
Frequency of M-Banking		
At least once a day	49	21.7
At least once a week	98	43.4
At least once a month	61	27.0
At least once a year	18	8.0
Duration of MB Uses		
Less than 6 months	57	25.2
6 months to 1 year	55	24.3
1 to 3 years	74	32.7
More than 3 years	40	17.7

In the above frequencies and percentages table, the majority of the respondents are Female (n = 120, 53.1%). The most frequent of Age category is 21-30 years (n = 176, 79.2%). The majority of respondents are studying at Bachelor Level (n = 171, 75.7%). Likewise, the most frequent respondents are unemployed (n = 155, 68.6%). Respondents are using social media at least once a week (n = 98, 43.4%). Finally, the most frequently reported duration of MB uses is 1-3 years (n = 74, 32.7%).

4.1   Common Method Biases

To examine the common method bias issue, Herman's single factor test has been performed in which the variance explained by an un-rotated single factor is 30.54% which is less than the suggested threshold of 50% (Podsakoff et al., 2003). This implies that this data has no issues of common method biases as a result the paper performed a structural equation model.

4.2   Structural Equation Model

Structural equation modeling (SEM) is a second-generation statistical technique for analyzing the cause-effect relationship between latent constructs that are always used in marketing and management research (Hair et al., 2016). The SEM is generally classified into covariance-based structural equation modeling (CB-SEM) analysis and variance-based (PLS-SEM) structural equation modeling. This research applies the PLS-Based Structural Equation Model (SEM) to examine the stated hypotheses. CB-SEM is the preferred method when the goal is to test the theory, confirm the theory, or compare alternative theories (Hair et al., 2016), whereas, PLS-SEM can be applied for exploratory research when the theory is less developed (Hair et al., 2016). Since this research intended to introduce a new variable in the existing TAM, the PLS-SEM, the combination of measurement and path model, is appropriate.

4.2.1 Measurement Model

To establish reliability and validity, the paper applied three criteria of the measurement model such as reliability analysis, convergent validity, and discriminant validity suggested by Ringle et al. (2015). The measurement model after the adjustment is stated below;

4.2.2 Reliability Analysis

To measure the reliability, this research has applied composite reliability (CR) and Cronbach's alpha with a cut-off value of 0.7. According to Table 2, since no value of CR and Cronbach's alpha are less than 0.70, the result confirms the reliability of the model (Ringle et al., 2015).

4.2.3 Validity Analysis

To achieve adequate convergent validity, item loadings and AVE must be higher than 0.7 and 0.5 respectively (Hair et al., 2016). According to Table 2, most of all values of factor loadings and AVE are more than 0.70 and 0.50 respectively. Although the loading of ATT 2 is less than 0.70, the overall AVE is higher than 0.50. Therefore, the Attitude construct is retained.

Table 2
Validity and reliability of constructs

Construct	Indicators	Loading	Mean	St. Dev	AVE	CR	Alpha
Attitude towards M-Banking	ATT 1	0.8526	0.8484	0.0429			
	ATT 2	0.6827	0.6816	0.1022	0.6157	0.8642	0.7922
	ATT 3	0.7765	0.7668	0.0776			
	ATT 4	0.8165	0.8177	0.0533			
Perceived Behavior Control	PBC 1	0.8199	0.8207	0.0476			
	PBC 2	0.8265	0.8186	0.0523	0.7053	0.9256	0.893
	PBC 3	0.8722	0.8633	0.0548			
Subjective Norms	SN 1	0.7140	0.7140	0.0824			
	SN 2	0.8218	0.8198	0.0455			
	SN 3	0.8560	0.8538	0.0402	0.6425	0.8777	0.7956
	SN 4	0.8076	0.8059	0.0522			
Behavior Intention	BOI 1	0.8526	0.8552	0.0383			
	BOI 2	0.8744	0.8757	0.0561			
	BOI 3	0.8895	0.8906	0.0479	0.7569	0.8123	0.6860
	BOI 4	0.8631	0.8598	0.0492			
Risk Perception of COVID-19	RPC 1	0.8175	0.7593	0.2149			
	RPC 2	0.7293	0.6643	0.2408	0.5912	0.8774	0.8128
	RPC 3	0.7572	0.6905	0.2416			

(AVE= Average Variance Explained, CR= Composite Reliability, CA= Cronbach Alpha)

4.2.4 Discriminant Validity

Discriminant validity assesses the extent to which a concept and its indicators differ from another concept and its indicators (Bagozzi et al., 1991). To test the discriminant validity, Fornell and Larcker's criteria is used. If the correlations between items in any two constructs are lower than the square root of the average variance shared by items within a construct, the discriminant validity will be ensured (Fornell & Larcker, 1981). As shown in Table 3, the values in the diagonal (square root of AVEs) are higher than the correlation coefficients, this shows an adequate discriminate validity.

Table 3
Discrimination validity (Fronell and Larcker's Criteria)

Latent Construct	1	2	3	4	5
1. Attitude	0.7847				
2. Behavior Intention	0.6418	0.870			
3. Perceived Behavior Control	0.6702	0.630	0.8398		
4. Risk Perception of COVID-19	0.1827	0.2199	0.1225	0.7689	
5. Subjective Norm	0.4674	0.5050	0.5344	0.1509	0.8016

4.2.5 Structural Model (Path Analysis)

Structural model has been tested with five hypotheses. Before testing the hypotheses, this paper has tested assumptions of mulita-collinearity. All the values of Variance Inflation Factor (VIF) are less than 3. Therefore, the structural model is tested with Smart-PLS.
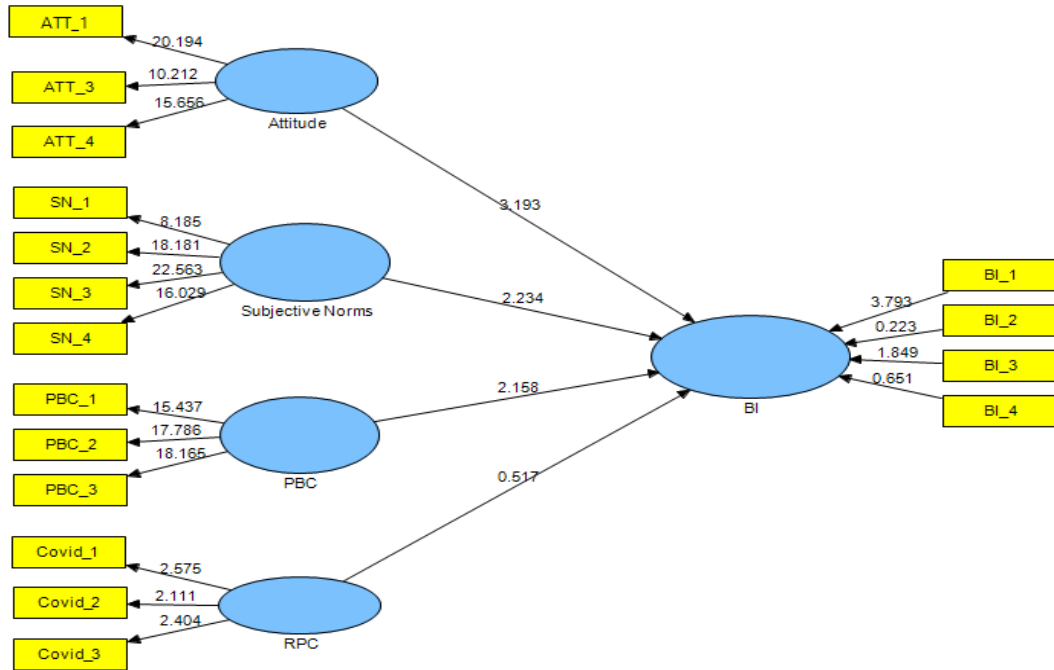
Figure 2: Structural Model (Direct Hypotheses)

Table 4

Results of structural model path coefficient (direct relationship)

Construct	Path Coefficient	Standard Deviation	Standard Error	T-Value	Significant Level
1. ATT -> BOI	0.353	0.1147	0.0765	3.0757	Significant
2. PBC -> BOI	0.289	0.1251	0.0742	2.3141	Significant
3. SN -> BOI	0.171	0.0834	0.0834	2.0556	Significant
4. RPC -> BOI	0.081	0.0917	0.0917	0.8831	Not Significant

(BI=Behavior Intention, PEU= Perceived Ease of Use, PU= Perceived Usefulness, RS= Resource Sharing)

The structural model shows the relationships (paths) between the constructs on the proposed models. H1 examines whether ATT is positively related to BOI. The results showed that ATT has no significant effect (direct effect) on BOI (β = 0.353, t = 3.0757, p < 0.001). Hence, H1 is supported. H2 examines whether PBC is positively

related to BOI. The results show that PBC has a significant effect (direct effect) on BOI (β = 0.2890, t = 2.3141, p < 0.001). Hence, H2 is supported. H3 examines whether SN is positively related to BOI. The results show that SN has a significant impact (total effect) on BOI (β = 0.171, t = 2.0556, p < 0.001). Hence, H3 is supported. Finally, H4 examines whether RPC is positively related to BOI. The results show that RPC has no significant impact (total effect) on BOI (β = 0.081, t = 0.8831, p < 0.001). Hence, H4 is not supported.

4.3   Artificial Neural Network (ANN)

Artificial neural network (ANN) is a massively parallel distributed processor made up of simple processing units, which have a neural propensity for storing experimental knowledge and making it available for use (Haykin, 2004). The ANN analysis has performed using IBM SPSS neural network module. The ANN algorithm can capture linear and nonlinear relationship and does not need normal distribution (Teo et al., 2015). The purpose of the artificial neural network is to examine predicting power of independent variables on dependent variables. Leong et al (2020) reported that the algorithm can learn through the training process to predict the outcomes of the analysis using a feed-forward-backward-propagation (FFBP) algorithm, in which inputs are feed in a forward path and the estimated errors move in a backward direction (Taneja & Arora, 2019). Multilayer perceptrons and sigmoid activation functions are used for the input and hidden layers (Sharma & Sharma, 2019). To avoid the possibility of over fitting, the researcher has reiterated a ten-fold cross-validating procedure and obtained the root mean square of errors (RMSE) (Ooi et al., 2018). The Table 5 shows that the average RMSE values of the training and testing procedures are relatively small at 0.467 and 0.484 respectively.

Table 5
Root Mean Square of Errors (RMSE) Values

Training			Testing			Total sample
N	SSE	RMSE	N	SSE	RMSE	
167	37.832	0.476	59	10.411	0.420	226
157	43.72	0.528	69	17.558	0.504	226
154	30.232	0.443	72	17.076	0.487	226
160	41.037	0.506	66	17.309	0.512	226
163	35.709	0.468	63	9.721	0.393	226
147	30.73	0.457	79	17.306	0.468	226
153	29.103	0.436	73	23.934	0.573	226
163	34.172	0.458	63	16.735	0.515	226
159	30.726	0.440	67	24.523	0.605	226
163	33.882	0.456	63	8.361	0.364	226
Mean	34.714	0.467		16.293	0.484	
Standard deviation	4.9005	0.0296		5.4903	0.0758	

To measure the strengths of the predictive power of each of the input neurons, the researcher has performed sensitivity analysis (Table 6) to obtain the normalized importance of neurons in the form of percentage (Karaca et al., 2019). The result shows that the most important predictor followed by the attitude, behavior control and subjective norms. The normalized importance of the significant predictors is Attitude (85%), Behavior control (74%), subjective norms (33%) and Risk perception of COVID-19 (29%) respectively.

Table 6

Sensitivity Analysis

Constructs	NN1	NN2	NN3	NN4	NN5	NN6	NN7	NN8	NN9	NN10	Average	Importance
ATT	1.000	0.547	1.000	1.000	1.000	1.000	0.469	1.000	0.623	1.000	0.864	85%
BC	0.969	1.000	0.640	0.727	0.525	0.597	1.000	0.700	1.000	0.428	0.759	74%
RP	0.304	0.103	0.236	0.288	0.395	0.417	0.329	0.269	0.311	0.250	0.290	29%
SN	0.382	0.127	0.264	0.311	0.357	0.826	0.346	0.296	0.253	0.214	0.338	33%

(ATT=Attitude, BC=Behavior Control, RP=Risk Perception of COVID-19, SN=Subjective Norms)

V. DISCUSSIONS AND IMPLICATIONS

The purpose of the paper is to examine the effect of attitude towards mobile, subjective norms and perceived behavior control on behavior intention of mobile banking adoption during COVID-19. This research has examined whether this research variables of theory of planned behavior (attitude, subjective norms and behavior control) has a significant impact on behavior intention of mobile banking. It is consistent with the findings who have found Attitude towards mobile banking (Chaouali, & Hedhli, 2019; Glavee-Geo, Shaikh, & Karjaluoto, 2017; Hong, 2019), Subjective Norms (de Luna et al., 2019; Malaquias 2017; Mohammadi, 2015; Martins et al., 2014) and Perceived behavior control (Glavee-Geo, Shaikh, & Karjaluoto, 2017; Hong, 2019; Yadav, Chauhan, & Pathak, 2015) significant impact on behavior intention of mobile banking adoption. The higher the positive attitude towards mobile banking, friends and family believe that using mobile banking is a good idea ,and the mobile banking users have the capability of using the higher likelihood of intention of mobile banking adoption. The finding of the paper is aligned with the theory of planned behavior.

The second purpose of the study is to examine the effect of risk perception of COVID-19 on behavior intention of MB adoption. This study found that no effect of risk perception of COVID-19 on behavior intention of MB adoption. It is consistent with the findings of Pokhrel (2021). It implies that MB users of this data set are least likely to intent to use MB because it is associated with financial transaction which is high involvement behavior. However, it is found significant in the absence of ATT, SN, and PBC on BI of MB adoption. Therefore, mobile banking could be applied as

a tool of containing the second wave of COVID-19 pandemic. This research could be a critical juncture understanding the perceived fear during health such as COVID-19 as an antecedent for explaining behavior intention of mobile banking.

For policy implications, the Government of Nepal and related stakeholders should promote the research and investigation in the domain of mobile banking adoption. The phenomenon is under development in scholarly communities. Government agencies can invite quality researchers for scientific inquiry of mobile banking and their opportunities and challenges. The annual research conferences can be organized on the related themes of the Digital Nepal Framework. This helps to bring academia, managers, and policymakers to establish healthy arguments in the recent development of the sector. Universities can establish a separate lab for researching the several aspects of the Digital Nepal Framework and the Government of Nepal can provide grant and financial assistance to the sustainable development of the field.

VI.   LIMITATIONS AND SCOPE FOR FUTURE RESEARCH

This research has provided the new insight of mobile banking adoption during COVID-19; however, this research has following limitations. First, the researcher has applied convenience sampling method to collect data and sample size is only 226. Therefore, in the future, researchers could collect data from large population by applying probability sampling method. Second, data were collected from mobile banking users who are related with education sector. Thus, the future research could be undertaken with more inclusive sample group. Third, behavior intention of mobile banking adoption with the risk perception of COVID-19 could be the new avenue for the future research. Finally, the paper has respondents who were already using mobile banking thus the result of study is limited to the frequency of mobile banking use rather than the complete adoption stages.

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Appendix

Part-II: Instruments/Measurements

(Strongly Disagree=1, Disagree=2, Neutral =3, Agree=4, Strongly Agree =5)

S.N.	Statements	1	2	3	4	5
ATT1	I believe using Mobile Banking is a good idea.					
ATT2	I believe using Mobile Banking is wise.					
ATT3	I believe using Mobile Banking is beneficial.					
ATT4	I believe using Mobile Banking is interesting.					
PBC 5	If I wanted it I could use the Mobile Banking.					
PBC 6	I have the resources and the knowledge and the ability to make use of the Mobile Banking.					
PBC 7	I would be able to use the Mobile Banking					
SN 8	My acquaintances/friends/family would find it reasonable for me to use mobile banking.					
SN 9	My acquaintances/friends/family would find it necessary for me to use mobile banking.					
SN 10	My acquaintances/friends/family would find it worthwhile for me to use mobile banking.					
SN 11	My acquaintances/friends/family would expect me to use mobile banking.					
BI 12	Given the opportunity, I will use Mobile Banking.					
BI 13	I am likely to use Mobile Banking in the near future.					
BI 14	I am open to using Mobile Banking in the near future.					
BI 15	I intend to use Mobile Banking when the opportunity arises.					
RP1	The corona virus/COVID-19 will NOT affect very many people in the country I'm currently living in.					
RP2	I will probably get sick with the corona virus/ COVID-19.					
RP3	Getting sick with the corona virus/COVID-19 can be serious.					