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The Consumer behaviour towards Digital Inclusion in Banking System during COVID-19

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Abstract: *This study explores consumer behavior towards digital inclusion in the banking system during Covid-19. It examines the important factors that lead to Attitude towards internet and mobile banking (AIMB) and the Use of internet and mobile banking (UIMB). The study comprised 300 respondents, and a convenient sampling technique was used to collect the data: an online questionnaire. Using Spss software to test the hypothesis and relationship between the variables, Regression analysis was used to assess the gathered data quantitatively. The findings show that increase in the Perception of covid-19 effect (PCOV), Perceived utility of internet and mobile banking (PUIM), Ease of use internet and mobile banking (EUIM), Trust in banks (TB), Safety of internet and mobile banking (SIMB) and AIMB also increased. Simultaneously, it is observed that PUIM, TB, EUIM and SIMB have a positive influence on AIMB. Moreover, there was positive impact AIMB on the UIMB.*

Key Words: Internet and Mobile Banking, Digitalization, Consumer behaviour, Retail Banking, Covid-19 Pandemic Outbreak

JEL Classification:

Introduction

Digital Inclusion

In recent years, technological development has forced many organizations, from supermarkets to banks, to continuously adjust their operations, goods, and services to meet the constantly changing consumer's expectations. As a result, a lot of businesses and significant organizations are accelerating their digital transformation. (Team, 2020)

These days, one of the most often used Words is "digital." Digital banking is no exception to the current trend of attaching the prefix "digital" to everything. With the arrival of Covid-19, publications proclaiming a "digital financial revolution" and the awakening of Pakistan's sleepy commercial banking sector were commonplace.

Technology is used to digitise data, converting it into a digital format. Digitization reduces human error, which enhances customer loyalty. All across the world, banks of all shapes and sizes are making significant

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investments in digital initiatives in an effort to maintain a competitive edge and offer their customers the best possible service. Additionally, digitization generates quality data intelligence and insight, both of which improve how banks interact with customers and compete. Due to digitalization, banks are rapidly providing better client services. This provides convenience and time savings for customers. (Jagtap, 2018)

COVID-19 Pandemic Outbreak

The COVID-19 situation has served as a wake-up call for businesses, when before it was a time-consuming and expensive process. Lockdowns, social exclusion, and forced retail closings have forced customers and businesses to look for new digital channels for communication and service delivery. Therefore, to fulfil current needs, assure company continuity, and provide for customers and society as a whole, digital transformation quickly rose to the top of the list of priorities for businesses, organisations, and governments throughout the world. (Team, 2020)

The Coronavirus has already had a significant influence on society and the economy worldwide. Retail banks are essential to helping society as a whole, not simply their clients and staff. The majority of banks are coping with the immediate effects of the pandemic and new working methods after activating their business continuity plans (BCP). It will depend on the structures put in place now how individual banks, as well as entire communities, will weather the storm and come out stronger. (Bryan et al., 2020)

Consumer Behaviour

Changes in consumer behaviour, as well as the relaxation of numerous legal and supervisory restrictions, have resulted in new operational problems and an increase in Defaulted loans. It is crucial for businesses and the financial industry throughout the world to address the effects of COVID-19 on businesses and changes in consumer behaviour over the long and short terms.

In the wake of covid-19 Epidemic, collaboration with Fintech would be the only win-win situation, after experiencing, decreased volume of transaction, resulting in a rise in their loss numbers. Most, if not all, digital banks like e-commerce banking have high market capitalizations, yet they lose money.

These unexpected shifts will influence consumer demand permanently in the future. In order to adapt to these behavioural shifts, banks must begin preparing to speed up digitization and channel migration. Reviewing digital initiatives and setting new priorities for capacity and capabilities are necessary. In actuality, every operation must to go through a thorough "start, halt, continue, accelerate" examination. (Bryan et al., 2020)

Customer adoption of e - banking and products as the new business paradigm is facilitated by the global phenomena of digitalization. Existing participants in the sector only need to do so fast in order to integrate this new reality and avoid going out of business (Broeders and Khanna, 2015). In the past, banks have used technology to increase their productivity and the level of service they provide to their clients. However, the rapid advancement and innovation in payment methods, customer communication channels, and communication media has had much wider effects on how banks interact with their clients today (Cuesta et al., 2015).

According to a research report by Karandaaz (2020), digital financial services (DFS) are favoured as the preferred method of financial transactions because they resonate with the precautions required in between lockdowns and broad social isolation to prevent the spread of COVID 19 (2020). The State Bank of Pakistan recently took action to support the digital financial ecosystem by helping to promote DFS. This action included waiving transaction fees for banks and Microfinance Banks (MFBs) consumers on Real-Time Gross Settlements (RTGs) transactions and using their online funds transfer services, as well as enabling digital challan collection. (Razi & Salik, 2020)

The purpose of this study is to explore the behaviour of retail banking consumer towards digital banking system after crises experience in pandemic period.

Sigficance of the Study

In this COVID situation Banking firms face a fundamental challenge to grow in digitalization disruption and changing behaviour of consumer towards mobile banking and digitalization. This study will highlight the key observation of consumers changing behaviour and attitudes after a careful analysis that will be part of new knowledge in research area.

The findings can be helpful for banking institution as that indicate customers experience and cause and effects of behavioural and understanding of customers perspective and attitudes can help banking institutes in improving their systematic digital strategies.

Research Objectives

- To study the effect of PCOV on PUIM, EUIM, TB, SIMB and AIMB in the banking system during Covid-19.
- To assess the influence of PUIM, EUIM, TB and SIMB on AIMB in the banking system during Covid-19.
- To analyse the impact of AIMB on UIMB in the banking system during Covid-19.

Research Question

What is the Consumer Behaviour towards digital inclusion in banking system during COVID-19?

Research Hypothesis

H_1 PCOV has a direct and positive influence on PUIM.

H_2 PCOV has a direct and positive impact on EUIM.

H_3 PCOV has a direct and positive impact on TB.

H_4 PCOV has a direct and positive influence on SIMB.

H_5 PCOV has a significant and positive impact on AIMB.

H_6 PUIM has a significant and positive influence on AIMB.

H_7 EUIM has a significant and positive influence on AIMB.

H_8 TB has a significant and positive impact on AIMB.

H_9 SIMB has a significant and positive impact on AIMB.

H_{10} AIMB has a direct and positive impact on UIMB.

Research Framework

Conceptual framework is given in figure 1.1 below which shows that the ten hypotheses are given.

Figure

Research Framework.

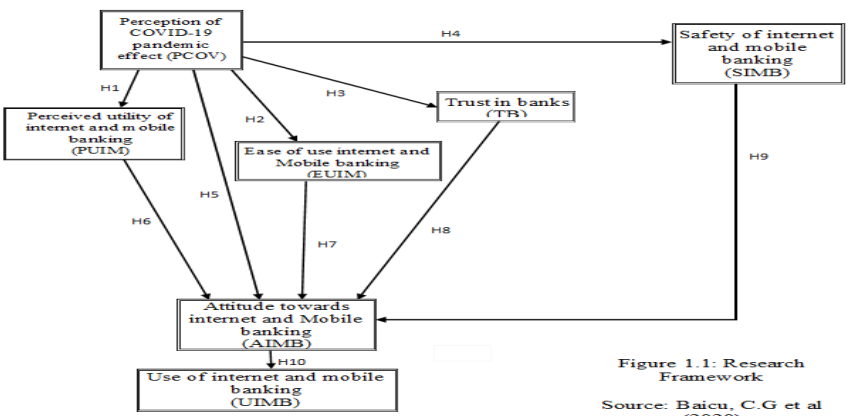

Figure 1.1: Research Framework

Source: Baicu, C.G et al (2020)

Literature Review

Customers are transitioning from physical to online transactions following Covid-19, some respondents experienced financial difficulties during the Covid-19 pandemic and expected to take out loans during the epidemic, and Covid19 had no impact on people with a high level of income (Kamath et al., 2021).

Findings of the study showed that Due to effect of COVID-19 on business, the products and services are likely to be changed to increase the digitalization to meet the needs of customer to face the loss especially in banking sectors (Mistrean, 2021).

They confirmed the influence of Covid virus on consumer's behaviour and their response towards e-banking services. As per Findings, Banks must support online banking, establish a safe environment that prioritises the security of online transactions, and raise public awareness to reduce the risk of fraud in an unpredictable climate (Afridi et al., 2021).

The finding implies that financial knowledge and Fintech affinities have a Pearson association. The cooperation between clients and financial institutions was examined in depth in order to determine the perceived worth of technology related aspects for the banks overall efficiency, as well as the monetary and non-monetary compromises students make when accessing financial services (Schipor, et al. 2021).

The COVID-19 crisis's effect on retail banking customer's behaviour was briefly explored. The results showed that when compared to the time before the pandemic, respondents used mobile/internet banking services more frequently (Baicu et al., 2020).

In especially during COVID-19, performance and web design improve e-banking loyalty. However, it was discovered that e-banking satisfaction only marginally mediated the indirect influence of website dependability and design on e-banking reliability. It was discovered that e-banking satisfaction entirely mediated the association between online banking loyalty and privacy and security. (Ul Haq, et al., 2020).

The findings demonstrate that the UTAUT model as a mediating variable only had an impact on the correlation between user characteristics and adoption behaviour. The results of this study imply that, during the COVID19 epidemic in the new normal period, the adoption behaviour of digital payments technology for Indonesian Batik small- and medium-sized enterprises (SME) consumers will be more influenced by the level of technology users' understanding. (SUNARJO et al., 2021)

The findings show that banks IT spending has a major impact on customers' adoption of financial digitization. Bank IT investments also enhance the possibility that customers will conduct their financial transactions online rather than in a physical branch (Carbó-Valverde et al., 2020).

Agboola et al (2019) examined how digitization improves commercial bank performance. It was demonstrated that the performance of commercial banks and the digitization process had a weakly significant and usually favourable association. Additionally, there is a significant link between successful commercial bank Nigerian operations and product innovation. (Agboola et al., 2019)

Customers are increasingly using mobile banking, according to the study. This allowed the bank to earn more money from fees and commissions from these transactions, while also boosting the economy by taxing all transactions that go through this channel (Devi, 2018).

(Moraru et al., (2018) appreciated the significance of e-banking in terms of client satisfaction with financial services. Overall consumer happiness with banking services and customer contentment with e-banking services are closely associated, indicating the importance of e-banking services, according to the research (Moraru et al., 2018).

Mobile money was shown to be the most frequently used digital channel in terms of transaction speed. The majority of respondents believed that ATM services needed to be improved because they weren't perceived as being quick (Rajan et al., 2018).

(Venkathaialam et al., (2017) examined the relationship between digitization and customer experience. About 70% of banks around the world lack a systematic digital strategy for providing a seamless and positive customer experience, which is critical for both new customer acquisition and client retention. With the arrival of the fourth revolution, banks must design and fine-tune their digital strategies

Raza et al (2017) analysed factors that affects bank adoption of e-banking in Pakistan. Six variables, including deposits, expenses, market share, spread, and wages, were shown to have a significant relationship with internet banking adoption, whereas others were determined to be negligible. According to the findings, the majority of factors influenced the banking industry's adoption choice in Pakistan (Raza et al., 2017).

Adapa et al (2017) Indicated technology factors, channel factor, and value-for-money variables all play a significant role in consumers' post-adoption behaviour when it comes to Internet banking. The impact of social factors was determined to be insignificant (Adapa et al., 2017).

It's possible that using i-banking more frequently is related to the length of the lockdown. As the most significant indicators of shifting financial behaviour, we offer significant insights to suppliers of financial services by identifying female gender, advancing age, residing in a city, and job security status (P. Bechlioulis et al., 2022).

According to a recent survey, publics are more inclined to use online banking if they trust it would be beneficial than if they believe it will be simple to use. The perception of trust serves as a partial mediating factor between perceived utility and desire to use online banking services. Adopting this study's findings as guidance the adoption of internet banking services is improved by financial institutions and policymakers (Reepu and Arora et al., 2022).

The findings imply that Generation Y students' opinions of the relative benefits and efficiency of m-banking have a significant positive influence on their sentiments about the practise, which in turn has a positive impact on how they use it. Understanding the factors that favourably influence the attitudes and usage patterns of the Gen Y cohort with regard to mobile banking will be advantageous for retail banks. Mobile banking customer experience and greater acceptance of their digital applications are pushed inside this sizable market area (Deventer et al., 2018).

The outcome demonstrates that perceived ease of use has no significant link with the dependent variable; however security and privacy have a strong relationship with the adoption of mobile banking (Bakar et al., 2017).

The research also highlighted differences in customer trust across different banking services and results at the corporate level. In contrast to investments and pensions, consumer trust in bank accounts is highest. Additionally, the report identifies nations with low, medium, and high levels of consumer confidence in banking, particularly banking services, as well as regional variations in consumer confidence in Europe. (Anneli Järvinen, 2014)

The variables discussed in the study include perceived value, perceived usability, perceived health, perceived social influence, and perceived utility as well as health warnings, transaction costs, and the use of mobile e-walls. The study demonstrated a significant impact, including that of its model-estimated model, on the desire to adopt a mobile e-wallet in behaviour. (Alwi et al., 2021)

The study comes to a number of conclusions regarding how the banking institutions' operations and their chosen business model are impacted by trends toward dematerialization. The findings of the research report can be used to develop policies that will increase the degree of digitalization of the Romanian banking sector, which will benefit managers in the financial industry as well as the regulatory authorities, particularly those in Romania. (Hadad and Bratianu, 2019)

Following the study, the total cost of operational risks was computed, and the

acceptability of this indicator to Santander Bank's capital was evaluated. This allowed the authors to determine whether the operational risks were acceptable. Important was value. It was also disclosed that Santander Bank's primary external risk for 2018 was fraud involving internet payments. The findings may aid in more successfully making judgements, optimising bank reporting papers, and evaluating insurance pay-outs for recognised operational risks. (Zabala Aguayo and Ślusarczyk, 2020)

Based on the most important demographic factors, correlation and ANOVA were used to analyse the data, and it was exposed that there was no significant different in consumer impression of e-payment methods, even in the time of Covid epidemic. (K and Siby, 2023)

The study's findings indicated that, following the occurrence of the COVID-19 in Ethiopia, a significant rise in the number of people interested in using digital payments has occurred. The most common types of digital payments used by customers are M-birr, hello cash, birritu, m - banking, E-birr, and Amole. (Dareje, 2021)

According to the report, Most clients prefer online banking (IB) services over banking services because of their reliability, efficiency, speed, privacy, and security, as well as their affordability, user-friendliness, and error-free system. The concurrent finding, on the other hand, demonstrates how security issues, a lack of understanding and trust, issues with ATMs, etc., influence customers' decisions to use internet banking services. (Omer et al., 2011)

The study shows how the use of digital banking increases bank profitability. It was discovered that factors like perceived value, convenience, functional quality, service quality, and innovation in digital banking are crucial for enhancing the customer experience, satisfaction, brand loyalty, and financial health of banks. A new Framework for Enhancing Digital Banking Services, Customer Experience, and Financial Performance has been created using the results from the three research perspectives (DiBCEFPEF). (Mbama, 2018)

The study investigates how consumers see digital payments. Since electronic money transfers became a possibility a few years ago, the country has greatly benefited from at his technological advancement. The comfort and use Government support for e-payment systems for development is expanding every day made life easier for people because they can now make payments online. (M, 2022)

The findings indicate that online transactions are legal in India and that usage is growing yearly. The study identifies the advantages and challenges that consumers face when using online payments. (Dr. Swati Kulkarni, Dr. Aparna J Varma, 2021)

In a service environment, this study defines significant advancements in terms of operational excellence, safety, and hygiene, and it requires additional empirical examination. So, in this context, we recommend studies by examining the extent to which intelligent technologies aid retail banks in boosting client loyalty and satisfaction. (TELLİ et al., 2022)

Results indicate that most respondents agreed and had confidence in online banking transactions, their simplicity compared to traditional banking, their time savings, and their convenience, while displaying a neutral attitude toward fraudulent activity. (Hameed, 2021)

According to the overall survey, Internet banking was well received by Pokhara valley, Nepal's residents, and there are promising signs for its future development. It further underlined how satisfied customers are with the present service's usefulness, security, and use. The study's findings unquestionably guarantee that technology will be needed and used as it becomes available, as is the case with Internet banking. (Shrestha et al., 2020)

Research Design

The research study designed after a careful insight of literature review that explained of different variables of consumer's behaviour in terms of mobile banking and digital banking.

The quantitative approach is taken to examine relationship between variables both descriptive and inferential statistical tools will be applied. The data for Quantitative research approach was collected through close ended questionnaire applying extended Likert scale. SPSS software has been used for regression analysis of collected data.

Sample for the study contains respondents who use online banking from different online banking and mobile banking services.

Table 1

Research Approach	Deductive
Data Collection	Primary Data
Data Analysis Method	Regression
Research Method	Quantitative
Analysis Tool	Spss
Sampling Size	300

Construct Measurement and Sampling

The survey instrument was developed utilising indicators selected from previous research after reviewing the literature. Questionnaires are designed having different scale depending on the nature of the questions. All questions are close ended type questions.

The questionnaire was made online and sent to population for collecting the data, the respondents number is 300 included different ages, cities, occupation and income. The study asked participants to rate their perceptions of how consumers behaved toward digital inclusion during the COVID pandemic using a Likert scale. The results of this investigation were interpreted using primary data.

Data Collection Technique

Questionnaire was adopted from a previous study (Baicu, C.G et al (2020) on internet banking, which was based on three models: "Theory of Planned Behaviour" (TPB) (Ajzen 1991). "Technology Acceptance Model" (TAM) and "Theory of Reasoned Action" (TRA) (Fishbein and Ajzen 1975) the research model is also adopted from same study (Baicu, C.G et al (2020) in which the conceptual model was proposed after studying

Data Analysis Approach

The research model is adopted from same study (Baicu, C.G et al (2020) which was based on three models: "Theory of Planned Behaviour" (TPB) (Ajzen 1991). "Technology Acceptance Model" (TAM) and "Theory of Reasoned Action" (TRA) (Fishbein and Ajzen 1975)

The information and data collected from the respondents were statistically analysed SPSS software. Additionally, independent variables and dependent variables measured using regression and correlation analysis.

Analysis, Results and Discussion

Demographic Analysis of Respondents

The tables below provide descriptive analysis of 300 respondents by age, gender, professions, and income.

Table 2

"Age"				
	Frequency(ℱ)	Percent	Valid Percent	Cumulative Percent
<25k	64	21.3	21.3	21.3
25-35k	89	29.7	29.7	51.0

	36k-45k	103	34.3	34.3	85.3
Valid.	46k-55k	21	7.0	7.0	92.3
	56k-65k	21	7.0	7.0	99.3
	60 above	2	.7	.7	100.0
	Total	300	100.0	100.0	

Age categories for respondents, which range from 18 to 60 years old, are included in the table and including their numbers and percentages.

Table 3

"Gender"					
		Frequency(f)	Percent%	Valid Percent.	Cumulative Percent.
Valid.	Male.	143	47.7	47.7	47.7
	Female.	157	52.3	52.3	100.0
	Total.	300	100.0	100.0	

The responses are displayed by the number and ratio of respondents by gender.

Table 4

"Professional"					
	Student.	141	47.0	47.0	47.0
Valid.	Employee.	159	53.0	53.0	100.0
	Total.	300	100.0	100.0	

By number and percentage of respondents, responses are displayed according to respondents' professions.

Table 5

"Income"					
		Frequency(f)	Percent%	Valid Percent.	Cumulative Percent.
	25K-50K	90	30.0	30.0	30.0
	51K-75K	65	21.7	21.7	51.7
Valid.	76K-100K	35	11.7	11.7	63.3
	Above 100K	35	11.7	11.7	75.0
	Not applicable	75	25.0	25.0	100.0
	Total	300	100.0	100.0	

The table below lists the number of respondents and percentages for each income bracket under which the respondents are classed.

Basic Equation

To compute the objectives the basic equation is based on.

$Y = B_0 + B_1X_1 + \dot{\varepsilon}$

Equations of Objective 1

$PUIM = \beta o + \beta 1\ (PCOV) + \dot{\varepsilon}$ .....equation (1)

$EUIM = \beta o + \beta 1\ (PCOV) + \dot{\varepsilon}$ .....equation (2)

$TB = \beta o + \beta 1\ (PCOV) + \dot{\varepsilon}$ .....equation (3)

$SIMB = \beta o + \beta 1\ (PCOV) + \dot{\varepsilon}$ .....equation (4)

$AIMB = \beta o + \beta 1\ (PCOV) + \dot{\varepsilon}$ .....equation (5)

Table 6

Model Summary of Objective 1.

Hypotheses	Correlation	R	R Square	Adjusted R Square	Std. Error of the Estimate	Sig. F Change	Durbin-Watson
H_1	PCOV -> PUIM	.616[a]	.380	.378	1.58322	.000	2.172
H_2	PCOV -> EUIM	.311[a]	.097	.094	.672	.000	2.121
H_3	PCOV -> TB	.388[a]	.151	.148	.709	.000	1.768
H_4	PCOV -> SIMB	.418[a]	.175	.172	.775	.000	1.924
H_5	PCOV -> AIMB	.216[a]	.047	.043	.710	.000	2.047

Table 5 Model summary shows H_1, H_2, H_3, H_4 and H_5 covers Objective 1 to analyse relationship between PCOV as independent variable on PUIM, EUIM, TB, SIMB and AIMB as dependent variables.

Equation 1 Results shows that equation 1 correlation coefficient R value (61%), R-Square coefficient value (38%) indicate moderate relationship between variables and probe Values (0.000) indicate significant relationship between PCOV and PUIM and the Durbin-Watson statistic represent the serial correlation between variables and its value 2.172

Equation 2 Results shows that correlation coefficient R value is (31%), R-Square coefficient value (9%) which indicate moderate relationship between variables and probe Values (.000) indicate a significant relationship between PCOV and EUIM and Durbin-Watson statistic (2.121).

Equation 3 Results show the correlation coefficient R value is (38%), R-Square coefficient value (15%) which indicate moderate relationship between variables and probe Values (.000) indicate significant relationship between PCOV and TB and Durbin-Watson statistic (1.768)..

Equation 4 Results indicate the correlation coefficient R value (41%), R-Square coefficient value (17%) which shows indicate a moderate relationship between variables and probe Values (0.000) indicate a significant relationship between PCOV and SIMB and Durbin-Watson statistic value (1.924).

Equation 5 Results show the correlation coefficient R value is (21%). R-Square coefficient value is (4%) which indicate moderate relationship between variables and probe Values (.000) indicate a significant relationship between PCOV and AIMB and Durbin-Watson value is (2.047).

Table 7

Coefficients of Objective 1.

Hypotheses	Model		Unstandardized Coefficients		Standardized Coefficients	t-value	Sig. level	95.0% Confidence Interval for B		Hypothesis Testing
			B	Std. Error	Beta			Lower Bound	Upper Bound	
H_1	PCOV -> PUIM	(Constant)	7.210	.354		20.363	.000	6.513	7.906	Accepted
		PCOV	1.212	.090	.616	13.508	.000	1.035	1.388	
H_2	PCOV -> EUIM	(Constant)	3.305	.150		21.982	.000	3.010	3.601	Accepted
		PCOV	.215	.038	.311	5.653	.000	.140	.290	

H_3	PCOV -> TB	(Constant)	3.047	.159		19.218	.000	2.735	3.359	Accepted
		PCOV	.292	.040	.388	7.269	.000	.213	.371	
H_4	PCOV -> SIMB	(Constant)	2.753	.173		15.885	.000	2.412	3.094	Accepted
		PCOV	.349	.044	.418	7.943	.000	.262	.435	
H_5	PCOV -> AIMB	(Constant)	3.501	.159		22.037	.000	3.188	3.814	Accepted
		PCOV	.154	.040	.216	3.816	.000	.074	.233	

Table 6 Regression coefficients shows H_1, H_2, H_3, H_4 and H_5 covers Objective 1. Test hypotheses between PCOV as independent variable on PUIM, EUIM, TB, SIMB and AIMB as dependent variables.

Equation 1 illustrated the correlation of

Variables PCOV and PUIM which reflect the B. Unstandardized Coefficients value at 1.212 with t value (13.508) and Sig. value (0.000) that shows positively significant relationship between PCOV and PUIM. Hence, Hypothesis for PCOV having significant relationship is accepted.

Equation 2 show the Coefficients results of variables PCOV and EUIM which reflect the B. Unstandardized Coefficients value at .215 with t value (5.653) and Sig. value (.000) that shows positively significant relationship between PCOV and EUIM. Hence, Hypothesis for PCOV having significant relationship is accepted.

Equation 3 highlighted the Coefficients values of variables PCOV and TB which reflect the B. Unstandardized Coefficients value at .292 with t value (7.269) and Sig. value (.000) that shows positively significant relationship between PCOV and TB. Hence, Hypothesis for PCOV having significant relationship is accepted.

Equation 4 the Coefficients shows the results of variables such as PCOV and SIMB which reflect the B. Unstandardized Coefficients value at .349 with t value (7.943) and Sig. value (0.000) that shows positively significant relationship between PCOV and SIMB. Hence, Hypothesis for PCOV having significant relationship is accepted.

Equation 5 the Coefficients shows that the Results correlation of variables PCOV and AIMB which reflect the B. Unstandardized Coefficients value at .154 with t value (3.816) and Sig. value (.000) that shows positively significant relationship between PCOV and AIMB. Hence, Hypothesis for PCOV having significant relationship is accepted.

Findings from Objective 1

It is observed from the analysis that with an increase (decrease) in the PCOV, all other selected factors such as PUIM, EUIM, TB, SIMB, and AIMB also increase (Decrease).

Hence it is concluded that Alternative hypothesis H_1, H_2, H_3, H_4 and H_5 are positively significant and accepted.

Equations of Objective 2

$$AIMB = \beta o + \beta 1\ (PUIM) + \acute{\varepsilon} \quad \ldots\ldots\ldots\ldots\ldots\ldots equation\ (1)$$

$$AIMB = \beta o + \beta 1\ (EUIM) + \acute{\varepsilon} \quad \ldots\ldots\ldots\ldots\ldots\ldots equation\ (2)$$

$$AIMB = \beta o + \beta 1\ (TB) + \acute{\varepsilon} \quad \ldots\ldots\ldots\ldots\ldots\ldots equation\ (3)$$

$$AIMB = \beta o + \beta 1\ (SIMB) + \acute{\varepsilon} \quad \ldots\ldots\ldots\ldots\ldots\ldots equation\ (4)$$

Table 8

Model Summary of Objective 2.

Hypotheses	Correlation	R	R Square	Adjusted R Square	Std. Error of the Estimate	Sig. F Change	Durbin-Watson
H_6	PUIM -> AIMB	.398[a]	.158	.155	.667	.000	1.965

H_7	EUIM -> AIMB	.513[a]	.263	.261	.625	.000	2.135
H_8	TB -> AIMB	.371[a]	.137	.135	.676	.000	2.054
H_9	SIMB -> AIMB	.334[a]	.112	.109	.686	.000	1.996

Table 7 Model summary shows H_6, H_7, H_8 and H_9 covers Objective 2 to analyse relationship between AIMB as dependent variable on PUIM, EUIM, TB and SIMB as independent variables.

Equation 1 Results shows the correlation coefficient R value (39%), R-Square coefficient value (15%) which indicate moderate positive relationship between variables and probe Values (.000) indicate a significant relationship between PUIM and AIMB and Durbin-Watson statistic is (1.965)

Equation 2 Results shows the correlation coefficient R value (51%), R-Square coefficient value (26%) which indicate moderate positive relationship between variables and probe Values (.000) indicate significant relationship between EUIM and AIMB and Durbin-Watson statistic is (2.135).

Equation 3 Results shows the correlation coefficient R value (37%), R-Square coefficient value (13%) which indicate week positive relationship between variables and probe Values (.000) indicate significant relationship between TB and AIMB and Durbin-Watson is (2.054).

Equation 4 Results shows correlation coefficient the R value (33%), R-Square coefficient value (11%) which indicate week positive relationship between variables and probe Values (.000) indicate significant relationship between SIMB and AIMB and Durbin-Watson value (1.996)

Table 9

Coefficients of Objective 2.

Hypotheses	Model		Unstandardized Coefficients		Standardized Coefficients	t-value	Sig. level	95.0% Confidence Interval for B		Hypothesis Testing
H_6	PUIM -> AIMB	(Constant)	2.383	.231		10.327	.000	1.929	2.837	Accepted
		PUIM	.144	.019	.398	7.486	.000	.106	.182	
H_7	EUIM -> AIMB	(Constant)	1.910	.214		8.921	.000	1.488	2.331	Accepted
		EUIM	.528	.051	.513	10.318	.000	.427	.628	
H_8	TB -> AIMB	(Constant)	2.628	.215		12.207	.000	2.204	3.051	Accepted
		TB	.351	.051	.371	6.892	.000	.251	.451	
H_9	SIMB -> AIMB	(Constant)	2.923	.194		15.051	.000	2.541	3.305	Accepted
		SIMB	.285	.047	.334	6.123	.000	.193	.377	

Table 8 Regression coefficients shows H_6, H_7, H_8 and H_9 covers Objective 2. Test hypotheses between AIMB as dependent variable on PUIM, EUIM, TB and SIMB as independent variables.

Equation 1 the Coefficients shows that the results correlation of variables PUIM and AIMB which reflect the B. Unstandardized Coefficients value at .144 with t value (7.486) and Sig. value (.000) that shows positively significant relationship between PUIM and AIMB. Hence, Hypothesis for PUIM having significant relationship is accepted.

Equation 2 the Coefficients shows that the results correlation of variables EUIM and AIMB which reflect the B. Unstandardized Coefficients value at .528 with t value (10.318) and Sig. value (.000) that shows positively significant relationship between EUIM and AIMB. Hence, Hypothesis for EUIM having significant relationship is accepted.

Equation 3 the Coefficients shows that the results correlation of variables TB and AIMB which reflect the B. Unstandardized Coefficients value at .351 with t value (6.892) and Sig. value (.000) that shows positively significant relationship between TB and AIMB. Hence, Hypothesis for TB having significant relationship is accepted.

Equation 4 the Coefficients shows that the results correlation of variables SIMB and AIMB which reflect the B. Unstandardized Coefficients value at .285 with t value (6.123) and Sig. value (.000) that shows positively significant relationship between SIMB and AIMB. Hence, Hypothesis for SIMB having significant relationship is accepted.

Findings from Objective 2

It is perceived from the results that with an increase (decrease) of PUIM, EUIM, TB and SIMB the dependent factor AIMB also Increase (Decrease).

Hence it is concluded that Alternative hypothesis H_6, H_7, H_8 and H_9 are positively significant and accepted.

Equation 1 for Objective 1

$$UIMB = \beta o + \beta 1\ (AIMB) + \acute{\varepsilon} \ldots\ldots\ldots\ldots\ldots\ldots equation\ (1)$$

Table 10

Model Summary of Objective 3.

Hypotheses	Correlation	R	R Square	Adjusted R Square	Std. Error of the Estimate	Sig. F Change	Durbin-Watson
H_{10}	AIMB -> UIMB	.382[a]	.146	.143	.711	.000	1.831

Table 9 Model summary shows H_{10} for Objective 3 to analyze relationship between UIMB as dependent variable on AIMB as independent variables.

Equation 1 Results show the correlation coefficient R value is (38%), R-Square coefficient value (14%) which indicates a moderate relationship between variables and probe Values (.000) indicate significant relationship between AIMB and UIMB and Durbin-Watson statistic value is (1.831).

Table 11

Coefficients of Objective 3.

Hypotheses	Model		Unstandardized Coefficients	Standardized Coefficients	t-value	Sig. level	95.0% Confidence Interval for B		Hypothesis Testing
H_{10}	AIMB -> UIMB	(Constant)	2.447	.244	10.043	.000	1.968	2.927	Accepted

AIMB	.415	.058	.382	7.131	.000	.301	.530

Table 10 the Coefficients shows that the results correlation of variables AIMB and UIMB which reflect the B. Unstandardized Coefficients value at .415 with t value (7.131) and Sig. value (.000) that shows positively significant relationship between AIMB and UIMB. Hence, Hypothesis for AIMB having significant relationship is accepted.

Findings from Objective 3

It is noticed from the findings that with an increase (decrease) AIMB, the dependent factor UIMB also Increases (Decrease).

Hence it is concluded that Alternative hypothesis H_{10} is positively significant and accepted.

Discussion

The COVID-19 pandemic has had a detrimental effect on the global economy. The strict lockdown measures have not only changed daily life but also retail banking customer behaviour. In this context, the goal of this research is to look into how the COVID-19 problem has affected consumer behaviour in retail banking, with a particular focus on the banking industry in Pakistan.

The PCOV is taken as an independent

Variable which influences the consumer behaviour in banking industry. Therefore, all selected variable such as PUIM, EUIM, TB, SIMB, and AIMB plays the role as dependent variable for analysis in this research study. Moreover, these variable cover's objective 1 and result shows PCOV has positively significant influence on PUIM, EUIM, TB, SIMB and AIMB. Therefore, the hypothesis such as H_1, H_2, H_3, H_4 and H_5 is accepted.

Additionally, the variables such as EUIM, TB, SIMB and PUIM are also taken as independent variables which impact on AIMB which is a dependent variable in this equation. These variables cover objective 2 and overall results indicated the significant relationship and coefficient for each variable such as EUIM, TB, SIMB and PUIM indicated positively significant with AIMB. Hence, the Alternate hypothesis such as the H_6, H_7, H_8 and H_9 has been accepted.

Similarly in objective 3 the AIMB is utilized as independent variable and UIMB as dependent variable wherein results shows positively significant relationship between variables. Therefore, Alternate hypothesis for H_{10} for the UIMB is accepted.

Hence, the overall result shows with rising Perception of COVID-19 increased the PUIM, EUIM, TB, SIMB and AIMB.

Moreover, AIMB increased with the increase of PUIM, EUIM, TB and SIMB. Similarly, AIMB has positively influence on UIMB.

Comparison between Pre and Post Covid 19

Due to COVID-19, the globe went through a very challenging moment. Long-term closures of businesses, schools, and numerous other facilities have a detrimental effect on people's quality of life. Pakistan shared a number of issues with other nations of the world.

Despite the pandemic's many issues, technology allowed the people to continue with their regular tasks. Even business meetings were conducted using various online platforms as education switched to an online format. If technology is not readily available to perform daily duties, the world would have

Come to a standstill.

It was interesting to note that throughout the epidemic, people were forced to work online, including on financial tasks, because they were confined to their houses.

From October to December 2020, a financial inclusion insights (FII) survey was conducted. According to its findings, there have been noticeable advances in financial inclusion since the FII Wave 6 survey, which was conducted between February and March 2020. In Pakistan, financial inclusion increased from 21% before the epidemic to 25% by the end of 2020. The advent of mobile money was solely responsible for this transformation. Before the epidemic, 9% of registered users

had mobile money accounts; by late 2020, 16% did. As a result of the pandemic, which raised demand for mobile money, overall access to mobile money over the same time period climbed from 16% to 27% of adults, including users who have not opened an account.

It is encouraging to see that financial inclusion for both men and women increased by four percentage points in the fourth quarter of 2020 compared to the first quarter of 2020 when we compare the pre- and post-Covid-19 scenario.

Women now possess three times as many mobile money accounts as men do, up from 2% before the pandemic to 6% by the end of 2020. Women's financial inclusion increased from 7% prior to the epidemic to 11% by the end of 2020.

In 2020, the percentage of women who own phones rose by 10%. Towards the end of 2020, however, there was still a 33 percentage point gender discrepancy in phone ownership, with 70% of males reporting having a phone and only 37% of women.

It's important to note that while 7% of adults registered their first mobile money account during the epidemic, 11% of adults utilised mobile money for the first time.

Furthermore, adults in metropolitan areas and those living above the poverty line were more likely to have mobile money accounts—by 12 and 10 percentage points, respectively.

Moreover, below-poverty adult users of Mobile money increased by 5%.

According to the results of a recent survey, Pakistanis are ready to switch from traditional platforms to digital ones for carrying out daily tasks. The Pakistani government has the chance to make it easier for people to use internet financial services by enacting regulations.

A chance for the government to track the economy and include more people in the tax system is presented by the shift from cash-based transactions to digital payment platforms.

Conclusion

The findings of the above study indicated the consumer behaviour shift towards digital inclusion in banking system during COVID 19.

The conclusions were made in the light of research objectives, research question and findings. The following conclusions were drawn from the data collected. Firstly, it was observed from the analysis that with the increased / decreased of PCOV, all other factors PUIM, EUIM, TB, SIMB and AIMB also increased (decrease). As a result of the COVID-19 epidemic, it was shown that online and mobile banking increased. Along with that, it was also observed that consumers were satisfied and they trust on technology which they use for internet and mobile banking during COVID-19.

Simultaneously, the objective two were analysed and finding indicated that with increased (decreases) of EUIM, SIMB, TB and PUIM also increased (decrease), Hence, it is observed from analysis that AIMB increase in COVID-19. Due to helpful application of internet and mobile banking which enhanced standard of banking system and increase capability of banking services during COVID-19.

Therefore, the results which indicate AIMB is positively influenced by perception of COVID-19 and trustworthiness of technology adopted for use.

Finally, in objective three it is observed that there is advantage from transaction, various payments or online purchase of product during COVID-19 pandemic. Change the belief and attribution of usefulness of mobile banking services changing COVID-19 pandemic. Therefore, it is concluded that after COVID-19, consumers changed their behaviour and are switching from physical to online transactions.

Limitations

Closed-ended questionnaires were used to collect the data for this study because comprehensive data from them couldn't be obtained. That is there are numerous data collection techniques that can be used in the

modern era. Due to restricted resources, the sampling technique for this study is practical and can be adjusted for increased data accuracy.

Recommendations

Pakistan's banks should take initiative to educate consumers and offer financial education courses or provide instruction to use available and newly introduced digital systems within the banking sector. Banks can also make a communication network for awareness between consumers and banks, as consumers can take the opportunity to learn advanced digital systems initiated by banks. Because consumers now believe in secure and safe banking transactions their behaviour has changed after covid-19.

Future Research Direction

Data were gathered from the Sindh province, and the sample size was 300, which is acceptable for learning about people's intentions in the nation, but in the future, sample sizes could be increased and data could be gathered from other provinces to enhance the study's ability to generalise. Future studies may add additional variables and change or modify additional questionnaires.

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