

The Mediating Role of Digital Competence in the Relationship Between Customer Experience And Customer Satisfaction: Evidence from Banking Sector

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ABSTRACT

This study explores the mediating role of digital competence in the relationship between customer experience and customer satisfaction within the banking sector. To gather insights, a research questionnaire consisting of 30 items was administered to 300 respondents who actively use online banking services from various banks in Multan, Pakistan. The primary objective of the study was to assess how different service quality factors in Internet banking influence customer satisfaction. The findings reveal that service quality, security measures, and ease of use significantly contribute to enhancing customer satisfaction. The study highlights the importance of investing in advanced IT systems and enhancing employee skills to improve operational efficiency and customer service. These measures are recommended to ensure a superior customer experience in the rapidly evolving digital banking landscape.

KEYWORDS Digital banking, customer satisfaction, customer experience, service quality, mobile payments, mobile banking application

1: INTRODUCTION

1.1 Background of study

Kumbhar (2011) has described the banking industry is being transformed by digital competence / digital banking. As electronic-based business models continue to replace traditional banking systems, nearly all banks are revisiting their customer relationship management strategies and redesigning their business processes. Commonly known as e-banking or online banking, this modern approach offers a variety of internet-based financial services, including ATMs, credit and debit cards, internet and mobile banking, electronic cash transfers, and electronic clearing services, among others. Among these services, ATMs are the most widely used within the e-banking sector. Online banking has emerged as one of the most effective alternatives to conventional banking, providing customers with greater convenience and accessibility.

Jahan, Ali et al (2020) have stated that the advancement of the internet has opened a new door for the banking sector in terms of extending a new financial mechanism. The internet has revolutionized the banking sector, offering tremendous opportunities to enhance the quality of services. Among these advancements, internet banking has become one of the most popular channels for conducting financial transactions. Its adoption is growing rapidly across the globe, reflecting its increasing importance in the financial landscape. Financial institutions are integrating internet technology into their core strategies, recognizing its potential to transform the industry. Internet banking offers significant benefits to both banks and their customers, enabling seamless financial transactions such as money transfers and online payments. This digital shift has redefined convenience and efficiency in banking services.

Mbama and Ezepe (2018) describe that mobile banking is one of the newest technologies that customers use while traveling. Customers can use mobile banking, a service offered by

trade and commercial businesses, investors, and service providers, to conduct transactions using a smartphone, tablet, cell phone, or personal organizer. The mobile device is used to check the balance, pay bills, deposit money, and transfer money. The balance can be accessed via a mobile network by SMS or phone call, or an Internet connection (Wi-Fi, mobile data, or fiber optic cable). People are no longer required to go to the branch in person to transact business. Account information and transactions can be accessed from any location on the planet virtually. In many ways, mobile banking is an extension of e-commerce.

Ahmad, Rashid et al (2011) has argued that each country's e-banking development is determined by the speed of web access, the capabilities of new online banking, and the frequency of e-banking use. E-banking emerged in the banking industry with the integration of information technology into banking and financial operations. According to the State Bank of Pakistan's first quarterly report on payment systems for the fiscal year 2021–2022, Pakistan's payment system—particularly its digital platforms—has shown impressive growth. During the quarter under review, e-banking, which includes transactions through Real-time Online Branches, ATMs, mobile banking, internet banking, call centers, and e-commerce platforms, continued to grow in both volume and value by 12% and 16%, respectively. Significant growth was observed in internet and mobile banking, with digital payments becoming increasingly popular. Mobile banking users rose to 11.3 million, marking a 4% increase from the previous quarter. Mobile banking transactions surged to 79.1 billion, amounting to approximately PKR 2.2 trillion—a 29% rise in volume and a 36% increase in value. Internet banking also played a vital role in this expansion, with a 31% rise in users and 30 million transactions processed, totaling PKR 1.9 trillion. This reflected a 6% growth in transaction volume and a 10% increase in their value. These trends underscore the growing adoption of e-banking services in Pakistan.

Benamati and Serva (2007) has examined Customer satisfaction measures how effectively a product or service meets the needs and expectations of its customers. It reflects a company's ability to address the psychological, commercial, and emotional requirements of its potential customers. Research has shown that various factors, such as demographics, behavior, and motivation levels, influence customer perspectives on adopting online banking services. Studies on customer attitudes and usage of these services consistently highlight the importance of these determinants. However, when it comes to the adoption of online banking, factors like trust, privacy, and security are particularly critical from the customer's viewpoint. These elements play a significant role in shaping their confidence and willingness to use digital banking platforms.

1.2 Objectives of study

The main objectives of this study are stated as under;

- To explore customer experiences with the use of digital/ mobile banking in Pakistan in order to understand customer satisfaction.
- To examine the impact of digital competence on consumer satisfaction in banking sector of Pakistan.
- To investigate how mobile banking service quality affects customer satisfaction
- To investigate how much customers trust digital banking/mobile banking in Pakistan to understand the reliability of online banking services.
- To analyzed the problems faced by customers in the use of digital banking in Pakistan to understand service quality of mobile banking

2: LITERATURE REVIEW

2.1 Introduction

Branchless banking, an innovation driven by electronic banking, enables financial institutions and nontraditional financial players to offer services beyond traditional bank branches. With the advent of various forms of electronic banking, customers can now conveniently conduct transactions anytime and anywhere, significantly reducing the need to visit physical bank locations. To gain insights for ongoing research, we have reviewed relevant studies that focus on mobile banking, analyzing the work of other researchers in this area. This analysis provides valuable perspectives to guide and inform current investigations.

2.2 Review of relevant studies

Mbama, Ezepue et al (2018). Examined the opinions of customers regarding the UK the financial institution's economic growth and e-banking customer experience. A survey of UK bank customers' opinions regarding the use of multivariate factor analysis, mathematical modeling, and An analysis of variance tests, as well as the use of banks' financial reports to obtain financial performance ratios, and their connection to the variables being studied are used to investigate the research hypotheses. Findings indicate that perceived risk, perceived value, employee-customer interaction, service quality, functional quality and usability, and are the most significant factors influencing the customer experience in digital banking. Loyalty, financial performance, and have a strong correlation.

Ahmad (2020) analyzed e- banking services provided by Askari Commercial Bank in Pakistan. Four customers and forty employees were chosen as samples of this study. The results are presented utilizing both quantitative and qualitative approaches. While operational issues were dealt by using correlation and regression analysis were used to analyze data. According to research, consumers are not as willing to embrace innovations, which accounts for the low customer satisfaction with e-banking. Poor regulations and sluggish internet speeds make it difficult in Pakistan. Customers are reluctant to adopt new technology because they have little belief in it and have low levels of internet access. To promote an IT society in Pakistan, the authority must lower the internet access fee and use the media to advertise the advantages of internet banking.

Zafarullah (2009) investigates financial services to measure the impact of information technology on organizational performance. Detailed interviews and field surveys were done with 48 organizations, (24 of which were in the banking sector and 12 of which were in the industrial sector) to acquire information from 12 local and 12 foreign. Multiple statistical techniques were used to examine the data. The study's findings suggest that while IT has had an overall negative impact on performance, the banking industry is still performing better than the industrial sector. While local businesses control the banking system, global enterprises control the manufacturing sector.

Railience (2014) shows analyzed Relationship between banking services an IT tools The study used document analysis, factor modeling, and examination of technical literature to construct an idea of relationship banking that continues to use IT as a vehicle for communication. An important business indicator is the acceptance of IT and a certain channel. The conclusion is that, from the bank's perspective, the indicators would be the policy for IT service, quality assurance, and processing of IT data for decision-making. It would show how much technology is utilized to uphold interpersonal connections. For the upkeep and growth of relationship banking through technology, a unifying mindset toward IT use, or closing the IT gap, is required.

Sabir et al (2014) have analyzed Mobile Banking: Consumer Adoption of Mobile Banking in

Pakistan." The researchers aimed to determine how popular mobile banking was among professors and students in Pakistani universities using the Technology Acceptance Model. The researchers used a self-administered questionnaire based on a five-point Likert scale and stratified random sampling method to collect data from 300 university students and teachers who had bank accounts. Reliability analysis and descriptive statistics and SEM model were used to analyze the result. According to the findings, the convenience of use and capability all raise the willingness to use mobile banking. The results show that Pakistanis are not innovators because of the significant costs and risks associated with adopting new technologies and innovations. Instead, it was discovered that Pakistanis may be the ones who adopt new technology the slowest.

Ali et al (2013) study was conducted to explore the impact of various service quality dimensions on customer satisfaction in Pakistan. Data were gathered through a 30-item questionnaire from 400 internet banking users across multiple bank branches in Karachi. Reliability analysis confirmed the consistency of all dimensions, while factor analysis validated the structure of the questionnaire used.

The results of regression analysis revealed a strong positive relationship between customer satisfaction and factors such as assurance, tangibility, reliability, and responsiveness. Empathy also showed a positive, albeit smaller, effect on customer satisfaction. To enhance customer confidence and comfort, online banks should focus on offering more cost-effective services. Additionally, management should implement more efficient systems to address customer complaints promptly and effectively.

Ahmad & Ali (2011) has investigated functionality of e-banking and service standards outcomes an appropriate sampling approach was utilized to identify 179 customers who met the criteria for the relevant demographics (gender, age, and computer use), past internet experience levels, and product-related skills. According to the findings of this study, Jordanian Commercial Bank's deployment of electronic banking boosted customer satisfaction, loyalty, and retention.

Fu Chen et al (2014) have examined the benefits of Internet banking services. An 18- item tool with six items was constructed as a result (content, accuracy, and format, eases of use, timeliness, and safety). The findings provide useful guidance for the development and application of Google wallet. Regarding the safety, punctuality, comfort, speed of delivery, and accuracy of the material. This study supports initial research that a website's user satisfaction and ease of use, as well as the web application itself, "are perceived security consultant antecedents of new consumers' first trust." This study will be useful in designing Online banking systems that will draw in new customers. The results of this study can also help the banking sector assess the effects of information technology and create effective plans for enhancing Internet client satisfaction, enabling banks to keep their current clientele and enhance the quality of their offerings.

Vijay (2011) The research project "Service Quality Perception and Customer Satisfaction in Internet Banking Services" examines the performance of public and private sector banks. This study is based on customer survey data that captures perceptions of internet banking services provided by these banks. The research investigates the relationship between customer satisfaction with internet banking services, customer demographics, and overall customer experience. The findings reveal that business owners, professionals, and managers generally express satisfaction with internet banking services. However, significant differences were observed in customer opinions regarding the services offered by public and private sector banks. Private sector banks were found to provide a wider range of internet banking services compared to their public counterparts. To better meet customer expectations, public sector banks are encouraged to enhance their online banking offerings and bridge the service gap.

Jahan et al (2020) have analyzed the key factors of consumer satisfaction with internet banking service in Bangladesh". The study investigates the key factors of client satisfaction with internet banking services. This study included a sample of 121 banking customers. Based on previous research, hypotheses were formed. According to the survey, internet banking service quality, security, and convenience of use all take a positive effect on customer satisfaction with digital banking. Some management implications for banking business managers were also utilized in the study.

Fatemeh et al (2013) define service quality's impact on users' trust in online banking an imposed exploratory study like this one is an example. The purpose of this study is to determine the impact of Iranian consumers' satisfaction with various aspects of the quality of Internet banking services. The relationship between service quality and customer happiness was initially investigated using a combination derived from a prior study. Dependability, efficacy, responsiveness, fulfillment, security/privacy, and website design were the six servqual criteria that were chosen based on the literature review. The data was gathered using a survey interview with a 5-point Likert scale. The findings demonstrate a significant association between each of the six servqual classes and customer satisfaction in online banking, with reliability exhibiting the strongest correlation and internet site design the poorest.

Kumbhar (2011) explored the influences of customer satisfaction on bank service characteristics. Between March and November 2010, routine primary data collection was done for the study's purposes. According to the results of the main component analysis, reliability test, and linear regression, cost-effectiveness, convenience of use, security, and responsiveness in ATM service are the most important elements in service quality.

Mei Ling et al (2015) they discussed that Customer experience, online design and content, security and privacy, convenience, and speed are the five aspects that can affect a customer's pleasure with Internet banking. With regard to the above elements that influence customers' decisions to utilize online banking, 200 working persons who took part in this study via a questionnaire survey contributed valuable comments and responses. The results of the survey show that online content, layout, and usability, as well as speed, have a significant impact on customer satisfaction with internet banking. The online design and content, ease, and speed are the three main variables that influence customer satisfaction with Internet banking, according to the observations.

Erboz1 & Podruzsik (2018). A study examining the impact of e-banking on Jordanian banking services found that electronic banking significantly influences customer satisfaction. Using survey data from 175 respondents, the research identified six key factors that greatly affect satisfaction: preference, confidentiality, affordability, ease of use, personalization and customization, and security. Statistical analysis of the survey responses revealed a positive correlation between the use of e-banking services and customer satisfaction.

Hwang, Fu Chen & Min Lee (2007) has conducted study on the impact of Internet banking on consumer satisfaction. The goal of this study is to provide a method for measuring customer satisfaction with online banking (IBCS). Online banking usage among Taiwanese financial institutions was surveyed via the web. A total of 226 valid questionnaires were gathered, with an 85 percent response rate. The results of the study will assist the banking sector in evaluating the effects of technology and creating effective plans for fostering online customer loyalty, enabling banks to keep their current clientele and enhance their level of customer care.

Santouridis Trivellas & Reklitis (2009). The study investigates the efficiency of internet services and customer satisfaction within e-commerce, focusing on the impact of the WEB SERVQUAL model in the banking sector. A SERVQUAL-based framework was applied, incorporating six dimensions: assurance, information quality, responsiveness, web assistance, empathy, and reliability, to assess user

satisfaction with internet services.

The research, conducted among internet banking users in Greece—a country with a relatively low internet user base—resulted in 184 valid responses. The findings revealed that, among the dimensions of internet service quality, information quality had the least influence on overall customer loyalty. In contrast, adaptation-related factors, such as comprehension and web support, significantly impacted customers' willingness to recommend the service to others

.Aboobucker and Bao (2018) study investigates the factors that influence customer acceptance of internet banking in Sri Lanka, with a particular focus on areas that have received less attention, such as security and privacy, perceived trust, potential risks, and website usability. Using structural equation modeling, the study tested its hypotheses based on data from 186 valid responses gathered from internet banking customers. The results show that perceived trust and website usability are key barriers to the adoption of internet banking. On the other hand, customers are less concerned about issues like security, privacy, and perceived risks when it comes to accepting internet banking. Additionally, the study found that factors such as age and gender play a role in shaping the relationships between these underlying factors..

Ahmad, sabeen, Bhati and Hwang (2019) study examines the quality of e-services and e-banking through the lens of technology acceptance and usage. The Technology Acceptance Model (TAM) was employed to assess the impact of e-service quality on the actual use of e-banking. The study involved 493 e-banking customers in Pakistan, with data analyzed using AMOS 20 and SPSS 20. The findings indicate that e-service quality positively influences perceived usefulness, perceived ease of use, and the intention to use e-banking. As a result, customer opinions significantly shape their attitudes toward adopting e-banking services.

2.3 Distinguish of the study

In the above literature it can be seen that some studies are conducted in Pakistan and some in other countries on the effects of customer satisfaction by using digital banking with different factors. This study specifically focused on the customer satisfaction by using digital banking through the service quality and customer trust. This study analyzed the relationship of customer experience and digital competence and how it can be influenced by customer satisfaction. This makes this study unique from above received studies.

3: RESEARCH METHODOLOGY

The current study attempted to understand customer satisfaction or internet banking with the customer experience through service quality and trust in mobile banking in Multan Pakistan. This chapter outlines the research methodology employed in the current study. The purpose is to detail the tools and techniques utilized in the research process. The methodology adopted for this study is described as follows.

3.1 Nature of study

The Quantitative research method has been used in this study. The data and research methods are quantitative in nature.

3.2 Types of data:

Primary data was used in this study. The primary data was collected from respondents with the help of a structured Questionnaire, containing 30 items.

3.3 Selected variables:

This study has one dependent variable, there independent variable, and one mediating variable

which are given below.

Independent variable:

- Customer experience.
- Digital banking service quality.
- Customer trust in digital banking.

Dependent variable: Customer satisfaction

Mediating variable: Digital competence

3.4 Conceptual model:

The conceptual model of this study is given in the figure below:

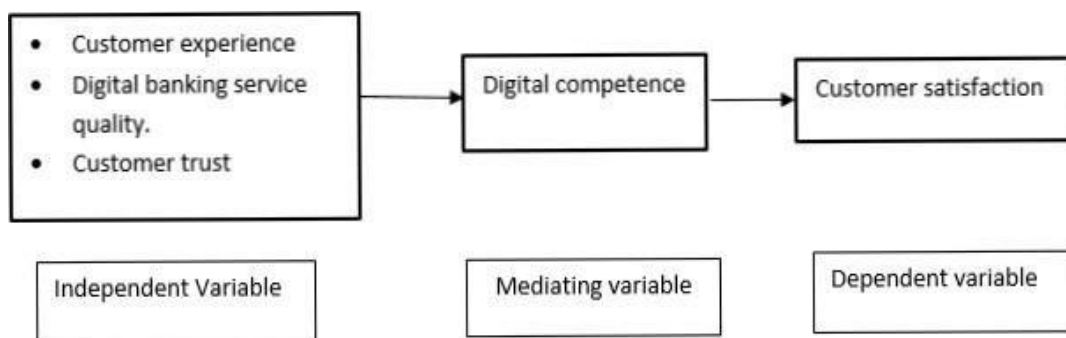


Figure 3.4 sketch of purposed Model.

The researcher first examines the relationship between customer experience and digital competence. Next, the focus shifts to exploring how digital competence affects customer satisfaction. The study then looks at the direct link between customer experience and customer satisfaction. Lastly, the researcher investigates how digital competence mediates the relationship between customer experience and customer satisfaction.

3.5 Sample of the study

In this study total 300 questionnaires were distributed among the users of internet banking and 272 questionnaires were found correct for analysis. The respondents were the students of institute of southern Punjab, Bahaudin Zakariya university and national university of modern languages they were the users of National Bank, Bank Alfalah, Bankislami Pakistan and Askari Bank Ltd.

3.6 Data collection Method

In the questionnaire used for this study, respondents were initially asked to provide demographic details such as gender, age, education, occupation, area of residence, years of banking experience, and internet usage experience. Afterward, the survey included questions based on the constructs of the research model, with responses gathered using a 5-point Likert scale.

3.7 Analytical Techniques

Partial Least Squares (PLS) is a statistical technique used to model relationships between variables, particularly when there are many variables in relation to the number of observations. There are several analytical techniques

- PLS Regression (PLSR)
- PLS Path Modeling
- Structural Equation Modeling (SEM)
- Bootstrap Resampling
- Model Evaluation and Interpretation

4: DATA ANALYSIS

Demographic Characteristics of Respondents

4.1 Age of Respondents

Age Group	Frequency	Percentage	Cumulative %
20 or below	152	55.88%	55.88%
21-30	105	38.60%	94.48%
31-40	9	3.27%	97.75%
41-50	6	2.21%	99.96%
Total	272	100%	100%

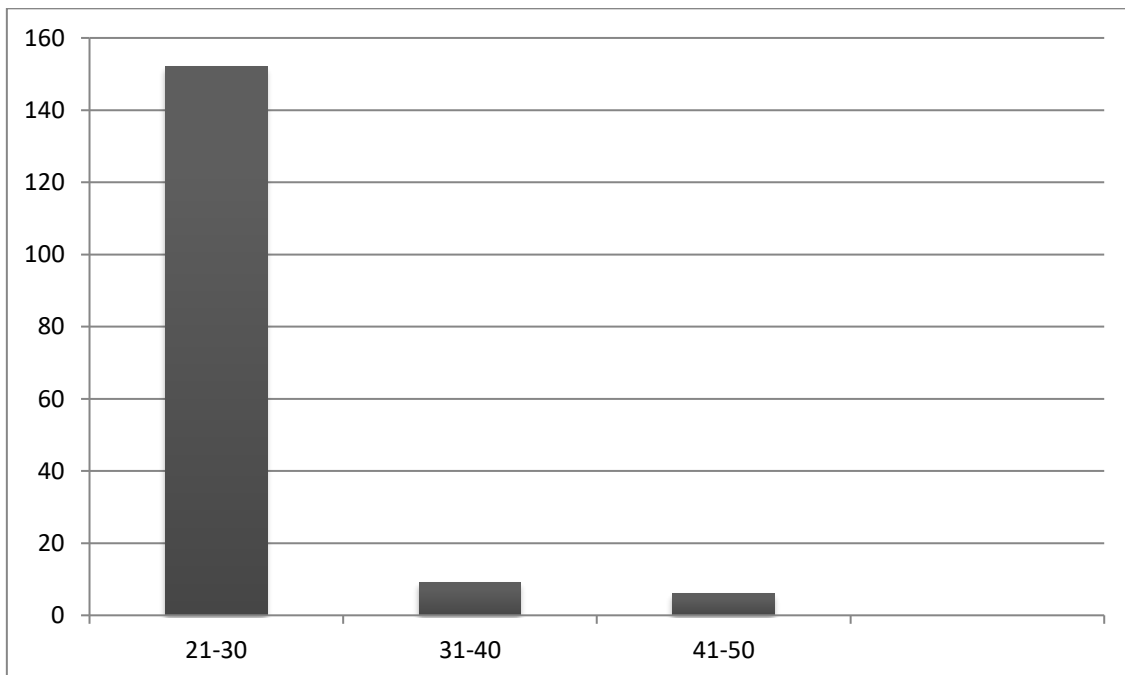


Table and figure show that out of 272 total respondents, 105 respondents' age was 20 or below 152 respondents' age was between 21-30, 9 respondents' age was between 31-40,

and 6 respondents' age was between 41-50. It means that 38% of respondents' age was 20 or below, 56% of respondent's age was between 21-30, 3% of respondent's 31-40 and 2% where respondents' age was between 41-50 and making a total percentage of 100%.

4.2 Gender of respondents

	<i>quenc</i>		<i>id</i>	<i>nulative</i>
		%	%	%
		%	%	%
		%	%	%

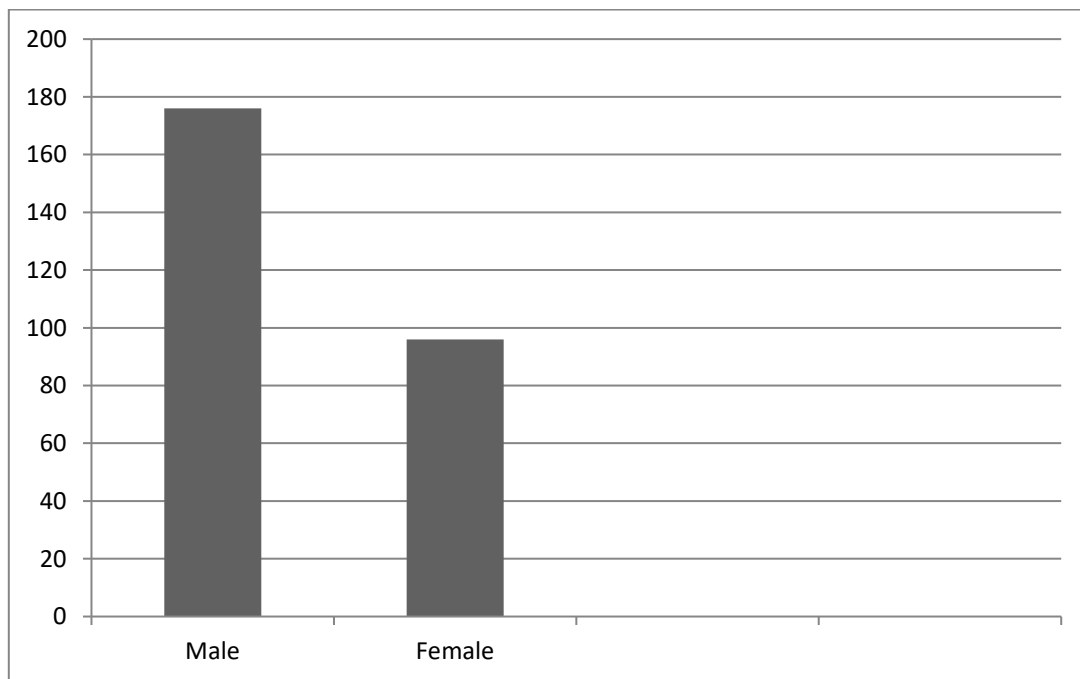


Table and figure show that out of 272 total respondents, 176 respondents were male and 96 were female. It means that 65% respondents were male and 35% were female, making a total percentage of 100%.

4.3 Education of Respondents

Education Level	Frequency	Percentage	Percentage	Percentage
Intermediate		%	%	%
Undergraduate		%	%	%
Postgraduate		%	%	%

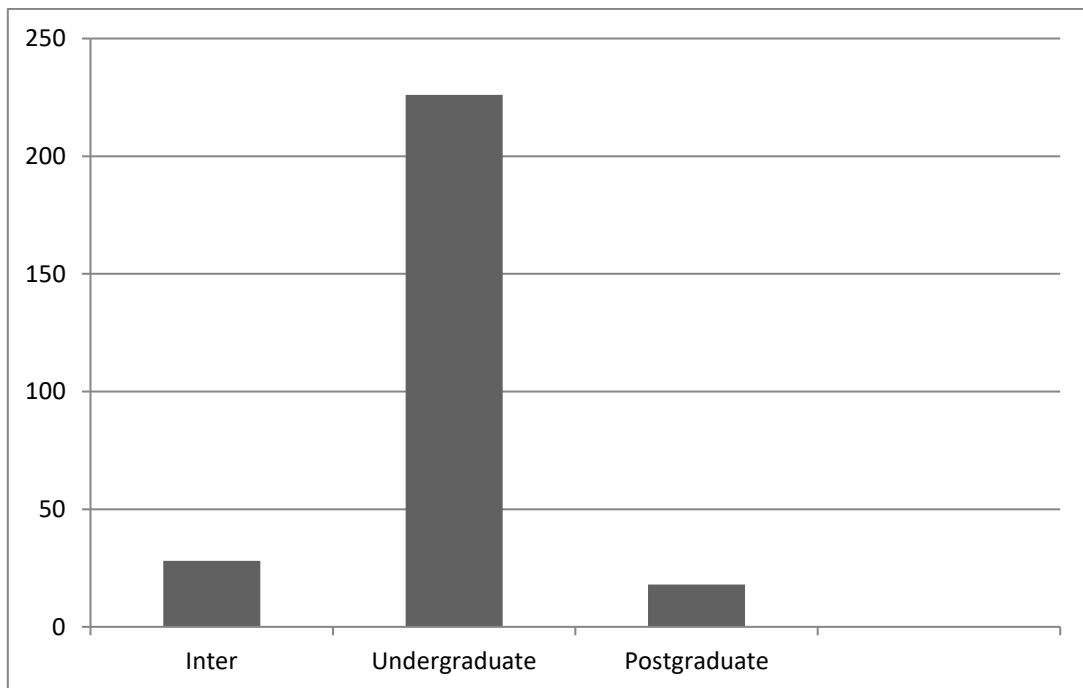
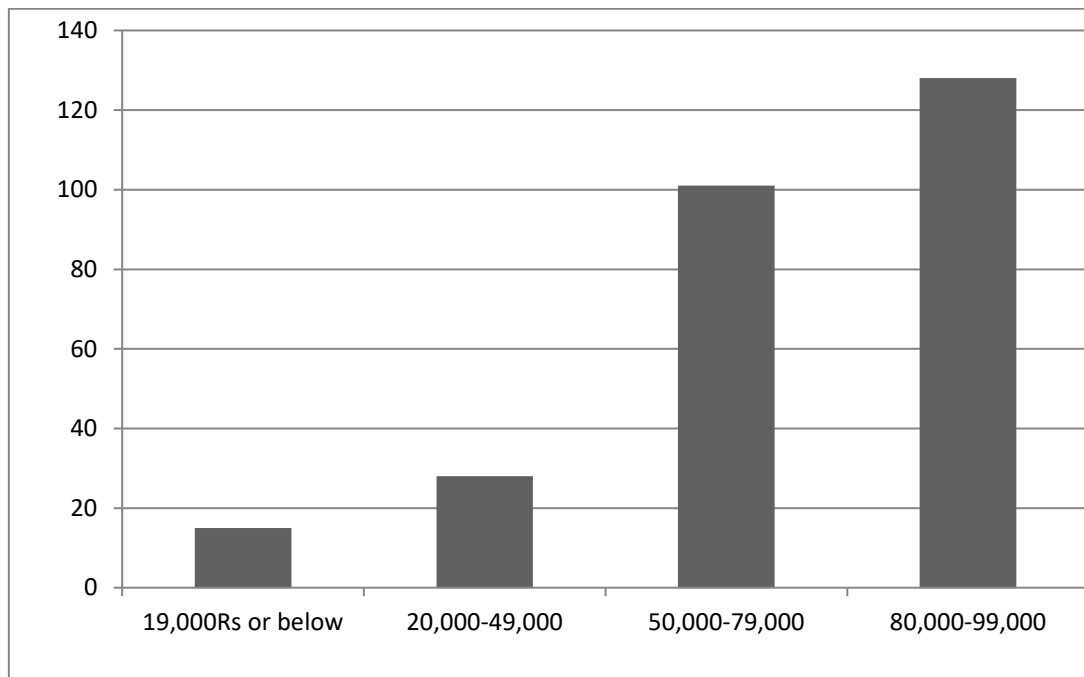


Table and figure shows that out of 272 total respondents, 28 (10%) of respondents' education was intermediate, 226 (83%) respondents were undergraduate, and 18 or 7% of respondents were postgraduate making a total percentage of 100%.

4.4 Income of Respondents.

Education Level	Frequency	Percentage	Percentage	Percentage
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000Rs below				
000- 000		%	%	%
000- 000		%	%	%
000- 000		%	%	%
al			%	%



In the table and figure income of respondents was shown. According to results out of 272 total respondents, 15 (6%) of respondents' family income was Rs 19,000 or below, 28(10%) of respondents' family income was between Rs 20,000 – 49,000, 101 (37%) of respondents' family income between 50,000 – 79,000 and 128 Or 47% respondents' family income was between 80,000 – 99,000. Thus, the income o the majority of respondents was between Rs 80,000 / 90,000.

4.5 Residential areas of Respondent

ions	ncy		id	mulat %
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al		%	%	%
pan		%	%	%
al		%	%	%

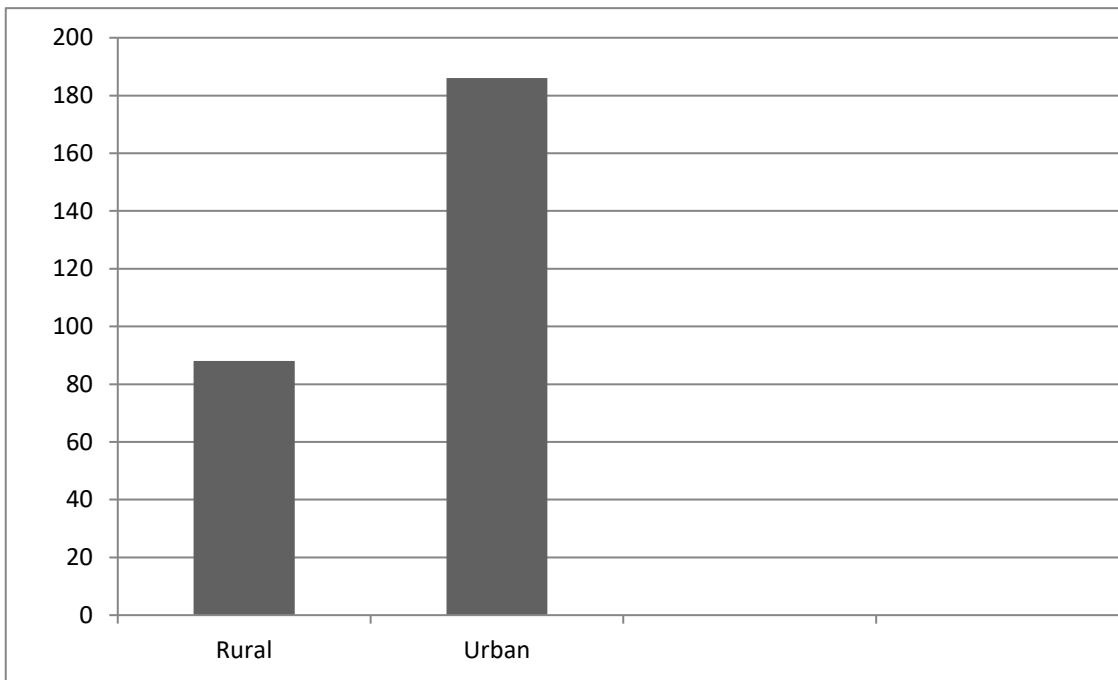


Table and figure shows that out of 272 total respondents, 88 (32%) of respondents were living in rural areas and 186 (68%) of respondents were living in urban areas. majority of respondents were living in urban area.

4.6 Profession of Respondents

Profession	Frequency	Percentage	Percentage
Employed			
Unemployed			
Student			

<i>ployed</i>				%
<i>al</i>			%	%

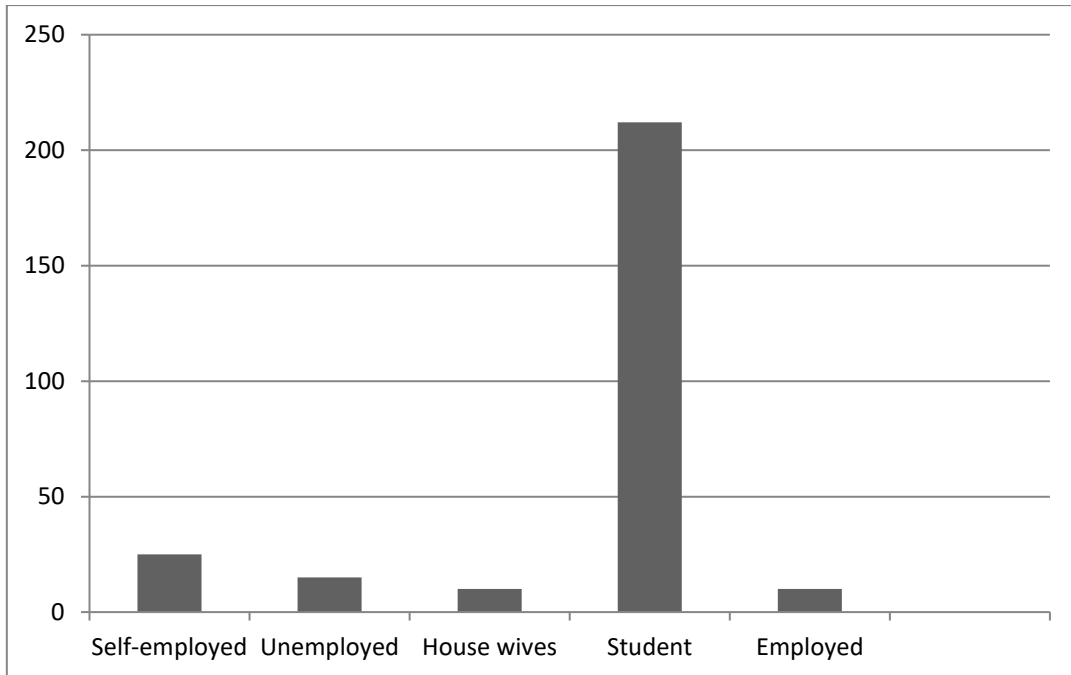
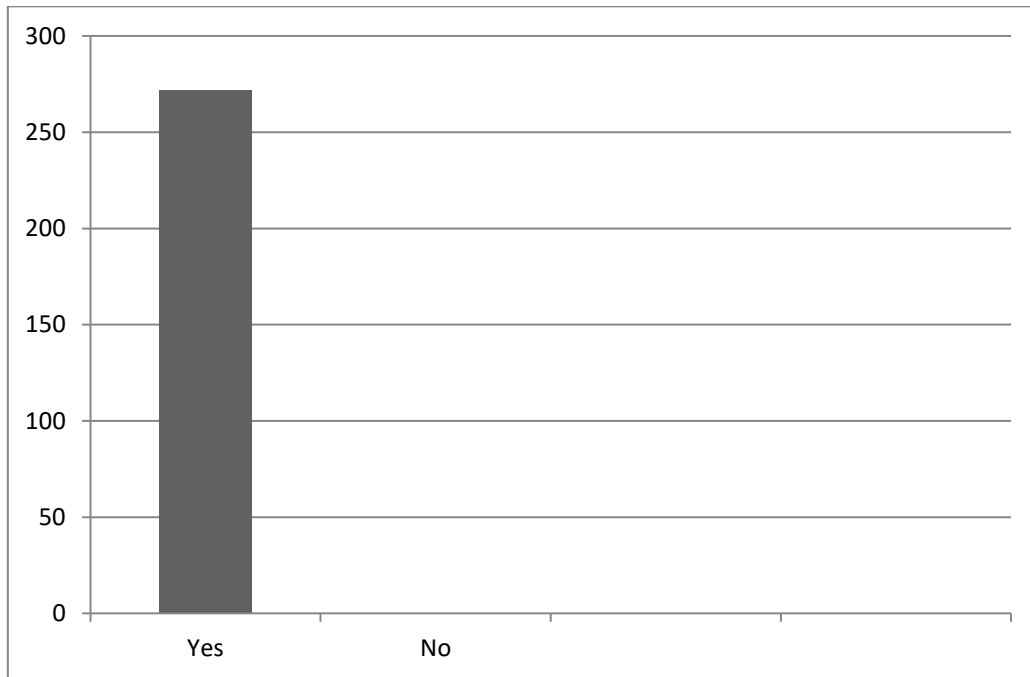


Table and Figure shows that out of 272 total respondents, 25 (9%) of respondents were self-employed, 15 (6%) of respondents were unemployed, 10 (4%) respondents were housewives, and 212 (78%) of respondents were students and 10 (3%) respondents was employed. In this way, only 5% of respondents were unemployed.

4.7 Do you own a cell phone?

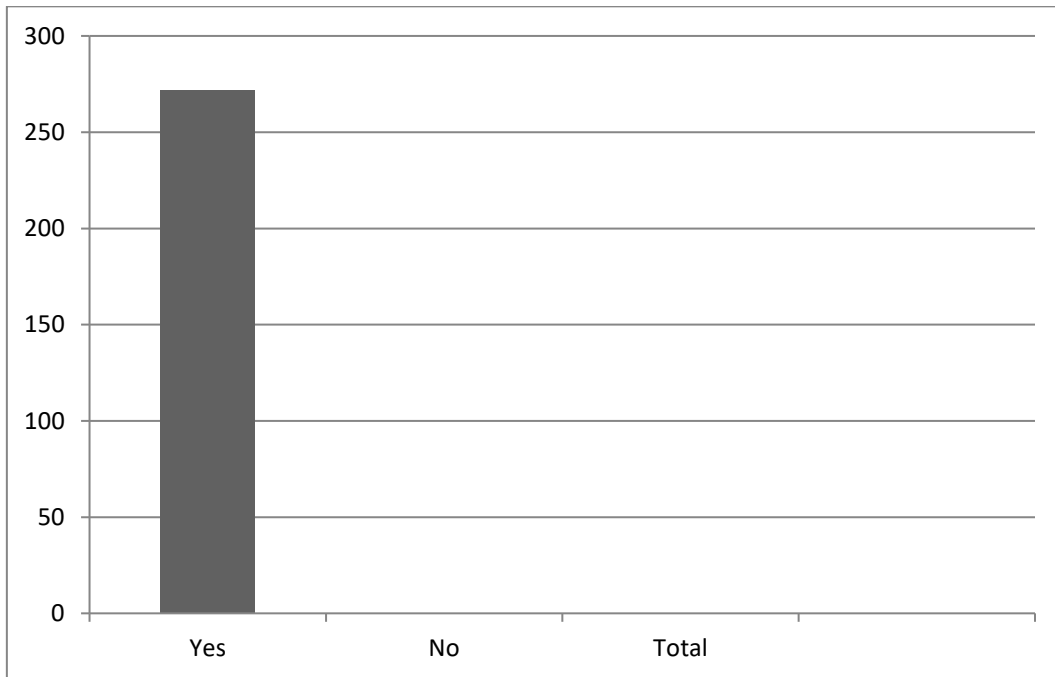
<i>io</i>	<i>q</i>		<i>id</i>	<i>nula</i>
	<i>cy</i>	%	%	%
<i>al</i>		%	%	%



In the table and figure out of 272 total respondents, all 272 have cell phones, meaning 100% of respondents were using cell phones

4.8 Do you use your cell phone for banking transaction?

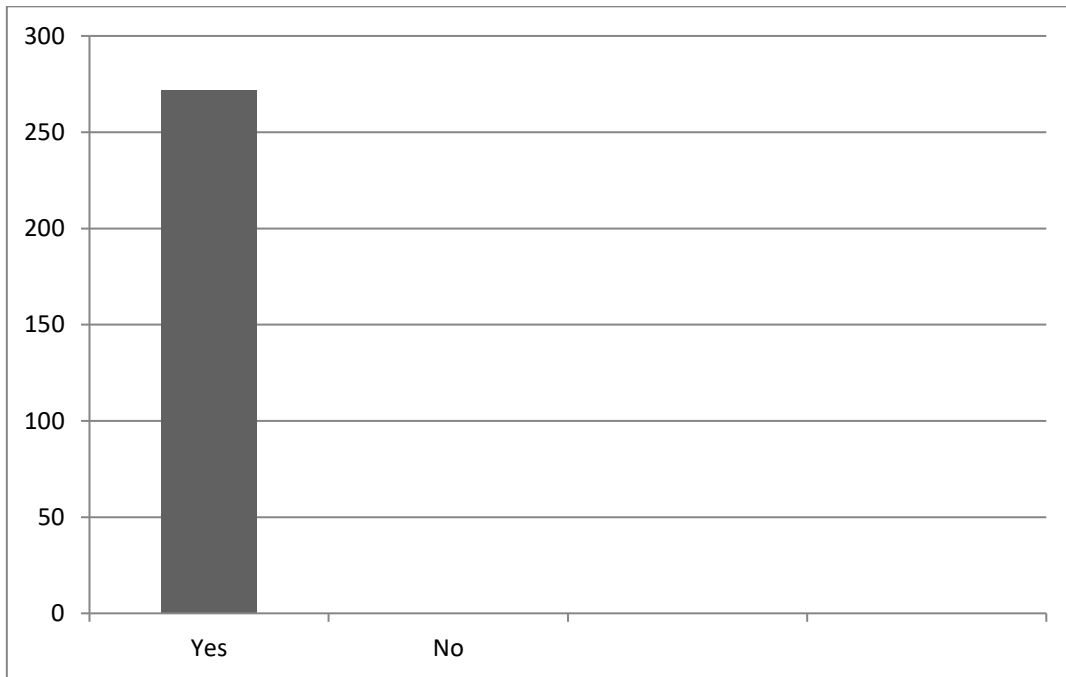
Gender	Frequency	Percentage	Valid Percentage	Cumulative Percentage
Male		%	%	%
Female		%	%	%
Total		%	%	%



The table and figure shows that all 272 respondents that were availing mobile banking services.

4.9 Do you maintain a bank account?

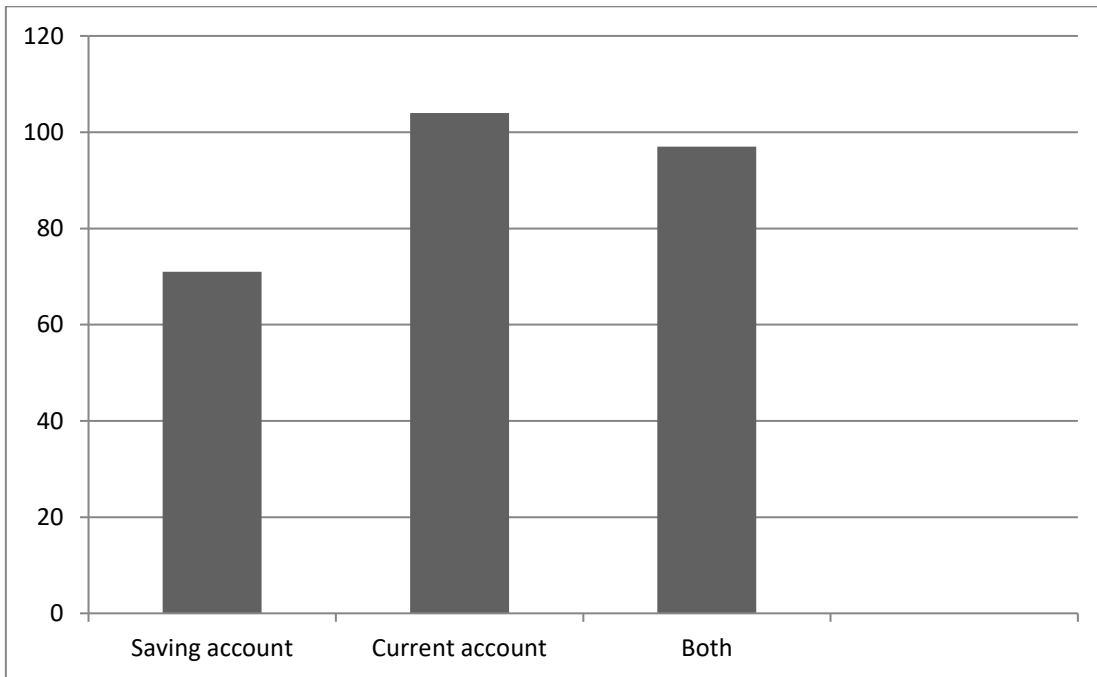
ions	que		id	nula
		%	%	%
al		%	%	%



The table and figure shows that all respondents have their bank accounts, and willing banking services.

4.10 Can you please tell what type of bank account you have?

Account Type	Count	Percentage	Percentage	Percentage
Current Account		%	%	%
Savings Account		%	%	%
Fixed Deposit		%	%	%
Other		%	%	%



The table and figure shows that out of 272 total respondents, 71 (26%) of respondents have saving accounts, 104 (38%) of respondents have current accounts and 97 (36%) of respondents have other accounts, making a total percentage of 100%. The majority of the students had current accounts.

4.11 Who provides you're online/internet banking services?

Options	Frequency	Percentage	Percentage
Bank		%	%
Bank or mobile operator		%	%
Mobile operator		%	%
Other company		%	%
Total			%

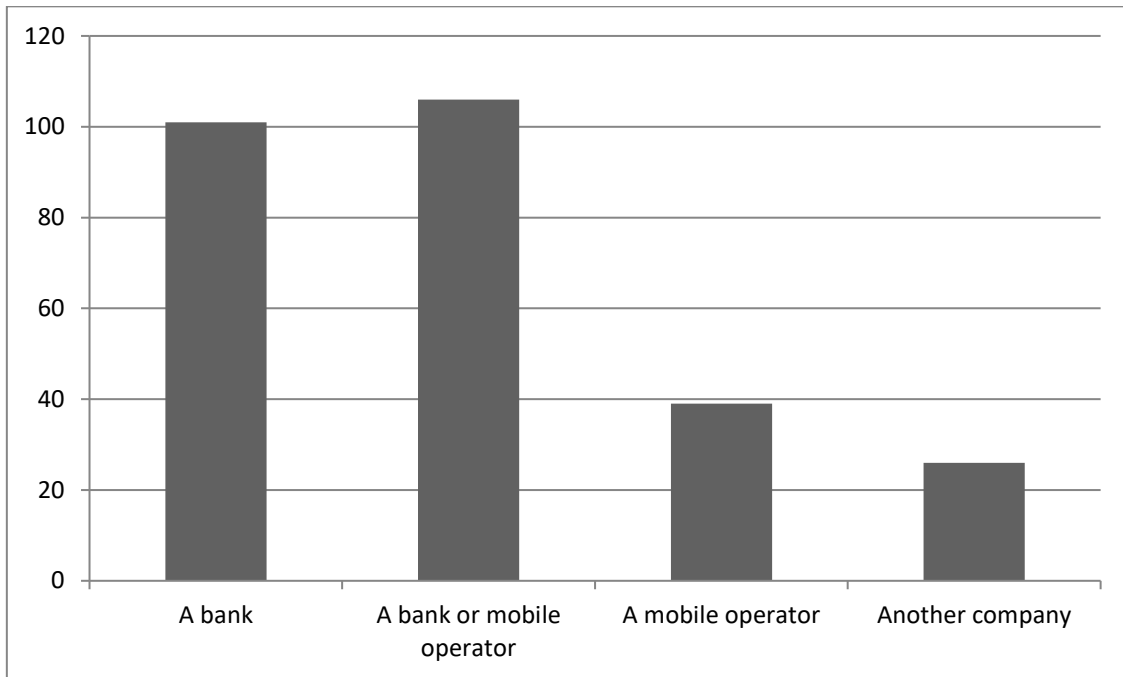
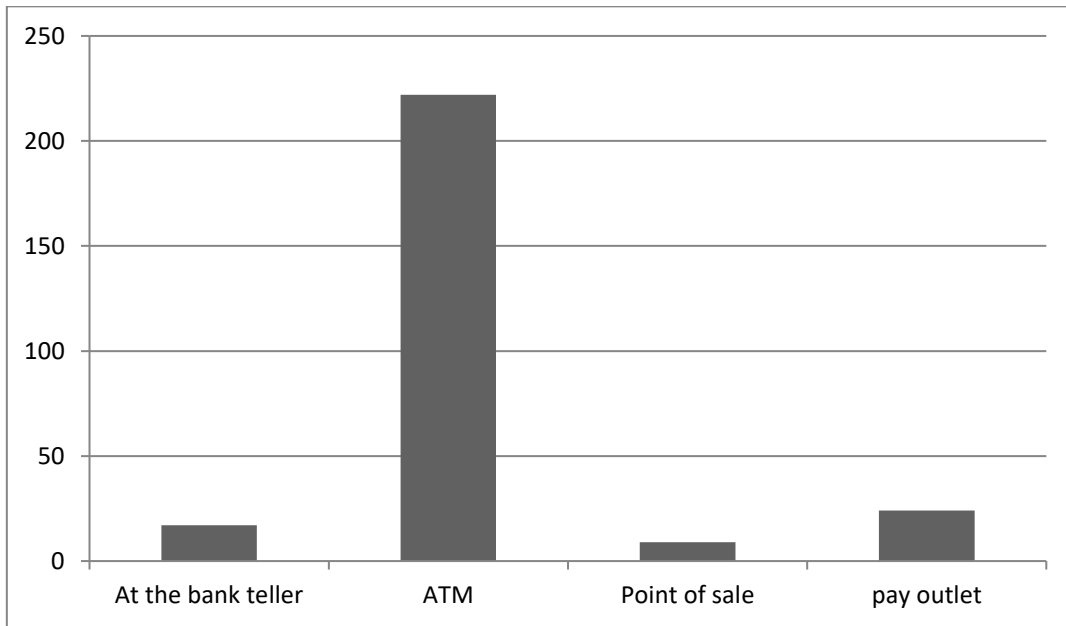


Table and figure shows that out of 272 total respondents, 101 (37%) of respondents have used mobile banking through their banks, 106 (39%) of respondents have used mobile banking through a bank or mobile operator together, 39 (14%) of respondents have used mobile banking through a mobile operator and 17 (10%) respondents have used mobile banking through another company making a total percentage of (100%).

4.12 Where do you frequently withdraw money?

Options	Frequency	Percentage	Percentage	Percentage
at the bank teller				
at an ATM		%	%	%
at a mobile banking outlet				%
at other outlets		%	%	%



In the table and figure shows that out of 272 total respondents, 17 (6%) of respondents have withdrawn money from the teller bank, 222 (82%) of respondents have withdrawn money from automatic teller machine (ATM), 9 (3%) of respondents have withdrawn money from point of sale and 24 (9%) respondents have withdrawn money from pay outlet and retail shops making a total percentage of 100%.

4.15 Sending and receiving money online?

Gender	Men	Women	Total	Percentage
Send				
Receive				
Both				
Total				

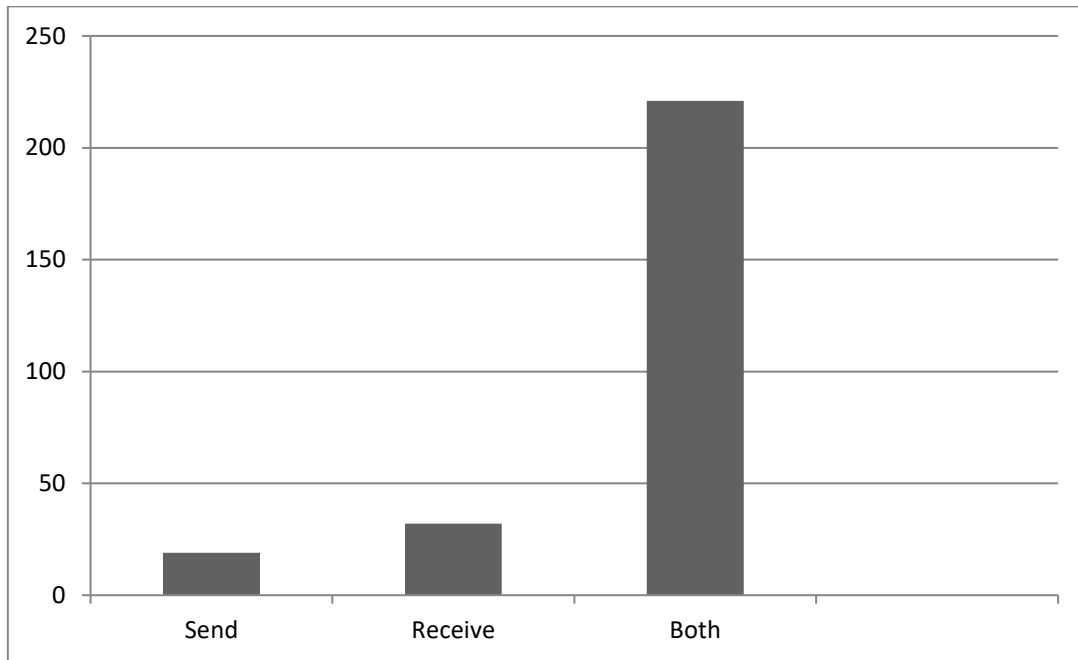
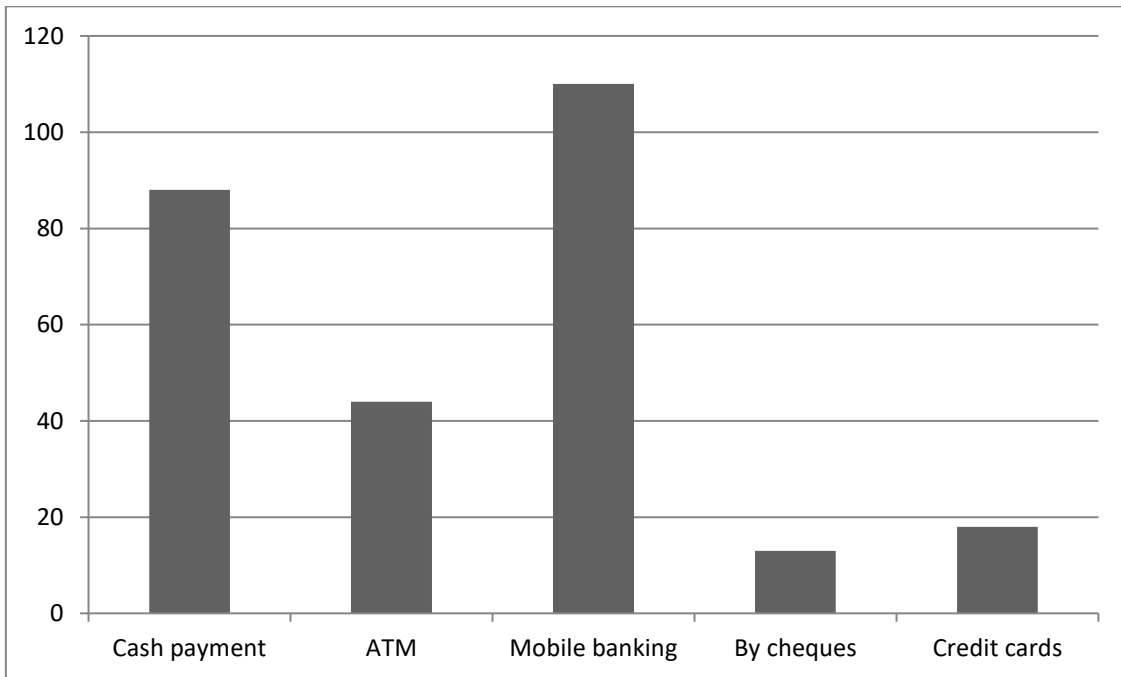


Table and figure shows that out of 272 total respondents, 19 (6%) of respondents have sent money through mobile banking, 32 (12%) of respondents have received money through mobile banking, and 221 (82%) of respondents have both sent and received money through mobile banking, making a total percentage of 100%.

4.16 How do you often pay your bills

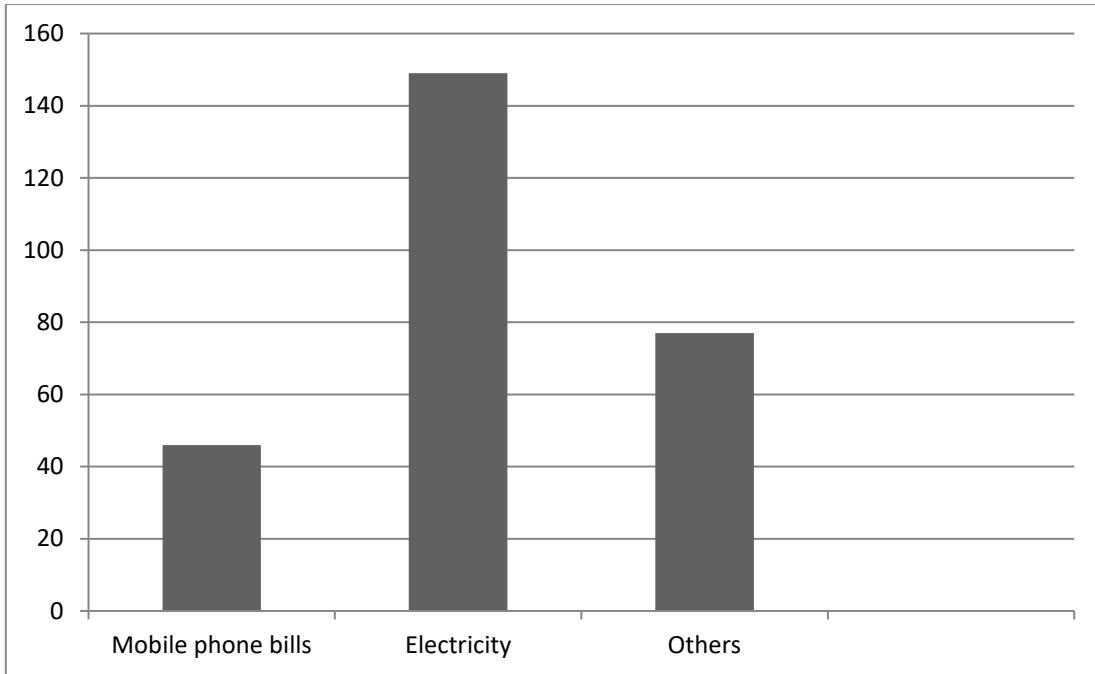
Options	Frequency	Count	Percentage	Formula
Payment		0	0%	0%
Mobile banking		0	0%	0%
Cheques				0%
Debit cards				0%
Other		0	0%	0%



The results in table and figure reveal that out of 272 total respondents, 88 (32%) of respondents pay their bills through cash payment, 43 (16%) of respondents have paid their bills through automatic teller machine (ATM), 110 (40%) of respondents have paid their bills through mobile banking, 13 (5%) respondents have paid their bills through by cheques and 18 (7%) respondents have paid their bills through credit cards making a total percentage of 100%. The Majority of respondents paid their bills through mobile banking.

4.17 What type of bills pays online?

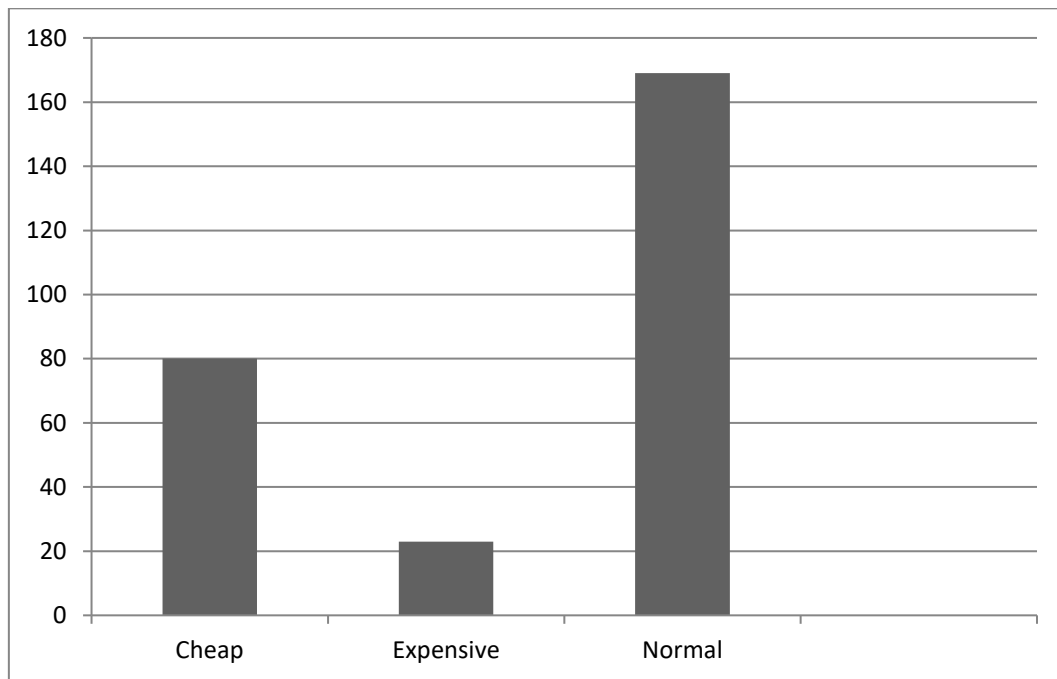
Types of bills	Frequency	Percentage	Total
Mobile bills		%	%
Electricity		%	%
Others		%	%
Total		%	



The data in table and figure out of 272 total respondents, 46 (17%) of respondents have paid their mobile phone bills through mobile banking, 149 (55%) of respondents have paid their bills through automatic teller machine (ATM), 110 (40%) of respondents have paid their electricity bills through mobile banking, 77 (28%) respondents have paid their other bills through mobile banking, making a total percentage of 100%

4.18 Is Mobile banking service cheap or expensive?

Response	Frequency	Percentage	Percentage	Percentage
Expensive		%	%	%
Neutral				%
Cheap		%	%	%
Don't know		%	%	%



The results in the table and figure shows that out of 272 total respondents, 80 (30%) of respondents have given the response that mobile banking is a cheap service, 23 (8%) of respondents have given the response that mobile banking is an expensive service, 169 (62%) of respondents have given the response that mobile banking is a normal service making a total percentage of 100%. The majority of respondents take online banking services neither cheap nor expensive.

4.19 Mobile banking cheaper than traditional banking?

Options	Frequency			Percentage
				%
Normal				%
Other	%			%

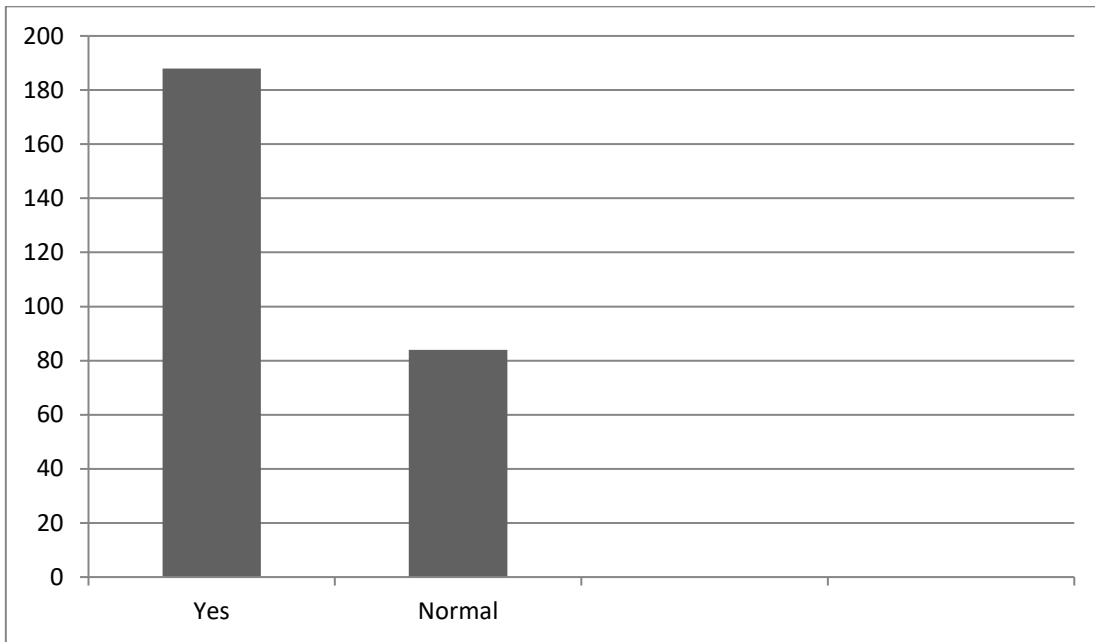


Table and figure1 shows that out of 272 total respondents, 188 (69%) of respondents have stated that mobile banking is a cheap service than traditional banking, and 84 (31%) of respondents have told that mobile banking is a normal service than traditional banking services making a total percentage of respondents 100.

4.20 Using mobile banking saves time.

Response	Count	Percentage
Strongly agree	191	70%
Agree	68	25%
Neutral	7	3%
Disagree	4	1%

In table it was formed that out of 272 total respondents, the response to the statement “using mobile banking saves time.”191 (70%) of respondents strongly agreed, 68 (25%) agreed, 7 (3%) are neutral and 4 (1%) disagree

with the statement. A majority of the respondents agreed that mobile banking saves times

4.21 Mobile banking is easy to use.

Options	Frequency		Percentage	Cumulative
Strongly agree		%	%	%
Agree		%	%	%
Neutral				%
Disagree				%
Strongly disagree				
Total		%	%	%

The results In table out of 272 total respondents, the response to the statement “mobile banking easy to use”115 (42%) respondents strongly agreed, 136 (50%) agreed, 17 (7%) were neutral and 4 (1%) disagree. With the statement that mobile banking is easy to use. Thus, it has been proved that mobile banking is easy to use.

4.22 Happy to use internet banking.

Options	Frequency		Percentage	Cumulative
Strongly agree		%	%	%
Agree		%	%	%
Neutral		%	%	%
Disagree				%
Strongly disagree				
Total		%	%	%

The data in table shows that out of 272 total respondents, the responded to the statement “Happy by using internet banking”125 (46%) respondents strongly agreed, 88 (33%) agreed, 50 (18%) were neutral and 9 (3%) were disagree with the statement they were to use internet banking because it is busy and very convenient.

4.23 Trust network connectivity and using mobile banking

Options	Quantity	Percentage	Percentage	Percentage
Strongly agree		%	%	%
Agree		%	%	%
Neutral		%	%	%
Disagree		%	%	%
Strongly disagree				
Total		%	%	%

In table out of 272 total respondents, the response to the statement 89 (33%) respondents strongly agreed, 113 (42%) agreed, 48 (18%) were neutral and 22 (8%) disagreed with the statement mobile banking is trustworthy.

4.24 Mobile banking is cost-effective.

Options	Quantity	Percentage	Percentage	Percentage
Strongly agree		%	%	%
Agree		%	%	%
Neutral		%	%	%

agree				%
strongly agree				
neutral		%	%	%

The results in table show that out of 272 total respondents, 99 (36%) of respondents strongly agreed, 87 (32%) agreed, 57 (21%) were neutral and 29 (11%) disagree with the statement that Mobile banking is cost-effective.

4.25 Used mobile banking because of its 24 X 7 availability.

options	quantity		id	formula
strongly agree		%	%	%
agree		%	%	%
neutral		%	%	%
disagree		%	%	%
strongly disagree				
total		%	%	%

Table shows that out of 272 total respondents, 125 (46%) of respondents

strongly agreed, 88 (31%) agreed, 38 (13%) were neutral and 21 (10%) disagree with the statement that mobile banking is available 24 hours and customers can use it any time.

4.26 Satisfaction with banks' level of data security

options	quantity		id	formula
strongly		%	%	%

<i>ee</i>				
<i>ee</i>		%	%	%
<i>utral</i>		%	%	%
<i>agree</i>				%
<i>ongly agree</i>				
<i>al</i>		%	%	%

The results in Table In the table out of 272 total respondents, 106 (39%) respondents strongly agreed, 103 (38%) agreed, 49 (18%) were neutral and 14 or 5% disagreed with the statement the security of the data of account holders is satisfactory.

4.27 Comfortable with using mobile banking?

<i>ions</i>	<i>qu y</i>		<i>id</i>	<i>nula</i>
<i>ongly ee</i>		%	%	%
<i>ee</i>		%	%	%
<i>utral</i>		%	%	%
<i>agree</i>				%
<i>ongly agree</i>				
<i>al</i>		%	%	%

Table shows out of 272 total respondents, 119, (44%) of respondents strongly agreed, 98 (36%) agreed, 41 (15%) were neutral and 14 (5%) disagree with the statement that using mobile banking is comfortable. only 5 percent of respondents disagreed with the statement.

4.28 Completely aware of all mobile banking services.

<i>ions</i>	<i>qu y</i>		<i>id</i>	<i>nula</i>
-------------	-----------------	--	-----------	-------------

ongly ee		o	o	o
ee		o	o	o
utral		o	o	o
agree				%
ongly agree				
al		%	%	%

Table shows that out of 272 total respondents, 86 (31%) respondents strongly

Agreed, 106 (38%) agreed, 65 (23%) were neutral and 24 (8%) disagree with the statement. majority of the statement told that they are aware of mobile banking.

4.29 Use all mobile banking services.

ions	qu y		id	nula
ongly ee		o	o	o
ee		o	o	o
utral		o	o	o
agree				%
ongly agree				
al		%	%	%

Table shows that out of 272 total respondents, 82 (29%) respondents strongly

Agreed, 86 (32%) agreed, 83 (31%) were neutral and 21 or 8% disagree with the statement that they are using all mobile banking services.

4.30 You faced many problems during using mobile banking.

ions	qu y		id	nula
------	---------	--	----	------

ongly ee				
ee		%	%	%
utral		%	%	%
agree		%	%	%
ongly agree		%	%	%
al		%	%	%

Table shows that out of 272 total respondents 34 (13%) of respondents agreed, 76 (28%) were neutral, 116 (43%) disagreed and 46 (16%) strongly disagreed. The majority of respondents disagreed with the statement that they face problems in using mobile banking.

4.31 Losing money due to incompleteness of transaction and networking issues.

ions	q c		id	nula
ongly ee				
ee				
utral				%
agree		%	%	%
ongly agree		%	%	
al		%	%	%

Table shows that out of 272 total respondents, 5 (2%) respondents were

neutral, 118 (43%) disagreed, and 149 (5%) strongly disagree with the statement that they lose money due to networking issues when they used mobile banking.

4.32 Empirical Analysis

This study examined the impact of customer experiences with digital and mobile banking on

customer satisfaction, as well as the level of trust customers place in digital banking services. To achieve these objectives, a questionnaire was used to collect primary data. The measurement for customer satisfaction was adapted from Ali et al. (2013), while customer experience with online banking was based on the work of Erboz & Podruzsik (2018). The mediating variable of digital competence was adopted from Kartiwi et al. (2013). A 5-point Likert scale was employed for the survey.

Data was collected using random sampling to access a diverse range of respondents, including students, businesspeople, and housewives, making the process cost-effective and convenient. A total of 300 questionnaires were distributed to mobile banking users, with 272 valid responses used for analysis, resulting in a response rate of 90%.

For data analysis, a structural equation model (SEM) using Smart PLS software was applied. The analysis included demographic and socio-economic summaries generated with SPSS software, as well as the evaluation of outer loadings, convergent and discriminant validity, and SEM estimates using Smart PLS. The results were interpreted under their respective categories.

4.34 socio-economic characteristics of respondents

Table 4.34 presents the socio-economic and demographic details of the respondents, including gender, age, education, occupation, family income, and residential areas. Starting with age, the majority of respondents (from a total of 272) were between 21 and 30 years old, and this age group was the most active in using internet banking. Regarding gender, 176 respondents were male (65%), and 96 were female (35%). The study primarily targeted online banking users in Multan, particularly those using services from Bank Alfalah, Bank Islami, Askari Bank, and National Bank. It was found that males predominantly use online banking services. In terms of education, most respondents were undergraduates. Regarding family income, respondents with monthly incomes between Rs 80,000 and Rs 99,000 were more likely to use internet banking. The residential area data revealed that 32% of respondents lived in rural areas, while 68% resided in urban areas, indicating that urban dwellers tend to use internet banking more frequently. Finally, students and self-employed individuals were the primary users of internet banking services. The full demographic statistics are displayed in Table 4.34.

Socio-economic characteristics		
Age		
21 or below		66%
30		66%
40		
50		
Gender		
Female		35%
Male	96	35%

Education High school or below Undergraduates Postgraduates		
Family income 0-49,000 Rs or below 50,000-49,000 50,000-79,000 80,000-99,000		6 6
Residential area Urban Rural		6 6
Occupation Self-employed Employed Housewife Student Unemployed	10	6 3%

4.35 Measurement model

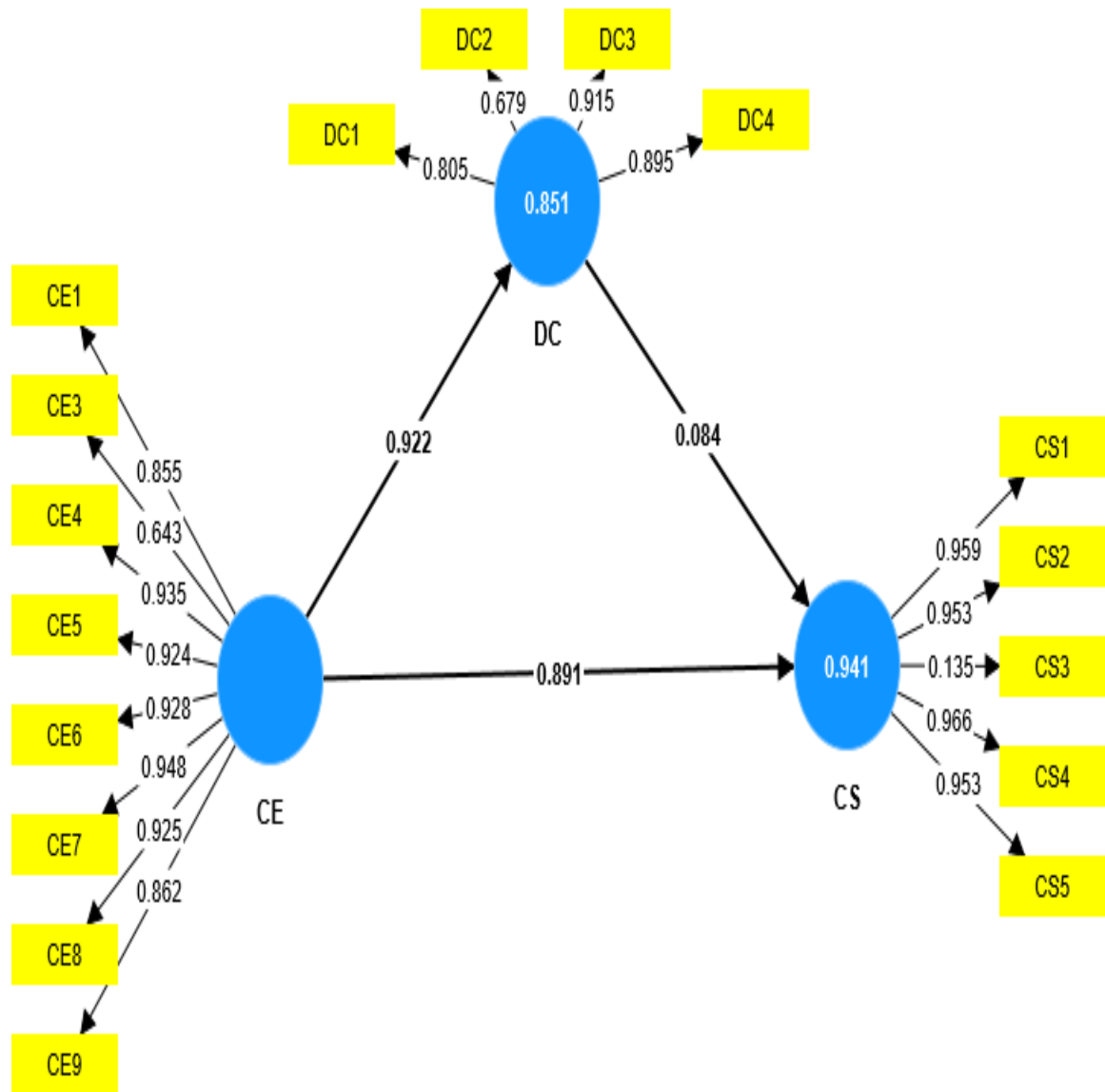
Figure 4.35 displays the measurement model, which includes indicators for measuring each latent variable, along with the path coefficients between the constructs and the R-square values. According to Hair Jr., Hult, Ringle, and Sarstedt (2016), the measurement model shows how latent variables are measured using their associated indicators. Regarding the reliability of the measurement model, Hair, Anderson, Babin, and Black (2019) suggest that indicator reliability is acceptable when the loading value is 0.708 or higher. Based on this guideline, it can be concluded that all latent variables in this study are valid and reliable.

Additionally, Figure 4.4.2 shows that a strong positive relationship exists between customer experience and customer satisfaction, with a path coefficient of 0.891. A similar positive relationship is found between customer satisfaction and digital competence, with a path coefficient of 0.084. Furthermore, a positive relationship between the mediating variable of digital competence, customer satisfaction, and customer experience is also observed, with a path

coefficient of 0.922.

Finally, as customer satisfaction is the dependent variable in the study, the R-square value is 0.941, which indicates that approximately 94% of the variance in customer satisfaction is explained by the variance in customer experience, digital competence, and the mediating role of digital competence. These results are illustrated in Figure 4.35.

Figure 4.35: Measurement model



4.36 Outer loadings and convergent validity

Table 4.36 presents the outer loading values for the factors used to measure the constructs in this study, along with convergent validity measures such as Cronbach's Alpha, composite reliability, and average variance extracted (AVE). Cronbach's Alpha and composite reliability assess the internal consistency of the constructs, while AVE evaluates their external validity. According to Hair, Anderson, Babin, and Black (2019), the rule of thumb for indicator reliability is that outer loading values should be 0.708 or higher, or at least 0.60 for acceptable reliability. Based on this guideline, all the factors used to measure the constructs in this study are deemed reliable and valid.

Furthermore, the recommended thresholds for convergent reliability and validity, as outlined by Hair et al. (2019), are 0.708 for Cronbach's Alpha, 0.70 for composite reliability, and 0.50 for average variance extracted. Since these criteria are met in this study, it can be concluded that the constructs are both valid and reliable, as shown in Table 4.36.

4.37 Table Outer Loadings and Convergent validity

Constructs and their items	Factor loading	Cronbach's alpha		
Customer Experience (C)		0.58	0.5	
1	0.55			
3	0.43			
4	0.35			
5	0.24			
6	0.28			
7	0.48			
8	0.25			
9	0.52			
Digital Competence (V)		0.99	0.9	
1	0.05			
2	0.79			
3	0.15			
4	0.95			
Customer Satisfaction (V)		0.59	0.2	
1	0.59			
2	0.53			
3	0.35			
4	0.56			
5	0.53			

4.38 Discriminant validity

According to Hair Jr. et al. (2016), discriminant validity ensures that each construct is distinct from all other constructs in the model. Hair et al. (2019) further explain that discriminant validity is confirmed when the shared variance of one construct is greater than the shared variance with all other constructs. The rule of thumb for this criterion is that the square root of the Average Variance Extracted (AVE) for each construct should be greater than the highest correlation value with any other construct. Therefore, based on the values presented in Table 4.4.4 and following the Fornell and Lacker (1981) method, discriminant validity is confirmed for all constructs in this study..

4.39 Table Discriminant validity – Fornell - Lacker Criterion

	83		
	63	59	
	63	57	

Hypothesis Testing

H1: Customer experience and customer satisfaction have a positive relation with mobile banking services.

H2: Customer experiences should have a strong positive impact on digital competence

/ Mobile banking.

H3: Digital competence strongly determined customer satisfaction in the banking sector.

Table 4.40 presents the results of the structural equation modeling (SEM) estimation, using the robust technique in Smart PLS. The study aimed to assess the direct impact of customer experience on customer satisfaction, as well as the mediating role of digital competence in this relationship within the banking sector.

The results in Table 4.40 show that customer experience has a strong and highly significant positive impact on customer satisfaction. The path coefficient for this relationship between customer experience (CE) and customer satisfaction (CS) is 0.969, with a p-value of 0.000 ($p < 0.01$). This confirms a positive and statistically significant link between CE and CS, leading to the acceptance of the first hypothesis (H1).

Similarly, another variable in the table shows the significant relationship between customer experience and digital competence. The path coefficient or structural link between Customer Experience and Digital Competence is 0.922 with a p-value of 0.000 which indicates a positive and highly significant relationship between CE and DC and thus the second hypothesis H2 is accepted.

Lastly, the relationship between DC and CS is also shows a positive and significant relationship in the table with a coefficient path value of 0.084 and p-value of 0.049. This shows the positive relationship between DC and CS the third hypothesis H3 is also accepted. In this way all hypothesis is accepted. These results are displayed in table 4.4.5

4.40 Estimated result of SEM Model

Path	Coefficient	t-statistic	p-value	Significance
Customer Experience → Customer Satisfaction	0.969	10.03	0.000	Accepted
Customer Experience → Digital Competence	0.922	10.07	0.000	Accepted
Digital Competence → Customer Satisfaction	0.084	1.84	0.049	Accepted

->	8		43	5	4

5: FINDINGS OF STUDY

The use of mobile banking services has significantly improved customer satisfaction throughout the entire customer lifecycle, driven by innovation and the increasing popularity of smartphones and tablet-based devices. This research highlights the substantial impact of information technology (IT) on the banking system. According to the findings from the questionnaires, IT has contributed to saving customers' time, which in turn increases their satisfaction. Customers believe that IT plays a crucial role in saving time and enhancing their overall satisfaction. Additionally, IT has a significant effect on improving customer experiences with digital banking.

Regarding service quality in the banking sector, IT also plays a vital role in facilitating network transactions. This study emphasizes the importance for businesses, including banks, to adopt and integrate new technologies to improve operations and deliver better services to customers. The banking sector, in particular, needs to invest more in IT systems to improve their operations and customer services.

From the analysis of demographic and socio-economic data, it was found that the majority of respondents were male, aged between 21 and 30, with family incomes ranging from Rs 80,000 to Rs 99,000, and most came from rural areas.

The study confirms that all the variables—customer experience, digital competence, and customer satisfaction—are strongly and statistically significantly related. The factor loading for each construct was assessed, and values above the threshold of 0.70/0.60 were considered valid. Factors with loadings below this threshold were excluded from the final estimation.

The validity tests showed that the constructs used in the study are both valid and reliable, meeting the criteria for convergent validity (0.07 for Cronbach's alpha, 0.07 for composite reliability, and 0.50 for average variance extracted). Additionally, discriminant validity was confirmed, as the square root of the AVE for each construct exceeded the highest correlation value with other constructs, in accordance with Fornell and Lacker's rule of thumb.

The Structural Equation Modeling (SEM) results revealed that customer experience has a strong and positive influence on customer satisfaction, with digital competence acting as a mediator. The study concluded that customer experience plays a critical role in enhancing customer satisfaction through the use of digital competence and internet banking, showing a positive and significant relationship between all variables.

5.1 Conclusion

The primary objective of this research was to examine the mediating role of digital competence in the relationship between customer experiences and customer satisfaction within the banking sector in Pakistan.

For this study, primary data was collected through a survey questionnaire targeting internet banking users in Multan. A total of 300 questionnaires were distributed to users, including students, businesspeople, and housewives, with 272 respondents providing complete and valid responses.

The survey consisted of two sections: the first focused on socio-economic and demographic information, while the second addressed the study's key variables—customer experience (independent variable), digital competence (mediating variable), and customer satisfaction (dependent variable).

To analyze the data, SPSS software was used for descriptive analysis, and structural equation modeling (SEM) was applied using Smart PLS. This approach allowed the evaluation of

convergent validity, outer loadings, discriminant validity, and the relationships between the constructs.

Digital banking offers numerous benefits, such as:

1. **Security:** With advanced encryption and security protocols, digital banking protects transactions and personal information, minimizing the risk of fraud and unauthorized access.
2. **Financial Management** It simplifies managing your finances by offering easy access to accounts, real-time balance updates, transaction histories, and budgeting tools.
3. **Time-Saving** Online banking enables users to perform various activities, such as transferring funds, paying bills, and checking balances, all without visiting a physical branch.
4. **Convenience** Digital banking is available 24/7 from anywhere with an internet connection, providing the flexibility to manage finances at any time. It also includes features like mobile check deposit and online loan applications.

In summary, digital banking enhances the overall user experience by offering a secure, efficient, and accessible platform for handling financial transactions.

5.2 Practical implications

Internet banking has become increasingly vital and widely embraced by users. As a result, understanding how to build, maintain, and strengthen customer relationships is crucial in today's competitive landscape. The findings of this study suggest that offering effective strategies, along with strong security and ease of use, can foster positive customer relationships and improve customer satisfaction, ultimately promoting the adoption of internet banking.

To stay competitive, companies should focus on creating internet banking services that are user-friendly and enjoyable. The study also found that younger age groups and men tend to have a more positive attitude towards internet banking, so it may be beneficial for banks to target these demographics more closely.

It is recommended that online banking management work on making website designs and content more visually appealing to capture the attention of both current and potential customers. Additionally, enhancing security measures is critical to ensuring customers feel safe using online banking and are more likely to establish long-term relationships with the service. Lastly, banks should prioritize offering reliable services that make customers feel more comfortable and confident in their online banking experience.

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