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# MEDIATING ROLE OF MOBILE BANKING BETWEEN SERVICE QUALITY AND ADAPTIVE PERFORMANCE OF MANAGERS IN SMES

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This study looks into the mediating role of mobile banking between service quality and managers' adaptive performance in Pakistan's small and medium-sized businesses. The purpose of this research is to discover how service quality and mobile banking affect managers' adaptive performance at work. The study's target population consists of managers or owners of SMEs listed in Chambers of Commerce in Pakistan's capital cities. As part of the more detailed investigation, 422 replies were obtained, representing a 50% response rate. SEM measurement and structural models were created to test the hypotheses. The results demonstrate that partial mediation is evident in the case of service quality and adaptable performance as direct beta without mediation is significant and positive, as well as in the presence of a mediator (mobile banking) service quality and adaptive performance are significant and positive. The outcomes of this study will assist academia, SMEDA, app developers, the banking sector, and practitioners in understanding the importance of service quality and mobile banking usage. Future researchers should do an empirical study evaluating the effects of information quality, system quality, and mobile device use on managers' adaptive performance in SMEs and major firms in Pakistan.

**Keywords:** Mobile Devices, Service Quality, Mobile Banking, Managers, Small, and Medium Enterprises, Adaptive Performance.

## Introduction

This study looks into the acceptance, quality, and use of mobile devices (android-based smartphone, PDA (Personal Digital Assistant), Samsung Galaxy, iPad, and Tab) in forecasting the relative advantage of mobile banking utilized by managers in Pakistan's small and medium firms. Feroz et al. (2020) discovered a substantial and positive relationship between mobile phone usage and community health worker performance in a recent study. They proposed that mobile phones be used appropriately to improve the performance of personnel at various organizational stratification levels. In 2019, a study discovered that mobile phone usage has a significant and favorable effect on pupils' academic achievement (Hossain et al., 2019). Adivar et al. (2019) discovered that efficient usage of technology and mobile has improved supply chain managers' performance in their study. In a similar vein, Kamboj and Gupta (2020) discovered that staff who used smartphone apps while conducting hospitality services enhanced their performance. Furthermore, Lebioda et al. (2019) discovered evidence of a favorable influence of mobile technology usage on workers' perceived performance. According to experts, there will come a time when no human being will be without a mobile phone due to the usefulness of mobile phones in our life (Batool et al., 2019; Yusuf et al., 2020).

According to a study performed by Junior et al., (2020), Brazilian SMEs have used technology to enhance their efficiency through the use of knowledge management systems. Thus according Chau et al. (2020), due to perceived benefits, compatibility, security, organizational readiness, creativeness, customer pressures, government assistance, and managers' IT competence, mobile commerce (m-commerce) was seen as very advantageous for Vietnam's SMEs. At the end of the study, they recommended other researchers to validate their findings in poor countries so that they could be compared.

Employee productivity and effectiveness are significant assets that contribute to the organization's capital. Enhancing emotional intelligence, for example, is a desired state in organizations (Munir & Azam, 2017), which may also be accomplished utilizing mobile phone technology by creating various personal intelligence abilities in the form of mobile applications. The creators of mobile technology do not assess the impact of their innovations on the workplace (Ter Hoeven et al., 2016). However, such mobile use should be consistent with the organizations'

moral and ethical standards, as mentioned by Mehmood et al. (2020), in order to benefit both employees and organizations.

Small and medium-sized businesses (SMEs) are widely regarded as the most essential economic component of the business. The success of SMEs is determined on their performance. The strategies and planning demonstrate a SME's accomplishments. The ability and implementation of a firm achieves the firm's aim (Al Salman & Hassan, 2016; Garca-Sánchez et al., 2019; Harwiki & Malet, 2020; Ismail & King, 2014; Queiroz et al., 2020; Taouab & Issor, 2019). A company that uses its resources properly and efficiently is always lucrative (Queiroz et al., 2020).

The ability to be adaptable is important in a dynamic setting. SMEs demonstrate this competence by being adaptable enough to make changes and achieve their goals (Blackford, 2003; Ensari & Karabay, 2014). Wang and Ahmed (2007) discovered that flexibility necessitates rapid practise and process adjustments. This competence enables SMEs to respond to changing market opportunities. The advancement of mobile devices and mobile technology improves the performance of SMEs (Harwiki & Malet, 2020; Wang et al., 2016).

The purpose of this study is to look at the service quality and mobile device usage in forecasting the relative advantage of mobile banking for managers or owners in Pakistan's Small and Medium Enterprises (SMEs). Managers and owners of small and medium-sized businesses face issues and obstacles related to technological and managerial capabilities and skills, as well as the ability to perform multiple tasks in order to achieve organizational goals (Sherazi et al., 2013; Dar et al., 2017). Many managers are still adopting and implementing new mobile technological capabilities, as well as researching creative company strategies (Siau et al., 2003). As a result, the purpose of this study is to identify the impact of managers' adaptive capability and their relative benefit of mobile banking in the setting of Pakistan.

The research questions that have been put forth to carry out this study in the light of the objectives are as follow: (1) to what extent is service quality associated with the relative advantage of mobile banking of managers? (2) To what extent is service quality related to the Mobile banking? (3) To what extent is service quality associated with the adaptive performance of managers through Mobile Banking?

## 1. Literature Review

### 1.1. Service quality

Service quality has taken into account reliability, assurance, responsiveness, and personalization. Offering quality services would also indicate the benevolence and ability of service providers (Yang, in the press). On the other hand, users may not build trust in mobile devices if phone companies offer uncertain and unsustainable facilities that slow down customers' responses. For example, if the user has an inquiry into the delivery method or the product's quality and the mobile vendor has not responded promptly, customers feel that the mobile makers require the mandatory capacity and skill to give quality services and meet its requirements. Service quality can, therefore, have an impact on the user behavior and attitude of mobile devices. Prior study has highlighted the impact of service quality on the behaviour and attitudes of smartphone service providers (Zhou, 2013; Lee & Chung, 2009) and virtual customer community members (Elliot et al., 2013). However, service quality, such as non-professional services, can influence customer behaviour, and delayed feedback diminishes perceived usage and influence over mobile devices. Customers' plans to pay off mobile site products, for example, may be jeopardised if the payment procedure cannot be completed on the mobile site since they will have to download and install payment apps. According to the Zhou (2013) study, service quality is now connected to the flow of mobile payment services. Furthermore, it has been demonstrated that the quality of service influences client behaviour in online purchases (Gounaris et al., 2010), mobile messaging service (Deng et al., 2010), and the digital travel group (Elliot et al., 2013). As a result, the following theory is advanced:

H1: Service quality shows a positive impact on adaptive performance.

H2: Service quality shows a positive impact on mobile banking.

### 2.2 Mobile Banking

Customers can control their bank accounts remotely from their phones via mobile banking, which improves the connectivity and effectiveness of financial services (Nour & Soltani, 2019). Mobile banking now provides access to all banking services, includes depositing and money transfers, along with receiving alerts on local ATMs and other services (Maina & Mungai, 2019). Mobile banking had also found to be more useful than conventional banking in terms of time saving for both banks and clients. Financial transactions and interactions can be managed more efficiently and quickly (Sharma & Sharma, 2019). With the use of mobile banking, one of most recent advancements in digital technology lead to significant improvements and persistent repetitions in the financial sector (e.g., Alalwan et al., 2017; Rana et al., 2017; Shaikh & Karjaluoto, 2015; Zhang et al., 2018; Gupta, 2013; Zhou, 2012; Lin, 2011). Mobile Banking appears to be an M-commerce service provided by banks and finance companies

that enables clients to analyse different types of data via mobile applications such as PDAs (Personal Digital Assistants), smartphones, or mobile devices (Al-Jabri & Sohail, 2012). This software is suitable for saving deposits, operations, and financial transactions (Alkhaldi, 2016; Slade et al., 2015; Arcand et al., 2017; Slade, Dwivedi, Piercy, & Williams, 2015). Mobile banking is an innovative idea. When compared with the previous e-Banking operating systems such as computer systems, kiosks, and laptop computers, this one has various and familiar standards of device stability, knowledge quality, and service quality (Tam and Oliveira 2017). For instance, customers who own a smartphone or tablet will be capable of conducting financial transactions without the use of any such tangible fixed devices. As a consequence, mobile banking not only permits consumers to connect to and transact with the virtual world in real time, but it has also changed how financial service have been used (Aboelmaged & Gebba, 2013). Mobile banking may assist managers in a number of ways, including access, ease, and speed of payment, safety, and control.

H2: Service quality shows a positive impact on mobile banking.

H3: Mobile banking mediates the relationship between Service quality and adaptive performance.

### 2.3 Adaptive Performance

Adaptive performance is all about studying and comprehending workplace changes and making adjustments to effectively respond to such changes (Pulakos, Arad, Donovan, & Plamondon, 2000). Multifaceted professionals who want to modify and adapt their reactions in response to changes in the working environment and obstacles often embrace adaptive performance. High adaptability is one of the most sought-after employee characteristics by firms because people with high adaptability can successfully adjust to today's dynamic business conditions (Niessen et al., 2010). Employees' adaptability, as opposed to employees' aversion to change, allows them to advance and flourish in their jobs (Pulakos et al., 2000).

It is vital to mention that one of the key ways in which technology improves managers' adaptation abilities is by improving communication between different layers of management and the front end. As employee collaboration improves, skills, information, and capacities are freely shared among SMEs through effective communication (Pollack & Adler, 2016). Managers gain not only first-hand market/competition insights, but also ideas, feedback, opinions, and suggestions from employees at all levels of management by sharing knowledge, skills, and abilities through communication (Usman et al., 2018). This helps managers' decision-making processes since it allows them to modify their performance and make creative decisions to deal with challenges and challenging situations (Pollack & Adler, 2016).

Mobile and technological devices streamline or further automate routine duties that previously consumed the majority of managers' time. Instead of manually preparing daily reports, new mobile technologies, for instance, enables SMEs' managers to handle the preparation and submission of regular reports swiftly (Usman et al., 2018). Moreover, technology has been utilised to ease hard administrative tasks such as competitor analysis, so that market reporting may be done quickly (Kitsios & Kamariotou, 2018). This simplification saved managers a significant amount of time, which can then be applied to more innovative thinking and decision-making. As a result, managers' creativity and ingenuity are strengthened, and they become more adaptable in dealing with a variety of settings (Kitsios & Kamariotou, 2018). One of the most major advantages of technology, such as mobile applications, is that it allows SMEs to manage their time more effectively. Managers can check their time spent on various activities and analyze their time usage using mobile technology and applications. Using such assessments, they can establish priorities by devoting the majority of their time to the most productive activities (Forth & Bryson, 2019). Managers will perceive and find methods to further enhance their time management by modifying their performance as they manage their time successfully (M'zungu, Merrilees, & Miller, 2019). They are also more creative and develop novel ways to do a task in order to save time and increase efficiency. As a result, managers' adaptation skills are increased by educating and tracking time through technology (Correa et al., 2018).

## 3. Research Methodology

The objective of this non-experimental predictive study is to examine the perceptions of business managers regarding the impact of service quality and usage of smartphones in predicting relative advantage of mobile banking. The use of quantitative surveys aimed at small and medium-sized enterprises situated in Pakistan's capital cities has been distributed. The target audience was the business professionals with the job title of manager or director. If managers or directors can identify perceptions of the acceptance, service quality and usage of mobile devices, small and medium-sized enterprises (SMEs) can resolve deficiencies and make more efficient use of mobile devices for mobile banking. As part of the larger study, 422 replies were received, with a response rate of 50%. The covariance-based structural equation modelling research approach was applied in this thesis (SEM). A research questionnaire of at least 200 cases is generally deemed and sufficient for SEM (Hair, Black, Babin, & Anderson, 2010; Kline, 2011). According to Hair et al. (2010), adopting a high sample size, such as at minimum 200 cases, increases SEM results. To put the hypotheses to the test, SEM measurements and structural models were developed.

The four-item Scale of Service Quality (SERQ) was adapted from Kim et al. (2004), and the eight-item Mediating Variable Mobile Banking scale was adapted from Rogers' study (2003). The final dependent variable, an adaptive performance scale with eight items, was adapted from Linda et al. (2013). The responses were computed using a 5-point-Likert Scale, with 1 (strongly disagree) following 5. (Strongly agreed). The sample size for the investigation will be determined using the clusters sampling technique.

## 1. Results and Analysis

**Table 1: Demography of the study**

| Characteristics | Classification | Frequency | Percentage |
|---|---|---|---|
| **Gender** | Male | 332 | 78.7 |
| | Female | 90 | 21.3 |
| | Total | 422 | 100.0 |
| **Age** | Less than 20 | 11 | 2.6 |
| | 21 To 30 | 153 | 36.3 |
| | 31 To 40 | 160 | 37.9 |
| | 41 To 50 | 75 | 17.8 |
| | 51 To 60 | 19 | 4.5 |
| | More than 60 | 4 | 0.9 |
| | Total | 422 | 100.0 |
| **Marital Status** | Married | 292 | 69.2 |
| | Unmarried | 130 | 30.8 |
| | Total | 422 | 100.0 |
| **Establishment Composition** | Trading | 137 | 32.5 |
| | Manufacturing | 79 | 18.7 |
| | Services | 206 | 48.8 |
| | Total | 422 | 100.0 |
| **Job Tenure** | Less than 1 year | 15 | 3.6 |
| | 1 To 2 | 51 | 12.1 |
| | 3 To 4 | 59 | 14.0 |
| | 5 To 6 | 56 | 13.3 |
| | 7 To 10 | 91 | 21.6 |
| | More than 10 | 150 | 35.5 |
| | Total | 422 | 100.0 |

SPSS was used to calculate data about gender, age, marital status, establishment composition, and employment tenure in this research study. A total of 422 responses were obtained, including 332 male respondents and 90 female respondents. Ranges of respondents' ages who fall in the field less than 20 are 11, 21 to 30 are 153, 31 to 40 are 160, 41 to 50 are 75, 51 to 60 are 19, and more than 60 are 4. There are 292 respondents married, and 130 are unmarried. The establishment composition consists of three categories in which trading represents 137 responses; manufacturing means 79 responses and services represent 206 highest responses. Job tenure ranges of respondents who come in less than one year experience are 15, 1 to 2 are 51, 3 to 4 are 59, 5 to 6 are 56, 7 to 10 are 91 and more than ten years' experience are 150 highest.

### 4.1 Data Normality Analysis:

**Table 2: Data Skewness, Mean and Kurtosis**

| Items | Mean | Std. Deviation | Skewness | Kurtosis |
|---|---|---|---|---|
| SERQ1 | 3.6730 | 1.13346 | -.866 | .025 |
| SERQ2 | 3.7346 | .94288 | -.661 | -.067 |
| SERQ3 | 3.8341 | .84470 | -.462 | -.046 |
| SERQ4 | 3.7654 | .94727 | -.729 | .304 |
| RB1 | 3.9668 | 1.08710 | -1.171 | .689 |
| RB2 | 4.0142 | .90382 | -1.172 | 1.630 |
| RB3 | 3.9242 | .95700 | -1.008 | .869 |
| RB4 | 3.9194 | .97140 | -1.088 | 1.097 |
| RB5 | 3.9171 | .94265 | -.928 | .608 |
| RB6 | 3.8886 | .97445 | -.858 | .535 |
| AP1 | 4.0190 | 1.00338 | -1.456 | 2.089 |
| AP2 | 4.1185 | .84144 | -1.164 | 1.691 |
| AP3 | 3.9739 | .85076 | -.997 | 1.398 |
| AP4 | 3.9621 | .88185 | -1.158 | 1.754 |
| AP5 | 3.9384 | .94555 | -1.062 | 1.068 |
| AP6 | 4.0308 | .96814 | -1.245 | 1.540 |
| AP7 | 4.0190 | .88246 | -1.058 | 1.279 |
| AP8 | 4.0450 | .94523 | -1.379 | 2.135 |

The normal distribution of the data is depicted in the table above. Bulmer created a thumb rule in 1979: the anticipated skewness value must be between +1 and -1, while Balandam and Mac Gillivray (1988) determined that the projected kurtosis value must be between +3 and -3. Since the predicted skewness value is between +1 and -1, whole items are usually allowed, but some are greatly inflated. The estimated kurtosis values range between +3 and -3, showing that the data is regularly distributed, therefore we can infer that normality has been met and additional investigation is feasible.

**Table 3: Reliability Analysis**

| Variables | Cronbach alpha |
|---|---|
| Service Quality | 0.683 |
| Mobile Banking | 0.797 |
| Adaptive Performance | 0.849 |

The reliability analysis table shows that Cronbach's alpha for service quality is 0.683, usage is 0.835, mobile banking is 0.797, and adaptive performance is 0.849. Cronbach's alpha's thumb rule is 0.7 and above is considered acceptable, 0.8 and more significant is considered better, and 0.9 and above is considered the best.

**Table 4: Correlation Analysis**

| Sr. No. | Variables | 1 | 2 | 3 |
|---|---|---|---|---|
| **1** | **Service Quality** | **1** | | |
| **2** | **Mobile Banking** | **.452**** | **.498**** | **1** |
| **3** | **Adaptive Performance** | **.540**** | **.580**** | **.588**** |

****. Correlation is significant at the 0.01 level (2-tailed).**

The correlation analysis table depicts the relationship between the constructs. Table 4 reveals Pearson's (r = 0.396) association between service quality and consumption, which is significant and beneficial. The quality of service is connected with mobile banking (r = 0.452), indicating a positive and substantial relationship. The quality of services is also related to adaptive performance (r = 0.540), indicating a positive significant association. Usage is substantially related to mobile banking (r = 0.498) and has a significant positive connection at the 0.01 level. Usage

is also connected with adaptive performance in a positive and significant way (r = 0.580). At the 0.01 level, mobile banking is strongly favorably and significantly connected to adaptive performance (r= 0.588).

**4.2 Test of Multicollinearity**

As a general rule, if the Value of VIF is less than five, there is no concern with multicollinearity. There is a significant multicollinearity problem if the VIF value is between 5 and 10, and a major multicollinearity problem if the VIF value is equal to or more than 10. A multicollinearity test was performed, and all of the VIF values in Table 5 were determined to be less than five, indicating that there was no multicollinearity.

**TABLE 5: Collinearity Statistics**

| Variables | Tolerance | VIF |
|---|---|---|
| Service Quality | 0.795 | 1.257 |
| Mobile Banking | 0.795 | 1.257 |

**4.2. Structural Equation Model:**

The Structural Equation Model (SEM) is a method for computing or assessing relationships using depicted data and particular assumptions (abstract hypotheses). SEM is quite useful for both primary and confirmatory models. The SEM has been used to generate inferential factors; these variables are not principally investigated and are thus derived more closely from diverse components. The SEM technique includes regression, route analysis, and factor analysis. In other words, SEM combines factor analysis (CFA) and multi-regression analysis. AMOS 26 was utilized in this study to evaluate the model's measurement or testing. SEM is used to detect abnormalities, changes, correlations, dependencies, and independence of variables under observation and discussion.

**Confirmatory Factor Analysis (CFA)**

Confirmatory Factor Analysis (CFA) is a type of structural equation model that seems to be likely to be understood in the same way as the evaluation model. With the help of Amos 26, the figure was created separately for each parameter. Following the formation of the CFA, the next step is to construct a superb wellness/fitness model. There are several forms of health model splitting. The CFI has to be between 0 and 1, reflecting the fitness of the model. Furthermore, it is prohibited if the CFI value is 0.90 or above (Hu & Bentler, 1999). Hu and Bentler (1999), on the other hand, anticipate that the RMSEA will be smaller than 0.08, suggesting that the model is fit. If the RMSEA value is less than 0.06, the model is adequate. Hu and Bentler (1999) If GFI and AGFI are greater than 0.90, it is highly regarded for model fitness. The overall measuring approach, as shown in Figure 2, is meant to test the questionnaire's validity and accuracy.

According to Table 6, all items exhibit convergent validity. Convergent validity is based on the assumption that two factors are linked with each other when evaluating the same design. In this analysis, we evaluate the fitness of the entire model. Table 6 shows that CMIN / DF is 2.818, RMR is 0.051, GFI is 0.917, AGFI is 0.889, CFI is 0.914, and RMSEA is 0.066. All values must meet both the threshold and the applicable criteria.

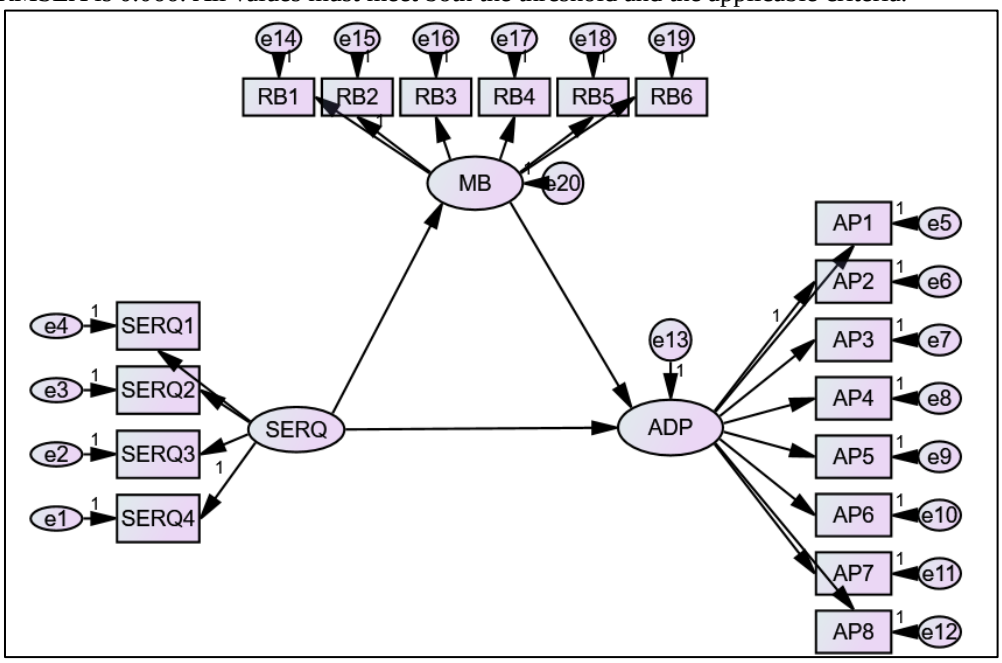

**Figure 2: Hypothesized Measurement Model**

**TABLE 6: Fitness Summary**

| Model | Hypothesized | Thresholds |
|---|---|---|
| CMIN/DF | 2.818 | < 3 |
| RMR | 0.051 | Closer to 0 |
| GFI | 0.917 | ≥ 0.9 |
| AGFI | 0.889 | ≥ 0.8 |
| CFI | 0.914 | ≥ 0.9 |
| RMSEA | 0.066 | ≤ 0.08 |

### 4.3. Hypothesis Testing

#### 4.3.1. Direct effect

AMOS was used to evaluate a structural model to determine the link between the variables after evaluating the model's fit. The direct impact of service quality on mobile banking and usage is seen in Table 7. H1&H2 have been accepted because service quality has a positive and significant effect on mobile banking (β=0.521, p<0.001), and service quality has a positive and substantial direct impact on adaptive performance (β=0.635, p<0.001).

**Table 7: Direct Effect**

| Hypotheses | Standardized Estimates | p-value |
|---|---|---|
| Service Quality ---> Adaptive Performance | 0.635 | 0.001 |
| Service Quality ---> Mobile Banking | 0.521 | 0.001 |

Note. ***p-value <0.001, **p-value<0.01, *p-value<0.05

#### 4.3.2. Analysis of Mediation

The mediation analysis is performed in SEM to evaluate the mediating role. The mediation analysis is summarized in Table 8. Partial mediation is considered in the presence of mobile banking between service quality and adaptive performance, as standardized direct beta is positive and statistically significant in the absence of a mediator (mobile banking), and standardized indirect beta is also positive and statistically significant (=0.271, p0.001), inferring that hypothesis 3 is accepted.

**Table 8: Influence of mediation**

| Variables | Direct beta without Mediation | Direct beta with mediation | Indirect beta | Mediation type observed |
|---|---|---|---|---|
| Service Quality ---> Mobile Banking ---> Adaptive Performance | 0.635<br>0.001<br>p-value | 0.354<br>0.001<br>p-value | 0.271<br>0.001<br>p-value | Partial mediation |

## 5. Contributions, Recommendations, Conclusion

### 5.1. Contributions

The current study has theoretically contributed to the existing literature on the adaptive performance and service quality of mobile banking for managers in small and medium-sized enterprises in Pakistan for several reasons. Firstly, Partial mediation is observed in the case of service quality, and adaptive performance as direct beta without mediation is significant and positive. In the presence of mediator (mobile banking), service quality and adaptive

performance are positive and significant. Secondly, this study tested the adaptive performance and service quality in the presence of mediator relative advantage of mobile banking in the context of Pakistan. This is consistent with the recommendations of Delone and McLean (2003) in new contexts. Thirdly, In light of Chau et al. (2020) recommendations, the current study has led the conversation towards the positive effects of adopting mobile technology in enhancing the adaptive performance and advantage of mobile banking of SME managers in Pakistan. The current study also provides relevant managerial implications for apps developers and banking sectors. First, the results of this study show that high-quality service should be provided by apps developers and banking sectors to enhance adaptive performance and relative advantage of mobile banking. Service quality should be accurate, consistent, timely, and easy to understand and free of technical terms (Ponte et al., 2015).

### 5.2. Future Recommendation

Future researchers should concentrate on the empirical investigation of the testing influence of information quality, system quality, service quality, and mobile device usage on managers' use of mobile banking in Pakistan, comparing SMEs and large firms.

### 5.3. Conclusion

The goal of this research was to undertake an empirical investigation into the role of mobile banking in bridging the relationship between service quality and adaptive performance of managers in Pakistani SMEs. After collecting data from clusters of Pakistan's capital cities, SEM was used to analyze the hypotheses. The SEM analysis findings prove and confirm all three assumptions. The study's results indicate that (1) service quality has a significant impact on adaptive performance of managers in Pakistani small and medium enterprises via partial mediation of mobile banking; and (2) the results of this analysis will also assist academia, SMEDA, and professionals know the significance of mobile technology and the impact of Service quality on adaptive performance of managers in Pakistani SMEs.

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