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AN EMPIRICAL INVESTIGATION OF INFORMATION QUALITY AND USAGE OF MOBILE BANKING IN PREDICTING ADAPTIVE PERFORMANCE: A SERIAL MEDIATION MODEL

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Abstract
This study investigates the Information quality, usage and mobile banking in predicting adaptive performance of managers through serial mediation model in small and medium enterprises of Pakistan. The purpose of this study is to find out how Information quality impacts the adaptive performance of managers at workplace through serial mediation of usage of mobile devices and relative advantage of mobile banking. The target population for this study includes managers or owners of SMEs listed in Chambers of Commerce of Capital cities of Pakistan. As part of the larger study 422 responses were received which shows 59% response. To test the hypotheses, measurement and structural models were developed in SEM. The findings show that serial mediation is observed in the case of information quality and adaptive performance as direct beta without mediation is significant and positive, and in the presence of serial mediators (usage and mobile banking) information quality and adaptive performance is positive and insignificant. The findings of this study will help the academia, SMEDA and practitioners to understand the importance of information quality, usage of mobile devices and mobile banking on adaptive performance. Future researchers must focus on empirical investigation of testing effect of service quality, system quality along with information quality and usage of mobile device on adaptive performance of managers comparing SMEs and large enterprises in Pakistan.

Keywords: Mobile Devices, Information Quality, Usage, Mobile banking, Adaptive Performance, Managers, Small and Medium Enterprises.

1. Introduction

This study investigates the acceptance, quality and usage of Mobile devices (android-based smartphone, PDA (Personal Digital Assistant), Samsung Galaxy, iPad and Tab) in predicting adaptive performance of managers in small and medium enterprises of Pakistan. In a recent study, Feroz et al., (2020) found a significant and positive association of mobile phone usage with the performance of community health workers. They proposed appropriate usage of mobile phone in improving performance of the staff of various organizational stratified levels. In 2019, a study also found such a significant and positive effect of mobile phone usage on academic performance of the students (Hossain et al., 2019). In their study, Adivar et al., (2019) found that effective use of technology and mobile had enhanced performance of supply chain managers. In the similar orientation, Kamboj and Gupta (2020) found that employees who used smart phone apps while performing services relating to hospitality, had improved their performance. Moreover, the study of Lebioda et al., (2019) also found the evidence of a positive impact of mobile technology usage on the perceived performance of the workers. In the opinion of experts, there would be a time when none of the human being/us would be without mobile phone due to helpfulness of mobile phones in our lives (Batool et al., 2019; Yusuf et al., 2020).

According to the study of Júnior et al., (2020), Brazilian small and medium enterprises (SMEs) has been using technology for enhancing their performance by their knowledge management systems. According to Chau et al., (2020), mobile commerce (m-commerce) was perceived as very beneficial for small and medium enterprises (SMEs) of Vietnam due to perceived aspects of benefits, compatibility, security, organizational readiness, innovativeness, customer pressures, government support, and IT knowledge of the managers. In the end of the study, they recommended other scholars to validate their study in developing countries for making comparisons.

The working and effectiveness of employees is the great advantage that is organization's capital. For instance, enhancing emotional intelligence is desired state in the organizations (Munir & Azam, 2017) that can also be done by the use of mobile phone technology by developing various emotional intelligence skills in the shape of

mobile applications. The inventors of mobile technology do not measure the influence of their inventions on work (Ter Hoeven et al., 2016). However, such mobile use should be within the moral and ethical values of the organizations as discussed by Mehmood et al., (2020) to reap positive outcomes for the employees and the organizations.

Small and Medium enterprises are known as the most important economic part of business. In the context of SMEs, their performance determines their success. The strategies and planning shows the achievements of an SME. The objective of a firm is achieved by the ability and performance of a firm (Al Salman & Hassan, 2016; García-Sánchez et al., 2019; Harwiki & Malet, 2020; Ismail & King, 2014; Queiroz et al., 2020; Taouab & Issor, 2019). A firm that use its own resources in most effective and efficient manners is always a profitable firm (Queiroz et al., 2020).

In a dynamic environment, the capability of being adaptive is very important. This capability is reflected by SMEs by being flexible enough to create changes and achieve their objective (Blackford, 2003; Ensari & Karabay, 2014). Wang and Ahmed (2007) has found that the flexibility would demand a quick and fast changes in practice and process. This capability helps SMEs to give evolving market opportunities. The evolutions of mobile devices and mobile technologies help to enhance performance of SMEs (Harwiki & Malet, 2020; Wang et al., 2016).

The objective of this study is to investigate the Information quality and usage of mobile devices in predicting adaptive performance of managers or owners in Small and Medium Enterprises (SMEs) of Pakistan. Managers or owners of small and medium enterprises face issues and obstacles of technological and managerial capabilities and skills to perform multiple tasks at workplace to achieve organization goals (Sherazi et al., 2013; Dar et al., 2017). Many managers are still in the process of applying and implementing the advance possibilities provided by mobile technology and analyzing innovative business models (Siau et al., 2003). The goal of this research is therefore to recognize the effect of adaptive capability of mangers of small and medium-sized businesses and their Adaptive performance in the context 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 information quality is associated to Adaptive Performance of managers? **(2)** To what extent information quality is associated to usage of mobile devices? **(3)** To what extent information quality is related to Adaptive Performance of managers through serial mediation of usage and mobile banking?

2. Literature Review

2.1. Information quality

Information quality has been considered to be accurate, sufficient, relevant and timely. Information quality is a "measure" that "tests semantic performance, the performance of knowledge in the expression of original intent" (Delone & McLean, 2003, p. 10). In other words, knowledge efficiency tests health using the message conveyed by the technical infrastructure through the collection of materials (Kim et al., 2009; Chung, & Lee, 2016; Changchit et al., 2017; Han, Park,). According to Kahn, Strong, and Wang (2002), the information delivered by the company has different characteristics (i.e. usability, integrity, legitimacy, added value, comprehensibility, objectivity, applicability, completeness, succinct representation, error-free and timely, reliable representation, sufficient knowledge, and customization). The purpose of providing these metrics is to meet customer needs in order to enhance their level of use. Chae et a., (2002) discover that the accessibility of knowledge has a huge impact on the use of the mobile Internet in general. More concisely, Lee and Chung (2009) found that knowledge validity has a positive effect on the use of M-Banking within the scope of South Korea.

Users are thought to use a mobile website at any time from everywhere to find or search product specifications, information for purchasing products and services. It has been pointed out that, if this information is incorrect or outdated, irrelevant, users may distrust the integrity of the mobile vendor and the ability to demonstrate service quality (Yang, in the press). They also may acknowledge that mobile phone vendors will delude and neglect their requirements and preferences. They may pretend to trust mobile vendors. Research conducted by Zhou (2011) indicates that the quality of information has a positive and significant impact on mobile users' trust and confidence in the mobile apps and website. Information quality has been recognized as a simulation of user trust and trust in mobile banking (Lee & Chung, 2009) of the virtual travel community (Elliot et al., 2013) of health infomediaries (Luo et al., 2010), and poor and weak information quality can undermine user know-how as users need and necessity to absorb much more struggles to scrutinize and examine information. This will increase the difficulty of their operation. Jung et a., (2009) have formed the view that the quality of content simulates the experiment of mobile TV users. Gao and Bai (2014) have argued that the information quality has been very much valued by users having experiments using social media networking services on smart mobile devices. The quality of information can also impact user satisfaction. Mobile vendors have underpinned quality information that helps users save time and will help them to assimilate product prices and provide relevant and appropriate information to the locations

identified by users (Mamonov & Benbunan-Fich, 2015), which is why users are expected to take positive views and attitudes towards the use of mobile services (Yang, 2010). In contrast, inadequate information quality can undermine the user behavior of mobile devices as they expect reliable, timely and useful information from the use of mobile services. Previous studies have shown the impact of information quality on consumer behaviors on mobile Internet sites (Zhou, 2014), mobile banking (Lee & Chung, 2009) and virtual communities (Elliot et al., 2013).Hence, the following hypothesis is proposed:

H1: There is a positive relationship between Information quality and Adaptive performance.

2.2.Mediation of Usage Behavior/ Usage (UB):

Usage "measures everything from a visit to a website, to a site navigation, to a retrieval of information, to a transaction execution" (Delone & McLean, 2003). Consumer satisfaction is a pattern of user behavior where they are committed to the brands they use and repeatedly have used the same service technology without trying to switch to a similar service as years pass (Oppong et al., 2014). Furthermore, existing clients prefer to choose the same brand regardless of the price problem (Ganguli & Roy, 2011). There are a range of approaches adopted by businesses to improve consumer satisfaction, such as offering rewards such as complimentary gifts and samples (Lee et al., 2001). Curiously, the company seeks to improve its commitment to its customers by raising the amount of utilization of its resources by improving the consistency of its facilities, the consistency of its knowledge and the efficiency of its processes (Laforet & Li, 2005; Saleem & Rashid, 2011). By-the degree of use, consumers will become addicted to the service and this, in effect, will create an unintended incentive to be faithful to the company (Lin & Wang, 2006). In fact, Ganguli and Roy, (2011) and Oppong et al. (2014) argued that use would enhance the sense of M-Banking. As such, the relations between the usage behaviour of mobile devices and work performance would be deduced as employees' usage behavior of mobile technology has a positive influence on their work performance.

Allen and Bryant (2011) have revealed the association between work performance and usage of technology by considering 200 workers in start-up business organizations. The employees assent that they compete their work tasks more effectively with the use of mobile technology. Kahle-Piasecki et al., (2012) also observe that mobile technology enhances employees' workable knowledge and ability. From the executives' point of view, mobile technology is considered to boost employees' communication skills, productivity and flexibility at low cost (Beutner & Pechuel, 2012; Lu et al., 2015).

The usage of an information system is described as "the use of a task-based system by the individual" (Burton-Jones & Gallivan, 2007; p. 659).The use construct takes into account the user, the system, and the associated activities. Usage of mobile has been evaluated in several ways: by single time usage or continuing usage, by single person or group of persons, either by self-revealed items or by experimental data. Researchers generally view usage as a direct antecedent of net benefits in IS work and/or as a mediator between knowledge content and net benefits (Straub et al., 1995; Kohli & Grover, 2008; Melville et al., 2004; Rai et al., 2002; Petter & Fruhling, 2011; DeLone & McLean, 2003; Wang et al., 2007). Based on the above it is assumed that;

H3: Usage of mobile device mediates the relationship between Information quality and Adaptive performance of managers at workplace.

2.3 Mobile Banking

Mobile banking empowers consumers to operate their bank accounts directly from their mobile phones to improve banking services' connectivity and effectiveness (Nour & Soltani, 2019). These days, all banking services can also be achieved via mobile banking, including depositing and transferring money and receiving alerts on the nearest ATMs and other services (Maina & Mungai, 2019). Mobile banking (compared to conventional banking) has become more helpful in saving time for bankers and customers. Financial transactions and the ability to interact can be handled more quickly and effectively (Sharma & Sharma, 2019).

Latest advancements in digital technology result in significant improvements and constant echoes with use of mobile banking in the financial market (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 application provided by banks or other financial institutions that enables consumers to analyze the various mode of data utilizing mobile applications such as PDAs (Personal Digital Assistants), smartphones, or mobile devices (Al-Jabri & Sohail, 2012). This app can use for transactions such as savings deposits, transactions and financial transactions (Alkhaldi, 2016; Slade et al., 2015; Arcand et al., 2017; Slade, Dwivedi, Piercy, & Williams, 2015). Mobile Banking is very unusual. It has different and similar standards of device consistency, quality of knowledge and quality of service compared to previous e-Banking platforms such as computer systems, kiosks and laptop computers (Tam and Oliveira 2017). For example, owning a smart device will also allow customers to engage in financial transactions

without any such physical fixed devices. As a result , mobile banking allows users to instantly connect and trade sequentially with the virtual world, but this has also changed the way banking services are used (Aboelmaged & Gebba, 2013). Managers may have several relative advantages of mobile banking, such as accessibility, convenience, ease of payment, security and control.

H4: Usage of mobile devices and mobile banking serially mediate the relationship between information quality and adaptive performance.

2.3. Adaptive Performance

Adaptive performance is all about analyzing and understanding changes in the workplace as well as making adjustments to effectively respond to those changes (Pulakos, Arad, Donovan, & Plamondon, 2000). Adaptive performance is normally embraced by multifaceted workers that are keen to modify and adapt their responses relatively to changes in working environment and challenges. High adaptability is one of the most sought capabilities of employees by organizations because employees with high adaptability are able to respond positively to dynamic business environments of the current world (Niessen et al., 2010). From employees point of views, adaptability enables the employees to progress and prosper in their career relative to employees are reluctant to change (Pulakos et al., 2000).

It is important to note that one of the major ways in which technology improve adaptability skills of managers is that it improves collaboration among different layers of management and front end. As collaboration among the employees is improved, skills, knowledge, and capabilities are shared freely through effective communication across the SMEs (Pollack & Adler, 2016). By sharing knowledge, skills, and capabilities through communication, managers does not only obtain first-hand market/competition insights but also ideas, feedbacks, opinions, and suggestions from employees from all layers of the management (Usman et al., 2018). This improves the decision making process of managers as they could adapt their performance and make creative decisions to handle challenges and tackle difficult situations (Pollack & Adler, 2016).

Mobile and technological devices simplify or further automate routine tasks that traditionally consumed most of the times of the managers. For example, instead of manually crafting daily reports, modern mobile technologies enable the managers of SMEs to manage the preparation and filing of daily reports instantly (Usman et al., 2018). Also, complex tasks of the management are being simplified using technology such as competitors' analysis and market reports can be done instantly with the help of technology (Kitsios & Kamariotou, 2018). This simplification saves a lot of the time of managers and this time can be used for more creative thinking and decision making. As a result, creativity and innovation of the managers is enhanced and they become more flexible in handling multiple scenarios improving their adaptability skills (Kitsios & Kamariotou, 2018).

One of the major benefits of technology such as mobile applications is that they enable managers of SMEs to manage their time effectively. Through mobile technologies and applications, managers can track the time they spend on different activities and analyze their time consumption. Using such analyses, they can set their priorities by allocating most of the time to the most productive activities (Forth & Bryson, 2019). As managers manage their time effectively, they will sense and identify ways in which they can further improve their time management by adapting their performance (M'zungu, Merrilees, & Miller, 2019). Also, they are more creative and find innovative ways to do a task effectively in a new way to further save time and enhance efficiency. So, by educating and tracking time through technology, adaptability skills of the managers of SMEs are improved (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 information quality through serial mediation of usage of smart phones and mobile banking in predicting adaptive performance. 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, quality, usage of mobile devices, and mobile banking, small and medium-sized enterprises (SMEs) can resolve deficiencies and make more efficient use of mobile devices for adaptive performance.

As part of the larger study, 422 responses were received and response rate is 50%.The method of research for this thesis is covariance-based structural equation modeling (SEM). A study sample of at least 200 cases is usually considered and appropriate for SEM (Hair, Black, Babin, & Anderson, 2010; Kline, 2011). Hair et al., (2010) have explained that adopting a broad sample size, like at least 200 cases, the results accuracy of SEM is increased. To test the hypotheses, measurement and structural models were developed in SEM.

The scale of Information quality (INFQ) consisting of 4 items was adapted from Kim et al., (2004), The mediating variable Usage of mobile device (USE) having 8 items scale was adopted from the study of Yueh et al., (2015). The

scale of relative advantage of mobile banking comprising 6 items was adapted from Sokari, I.E., (2017).The last dependent variable Adaptive performance scale having 8 items was adopted from the study of Linda et al., (2013**).** Reponses has been computed by 5-point-Likert Scale as anchored by 1 (strongly disagree) following 5 (strongly agreed). Clusters sampling technique will be used to draw sample size for the study.

4. 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
	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

In this research study, data about gender, age, marital status, establishment composition, job tenure was calculated through SPSS. Four hundred twenty-two responses were received, in which 332 male respondents and 90 female respondents. 2.6% respondents age are less than 20 years, 36.3% of respondents age are between the range of 21 to 30 years, 37.9% of respondents' ages are between the range of 31 to 40 years which shows highly response rate in this range of age, 17.8% of respondents age are between the range of 41 to 50 years, 4.5% of respondents age are between the range of 51 to 60 years and 0.9% of respondents age are more than 60 years which shows least response rate. 69.2 % of respondents are married and 30.8% of respondents are unmarried. There are three categories of establishment composition: Trading, Manufacturing and Services. 32.5% of respondents belong to trading sector, 18.7% of respondents belong to manufacturing sector and 48.8 % of respondents belong to services sector which shows highly response rate. 3.6% of respondent's job tenure is less than 1 year, 12.1% of respondent's job tenure is between the 1 to 2 years, and 14% of respondent's job experience is between the 3 to 4 years, 13.3% of respondent's job tenure is between 5 to 6 years, 21.6% of respondents job tenure is between 7 to 10 years, 35.5% of respondents job tenure is more than 10 years which shows highly response rate in the job tenure categories.

4.1. Data Normality Analysis:

Table 2: Data Skewness, Mean and Kurtosis

Items	Mean	Std. Deviation	Skewness	Kurtosis
INFQ1	3.8531	1.08858	-1.115	.734
INFQ2	3.8602	.91795	-.904	.689
INFQ3	3.6872	1.02082	-.838	.287
INFQ4	3.7796	.99465	-.958	.647
USE1	3.7678	1.18105	-1.019	.224
USE2	3.9218	.94054	-1.014	.706
USE3	3.9076	.91360	-.849	.578
USE4	3.7180	1.01701	-.733	.064
USE5	3.7346	1.06808	-.724	-.118
USE6	3.8626	.94759	-.867	.580
USE7	3.8697	.95980	-.935	.473
USE8	3.8057	1.02239	-.836	.191
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 table above shows the normal distribution of the data collected. In 1979, Bulmer defined a thumb rule: the projected skewness value must be between +1 and-1, and Balandam and Mac Gillivray (1988) initiated that the estimated kurtosis value should be between +3 and-3 forecasts. Complete elements have normally been approved as the estimated skewness value is in the middle of +1 and-1, but some values are slightly inflated. The estimated kurtosis values are within +3 and-3 which, in relation, indicate the data is normally distributed and we can say that normality is fullfiled and has the capacity for more analysis.

Table 3: Reliability Analysis

Variables	Cronbach alpha
Information Quality	0.767
Usage	0.835
Mobile Banking	0.809
Adaptive Performance	0.849

Reliability analysis table shows that cronbach' alpha for information quality is 0.767, usage is 0.835, mobile banking is 0.809, and adaptive performance is 0.849. The thumb rule for cronbach's alpha is that 0.7 and above is considered good, 0.8 and above is considered better, and 0.9 and above is considered the best.

Table 4: Discriminant Validity
HTMT Analysis

VAR.	INFQ	USE	RMB	ADP
INFQ				
USE	0.332			
RMB	0.450	0.566		
ADP	0.459	0.665	0.693	

Thresholds are 0.850 for strict and 0.900 for liberal discriminant validity.

There are no warnings for this HTMT analysis.

Table 4: Correlation Analysis

Sr. No.	Variables	1	2	3	4
1	Information Quality	**1**			
2	Usage	**0.387*** **	**1**		
3	Mobile Banking	**0.430*** **	**0.625*** **	**1**	
4	Adaptive Performance	**0.436*** **	**0.720*** **	**0.694*** **	**1**

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

The correlation analysis table shows the association between the constructs. Table 4 shows Pearson's (r = 0.387) information quality and usage which shows a significant and positive relationship. The information quality is correlated with the mobile banking (r = 0.430) and shows a positive and significant relationship. The information quality is correlated with the adaptive performance (r = 0.436) and shows a positive and highly significant relationship. Usage is strongly linked with mobile banking (r = 0.625) and has a strong positive relationship at 0.01 level. Usage is strongly linked with adaptive performance (r = 0.720) and has a strong positive relationship at 0.01 level. Mobile banking is highly correlated with adaptive performance (r = 0.694) and shows positive and highly significant relationship at 0.01 level.

Table 3: Confirmatory factor analysis

Construct	Item	Loading	C.R	Cronbach alpha
Information Quality	INFQ1	0.62	0.76	0.77
	INFQ2	0.75		
	INFQ3	0.69		
	INFQ4	0.66		
Usage	USE2	0.75	0.76	0.83
	USE3	0.66		
	USE4	0.65		
	USE5	0.55		
	USE6	0.50		
Mobile Banking	RB1	0.66	0.80	0.81
	RB2	0.67		
	RB3	0.72		
	RB4	0.61		
	RB5	0.66		
Adaptive Performance	A P1	0.69	0.84	0.85
	AP2	0.67		
	AP3	0.72		
	AP4	0.68		

AP5	0.70
AP6	0.61
AP7	0.55

The Confirmatory factor analysis table shows the values of the factor loading, composite reliability, and Cronbach's alpha. Most of the values of factor loading are above the 0.50 threshold so the measure is assumed to be adequate. Composite reliability for all constructs are also above the threshold 0.7 which means that convergent validity was present and scales met the criteria of validity. Cronbach alpha for service quality is 0.68, usage is 0.83, mobile banking is 0.79, and adaptive performance is 0.84. 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.

4.2 Test of Multicollinearity

As a general guideline, if the Value of VIF is less than 5 then there is no multicollinearity problem. If the VIF value ranges from 5 to 10, there is a moderate multicollinearity problem and if the VIF value is equal or greater than 10, there is a serious multicollinearity problem. Multicollinearity test was carried and all VIF values in Table 5 were found to be less than 5 and did result in no multicollinearity.

TABLE 5: Collinearity Statistics

Variables	Tolerance	VIF
Information Quality	0.861	1.161
Usage	0.740	1.351
Mobile Banking	0.702	1.424

4.2. Structural Equation Model:

The Structural Equation Model (SEM) is often a procedure for computing or analyzing relationships through depicted information plus specific assumptions (abstract hypotheses). SEM is extremely applicable to both primary and confirmatory models. The SEM has been used to form inferential factors, these factors are not primarily examined and are therefore generally derived more closely from a variety of separate factors. SEM technique involves regression, path assessment and factor assessment. In other words, SEM is an amalgamation of both factor analysis (CFA) and multi-regression analysis. AMOS 26 has been used in the present study to assess the measurement or test of the model. SEM is used to identify anomalies, changes, correlations, dependence and independence between the variables under observation and dialogue.

4.2.1. Confirmatory Factor Analysis (CFA)

Confirmatory Factor Analysis (CFA) is a type of structural equations model that is probably understood in the same way as the evaluation model. With the help of Amos 26, the figure was independently ready for individual factors. Precisely once the CFA is made, the next step is to create a model of great wellness / fitness. There are a few kinds of health model splitting. The CFI must range from 0 to 1 showing the fitness of the model. In addition, if the CFI value is 0.90 or greater, it is as per limit (Hu & Bentler, 1999).

However, according to Hu & Bentler (1999), the assessment of RMSEA will be below 0.08, that further shows some fitness of the model. If the value of RMSEA is less than 0.06, the model is appropriate (Hu & Bentler, 1999). If the value of GFI and AGFI is greater than 0.90, it is highly valued for model fitness.

The overall measurement model is intended to test the validity and accuracy of the questionnaire as shown in Figure 2.Table 6 demonstrates the convergent validity of all items. Convergent validity has expected that two variables are correlated to each other in order to assess the same design.

In our analysis, we evaluate the fitness of the overall model. Table 6 shows that CMIN / DF is 2.453, RMR is 0.055, GFI is 0.908, AGFI is 0.882, CFI is 0.921 and RMSEA is 0.059. All values shall meet the threshold values and the adequate standard.

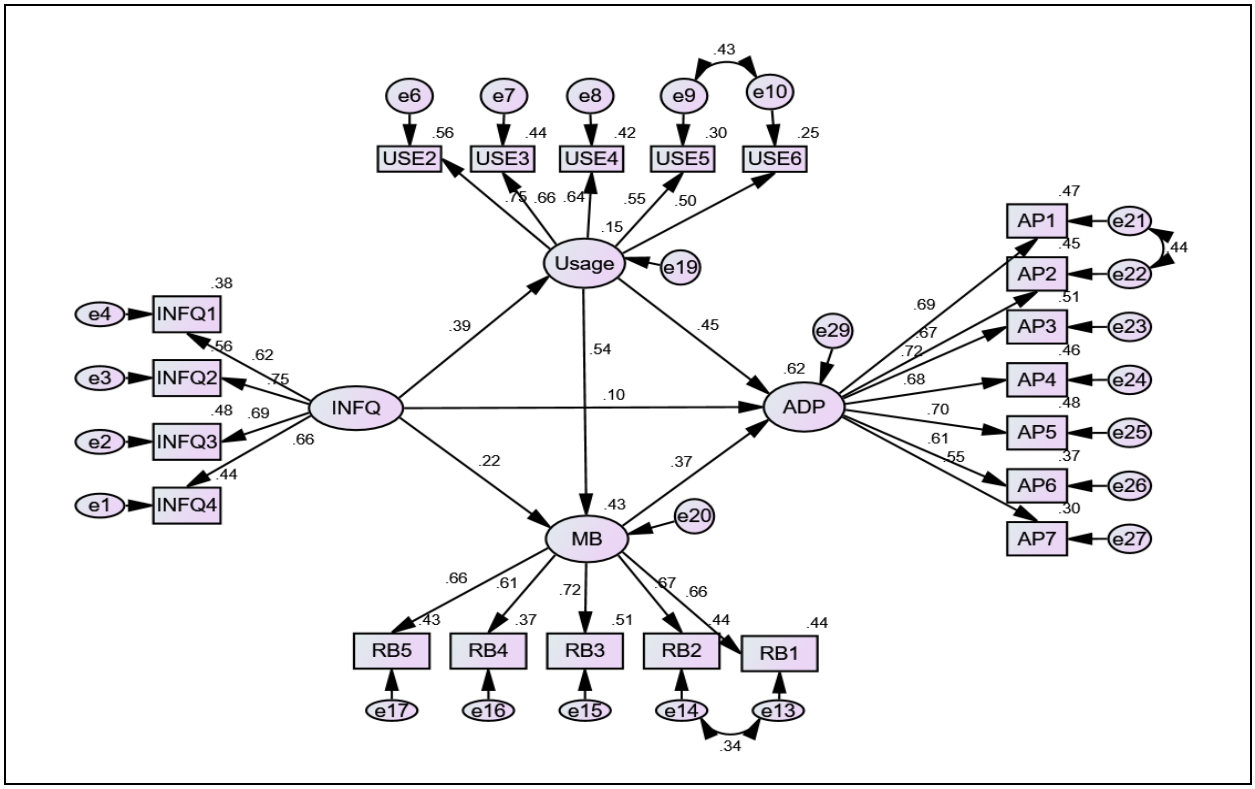

Figure 2: Hypothesized Structural Model

TABLE 6: Fitness Summary

Model	Hypothesized	Thresholds
CMIN/DF	2.453	< 3
RMR	0.055	Closer to 0
GFI	0.908	≥ 0.9
AGFI	0.882	≥ 0.8
CFI	0.921	≥ 0.9
RMSEA	0.059	≤ 0.08

4.3. Hypothesis Testing

4.3.1. Direct effect

After evaluating the fit of the model, AMOS develops a structural model to determine the relationship between the variables. Table 7 shows the direct impact of information quality on adaptive performance. Information quality has a positive and significant impact on adaptive performance (β=0.571, p<0.001), so H1 has been accepted.

Table 7: Direct Effect without Mediation

Hypotheses	Standardized Estimates	p-value
Information Quality---> Adaptive Performance	0.57	0.001

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

Table 8: Direct Effect with Mediation

Direct paths	Standardized Estimates	p-value
Information Quality ---> Adaptive Performance	0.10	0.110
Information Quality ---> Mobile Banking	0.22	0.001
Information Quality ---> Usage	0.39	0.001
Usage -----> Mobile Banking	0.54	0.001
Usage -----> Adaptive Performance	0.45	0.001
Mobile Banking----> Adaptive Performance	0.37	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 determine the mediation effect. The summary of the mediation analysis is shown in Table 8. Full serial mediation is observed in the case of information quality and adaptive performance as standardized direct beta without mediation is significant and positive, as well as in the presence of serial mediators (usage and mobile banking) information quality and adaptive performance is positive and insignificant (β=0.09, p<0.066), and standardized indirect beta is also significant and positive (β=0.335, p<0.001) thus hypothesis 2 is accepted.

Table 7 Path analysis results.

H.	Path	Estimate	SE	P	CI	Result
H1	INFQ----> AP	0.101	0.057	0.110	[-0.003; 0.219]	Not supported
H2	INFQ---> Usage---> AP	0.176	0.060	0.001	[0.108; 0.312]	Supported
H3	INFQ---> MB---> AP	0.081	0.046	0.001	[0.028; 0.179]	Supported
H4	INFQ---> Usage--->MB---> AP	0.078	0.038	0.001	[0.035; 0.160]	Supported
	Total Indirect Effect	0.335	0.072	0.001	[0.314; 0.551]	

5. Contributions, Recommendations, Conclusion

5.1. Contributions

The current study has theoretically contributed to the existing literature on adaptive performance of managers in the field of small and medium-sized enterprises in Pakistan for a number of reasons. Firstly, Serial mediation is observed in the case of information quality and adaptive performance as direct beta without mediation is significant and positive, as well as in the presence of mediator (usage) information quality and adaptive performance is positive and insignificant. Secondly, this study tested the adaptive performance in the context of Pakistan. This is consistent with the recommendations of Delone and McLean (2003) in new contexts. Thirdly, In the light of the recommendations of Chau et al., (2020), current study has led the conversation towards positive effects of adapting mobile technology in enhancing adaptive performance of SMEs managers in Pakistan. Current study also provide relevant managerial implications for apps developers and mobile vendors. First, the results of this study show that high-quality information should be provided by apps developers and mobile vendors to enhance adaptive performance. Information should be accurate, consistent, timely, and easy to understand and free of technical terms (Ponte et al., 2015).

5.2. Future Recommendation

Future researchers must focus on empirical investigation of testing effect of service quality, system quality along with information quality and usage of mobile device on adaptive performance of managers comparing SMEs and large enterprises in Pakistan.

5.3. Conclusion

This study was designed to test an empirical investigation of Information quality and usage of Mobile devices in predicting adaptive performance of managers in small and medium enterprises of Pakistan. The data was collected from the clusters of capital cities of Pakistan and SEM was used to test the hypotheses. All three hypotheses are validated and supported with the results of SEM analysis. The findings of this study show that (1) Information quality shows significant impact on the adaptive performance of managers through partial mediation of usage of mobile devices in small and medium enterprises of Pakistan; and (2) the findings of this study will also help the academia, SMEDA and practitioners to understand importance of mobile technology and the impact of information quality and usage of mobile devices in adaptive performance.

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