



# The Journal of **ARSYM**

*A Publication of Students' Research of the*  
**Annual Research Symposium in Management**

Volume 02 Issue I

# **The Journal of ARSYM**

A Publication of Students' Research of the Annual Research Symposium in  
Management

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The Journal of ARSYM (JARSYM) is a refereed journal published bi-annually by the Faculty of Business Studies & Finance, Wayamba University of Sri Lanka. The aim of the JARSYM is to disseminate high-quality research findings on a variety of timely topics generated by the undergraduate and postgraduate researchers in the Wayamba University of Sri Lanka. Furthermore, it opens up avenues for the undergraduates involved in the industry to share their inventions, state-of-the-art discoveries and novel ideas. The main philosophy behind the JARSYM is to enhance the research culture within the faculty, thereby within the Wayamba University. All research articles submitted are double blind reviewed prior to publishing. Views expressed in the research articles are not the views of the Faculty of Business Studies and Finance, Wayamba University of Sri Lanka or the Editorial Board.

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# **Impact of Mobile Banking Service Quality of Commercial Banks on Customer Satisfaction (With Special Reference to Gampaha District, Sri Lanka)**

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## **ABSTRACT**

Mobile banking services have created a new, convenient and fast delivery channel for customers to enjoy banking services from anywhere, any time. Mobile devices have created a wide array of business opportunities through the expansion of wireless technology. Since Mobile banking is ubiquitous in nature, customers who use mobile banking experience a greater flexibility. However, it has been identified that, Sri Lankan banking customers are bit hesitant to perform their banking activities through mobile devices. Therefore, this study has been carried out with the objective of identifying the impact of mobile banking service quality of commercial banks on customer satisfaction with special reference to Gampaha district. Literature supported to identify the mobile banking service quality as the independent variable and usefulness, ease of use, relative advantage, perception of risk and user's life style and current needs as the dimensions of independent variable on customer satisfaction. The study uses primary data which gathered from the banking customers in commercial banks. The data were collected through an online questionnaire and reliability analysis, descriptive statistics, correlation analysis and regression analysis were used to establish the reliability and analyze the collected data. This research study has revealed that, usefulness, ease of use, relative advantage, user's life style and current needs have a statistically significant impact on customer satisfaction and on the other hand, perception of risk has a statistically insignificant impact on customer satisfaction. Therefore, banks should customize their products and services according to the customer requirements in the process of mobile banking product development and it will be much more helpful to make a satisfactory and successful service for the banking customers.

**Keywords: Customer Satisfaction, Mobile Banking, Perception of Risk**

## **1. INTRODUCTION**

### **1.1 Background of the Study**

Due to the rapid development of the wireless technology, the number of mobile phone usage has proliferated in Sri Lanka. Hence, mobile phones have created a platform for business organizations to expand commercial transactions in a convenient manner. Further, it has created a wide array of business opportunities through the expansion of wireless technology and mobile banking plays a pivotal role in the banking and finance industry in Sri Lanka. Mobile banking can be defined as “a channel whereby the customer interacts with a

bank via mobile device” (Barnes & Corbitt, 2003). Transformative models integrate unbanked populations into the formal financial sector (Mostafa, Reza, & Tanvir, 2010). Mobile banking is an application of mobile computing which provides customers with the support needed to be able to bank anywhere, anytime using a mobile handheld device and a mobile service (Ravichandran & Madana, 2016). Mobile banking offers anytime and anywhere access and customers have a greater flexibility to use mobile banking over the use of electronic banking. Mobile banking services provide time liberty, expediency and swiftness to banking customers. Mobile banking would be an astrictive communication way of providing banking services and mobile banking could contribute to the development of the financial sector through promotion of better financial services. Therefore, mobile banking plays a vital role in day-to-day life of banking customers.

According to Technology Acceptance Model (TAM), usefulness is considered as the degree to which using a particular system would enhance the individual’s job performance (Nysveen, Pedersen, & Thorbjornsen, 2005). The relationship between perceived ease of use and their effects on a user’s behavior have been examined and supported extensively in the IT/IS literature (Gahtani, 2001). Relative advantage also can be described as an innovation that provides greater service to customers when it is compared with its predecessors (Karayanni, 2003). Perceived risk was first introduced in marketing research as an external variable in the study of innovation diffusion and adoption contends that the speed of adoption is negatively related to the level of perceived risk (Frambach & Schillewaert, 1999). Once the innovation takes place, it helps to develop the life style of the users and it will be more if the adoption increases satisfaction. Compatibility with user’s life style and current needs also considered as one of the main sources for theoretical framework, called Innovation Diffusion Theory (Rogers, 2003).

## **1.2 Problem Statement**

Commercial banks in Sri Lanka strive to achieve the competitive position in the domestic market through building a strong relationship with customers by providing a novel service with good quality and higher security (Kahandawa & Wijayanayake, 2014). Therefore, banks should invest and replenish their information technology initiatives to gain the confidence and satisfaction that customer as aspires through mobile banking services. There have been a number of products introduced by Sri Lankan banks to encourage mobile banking. The main advantage of this service is that customer can engage in transactions and perform banking activities around the clock. Only 20% of banking customers use mobile banking services while there are 27.38 million of smart phone users in Sri Lanka (Ayoobkhan, 2018). This confirms that, Sri Lankan consumer still not rely on the use of banking services through mobile phones. The power of mobile banking shows the utilization of multiple mobile banking channels to understand what mobile tools will be needed to become the premium choice for all banking activities. This research study is focused on understanding the usage of mobile banking services by Sri Lankan banking customers especially on the field of services through focusing on customers’ satisfaction to let customer feel secure and private from being monitored.

Therefore, this research study is trying to answer for the question of what is the impact of mobile banking service quality of commercial banks on customer satisfaction.

### **1.3 Objectives of the Study**

The general objective of this study is to identify the impact of mobile banking service quality of commercial banks on customer satisfaction with special reference to Gampaha district, Sri Lanka. In addition, this study was carried out with specific objectives to identify the impact of usefulness, ease of use, relative advantage, perception of risk and user's life style and current needs on customer satisfaction.

### **1.4 Significance of the Study**

- Identifying the factors that cause to increase the customer satisfaction through mobile banking in commercial banks in Sri Lanka.
- This study will provide information for banks to enhance the satisfaction level of banking customers through mobile banking services.
- The findings of the research study will be helpful to use as a reference source for future researches who are interested to study the impact of mobile banking service quality of commercial banks on customer satisfaction

## **2. LITERATURE REVIEW**

### **2.1 Technology Acceptance Model**

Technology Acceptance Model (TAM) is introduced by (Davis, 1986) is one of the more widely used and accepted models in research which uses to explain the Information Technology (IT) and Information System (IS) acceptance and usage. Technology Acceptance Model (TAM) tries to establish a relationship and it also describe the intention of users and how users are influenced by a product or service. This theory emphasizes the importance of usefulness and ease of use in technology (Bagozzi, Warshaw, & Davis, 1992). TAM suggests that individual's acceptance and usage of a technology are determined by two key beliefs, perceived usefulness and ease of use (Davis, 1986).

### **2.2 Innovation Diffusion Theory**

Innovation Diffusion Theory (IDT) was developed by (Rogers E. , Diffusion of Innovations, 1962). This theory is the most appropriate for investigation of the adoption of technology in higher education and educational environment (Medlin & Whitten, 2001), (Parisot, 1995). Innovation Diffusion Theory (IDT) describes that the adoption of an innovation by consumers is not a straight forward process (Bouwman, Carlsson, Castilo, & Waldon, 2007). In this theory, discuss the importance of understanding the role of barriers and benefits of mobile services as well as the role that functional differences of mobile service bundles play in the process of actual and future use of these bundles. When a new innovation comes in, it helps to develop the life style of the users and it will be more if the adoption increases satisfaction and it is also a fact that a progressive image could be created among the community using mobile

banking services and they get self – respect and it will play a great role in adoption of the technology.

### **2.3 Customer Satisfaction**

Customer satisfaction can be defined as a measurement that determines how satisfied customers are with a company's product, service and capabilities and customer satisfaction means a person's feeling of pleasure or disappointment, which resulted from comparing a product's perceived performance or outcome against his/her expectations (Kotler, 2000). Most researchers agree that satisfaction is an attitude or evaluation that is formed by the customer comparing their pre – purchase expectations of what they would receive from product to their subjective perception of the performance they actually did receive.

### **2.4 Mobile Banking Service Quality**

The increased prevalence of mobile phones provides existing opportunities for the growth of mobile banking in Sri Lanka (Dandeniya, 2014). Mobile banking refers to the provision and use of banking and financial services through mobile telecommunication devices such as mobile phones or tablets (Goyal, 2012). Mobile banking allows customers to use mobile devices as another channel for their banking services. Most mobile banking offerings are additive in that they provide a new delivery channel to existing bank customers (Mostafa S. , 2010). Mobile banking is considered to be one of the most value-added services in banking (Lee, et al., 2003). Facilities provided by mobile banking services have helped financial institutions to reduce traditional face to face banking transactions through automated services where ever possible.

### **2.5 Impact of Usefulness on Customer Satisfaction**

Respondents' response on usefulness of mobile banking is shown evident that the respondents generally agreed that mobile banking enables them to accomplish their tasks more quickly and it is generally advantageous and makes it easier for them to carry out their tasks. (Ravichandran & Madana, 2016). Usefulness of mobile banking in improving performance or efficiency will positively impact attitude toward that application (Aboelmaged & Gebba, 2013). Perceived usefulness is a significant driver of customer satisfaction (Marinkovic & Kalinic, 2017). If consumers find it useful, (especially now having electronic banking already accessible) the higher the intention to adopt mobile banking services (Karjaluto, et al., 2010).

### **2.6 Impact of Ease of Use on Customer Satisfaction**

If there are user friendly mobile banking applications and basic skills regarding using application, consumers are more likely to adopt for mobile banking services (Kazi & Mannan, 2013). Ease of use is posited as influencing the adoption of mobile banking because of the higher complexity in using a small device to conduct banking transactions and if higher the ease of use of the mobile device for banking transactions, the higher the intention to adopt it or use it (Karjaluto, Riquelme, & Rios, 2010). Perceived ease of using mobile banking directly affects the mobile banking adoption (Hanafizadeh, et al., 2014).

## **2.7 Impact of Relative Advantage on Customer Satisfaction**

Greater the relative advantage of using mobile banking services, the more likely that mobile banking will be adopted (Hettiarachchi, 2014). Relative advantage had significant effect on consumer adoption for mobile banking services (Yunus, 2014). There is a positive impact of relative advantage on customer satisfaction on mobile banking services and banks face dual competitive pressure to provide service quality and administrative efficiency (Yu & Fang, 2009). There is a positive impact of relative advantage on customer satisfaction. Further, researcher found that, the antecedents of attitude toward mobile banking differ between potential and repeat customers (Lin, 2011).

## **2.8 Impact of Perception of Risk on Customer Satisfaction**

There is a negative relationship between the perceived risk and the mobile banking adoption and they further found that, when the risk level is higher, the satisfaction may reduce as vice versa (Ayoobkhan, 2018). Perceived risk has a highly significant influence on consumers' adoption and attitude of mobile banking services (Kumari, 2015). There is a negative relationship between perceived risk and mobile banking app usage in banking customers of Gampaha district (Jayamanna, 2019). Perceived risk has a negative influence on intention to adopt mobile banking services among low- income sector in Pakistan (Kazi & Mannan, 2013).

## **2.9 Impact of User's Lifestyle and Current needs on Customer Satisfaction**

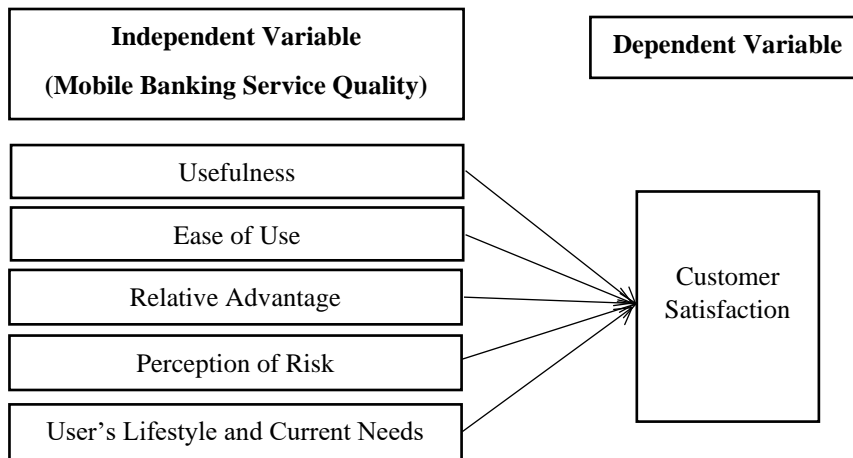
Compatibility has a highly significant influence on consumers' adoption and attitude of mobile banking services. Adoption with life style was found to be the most significant antecedents, explaining the adoption of mobile banking (Kumari, 2015). Due to the cultural effect, the modern banking is not compatible with the life style of rural population of Pakistan though the population widely acknowledged its usefulness (Mazhar, et al., 2014). Compatibility (with life style and device) is the most significant driver of intentions to adopt mobile banking services in developed and developing countries (Shaikh & Karjaluo, 2015).

## **3. METHODOLOGY**

The quantitative method and deductive approaches were used to investigate the impact of mobile banking service quality of commercial banks on customer satisfaction. Primary data was gathered directly from respondents for this research study and the collected data were analyzed using SPSS version 20 tool. Previous literatures have been adopted to identify the independent variable as mobile banking service quality that affected on customer satisfaction and dimensions of the independent variable are usefulness, ease of use, relative advantage, perception of risk and user's life style and current needs. Figure 1 shows the conceptual framework developed using the five independent factors.

Target population is comprised with respondents who are the banking customers of four leading commercial banks in Gampaha district. Researcher selected four commercial banks as Bank of Ceylon, People's Bank, Sampath Bank and Hatton National Bank by representing both private and public sector. Because these banks have introduced most of the mobile banking services to

their customers (Kahandawa & Wijayanayake, 2014) and Sample of this research is 310 respondents from total population based on the Krejcie and Morgan table. Convenience sampling method was used to select the banking customers of four commercial banks. Purposive sampling used to gather data from the respondents who have better knowledge and experience related to mobile banking services which is suitable for the achievement of the research objective. Researcher used ten (10) months of time period to complete this research study.



**Figure 1: conceptual framework**

Source: Researcher Constructed (2020)

The researcher used primary and secondary data to conduct this research. Primary data about the impact of mobile banking service quality of commercial banks on customer satisfaction has collected through online questionnaire and this method has helped to obtain first – hand information from the respondents. The questionnaire for this study consisted of total twenty-eight (28) questions that were developed based on independent and dependent variable. There were seven sections in the online questionnaire. Researcher analyzed data in terms of align with the objective of the study already proposed after the data gathering process. The secondary data was collected from the other research findings that have already investigated in relation to this study.

#### **4. RESULTS AND DISCUSSION**

Researcher used Statistical Package for Social Science (SPSS) version 20 tool for data analysis. Researcher analyzed reliability analysis, descriptive statistics, correlation analysis and regression analysis.

According to kurtosis value, except perception of risk, all other variables have positive kurtosis. It shows usefulness, ease of use, relative advantage, user's life style and current needs and customer satisfaction have longer tail distribution. But perception of risk shows a negative kurtosis value which is less than zero and it shows a right tail distribution. The Cronbach's Alpha values of usefulness, ease of use, relative advantage, perception of risk, user's life style and current needs and customer satisfaction on mobile banking service quality

remained as 0.756, 0.838, 0.759, 0.936, 0.894 and 0.786. It means, according to the reliability analysis, Cronbach's Alpha value of all independent variables was higher than 0.7 and therefore, the questionnaire used by the researcher was a reliable one.

#### 4.1 Examining Respondents' Profile

According to data analysis, out of 310 respondents 59% were male and 41% were female. Accordingly, the majority of the respondents were male. It means male respondents are using mobile banking services rather than female respondents. It can be noted that, 56.5% of the respondents were single and 43.5% were married.

The majority of the respondents were employed as 71.6% and rest represents business owners and students as 11.3% and 17.1% respectively. In fact, most of the respondents were employed respondents than students and business owners. Most of the respondents were in age between 21-30 years as 53.9% others were less than 20 years, 31 – 40 years, 41 – 50 years and more than 50 years as 3.2%, 24.2%, 16.8% and 1.9% respectively. In the age category the highest responses were coming from the age category of 21 – 30 years. A trend can be observed on using mobile banking services among the youth. Out of the respondents, 2.9% has a post – graduate degrees, 24.5% has a bachelor degree, 20.6% has some sort of a professional qualification, 14.8% has a diploma, 33.2% has passed A/L and 3.9% has passed O/L. The highest respondents were from the category of A/L qualification and the least is from the post – graduate qualification. It should be noted that, majority of mobile banking customers are interacting with the bank between 1-5 years as 56.8%. However, about 31% customers have less than 01-year interaction, about 10.3% customers have more than 05 years' interaction and about 1.9% customers have no interaction with the bank. Frequency can be categorized as daily, twice a week, once a week, once a month and no frequency and the percentages were 3.5%, 7.1%, 21%, 66.5% and 1.9% respectively. It should be noted that, most of the customers are using mobile banking services for once a month.

#### 4.2 Descriptive Analysis and Correlation Analysis

**Table 1: Descriptive Statistics, Correlations**

Variable	Mean	Standard Deviation	Pearson Correlation	Significance Value (p value)
Usefulness	4.1148	0.59662	0.734	0.000
Ease of Use	4.1032	0.65195	0.721	0.000
Relative Advantage	3.7252	0.67393	0.553	0.000
Perception of Risk	3.4297	0.90716	0.154	0.007
User's Life Style and Current Needs	4.1639	0.70246	0.797	0.000

Source: SPSS data (2020)

According to the Table 1, the mean value of usefulness, ease of use, relative advantage, perception of risk and user's life style and current needs were 4.118, 4.1032, 3.7252, 3.4297 and 4.1639 respectively. The standard deviation of usefulness, ease of use, relative advantage, perception of risk and user's life style and current needs were 0.59662, 0.65195, 0.67393, 0.90716 and 0.70246

respectively. The lowest mean value was from perception of risk as 3.4297 and maximum mean value was from user's life style and current needs as 4.1639. Perception of risk variable was highly dispersing from the mean value and usefulness has the data set has been dispersed close to the mean value. Therefore, perception of risk has the highest standard deviation and usefulness has the lowest standard deviation.

Pearson correlation was used to identify the nature, strength of the relationship/impact between dependent and independent variables. Pearson correlation values of usefulness, ease of use, relative advantage, perception of risk and user's life style and current needs were 0.734, 0.721, 0.553, 0.154 and 0.797 respectively at 0.01 significant level. Therefore, all independent variables have positive correlation with customer satisfaction on mobile banking service quality. Usefulness, ease of use, user's life style and current needs represent strong positive correlation towards customer satisfaction on mobile banking service quality. Further, relative advantage shows a moderate positive correlation and perception of risk shows a weak positive correlation towards customer satisfaction on mobile banking service quality.

According to correlation analysis the significance value of all independent variables was 0.000 and the significance value of perception of risk was 0.007. It means all independent variables (usefulness, ease of use, relative advantage, perception of risk, user's life style and current needs) were statistically significant variables because all p values were lower than 0.01 (At 0.01 significant level).

#### 4.3 Regression Analysis

**Table 2: Regression Results**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.844 <sup>a</sup>	.712	.708	.36443	1.899

a. Predictors: (Constant), Usefulness, Ease of Use, Relative Advantage, Perception of Risk, User's life style and current needs

b. Dependent Variable: Customer Satisfaction on Mobile Banking Service Quality

Source: SPSS data (2020)

In this research study, R value was 0.844 and R square ( $R^2$ ) value was 0.712. It means that, 71.2% of customer satisfaction is explained by the particular dimensions of the independent variable such as usefulness, ease of use, relative advantage, perception of risk and user's life style and current needs. The rest of 28.8% of customer satisfaction on mobile banking service quality is depended on the other variables other than variables that are not covered by the current research study. The adjusted R square value was 0.708. In this research study, Durbin – Watson value was 1.899. Therefore, there is no first order linear auto correlation between variables as it was in between  $1.5 < d < 2$ .

Based on Table 3, following model can be derived for the impact of mobile banking service quality of commercial banks on customer satisfaction.

$$CSMBS = 0.316 + 0.284(U) + 0.135(EU) + 0.136(RA) - 0.047(PR) + 0.444(ULC) + \mu$$



Based on the results, usefulness has a positive impact on customer satisfaction as its coefficient was 0.284. Also ease of use has a positive impact on customer satisfaction and the coefficient value was 0.135. Relative advantage shows a positive impact towards customer satisfaction and the coefficient value was 0.136. According to the results, perception of risk shows a negative impact towards customer satisfaction and the coefficient value was -0.047. User's life style and current needs shows a positive impact on customer satisfaction and the coefficient value was 0.444.

**Table 3: Coefficients**

Model	Unstandardized Coefficients		Standardized Coefficients	T	Sig.
	B	Std. Error	Beta		
(Constant)	.316	.162		1.956	.051
Usefulness	.284	.056	.251	5.111	.000
Ease of Use	.135	.054	.130	2.481	.014
1 Relative Advantage	.136	.040	.136	3.348	.001
Perception of Risk	-.047	.025	-.063	-1.857	.064
User's Life style and Current needs	.444	.049	.462	9.106	.000

Source: SPSS data (2020)

The significance value of usefulness, ease of use, relative advantage, perception of risk and user's life style and current needs were 0.000, 0.014, 0.001, 0.064 and 0.000 respectively. Based on the results, variables of usefulness, ease of use, relative advantage and user's life style and current needs were considered as statistically significant variables that affected to the customer satisfaction due to p values of these four variables were less than 5% significant level. Furthermore, usefulness was a statistically significant variable that affected on customer satisfaction and it has proved that, through the researches (Ayoobkhan, 2018), (Rathnayake, 2017), (Riquelme & Rios, 2010) and other previous researches. Ease of use was a statistically significant variable that affected on customer satisfaction. This has proved from the previous researches (Aboelmaged & Gebba, 2013), (Yu & Fang, 2009), (Alsamydai, 2014) and another different previous researches. Relative advantage was a significant variable that affected towards customer satisfaction. This has proved that, based on some researches (Jayamanna, 2019), (Kumari, 2015) and other previous researches. User's life style and current needs was a significant variable that affected on customer satisfaction. It has mentioned by some previous researches (Wu & Wang, 2005), (Kumari, 2015), (Lin H.-F. , 2011) and other researches. Because p values of these four variables were less than 5% significant level. Perception of risk was considered as a statistically insignificant variable that affected on customer satisfaction. The reason was p value of this variable was 0.064 and it was higher than 5% significant level. It has proved through the previous researches (Alsamydai, 2014), (Aboelmaged & Gebba, 2013) and others.

#### 4.4 Testing of the Hypothesis

**Table 4: Summary of Testing Hypothesis**

Variable	Hypothesis	P Value	Relationship	Accept / Reject
Usefulness	H1: Usefulness of mobile banking services could have a positive impact on customer satisfaction.	0.000	Positive	Accepted
Ease of Use	H2: Ease of use of mobile phone for banking services will have a positive impact on customer satisfaction.	0.014	Positive	Accepted
Relative Advantage	H3: Relative advantage of mobile banking could have a positive impact on customer satisfaction.	0.001	Positive	Accepted
Perception of Risk	H4: A negative perception of risk of mobile banking should have a negative impact on customer satisfaction.	0.064	Negative	Rejected
User's Life style and Current needs	H5: User's lifestyle and current needs would have a positive impact on customer satisfaction.	0.000	Positive	Accepted

Source: SPSS data (2020)

#### 5. CONCLUSION

Mobile communication has reached the grass root of the society as everybody could own a mobile device. Mobile banking has been identified as one of the alternative delivery channels in banking. However, the success of using mobile banking remains questionable especially in Sri Lankan setting. Therefore, this study has carried out with the main objective to identify the impact of mobile banking service quality of commercial banks on customer satisfaction with special reference to Gampaha district, Sri Lanka. This research study, used customer satisfaction as dependent variable and independent variable was mobile banking service quality. Researcher used usefulness, ease of use, relative advantage, perception of risk and user's life style and current needs as the dimensions of the independent variable. Then, data were gathered from 310 respondents (commercial banking customers) in Gampaha district and used an online questionnaire. and used reliability testing, frequency analysis, descriptive statistics, correlation analysis and regression analysis.

According to findings of correlation analysis, all the dimensions of independent variable show a positive relationship towards customer satisfaction and statistically significant variables on customer satisfaction at 1% significant level. Regression analysis was the main data analysis technique and through the regression analysis the researcher found that, usefulness, ease of use, relative advantage and user's life style and current needs were significant variables that positively affected on customer satisfaction at 5% significant level. On the other

hand, perception of risk was an insignificant variable that negatively affected on customer satisfaction.

Researcher can recommend that, when banks are designing a mobile product, they should customize their products and services according to the customer requirements and consider usefulness, ease of use, relative advantage and user's life style and current needs except perception of risk. Then it will make the service successful and satisfactory. Because all other variables except perception of risk were significant and most affected variables for customer satisfaction on mobile banking service quality. This research study has focused on customers who are in urban areas only. It was a limitation of this study and therefore, future research could be carried out with a population of balance representation from both rural and urban communities. Further, researcher has focused only for customers who are in Domestic Licensed Commercial Banks. Therefore, future researchers have an opportunity to carry out researches on customer satisfaction for mobile banking service quality for above mentioned two banks' customers. Moreover, researcher has used only five dimensions of independent variable. But there are some other variables that future researchers can be used. They are need for interaction, perceived cost of use, trust and so on. Those can be presented as the suggestions for the future researchers.

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