



Impact of ATM Service Quality on Customer Satisfaction: The Case from Afghan  
Commercial Banks

By

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## **AUAF Declaration of Authorship**

### **Master's in Business Administration Thesis**

I hereby declare that:

- This thesis for the Masters in Business Administration at the American University of Afghanistan is my original work. I wrote this myself under the supervision of the MBA faculty assigned to me by the program director.
- To the best of my knowledge, I have cited accurately all sources I have used for this thesis.
- I have acknowledged those parts of this thesis that are based on the collaborative work with third parties other than my supervisor.
- I have not submitted this thesis or substantial parts of it for a degree or any other qualification at another institution.

Student's Name:.....

Student's ID:.....

Name of Thesis Supervisor:.....

Date:.....

## Acknowledgment

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## Abstract

The aim of this research is to examine the relationship between automated teller machine service quality and customer satisfaction in Afghan commercial banks. For this purpose SERVQUAL framework was applied and a survey questionnaire was constructed which contained questions related to the five dimensions of SERVQUAL model that constitute the base for measuring service quality globally (Parasuraman et al., 1988). The data was collected from 100 customers of Afghan commercial banks that used automated teller machines at the automated teller machine terminals during transactions. The result of the data analysis showed that Responsiveness, Empathy and Assurance factors have significant impact on customer satisfaction.

The findings suggest that decision makers and managers in the banking industry should focus on improving Responsiveness, Empathy and Assurance dimensions of automated teller machine service quality for improving customer satisfaction.

**1-Keywords:** Automated Teller Machine, Service Quality, Customer Satisfaction

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# **Chapter One**

## **Background of the Study**

### **1.1. Introduction**

The rivalry among firms for improving service quality and customer satisfaction is a well-known fact in today's business world. A higher level of service quality will result in a higher level of customer satisfaction and sustainable competitive advantage in banking industry, as many companies have recognized that the consistent delivery of services with superior quality to competitors can bring strong competitive advantages (Ghobadian et al., 1994). The banking industry, which is considered one of the important industries in service sector, has to bring improvements to the quality of the service they provide to their customers (Mishkin, 2007). High quality service that meets customers' expectations can increase profitability of the organization.

Over the last several decades, because of the intensification of competition, banks are obliged to accurately gauge customers' demands and needs (Philip, 1994). In order to bring satisfaction and happiness to clients, firms should know customers' desires and demands (Davenport et al., 2014). Demands, expectations, requirements and choices of customers are always changing, therefore, banks should know which products or services customers demand, followed by finding the means to encourage customers to buy those products or services (Anthony, 2000).

According to Lundahl (2009) the financial services landscape and customers demand are rapidly changing in the world, therefore, regulatory, structural and technological changes have occurred worldwide in the global banking environment for delivering required services for attracting new customers and retaining the existing

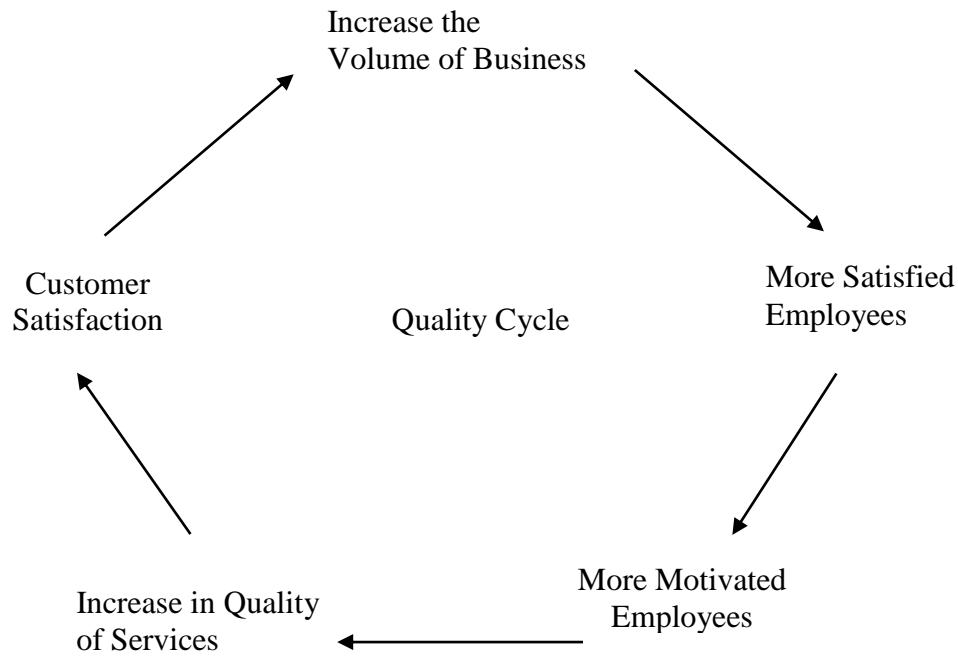
customers (Angur et al., 1999). According to Arasli et al. (2005), banks offer different services to meeting the changing needs of customers by deploying technology. Utilization of information technology has paved the way for the banking industry to offer good services to its customers. For example, by using automated teller machine some of traditional activities are considered outdated and this industry has turned into information processing industry which automated teller machine, point of sale, debit card, credit card, tele-banking and internet banking are the main products offered by banks (Ziaeef, 2014).

Information technology usage in banking industry over the last few years has improved, and that helped the banks to change and differentiate their services and products from their competitors (Saffu et al., 2008).

Service agencies have three major tasks. First, they should increase and improve their competitive ability. Second, they should differentiate their services from their competitors. Third, they should improve their service quality and productivity (Bullinger et al., 2003). However, it is mentionable that banks should not endanger the quality of services for increasing the productivity (Bahia & Nantl, 2000).

Haskt (1987) found that high quality service delivery can increase the volume of business and help an organization to have more satisfied and motivated employees.

Figure 1.1: Service Quality Benefits Life Cycle

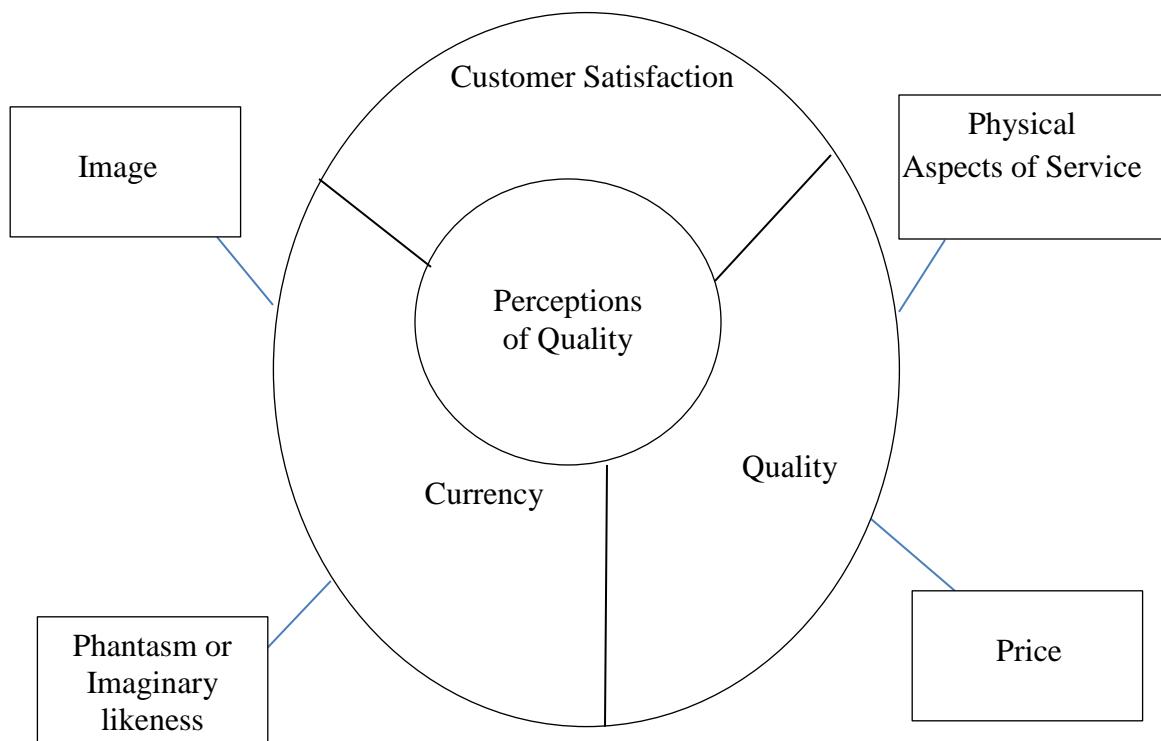


Source: Haskt, 1987

In addition, implementation of a strategic quality management program requires a clear awareness of the attitudes of service quality, customer expectations and customers' perceptions about quality (Kannan et al., 2005).

Perceptions of customers about the quality of services provided to them are influenced by different factors. According to Qubadin (1994), Figure 1.2, the four factors affecting customer perception about quality and value of services are: price, phantasm (ideas a customer has in his mind about a product or service), image of a service provider in the market and physical aspect of service.

Figure 1.2: Factors Affecting Perception of Customer



Source: Qubadin, 1994

Delivering of banking services through new banking technologies like ATM has changed the banking service delivery. Therefore, it is vital banks to examine and to identify those factors which are affecting the quality of services from the customer viewpoint; for that purpose we apply service quality framework (SERVQUAL) in this research (Gounaris, 2005). SERVQUAL model is a multi-dimensional research tool, designed to measure perceptions and expectations of a service through its five dimensions that are believed to represent service quality (Gounaris, 2005). Its five dimensions are Responsiveness, Reliability, Empathy, Tangibility and Assurance.

It is mentionable that customer expectation matches customer perception when high quality of services is delivered (Wang et al., 2003). Therefore, delivering high

quality services can increase customer satisfaction and loyalty and decrease customer defection, which ultimately increases firm profitability (Arasli et al., 2005). For the purpose of measuring the gap between perceptions of customers and service quality expectations of the customers, service quality model (SERVQUAL) and its five dimensions for the first time introduced by Parasuraman (Parasuraman, 2002).

SERVQUAL model's five dimensions are:

- Responsiveness involves the willingness of the service provider to help and provide prompt response and service to customers (Kulašin et al., 2005).
- Empathy refers to the capability and willingness to give individualized and personalized care to customers (Culiberg et al., 2010).
- Tangible explains the appearance of equipment, physical facilities, personal and communication materials (Kang et al., 2004)
- Assurance involves the friendliness, courtesy and knowledge of employees to convey confidence and trust to customers (Shanka et al., 2012)
- Reliability refers to the ability of a firm to deliver the promised service accurately (Kulašin et al., 2005).

The purpose of this research is to provide more empirical indications to Afghan commercial banks decision makers by investigating ATM service quality and customer satisfaction by applying SERVQUAL model. In this research the researcher used quantitative method and data was collected through questionnaire. Collected data was analyzed by regression analysis statistical process to find out that which dimensions of ATM service quality have significant impact on customer satisfaction. It is mentionable that for getting reliable information validation analysis like, t-test, p-value, normality,

multi-collinearity and auto-correlation tests as suggested by Bertsimas et al. (2000), were conducted.

This research paper is divided into five chapters. Beside the first chapter, chapter two provides the literature review, chapter three the methodology, chapter four the findings and finally the last chapter provides conclusion and recommendations for this study.

## **1.2. Statement of the problem**

After more than two decades of civil war and the collapse of the Taliban regime in 2001, as other sectors, Afghanistan's banking and finance sector was hardly recognizable and the economy of the country was in its worst situation (Pavlovic et al., 2009). After some time Asian Development Bank alongside three other large Corporations (Afghanistan Partners Corporation, Welton Holding, and Horizon Associates) together established the first private bank in 2004, the Afghanistan International Bank (Asia Foundation Report, 2016). which after that the banking industry grew rapidly, as by 2005 totally eleven banks got their license from central bank of Afghanistan, which three of them were state owned, eight foreign and local private banks (Pavlovic et al., 2009). The growth in the banking industry resulted in high competition among them for attracting customers. As of 2005, most of these banks started offering unique and new electronic banking services to their customers. Afghanistan banking sector witnesses considerable improvements in its banking industry comparing to late 2001, as most of the Afghan commercial banks provide standardized services and products, such as, ATM, POS, internet banking, debit card, credit card, web surfer card and prepaid card to their customers in order to get a greater market share and to improve

their customers' satisfaction level (Pavlovic et al., 2009). But still Afghanistan's banking sector faces systematic weaknesses in operations and banking governance (Sopko, 2016).

Thus, for improving some parts of banking services and to deliver high quality services, it is necessary for the Afghan commercial banks to know that which dimensions of their ATM service quality have significant impact on customer satisfaction.

According to Sabir et al. (2016), customer satisfaction is an important part of business strategy and all the businesses globally compete for attracting customers, as customer satisfaction is a key indicator of business performance. It is also mentionable that no specific research is conducted in this regard in Afghanistan yet. Therefore, this research will bridge this gap and the result will help decision makers working on providing ATM services to customers in the banking sector of Afghanistan to find out that which ATM service quality dimensions have significant impact on customer satisfaction.

### **1.3. Research Objectives**

#### **1.3.1. General Objective of the Study**

The objective of this research is to investigate the impact of the ATM service quality on customer's satisfaction in Afghan commercial banks by applying SERVQUAL model.

#### **1.3.2. The Specific Objectives of the Study**

To investigate the impact of Responsiveness, Empathy, Tangibility, Assurance and Reliability components of ATM service quality on customer's satisfaction in Afghan commercial banks.

#### **1.4. Research Questions**

The research questions are as follow:

- Does Responsiveness component of ATM service have significant or substantial impact on customer satisfaction?
- Does Empathy component of ATM service have significant impact on customer satisfaction?
- Does Tangibility component of ATM service have significant impact on customer satisfaction?
- Does Assurance component of ATM service have significant impact on customer satisfaction?
- Does Reliability component of ATM have significant impact on customer satisfaction?

#### **1.5. Significant of the Study**

This research helps the officials of the banking sector in Afghanistan who are directly dealing with the ATM services in Afghan commercial banks. This study will help these practitioners to find the best ways to provide high quality ATM services to their customers and to adjust their services to customer wants. In addition, this study will help them to find out that which dimensions of ATM service quality have positive relationship with customer satisfaction to improve them for attracting new customers. Finally, it can be a helpful tool for academics and readers who are interested in ATM services in Afghan commercial banks.

### **1.5.1. Geographic Scope**

This research was conducted to assess ATM service quality and its impact on customer satisfaction in Afghan commercial banks. For this purpose, data was collected from the customers of Afghan commercial banks that offer ATM services to their customers in Kabul city.

### **1.5.2. Methodology Scope**

In this research both the primary and secondary resources have been used. The primary data was collected through questionnaire from the customers of Afghan commercial banks and the secondary data was collected from reviewing various books, journal reports, essays and other resources discussing the same topic. Population of this research comprised of conveniently selected ATM card users of Afghan commercial banks customers in Kabul city. To achieve the objective of this study a five point likert-scale questionnaire was designed and distributed among Afghan commercial banks' customers in Kabul city based on convenience sampling selection. The questionnaire had about 24 questions which 20 of them were likert-scale questions.

## **1.6 Limitation of the Study**

The data was collected from the customers of the Afghan commercial banks just from Kabul city, therefore, that might raise concerns about its limited generalizability. In addition, the sample size was small for collecting the data because of the limited time frame. So the time constraint was another big issue. Also not all banks like Ghazanfar bank provide ATM services. Finally, the study considers the effect of service quality factors of ATMs on customer satisfaction. Although there might be other factors that can affect it.

## **Chapter Two**

### **Literature Review**

#### **2.1. Introduction**

This chapter covers various literature reviews related to this topic and other related areas. This was made possible by identifying, collecting and reviewing literatures from various sources such as books, journals, reports and other related useful sources.

#### **2.2. Theoretical Review**

##### **2.2.1. Definition of ATM**

An Automated Teller Machine (ATM) is a new technology which is used for the purposes of money withdrawal, deposit and money transfer between accounts (Uddin, Khan, & Mohammed, 2016). Or it is an electronic device, which let customers of a financial institution or a bank to conduct their business transactions without facing cashier or teller of a bank (Oumer, 2016).

ATM is one of the first popular machines in the banking industry that provides access to customers electronically, it enables the banking industry to serve their customers everywhere – no matter if the customers are in the bank hall or far away in a super market (Olumide, 2014).

Automated teller machine as an electronic financial machine carry out the work of a bank cashier or teller as it can accept cash deposits and do cash withdrawals the same as a bank teller (Uddin et al., 2016). When a card holder wants to withdraw money she/he just enters his card into the machine, then the machine asks her/him to enter his four digits Personal Identification Number (PIN), after verifying PIN and Card , the home

screen of the machine displays different options available; afterwards card holder can carry out any transaction he/she wants, like: cash withdrawal, balance enquiry, mini statement and changing PIN (Uddin et al., 2016).

### **2.2.2. Locations of ATM**

ATM has different kinds but generally based on location, there are three categories of ATMs which are listed below (R, 2015):

- **On Site ATM**

In this category all those ATMs are included which are installed inside the bank premises and customers are able to use both the ATM and physical branch.

- **Offsite ATM**

All those ATMs which are outside the bank premises but operate in the same area where the head office or the branch is located.

- **Stand Alone ATM**

These ATMs are the same as offsite ATM. But they are not placed neither inside the bank premises nor operate in the area where the bank head office or the branch is located. Examples can be the ATMs in the shopping malls and restaurants (R, 2015). ATM can also be placed in airports, petrol/gas stations, restaurants and any places where people visit regularly (Adepoju & Alhassan, 2010).

### **2.2.3. The Impact of Technology on Banks**

Banks can get significant benefits from investing in information technology as investing on it can save the time of the bank employees, customers and reduces the bank expenses as well (Dangolani, 2011).

According to Agbolade (2011), investment in information and communication technology increases bank profitability. As per his findings, there is a positive relationship between ICT implementation and profitability of banks, so their profits increase proportionately when they adopt information technologies (Agbolade, 2011). Also Maduem (2010) found that investment in information technology increases bank efficiency.

In this era only those banks can flourish and operate profitably, which their payments and service delivery systems are renovated and new information and communication technologies are used in their day to day operations as it is necessary for every bank to reconsider their policies when planning to deploy IT into their systems and these banks should be agile in today's market to compete well and ultimately to survive (Otieno, 2010). Financial institutions should be aware that information and communication technologies have tremendous role on this system and are of utmost importance which any drawbacks could negatively affect their operation in the market. The pursuit of survival policies and the sense of current market share preservation stimulated businesses to use new electronic devices in their business, as adoption of new technology like ATM, improves the service quality and that ultimately result in customer satisfaction (Otieno, 2010). Best service quality is an important instrument for measuring customer's satisfaction, as there is a positive relationship between them (Pitt, 1995).

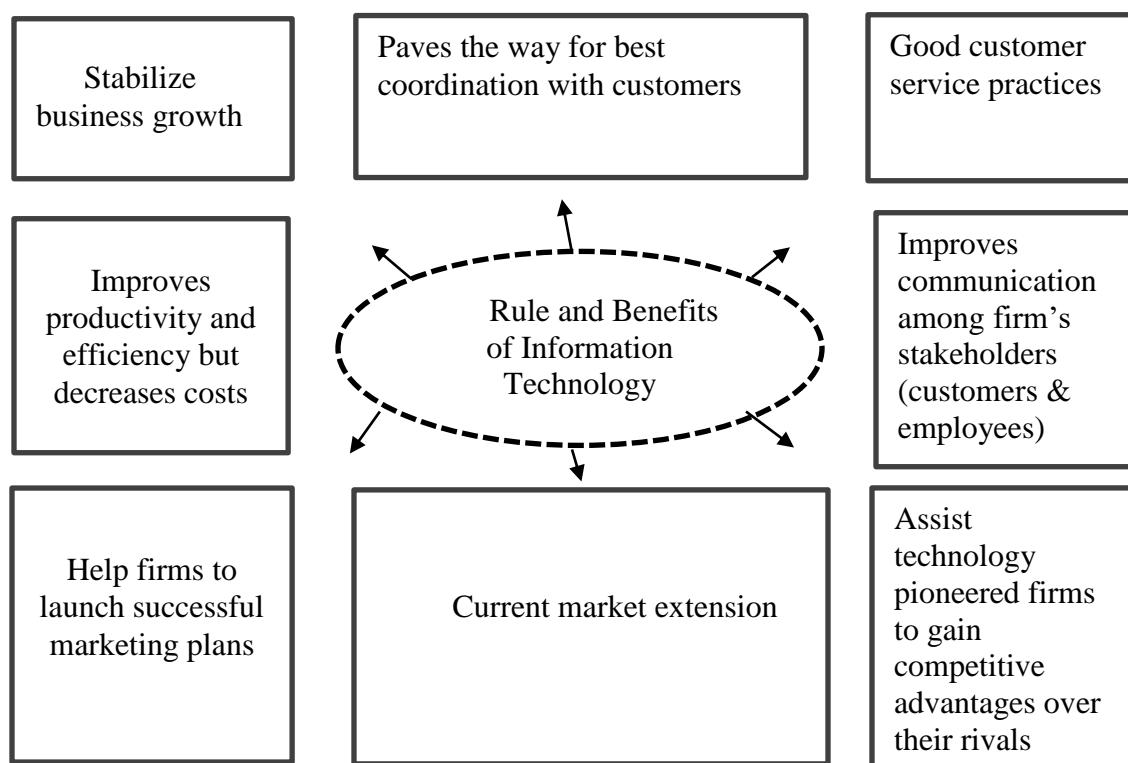
This is also vital for banks to gauge the satisfaction level of customers from the service quality of financial services offered to them, because it can affect retention, positive word-of-mouth, and desirability of the customers (Santos, 2003). Information

technology has positive role in the development of operations and strategies of organizations (Bahrami, Ghorbani, & Arabzad, 2012).

Based on Bahrami, Ghorbani and Arabzad (2012) research in Iran, investment in information technology can improves productivity and profitability of organizations. They also pointed out that investment on IT decreases cost and increases profit. So there is a negative correlation between investment in information technology and cost.

The main benefits and functions of investing in information technology and customer satisfaction are discussed in below chart ( Bahrami et al., 2012).

Figure 2.1: Rule and Benefits of IT on Firms



Source: Bahrami et al., 2012

Based on above figure, competitive advantage can also be expanded by deployment of new technology in a firm. Bahrami (2012) argued that an organization can gain

competitive advantage if they use information and communication technologies for manipulating particular firm resources that are distinctive, hard and difficult to be attained by other firms.

Also investment in ICT as indicated in below diagram has tangible and intangible effects on an organization' productivity (Bahrami et al., 2012).

#### **2.2.4. Benefits of ATM to Customers**

Lovelock (2000) found that the use of automated teller machine by banking industry save the time of both the customers and employees. He stated that for a customer it is unnecessary to wait for a long time in queues to conduct just a single transaction, because ATM can almost perform the job of a teller. Also he recognized that user-friendliness and ATM functionality are the main factors of customer satisfaction.

Automated teller machine makes it easy for customers to conduct transactions whenever, wherever they want and there is no time limitation and the services of banks are available 24 hours a day (Goldrik, 1994).

According to Joseph (2003) another big benefits of automated teller machine is that it made it easy for customers to do their transactions easily. Rick Roy (1991) stated that automated teller machine as a big banking technology helps banking industry to foster automation of service delivery which ultimately can result in customer satisfaction. Based on Roy's view, automated teller machines are being used for delivering best customer services instead of people as the transactions are done without any error which that would result in fast and easy delivery of banking services to customers and ultimately can increase customer satisfactions and profitability of the organization.

However, Prond and Hocker (1993) found that investing in information technology, is not effective on productivity of banking system, but information system and labor cost have positive effect on productivity of banks. Based on their analysis ATM deployment has positive impact on information system's labor cost and that ultimately increase the productivity of banking sector as a whole. The result of a study which was conducted by Coupon (2002) shows that ATM deployment at first decreases productivity but after its full operation it increases bank productivity from 3% to 17% (Coupon et al., 2002).

Kasu Laru (2002) found that the relationship between the number of ATM machines and number of branches of a bank has positive correlation with productivity. Immeasurably system of technology increase the efficiency of the banks but improvement of cost efficiency compared with profit efficiency is relatively low (Seloster, 2005). Furthermore, installation of ATMs in different part of a city or a region can give easy and flexible access to clients – twenty four hours a day and seven days a week – that create new habits for customers and they get used to that (Tony, 2003). As the customers get used to this facility, so this ultimately make them loyal, and that is what an organization wants.

## **2.2.5. Benefits of ATM for Bank Image**

According to Automated Teller Machine Industries Association (ATMIA, 2010) the benefits of ATM are as follow.

- **Congestion Reduction**

By using ATM customers try to carry out their transactions directly through ATM and avoid going to bank hall.

- **Cost Saving**

ATM installation by banks in different locations decreases the cost of hiring tellers.

- **No limitation**

ATM can extend the time of banking hours beyond eight hours a day (8:00 am till 4:00 pm) it can be reachable any time – day and night.

- **Best Tool for CRM**

It's the best tool for customer relationship management as it directly connects customers with the bank which that can also increase the level of customer satisfaction and retention.

- **Advertising Tool**

Off-site ATMs can be the best tool for marketing. Banks can put their signage on them to attract more people to use their services.

- **Improves Branchless Banking**

It helps the banking sector to experience and initiate branchless banking services in the country which it could ultimately increases the level of customer satisfactions, retention and loyalty.

#### **2.2.6. Challenges of ATM to Customers**

Despite the benefits of ATMs there are some challenges that affect the relationship of banks customers.

According to R (2015) one of the big challenges which the customer of the banking industry might experience is with the network of the ATM. If automated teller machines networks don't work properly and experience some unexpected breakdowns or failures, customers may face some serious problems which could negatively affect their satisfaction level.

Also sometimes there are shortages of cash in ATMs and its replenishments take time which that could also negatively affect customer satisfactions. The limitations in cash withdrawal are also a big challenge towards customers. If somebody needs more than the limit already determined then she/he should visit a branch and carry out her/his transaction. This can also negatively affect customers' satisfaction.

Automated teller machines also became the source of complain for the customer of financial institutions; specially, when customers' automated teller machine (ATM) cards are being used by their family members and friends (Snellman & Vihtkari, 2003). Therefore, it can cause customer dissatisfaction which could negatively harm their businesses.

Also ATM can make money laundering process easy because terrorists and money launderers deposit their black money in a country with no strict regulations on money laundering and withdraw cleaned money from other countries. Also as there is no face to face relation between the banks' officials and clients, it similarly helps money launderers to achieve their objectives of successful money laundering (Unger & Den Hertog, 2012).

#### **2.2.7. Customer Satisfaction**

Kotler (2008) defined it as “the extent to which a product’s perceived performance matches a buyer’s expectation”. If buyers reaches to his expectation, they are satisfied and if not they are dissatisfied.

It's an important concept in marketing. It's theoretically and practically important for marketers and researchers. Organizations try to satisfy their customers as customer satisfaction is the big goal of businesses and considered as the essence of businesses (Vanniarajan & Anbazhagan, 2007).

Belas (2014) defined customer satisfaction as the feeling of satisfaction of customers toward the performance of products or services which are used or consumed by them. Tse and Wilton (1988) pointed out that customer satisfaction is the evaluation of the expected and actual performance of the product. Other authors claim that customer satisfaction is the evaluation of current situation or process (Gustaftsson, 2005). Kim (2004) concluded that customer satisfaction is the judgment and reaction of customers towards the state of satisfaction and satisfaction level. Increased satisfaction level of customers is crucial for every business, as firms can create strong affiliation with customers. Furthermore, it can also be important for product differentiation (Deng, 2009).

Customer satisfaction can make customers loyal to banks. Though it is difficult and costly to provide best services to customers to make them satisfied, but in the long run its benefits surplus its costs (Anderson, 2004). For every organization especially for banks it's necessary to provide reasonable services to their customers at a reasonable price in order to make customers satisfied and loyal as it can assist an organization to retain its customers (Gustafsson et al., 2005). Generally, it is acceptable that the quality of service and price, determine level of customer satisfaction (Turel et al., 2006). Another important factor which affects customer satisfaction positively is the involvement of customer in business process. If a customer allocates his time for getting information about a product or service like ATM that would positively affect his satisfaction level (Coote et al., 2007). If they are not involved that would negatively affect their satisfaction level. This involvement would have positive effect on the organization as well as that would create positive impression about the organization and even the customers would be eager to expend and recompense more for its services and products (Anderson, 2004). If the organization fails to do that efficiently and effectively comparing to its competitors, then that would negatively affect its operation and would fail to compete profitably in the market (Anderson, 2004).

Ahn (2006) claimed that when concerns and complaints of customers are not considered by a bank then customers would easily switch the bank and look forward for other banks. Satisfaction of customers with the product and service can lead to competitiveness and success. Customer satisfaction is an important issue in banking industries nowadays. Ahmed et al. (2017), stated that customer satisfaction has a vital role in customer marketing. They studied customers' satisfactions factors based on bank

mangers' knowledge from their customers. They scrutinized various strategies that are effective for better customer satisfaction and factors customers prioritize them. Finally, they came up with the conclusion that offering best services and facilities increase customers' satisfaction level.

Cabas (2001) stated that competitiveness, investment opportunities and cost reduction are the main motivators for the banking industry to install and place automated teller machines in its banking network.

For financial institutions especially banks customer satisfactions are vital and valuable because their customers and clients are the last source of income (Saad, 2012). Mentioned study was conducted in Pakistan and was measuring customer satisfaction level of both the Islamic and conventional banks' customers; they explored the link between different topographical variables and customer satisfaction levels. The outcomes of their study disclosed that some factors like friendliness, competency and efficiency of their staffs had tremendous role in customer satisfaction.

Mobarek (2007) in a study found that waiting time and swiftness of operation are the main elements of customer satisfaction.

A study which was conducted in India for determining the customer satisfaction level of private and public banks in Punjab province revealed that, state owned banks, despite being a little behind technologically than private banks, are more dedicated to offer best services to their customers for increasing their satisfaction level (Gill & Arora, 2013).

Also different researches have been conducted about efficiency and effectiveness of automated teller machine. Stemper (1990) believed that freedoms in doing transactions

are the positive aspects of automated teller machine. Based on his analysis customer has full authority in doing his transaction which positively impact customers. This effectiveness in services delivery grant sovereignty to customers, improve service quality and performance of banking industry (Lovelock, 2000). For those banks struggling to sustain competitive advantage, delivering services that satisfies customers' needs and maximizes their operational performance are the main elements. In another study Polatoglu (2001) found that reliability of ATM is the essential part of customer satisfaction, and this reliability can encourage customers to use electronic banking.

Muhammad (2010) studied customer satisfaction and ATM service quality in Pakistani commercial banks which the findings of his study revealed that there is positive relationship between customer satisfaction and ATM service quality. He used regression analysis and selected 500 customers of Pakistani commercial banks for testing his six hypotheses. Alabar (2012) studied customers' satisfaction and electronic banking services which his study showed that there is a direct association between customer satisfaction and e-banking. It is mentionable that he used regression analysis for testing the hypothesis which the total numbers of respondents were 400 customers. Patricio (2003) believed that without technology, it is impossible for banking industry to get customers satisfaction.

Premalatha & Sundaram (2012) found that automated teller machine (ATM) services have a crucial role in conducting easy transactions. Moutinhowo (1992) concluded that automated teller machine speeds customers' transaction and save the time.

The result of a study which was conducted in Bangladesh in 2003 by Joseph, Stone and Mcandres, showed that, the user responsiveness system, appropriate location

and sufficient number of automated teller machine, are the main factors of customer satisfaction. Also Islam (2007) in his research found that staff response, freshness of currency notes and ATM location have positive correlation with customer satisfaction.

Contrary to that inadequate number of ATM, failures to operate consistently and security are the main factors of dissatisfaction of customers.

Ennew and Brinks (1996) found that there is a positive association between profitability, customer relationship and adherence to the idea of service quality. The research was focusing on the connectivity of customer loyalty and service quality. Also retention of customer is a standard for successful service quality programs (Yavas et al., 1997). He also concluded that as employees have direct contact with customers they should be satisfied, as this would help the bank to offer best services to their customers and retain them.

From another hand electronic payment is useful than traditional payment systems for the customer and banking industry, because it's cheaper than the paper centered payments (Humphrey el al., 2003).

Daveis (1996) studied the main factors influencing customer satisfaction; he found that, cost and good functionality of ATM are the main predictors of customer satisfaction.

Fee also has significant impact on customer satisfaction (Singh, 2009). It can be a determinant for measuring customer satisfaction; it increases customers' satisfaction when it decreases and vice versa. Satisfaction can also be a determinant for customer satisfaction, especially if technology is a matter while delivering services (Tong, 2009).

Chavan (2013) identified eight characteristics of customer satisfaction. He pointed out that paying enough attention to each customer's demand, professionally behavior of staffs, no fee for checks, no error records, facility of online banking and finally cooperation and readiness of staff to keenly answer customers' questions are the main attributes of customer satisfaction.

Shamsuddoha (2005) in Bangladesh found out that accurateness, appropriate ATM location, consistent services are the main factors of customer satisfaction.

Security also has tremendous role in customer satisfaction. In a study which was conducted by Cheung (2002) in Bangladesh, the result showed that insights about security have tremendous role on influencing customers' sensitivity about quality of services. Sing (2011) in a study in India found that cash availability in ATM, appropriate location, and process time are the three main elements affecting customer satisfaction and they have the highest satisfaction rate in India. He also concluded that no problem solving, networked ATM are the main dissatisfaction factors.

Also both privacy and security are considered as the main factors impacting customer satisfaction (Szymanski & Hise, 2000). If customers are being anxious about safety and confidentiality issues of the services they use, that can negatively affect their satisfaction level and will get dissatisfied. Other research shows that ATM best service quality has important role in profitability of banks because it increases the volume and worth of deposits, shrinks cost of the banking industry, reduces the number of branches and staffs and ultimately improves profitability of banks (Katagiri, 1989).

Agboola (2001) through a research found that banking's service quality, performance and customer satisfaction has positive correlation with each other. In his

study profit and turnover of the banking industry were considered as the main factors of performance measurement. The result of his study showed that banks which use information technology like ATM in its day to day operations, gain more than banks which are not using it. Another researcher found that ease of use; trustworthiness and accessibility are important elements for customer satisfaction while untrustworthiness and complexity are the main factors of customers' dissatisfaction (Rugimbana & Iversen, 1994)

Islam et al. (2005), in a study in Bangladesh surveyed the satisfaction level of the customers of the banking industry in a prominent bank (HSBC) there. The survey result showed that appropriate location of ATM, staff promptness in customer enquiry response, currency freshness, fast delivery of ATM cards and ATM service quality were expressively and positively correlated to customer satisfaction. Based on his analysis inadequate number of ATM, security and out of service ATM are the main reasons of customers' dissatisfaction.

Furthermore, appropriate location and approachability of ATM have substantial impact on customers' satisfaction (Moutinho & Brownlie, 1989), while waiting in long lines are the main reasons of customers' dissatisfaction. Other researchers say that breakdown and disruption of ATM services are the main reasons of customers' dissatisfaction (Howcroft, 2009). However, most researchers have found that offering best services through using technology can cause seclusion, impassiveness and sense of ineffectiveness (Grabner, 2003).

Adoption of technology also differs from organization to organization, culture to culture (Phillips, 2004). Customer loyalty can be established through new technology

initiation and intense competition. Failure to deploy new technology will result into substituting of banks by customers (Lewis, 2004). Based on it, offering best services through using new technology can increase customer satisfaction and loyalty. Based on a study which was conducted in Bangladesh; numbers of ATMs, their appropriate locations and differentiated service presentation are the main reasons to customers for switching bank (Meller, 2013).

Organizations which have more satisfied customers, meaning that they have more loyal customers (Chi & Gursoy, 2009). Jamal and Khattak (2003) found that customer satisfaction and service quality are correlated but there is not at all any connection between customer satisfaction and tangibility component of service environment. The study was focusing on retail banking and customer satisfaction influential factors in Pakistan.

Development in communication and information technology assisted the banking industry to provide their customer best banking services. These developments enabled these organizations to compete well and deliver top services to their clients. Most researchers have found out that perception and satisfaction level of customers help organizations to assess if their service delivery channels are successful and efficient (Tong, 2009). Most of the organizations are keen full to deploy new technologies in their organizations for increasing productivity, efficiency, effectiveness, competitiveness and service quality of their organizations (Huff & Munro, 2005). The identification of customer satisfaction by banking industry is done through cognitive, interactive and attitudinal reaction of customers toward service provider (Meller, 2013).

Price, service quality, innovation and convenience are considered the vigorous dimensions of customer satisfaction (Athanasopoulos, 2000). This would help organizations to get customers' satisfaction and to offer services which customers like more to avoid customer attrition. Rexha (2003) found that satisfaction of corporate customers does not guarantee the usage of electronic banking by them and there is no relationship between them. Although, satisfaction does not have any impact on commitment and trust of customers but both of them can affect the possibility of using electronic banking. Therefore, satisfaction can have an impact on the preferences of customers for using electronic banking (Rexha, 2003).

There is also a positive association between market share and customer satisfaction (Fisher, 2001). Based on this analysis when customers get satisfied that would have positive impact on the market extent of their businesses. Customer satisfaction also can improve corporate image of the organization (Newman, 2001).

#### **2.2.7.1. Outcomes of Customer Satisfaction**

It has an important impact on the productivity and profitability of any organization. Banking industry the same as other organizations try to keep their customers satisfied. Satisfaction of customers can result in behaviors, loyalty, best word of mouth, and abridged price sensitivity. All these points can be achieved when the banks satisfy their customers.

Below are some positive points that can be expressed when the organizations satisfy their customers.

#### **2.2.7.1.1. Loyalty**

Gremler (1996) described loyalty as the degree of which a buyer or customer repeatedly purchasing a service or product from a service provider without affecting its willingness to change the provider and to possess positive attitudinal temperament towards the provider and only uses this provider when there is a need for this service (Kotler, 1999).

Nevertheless, a loyal customer cannot be a satisfied customer. Lee (2011) believed that satisfaction cannot guarantee loyalty. Therefore, customer can be loyal but not satisfied and loyalty comprise of positive and negative responses because it is a multi-dimensional phenomenon (Zeithamal, 1996). Customer desertion is not always the opposite of customer loyalty (Colgate, 1996). Dougall (1993) pointed out that 50% of the clients would still remain with the organization even though one of their problems is not solved. The reason behind it may be the switching cost, time constraints, money constraint, location, no appropriate alternative and habit (Bitner, 1990). Considering all these points customer loyalty can be a key factor for every organization. This would help these organizations to be successful and sustainable in the market over time. For that reason, it is perceived that loyalty can have positive impact on customers' word of mouth.

#### **2.2.7.2. Positive Word of Mouth**

Word of mouth defined by different authors in different ways. East, Hommond, and Lomax (2008) defined it as a casual advises that are being communicated among customers . Word of mouth is considered one of the important element of the framework of satisfaction-profit relationship (Ghorban & Tahernejad, 2012). Organizations attempt to increase customer satisfaction. Customer satisfaction can have positive impact on

customers' word of mouth. It can help the organization to gain popularity in the market and improve its brand name. Ultimately it can affect the profitability of the company which is the main goal of every organization (S^derlund & Rosengren, 2007). Word of mouth can be positive or negative which are established through sharing different information about purchase or consumption among customers (Ghorban & Tahernejad, 2012).

There is no consensus among researchers that what people deliver when communicating with each other about the content of WOM (Hartline & J., 1996). Some researchers believe that it contains customers' thought about a commercially-based experience (Van Durme, & Carrie, 2003). However, there are other researchers who agree with both of abovementioned ideas (Brown et al., 2005). Other researchers defined it "as a self-reported behavior" (Bowman et al., 2001)

Other researchers like Seeney & Swait (2008) and Swait & Erdem (2004) concluded that customer loyalty and satisfaction can result in positive word of mouth. Hung and Lio (2010) agreed that there is relationship between satisfactions, faithfulness and word of mouth. Based on their research there is a positive association between word of mouth and customer satisfaction the same as Kumar and Shah (2004) believed. So service superiority has positive impact on customer satisfaction.

Those customers who are dissatisfied can use their dissatisfaction feelings through word of mouth against the organization more seriously, and they would never come back to the organization for repurchasing of products and services. Therefore, best services should be offered to them to increase their satisfaction level, as satisfied customers can spread positive word of mouth in the market which will help the firm or bank to increase

their selling in the market and ultimately to increase their profits. These customers will come back for repurchasing of the products and services. Brown (2005) studied the role of word of mouth and customer satisfaction. After his research he found that satisfaction is a precursor on word of mouth. He stated that customer satisfaction can be spread through word of mouth and satisfied customers can do it better than any other customer in a positive way but unsatisfied customer can bad-mouth the organization which would have negative impact on its operation in the market. Word of mouth is described by him as an information channel about organization, products and services, and stores which can be communicated through these organizations' efforts. Brown (2005) added that word of mouth can be distressed by identification and commitment and can be improved through offering best with good quality services.

#### **2.2.8. Customer Retention**

For every organization it's essential to identify the value of customer retention. Even if an organization's customers are satisfied; customer retention is still can be an important issue for a firm or a bank. The simplest description of retention is the willingness of customers to keep using product or services of a company (Nezhad, Jomehri, & Javanshir, 2011). Banks can achieve that through offering best services to their customers, also in the banking sector retention means that customers keep their accounts open and operational with the bank and it can increase number of existing customer's present values (Magasi, 2015). Nowadays for customers, value is important than quality or price (Mazumdar, 1993).

Customer value and customer retention has direct relationship with each other, as a 5% enhancement in customer relationship improves customer value 125% (Reichheld,

1990). He further noted that profits of service industry are correlated with customer's length of relationship. Other researcher concluded that 75% of budget of organizations must be spent for increasing customer retention and for making strategies for such purposes (Weinstein, 2002). Retention of customers can improve if satisfaction level of customers improves too (Parasuraman, 2002). Kotler (2012) stated that a satisfied customer would tell 5 others to buy a specific product of a qualified firm which offer best services to their customers and will remain loyal to the organization in the future. Service quality has tremendous effect on customer satisfaction as it can increase customer loyalty and retention (Ennew & Binks, 1996).

### **2.2.9. SERVQUAL Model**

The concept of SERVQUAL was first introduced by Parasuraman, Zeithaml, and Berry (PZB) in 1985 when they presented their seminal paper (Kulašin & Fortuny-Santos, 2005). They proposed a conceptual framework for analyzing the service quality of service industry which then known as SERVQUAL model (Kulašin & Fortuny-Santos, 2005). This model was developed after a comprehensive data accumulation and data analysis. The data was gathered through two crucial and important data gathering methods - focus group analysis and executive interviews – which were implemented in some handful service business including: telecommunication company, banking, security broker, credit card company, and repair and maintenance companies (Kulašin & Fortuny-Santos, 2005). Based on Parasuraman et al., (1988) opinion five dimensions namely Reliability, Responsiveness, Assurance, Empathy and Tangibles are the most important dimensions of measuring service quality globally.

Table 2.1: Service Quality Dimensions Description.

<b>Service Quality Dimension</b>	<b>Description</b>
Tangibles	Modern Equipment
	Neat and professional employees
	Best facilities associated with the service
	Visually appealing material linked with the service
Empathy	Close attention to customers individually
	Best employees who deal with customer carefully
	Having the customers' best interest at heart
	Having best employees to understand the needs of customers
	Convenience business hour
Assurance	Ensuring customer to feel safe in their transactions
	Having courteous employees
	Having employees who have the knowledge and answer customers' question
Responsiveness	Customer should be informed by employees when services are offered
	Quick response to customers inquiries by employees
	Enthusiasm of employees to help customers
	Respond to customers' request promptly
	Instilling confidence to customers by employees
Reliability	Providing services as promised
	Handling customer service problem
	Performing services right at first time
	Providing services at the promised time
	Maintaining error-free record

Source: Chun Wang and Zheng Wang, 2006.

This model is a popular model and has been used by different researchers in the developing and in the neighboring countries of Afghanistan. Tufail & Humayon (2013) studied the ATM service quality in Pakistani banking sector. The research examined service quality in banking sector. A total of 160 questionnaires were distributed in Bahawalpur region of Pakistan to measure the five dimensions of the service quality. They found that all of them have significant influence on customer satisfaction of the banking industry.

Jha et al. (2014), used SERVQUAL model to examine the satisfaction level of customer who had ATM cards. A total of 110 questionnaires were circulated among the customers of ATM in Bihar region. The results showed that all the dimensions of SERVQUAL had significant impact on customer satisfaction of ATM users in the said region. Therefore, it was decided to use this model in this research for analyzing Afghan commercial banks customers' satisfaction from the automated teller machine (ATM) services which are provided by these banks.

In this study we consider below diagram our conceptual framework:

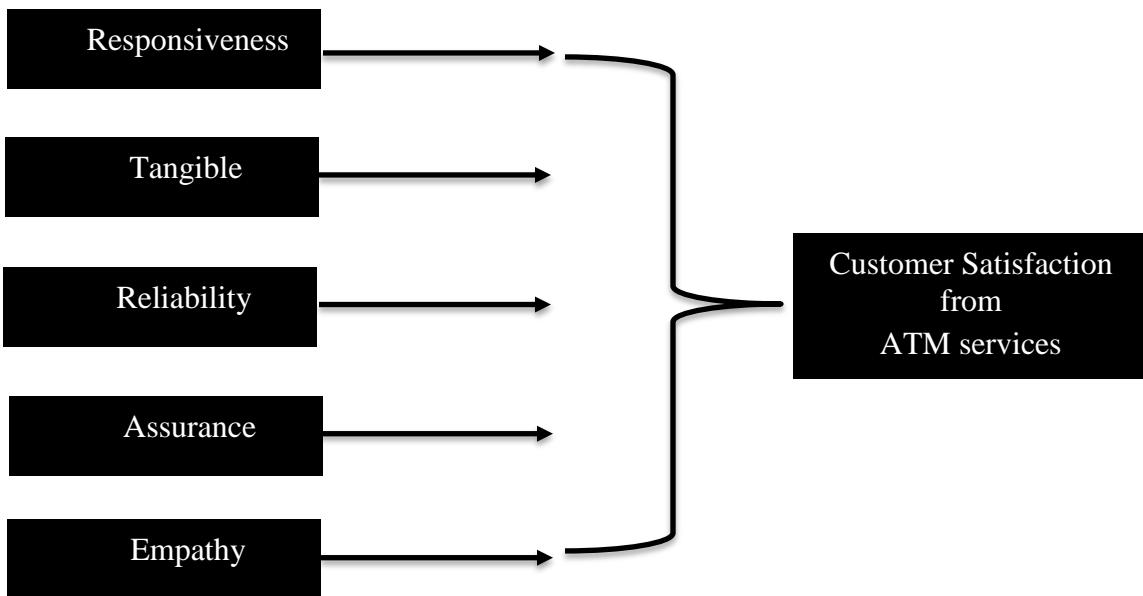


Figure 2.2: Conceptual Framework

#### **2.2.9.1. Dimensions of Service Quality**

SERVQUAL model has five important dimensions which are furnished below. Different scholars' findings proved different results. For example, in a study which was conducted in the United States by Joseph about ATM service quality and customers' satisfaction, it was concluded that, security, best placement and sufficient number of ATM are the essential dimensions of ATM service quality. Hasan et al. (2013), studied

ATM service quality on customer satisfaction in Pakistan, he found that reliability is the only service quality dimension which customers look at it firstly. Based on their analysis, customers want an error-free and functional ATM services. In another study which was conducted in Iran by Ebrahimi & Moghadam (2012) they found out that Responsiveness and Assurance are the two ATM service quality dimensions which are the most important factors to customers.

#### **2.2.9.1.1. Empathy**

Another factor of service quality theory is empathy. Based on this factor financial institutions or banks should work closely with their customers and pay special attentions to their wants. Also their reasonable demands and expectations should be met by the organization. As bank staffs are directly in contact with customers, therefore, it is necessary for them to pay special attention to their concerns when they face problems related to ATM. Thus, they should maintain close relationships with ATM users.

Bank employees should answer customers' enquiry on time, their concerns should be taken seriously; as their fair behavior can raise customer satisfaction and encourage customers to keen fully stay with the company which ultimately can assist the organization to retain its customers (Verdugo, 2009). So, empathy implies that organizations should care about their customers' problem and understand their needs.

Empathy also seeks to find out that what kinds of ATM services are offered to customers? Are they useful and enough or not? (Mohammad & Shereen, 2011)

#### **2.2.9.1.2. Tangibility**

In the service sector tangible means, physical facility, safety and convenience that assist an organization to offer its services to its customers (Lunardi et al., 2005).

Tangible, also mean physical equipment; like ATM, which have direct link with customers (Parasuraman, 1998). In a study which was conducted in Bangladesh by Nabi (2012) showed that most of the customers prefer those banks which place their ATMs in a convenient and accessible locations and use best technologies for the operations.

Placing ATM in a convenient location is considered important for customers which most of the researches in the neighboring countries prove that. For example, in a study which was conducted by (Munusamy & Chelliah, 2010) in Bangladesh it was found that ATM location has positive correlation with customer satisfaction. Because of this it was decided to consider it in customer satisfaction analysis in Afghanistan as well.

#### **2.2.9.1.3. Assurance**

Assurance is another important factor which means trust and increasing confidence of customers towards the bank. Banks should ensure their customers that its employees are honest, faithful and dedicated to their employer and everything would be safe and secret between the customers and bank. Furthermore, banks should try hard to have polite, reliable and trustworthy employees to prevent mistrust of customers.

#### **2.2.9.1.4. Reliability**

It means that the firm must serve their customers exactly at the time which it promised to serve them (Ryan, 2003). He also pointed out that accuracy of a firm or bank function is the crucial aspect of this attribute which needs to be considered properly as well. It's an important and valuable aspect of all service industry (Parasuraman et al., 1985). Based on this author analysis security and privacy are the main elements of this dimension. Therefore, security is an important element of customer satisfaction in online banking services (Liao, 2008).

#### **2.2.9.1.5. Responsiveness**

As the name explains it is the willingness of the firm or bank to provide or offer swift services to customers (Parasuraman et al., 1999). For banks it's necessary to provide their customers best services on a timely manner. This would help the firm to increase customers' satisfaction level and keep them loyal to the firm or bank. If a bank fails that would negatively impact customer satisfaction which as a result would keep them unsatisfied and disloyal. It means that how an organization is ready to assist its customers in a speedy and fast way to resolve their problems (Parasuraman et al., 1999).

It has been considered as a central element of customer satisfaction. It is crucial for every organization to serve the customers better and when a customer demands, be accessible to customer, work closely with the customers to resolve their problems and meet their demand (Balunywa, 1995). Generally, customers expect to be served as soon as possible as they don't like to wait for long times (Ruby et al., 2012). If banks fail to fulfill customers' expectation in short time, it can be improved by providing professional services quickly (Adeoye & Lawanson, 2012).

For bank customers this dimension of SERVQUAL model is very important because they (customers) expect convenient and easy services from banks. Once customers feel that his bank serve them better, on time and hear their complaints and criticisms properly, then the chances of customers to become loyal and satisfied increase (Ree & Van, 2010).

Responsiveness is an important matter but it is not compulsory (Ree & Van, 2010). Customers are more willing to be in direct contact with ATM than with teller. Because of human feelings, productivity might decrease (Chelliah, 2010). It is important to mention

that there is different perception about customers dealing with ATM (Machine) or employee (Human).

## **Chapter Three**

### **Research Methodology and Design**

#### **3.1. Introduction**

In the preceding chapter we studied different ideas of some authors who have studied ATM service quality and customer satisfaction in different countries. We also defined key terms and conceptual framework of this study. This chapter looks at research methodology and design which are employed in this study. In addition, it helps us to find out that how data was collected and analyzed for achieving the research objective.

The research method is a set of rules, tools and valid methods (reliable) for the purpose of reality checking, discovering the unknowns and for achieving solutions to problems (Yin, 2013).

#### **3.2. Target Population**

For this research the data was gathered from the customers of the Afghan commercial banks that are offering ATM services to their customers in Kabul city. The researcher puts its effort to randomly select customers who are conducting their transaction through ATM.

#### **3.3. Sampling Techniques and Size Determination**

For the purpose of answering research question, in this study data was collected from the bank customers who had ATM card, and regularly use ATM services. It is mentionable that data was collected without specifying any specific branch of these banks in capital Kabul. As per research guideline the sample size should be selected randomly in order to signify the entire population. As sampling is the selection of the number of people from a crowd of well-defined population. Therefore, each sample should be

entitled to two characteristics. First, it should have a logical size or volume. Second, it should represent the population from which it was obtained.

Thus, for this study as per Gorsuch (1983) and Kline (1994) recommendations, 100 customers of Afghan commercial banks using ATM services were randomly selected on the chosen ATM locations and interval time, then the questionnaires were distributed for collecting their views and experiences about the ATM service quality which they receive from the bank they use its ATM services. It is mentionable that Gorsuch (1983) and Kline (1994) recommended sampling size of at least 100 for conducting researches. Furthermore, for Lee and Comrey (1992) sample size of 100 is also acceptable which based on their ideas, sample size of 100 was selected. This sample size can help us to remove the sample frame error and to rightly represent the whole population which the research has targeted. Assortment of the population is reliant on the research which the researcher determined.

A sample is part of a group of research and subset of selected population. It should replicate the population which it is selected from. It helps the researcher to avoid any disparity occurring during sampling selection.

### **3.4. Data Collection**

In this research, the researcher collected the data through primary design. All the data was collected directly by the researcher himself. Primary data are those data which are directly collected by the researcher and it is also called the first hand data (Schabenberger et al., 2017). For the purpose of this research the data was collected through questionnaire from the Afghan commercial banks customers using ATM services.

The questionnaire had two key parts. In the first part background of the respondent was asked, such as, gender, age, education qualification and occupation. In the second part which assessed the service quality of ATMs had five sub parts. These sub parts were the dimensions of SERVQUAL model which were used in this research. These SERVQUAL dimensions are Reliability, Responsiveness, Assurance, Empathy and Tangibility.

For each of the Reliability, Assurance and Responsiveness dimensions four questions were designed. While for each of, Empathy and Tangibility dimensions 3 questions were designed. In addition, two questions were designed for assessing the customer satisfaction level. For increasing the effectiveness of the research, researcher used the questionnaire as the primary source of information. The questionnaire was properly designed to assess the relationship between dependent variable (Customer Satisfaction) and independent variables (ATM service quality dimensions).

In this research, one hundred of questionnaires were distributed among Afghan commercial banks' customers. For the purpose of making the best questionnaire, researcher referred to various author suggestions and based on those suggestions these 24 questions were made. Researcher decided to make all these question likert-scale questions. These questions had five answer which the scale 1 indicated strong disagreement, scale 2 indicated somewhat disagreement, scale 3 indicated indifference, scale 4 indicated somewhat agreement and scale 5 strong agreements. Every one of these scales had its own value and based on that the researcher knew that what the customer feels about the service quality offered to them by banks. As mentioned in the first page of

the questionnaire, the purpose of the research clearly explained to the respondents in order to ensure them that the information they provide would be kept confidential.

### **3.5. Variables**

In this part the researcher wants to assess that how the independent variables (Responsiveness, Assurance, Reliability, Empathy and Tangibility) affect the dependent variable (customer satisfaction).

#### **3.5.1. Empathy**

In this research Empathy is one of the independent variable and one of the SERVQUAL dimension. It is defined as the enthusiasm and ability to give tailored attention to a customer (Culiberg & Rojsek, 2010). Based on this factor financial institutions or banks should work closely with their customers and pay special attentions to their wants. Therefore, it is the individualized attention from a firm to its customers. Also all customers' reasonable demands and expectations should be met by the organization.

Empathy also includes some other dimensions like security, credibility, competence, and understanding customers (Chingang & Lukong, 2010). As bank staffs are directly in contact with customers, therefore, it is necessary for them to pay special attention to their customers especially when they face problems related to ATM. Thus, they should maintain close relationships with ATM users.

### **3.5.2. Responsiveness**

The second independent variable is Responsiveness, as the name explains it describes the willingness of employees to service the customers when needed or the inclination of the firm or bank to provide or offer swift services to customers (Parasuraman, Berry, & Zeithaml, 1999).

It also consists of understanding the customer needs, good staff attention to customers wants and having appropriate operational hours (El Saghir & Nathan, 2013). In addition, it means that how an organization is ready to assist its customers in a speedy and fast way to resolve their problems (Parasuraman, Berry, & Zeithaml, 1999). It has been termed as an important element of customer satisfaction. It is crucial for every organization to serve its customer better and when a customer demands, be accessible to customer, work closely with the customers to resolve their problems and meet their demand (Balunywa, 1995). Generally, customers expect to be served as soon as possible as they don't like to wait for long times (Ruby & others, 2012). If banks fail to fulfill customers' expectation in short time, it can be improved by providing professional services quickly (Adeoye & Lawanson, 2012).

### **3.5.3. Reliability**

The third independent variable is Reliability; it's considered the most important dimension of service quality model (Yang et al., 2004). It explains the capability of an organization to serve customers problem on time without any delay and keep and maintain an error free records (El Saghir & Nathan, 2013). He also pointed out that reliability is the fulfillment of orders truthfully, maintaining good record and calculating commission precisely.

Security and privacy are the main elements of reliability dimension as security is an important element of customer satisfaction in online banking services (Liao, 2008).

It describes that the timeliness of services or it describes that the firm must serve their customers exactly at the time which it promised to serve them (Ryan, 2003). He also pointed out that accuracy of a firm or bank function is the crucial aspect of this attribute which needs to be considered properly as well. Also according to other authors it is considered as an important and valuable aspect of all service industry (Parasuraman, Zeithaml, & Berry, 1985).

#### **3.5.4. Assurance**

The fourth dependent variable is Assurance, which describes trust and confidence of customers towards the bank. In developed countries like United Kingdom assurance means having best management team, giving easily access to customer account, providing best financial advices, and having polite and friendly staff (El Saghir & Nathan, 2013). Therefore, banks should try hard to have polite, reliable and trustworthy employees to prevent mistrust of customers and motivate their customers that its employees are honest, trustworthy and dedicated to their employer and everything would be safe and secret between the customers and bank.

#### **3.5.5. Tangibility**

The last dependent variable is Tangibility; it covers facilities, physical equipment such as ATM, personnel and written materials (Parasuraman, Zeithaml, & Berry, 1998). Also it explains the physical facilities, safety, conveniences that are assisting an organization to offer its services to its customers (Lunardi, Henrique & Porto Bellini, 2005). Most of the customers prefer those banks which placed their ATM in convenient

and accessible locations and use best technologies for their operations (Nabi, 2012).

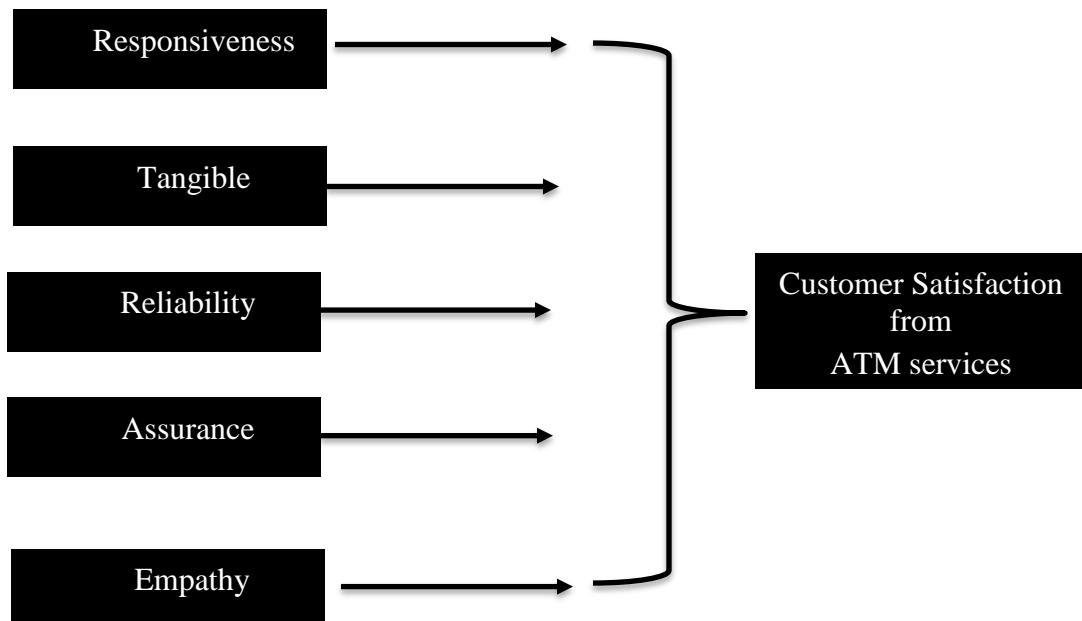
Placing ATM in convenient location is considered important for customers which most of the researches in the neighboring countries prove that. For example; in a study which was conducted by (Munusamy, Chelliah, 2010) in Bangladesh it was found out that ATM location has positive correlation with customer satisfaction. Because of this it was decided to consider it in customer satisfaction analysis in Afghanistan as well.

### 3.6. Theoretical framework

This research assesses the influence of ATM service quality on customer satisfaction. For this purpose, the SERVQUAL model is used. The five dimensions of SERVQUAL are independent variable while the customer satisfaction is the dependent variable.

The hypothetical framework is furnished in below figure 3.1:

Figure 3.1: Conceptual Framework



### **3.7. Hypothesis Development**

The theoretical framework has been set and based on that hypothesis are as follow:

✓ According to Ebrahimi and Moghadam (2012) who studied the relationship of ATM service quality and customer satisfaction in Iranian Commercial Banks , it showed that there is a significant relationship between customer satisfaction and Responsiveness dimension of service quality. For that reason, in this study we assume

**H1:** there is a significant relationship between customer satisfaction and responsiveness dimension of service quality of Afghan commercial banks.

✓ According to Munusamy and Chelliah (2010) who studied the relationship between customer satisfaction and Tangibility dimension of service quality in Bangladeshi commercial banks, He found that there is a significant relationship between customer satisfaction and Tangibility dimension of service quality. Thus, in this research we assume that:

**H2:** there is a significant relationship between customer satisfaction and tangibility dimension of service quality in Afghanistan .

✓ According to Mojoodi et al. (2013), who studied service quality dimensions in technology-based banking, found out that there is a significant relationship between Assurance dimension of service quality and customer satisfaction. Therefore, in this research we assume that:

**H3:** there is a significant relationship between customer satisfaction and assurance dimension of service quality in Afghanistan .

✓ According to Hasan et al. (2013), who studied ATM Service Quality and its Effect on Customer Retention in Pakistani banks , it showed that there is a positive

relationship between customer satisfaction and reliability dimension of ATM service quality. Therefore, we assume that:

**H4:** there is a significant relationship between customer satisfaction and Reliability dimension of ATM service quality.

✓ According to Mukhtar et al. (2014), who studied customer satisfaction and services provided by Pakistani banks, showed that there is a positive relationship between customer satisfaction and Empathy dimension of service quality. Therefore, we assume that:

**H5:** There is a positive relationship between customer satisfaction and empathy dimension of service quality.

### **3.8. Statistical Analysis**

In this chapter the researcher formed the conceptual framework. In order to answer and to test those hypotheses, different statistical techniques will be used. The usefulness of these testing through statistical means is that it will enable the researcher to make certain that those hypotheses are tested in an inclusive manner. For that reason both pretentious and unpretentious statistical analysis where needed and considered logical were used. Those techniques were used based on the generally recognized research practices.

Generally the questionnaire had two parts which the second part consist of five sections which tested the five dimensions of SERVQUAL model. In the second section the first part tested Reliability dimension and customers satisfaction. It consists of four question and tested that how Responsiveness of ATM service affect customer satisfaction. The second part of this section was tested Responsiveness dimension and

customer satisfaction. It also consist of four questions which aimed to assess that how this dimension affect customer satisfaction. The third part of this section tested the Assurance component of ATM and customer satisfaction to find out that how Assurance of ATM services affect customer satisfaction. The fourth and fifth section tested Empathy and Tangibility dimensions of ATM service quality and customer satisfaction respectively. To get an acceptable and reliable result from all these questions, multiple linear regressions is going to be run and related tests will be conducted.

### **3.9. Data Analysis and Validating Regression Model**

In this study the descriptive analysis is going to be used and different validity tests will be conducted, such as, Normality, Heteroscedasticity, Autocorrelation and linearity tests. Since in this study we assume that there is a linear relationship between dependent variable and independent variables, therefore, for accepting or rejecting the model we have to conduct below tests.

#### **3.9.1. Normality Test**

To test the normality of a model its residual histogram should be plotted. When the histogram is bell-shaped then the assumption of Normality is possibly fulfilled (Bertsimas, 2000). Contrary to that if the histogram is not bell-shaped then the assumption of Normality is violated. Furthermore, there are other sophisticated models that can also show if the model is normal or not, such as Kurtosis and Skewness measurements, they show symmetry of distribution and shape of distribution respectively (Jondeau et al., 2003). Based on different authors view points, a normal distribution has a value of zero for both the Kurtosis and Skewness but a pictorial check of “noise” histogram can be sufficient tool for normality checking (Jondeau et al., 2003).

### **3.9.2. Heteroscedasticity Test**

Another test for the linear regression is the Heteroscedasticity. It assumes and explains that the value of all the unaccounted distribution or residual values have the same standard deviation, if the values of residuals get larger when independent values increase then the heteroscedasticity assumption is violated (Bertsimas et al., 2000).

### **3.9.3. Linearity Test**

Another assumption of the linear regression is the linearity which it assumes that the connection between dependent and independent variables are linear. The scatter-plot of a linear regression with only one independent variable is easy and can visually be checked if there is any linear relationship between dependent and independent variables but as for a multiple regression it is difficult to draw its scatter-plot, therefore,  $R^2$  should be checked, the higher the R-square the higher is the chance of linearity relationship between dependent and independent variables (Campbell et al., 2008).

### **3.9.4. Auto Correlation Test**

Another assumption about the linear regression is that the residuals or ( $\epsilon$ ) should be independent. If the unaccounted difference is not dependent to each other than the assumption of auto correlation is violated (Bertsimas et al., 2000).

## **Chapter Four**

### **Findings**

#### **4.1. Introduction**

Through this chapter we are going to present the findings of this research. For that reason and for getting reliable information, Regression is deployed. The data which are collected for this research will be analyzed by regression analysis and the result will be tested through different statistical analysis such as descriptive statistics, linearity, correlation analysis, multicollinearity testing, multiple regression, normality, R square, t-test and p-value for answering the research question and testing the hypothesizes which have already been determined and discussed in chapter three of this study.

#### **4.2. Questionnaire Data Analysis**

In this part short descriptions of each survey questionnaire are discussed below.

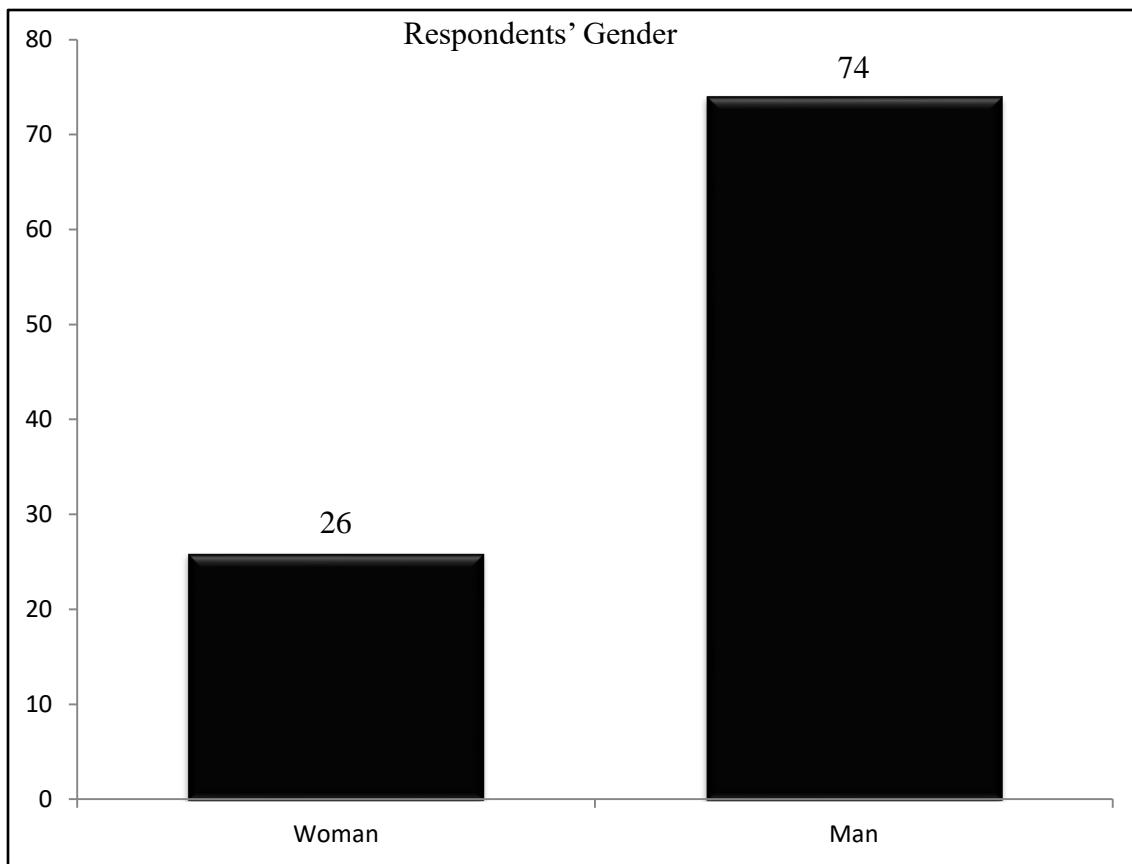
##### **4.2.1. Background Characteristics of the Respondents**

In this section of the questionnaire four questions are included such as gender, age, education qualification, and occupation of the respondents which are discussed as follow:

###### **4.2.1.1. Gender**

From the below figure it can be seen that 76% of the respondents were males and the remaining 26% were females. It implies that most males transact through ATM than females. It can also be derived that most ATM card holders are man with a high rate of ATM transactions.

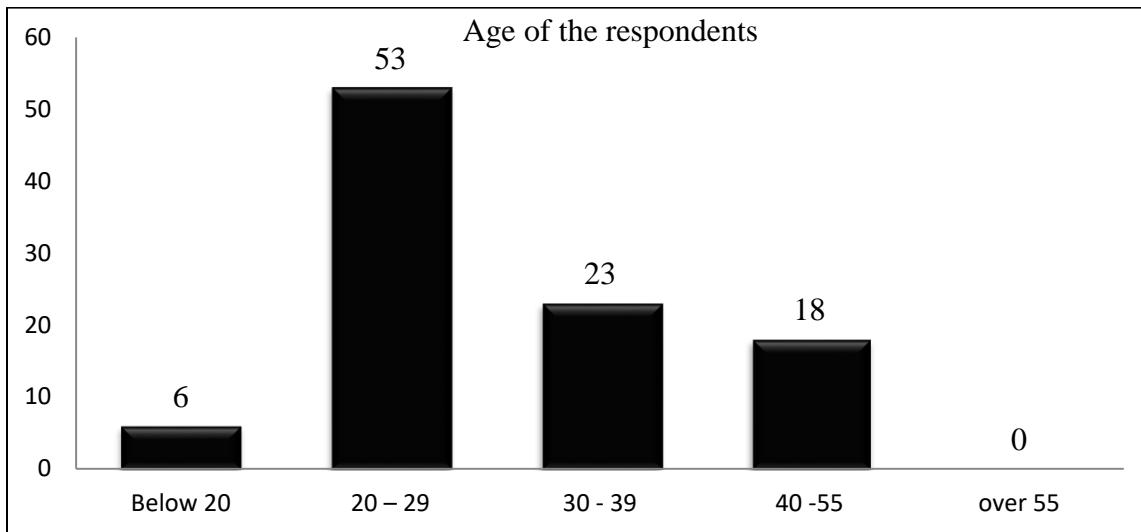
Chart 4.1: Respondents' Gender



#### 4.2.1.2. Age

Based on below graph 6% of the respondents were below twenty years old, 53% were between 20 to 29 years old, 23% were between 30 to 39 years old, 18% of the respondent between 40 to 45 years old and no respondent were more 55 years old. The study found out that the lease age of the respondent was 18 years because most of the banks based banking law open accounts for the people who are at least eighteen years old. The full detail of the respondents' age distribution is explained in graph 4.2.

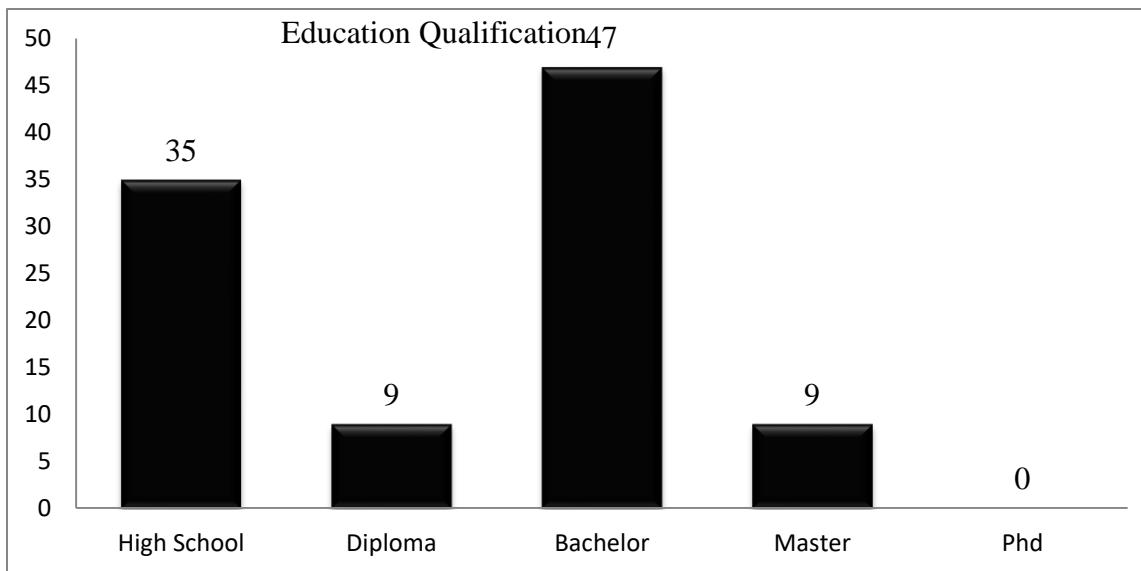
Chart 4.2: Age of the respondents



#### 4.2.1.3. Education Qualification

Based on below graph 35% of the respondents had high school degree, 9% Diploma, 47% Bachelor and 9% had Master degree. It implies that people with bachelor degree mostly use ATM cards and transact through ATMs. The full detail of their education qualification is furnished in below graph.

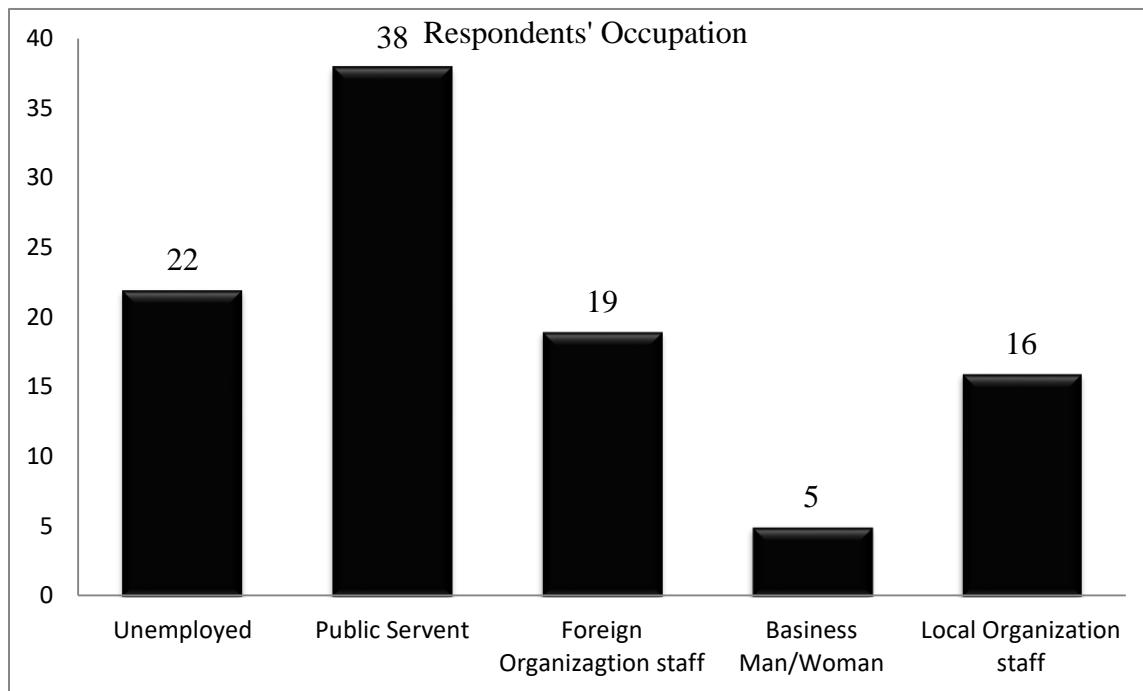
Chart 4.3: Education Qualification of the Respondents



#### **4.2.1.4. Occupation**

Based on below graph most of the respondents 38% were public servant, 22% were unemployed, 19% were foreign organizations staff, 5% were business people and 16% were local originations staff.

Chart 4.4: Respondents' Occupation



#### **4.2.2. Customer Response to ATM Service Quality Items (SERVQUAL Model)**

The SERVQUAL model has five dimensions such as Reliability, Responsiveness, Assurance, Tangibility and Empathy . The result of all the questions which were determined in chapter three related to each one of the dimensions of SERVQUAL model are discussed as follow:

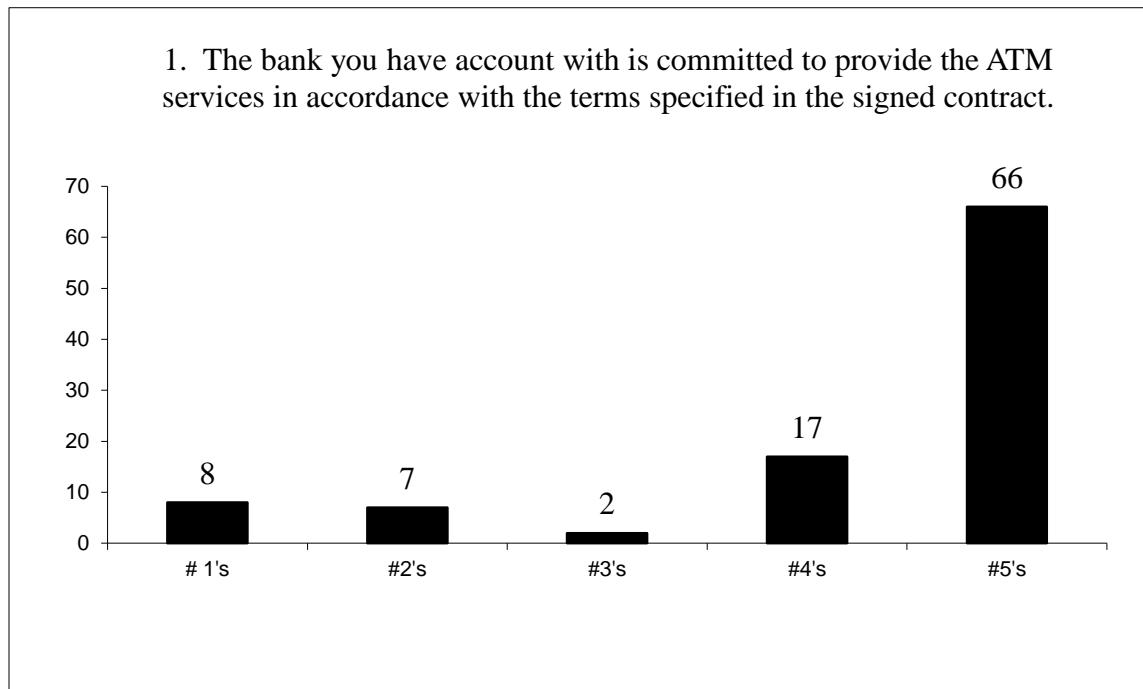
#### 4.2.1.1. Questions Covering Reliability Dimension

Reliability is one of the dimensions of ATM service quality, which four questions were designed to find out if it has any effect on customer satisfaction. The result of question one through four is as follow:

**Question1.** The bank you have bank account with is committed to provide the ATM services in accordance with the terms specified in the signed contract.

From the total number of respondent 66% strongly believe that Afghan commercial banks provide the ATM services according to the contract signed in the first stage of ATM card issuing process. While 17% of the respondent are just agree, 2% are neutral, 7% were somehow disagree and 8% of the respondents were strongly disagree and believed that Afghan commercial banks are not following the singed contract. The details are shown in chart 4.5.

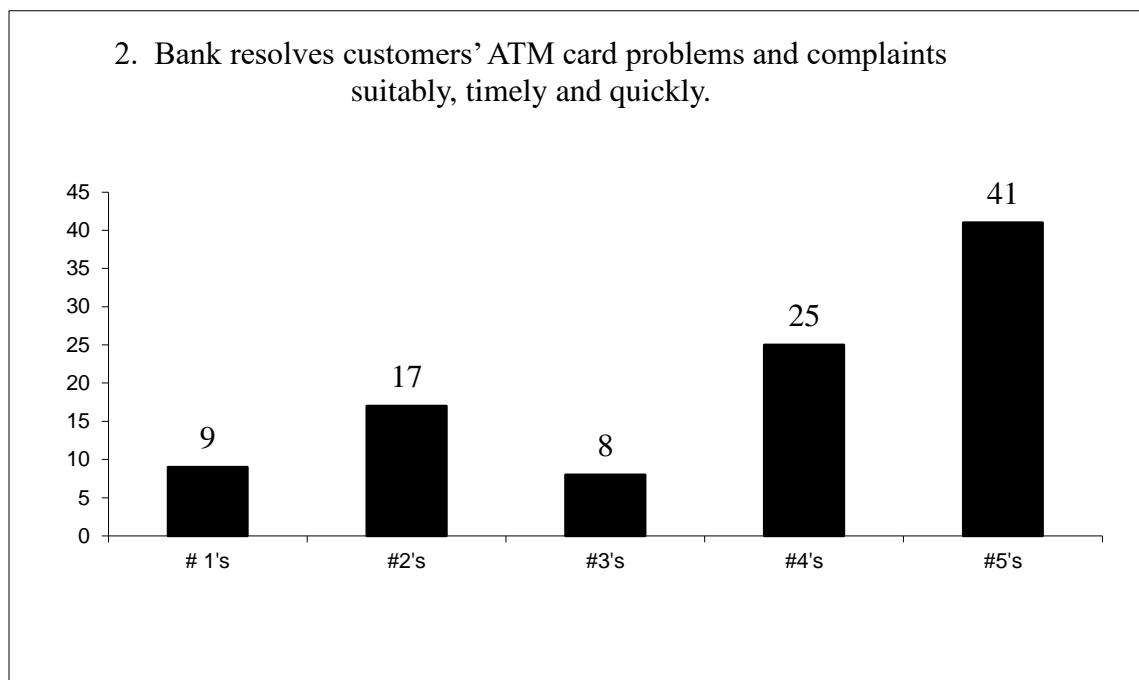
**Figure 4.5:** Respondents answer to the first question of Reliability dimension



**Question 2.** Bank resolves customers' ATM card problems and complaints suitably, timely and quickly.

From the total number of respondents 41% of them were strongly agree that their ATM card problems are solved in a timely manner while 25% were agree, 8% were neutral, 17% were somewhat disagree and 9% were strongly disagree if Afghan commercial banks solve the problems with the ATM card quickly. The details are shown in figure 4.6

Chart 4.6: Respondents answer to the second question of Reliability dimension

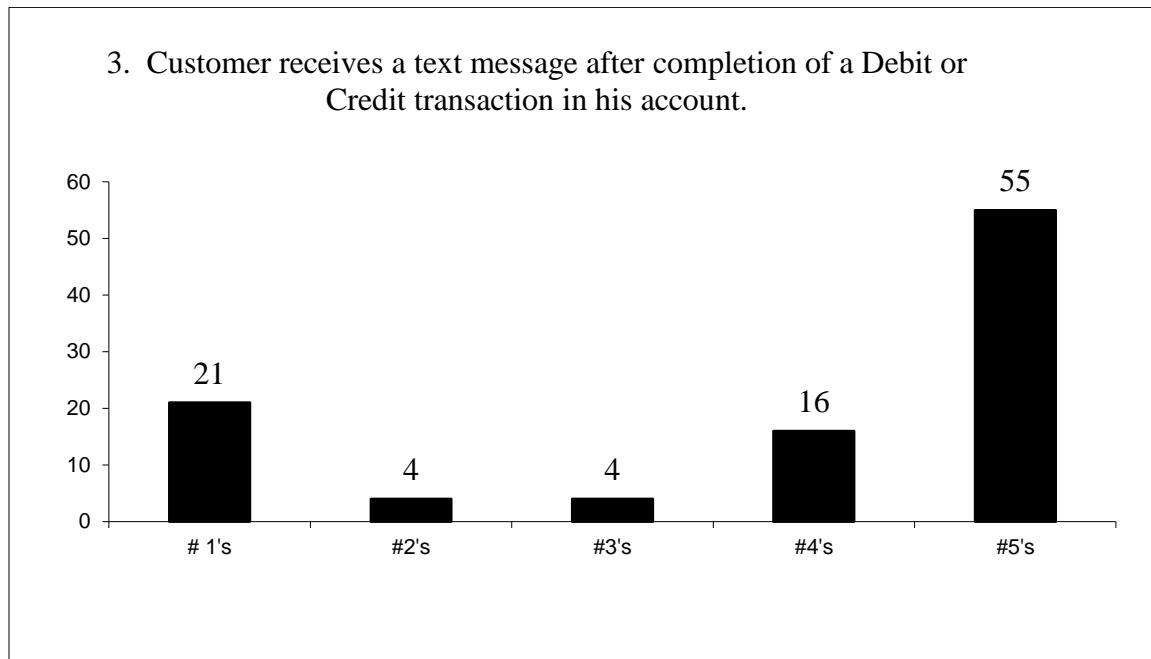


**Question 3.** Customer receives a text message after completion of a Debit or Credit transaction in his account.

Overall 55% were strongly agree that customers receive a text message after transaction completion, 16% were agree, 4% were neutral, other 4% were somewhat disagree and 21% were strongly disagree.

This implies that majority believe that they receive text messages after transaction completion through ATM. Nevertheless some respondents believe that they don't receive any message. Through Chart 4.7 it is visually shown.

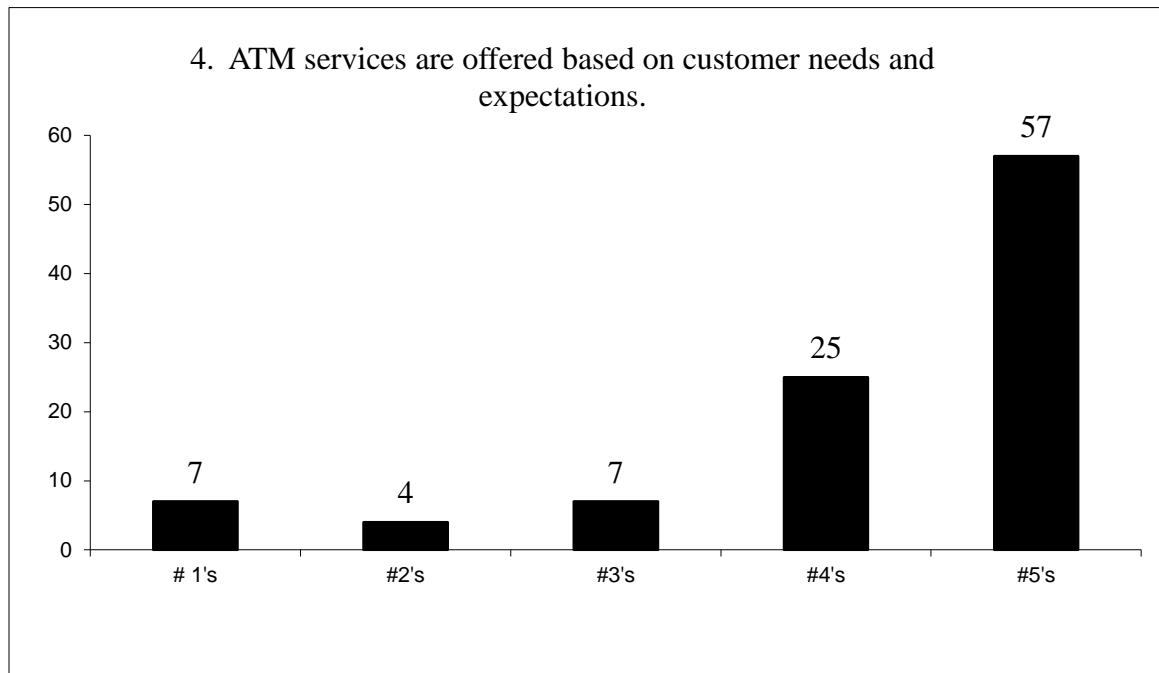
Chart 4.7: Respondents to the third question of Reliability dimension



**Question 3.** ATM services are offered based on customer needs and expectations

Based on the below chart 57% of the respondents strongly believed that Afghan commercial banks offer ATM services based on their needs and expectation, while 25% were agree, 7% didn't have any idea, 4% were somewhat disagree and 7% were strongly disagree. But overall most of them were agreed and believed that ATM services are offered based on customer needs. The detail is furnished in below chart.

Chart 4.8: Respondents answer to the fourth question of Reliability dimension



#### 4.2.1.2. Questions Covering Responsiveness Dimension

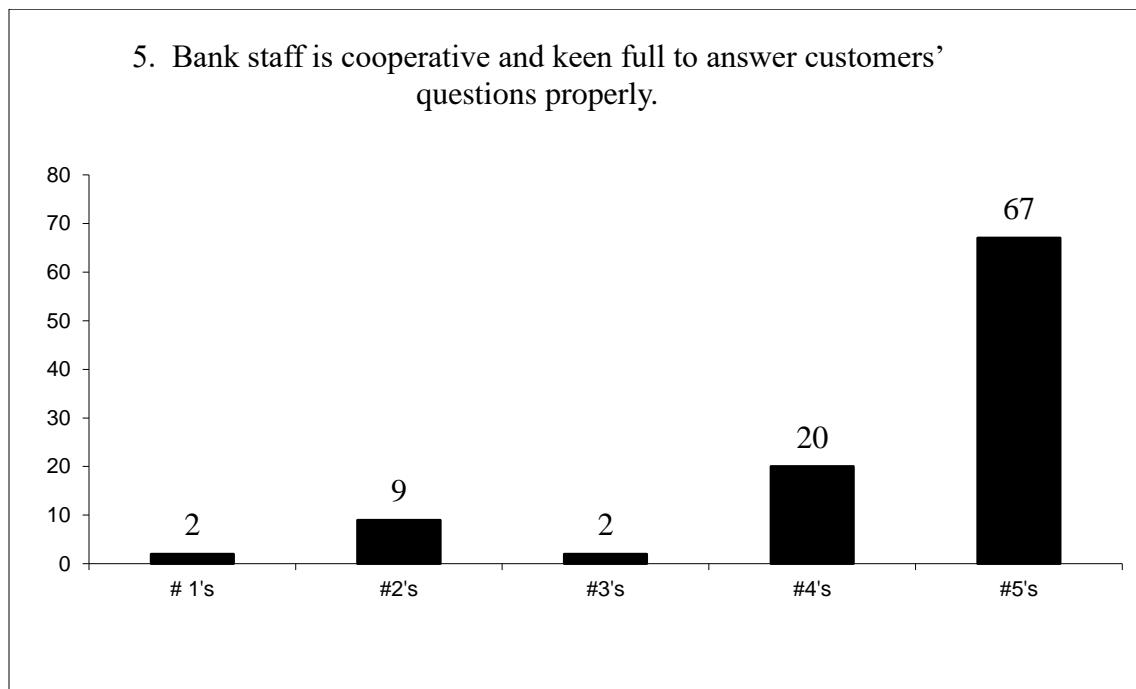
It is the second dimension of SERVQUAL model and four questions were assigned for this section to assessing if it has any positive effect on customer satisfaction.

Respondents answer to all its four question are discussed below:

**Question 5.** Bank staff is cooperative and keen full to answer questions properly

67% of the respondents strongly believed that bank staffs are cooperative and willing to answer customer's question. 20% were somewhat agree, 2% were neutral, 9% were somewhat disagree, and the remaining 2% completely reject this notion and were negatively responding to this questions. The result of this question is depicted in chart 4.9.

Chart 4.9: Respondents answer to the first question of Responsiveness dimension.

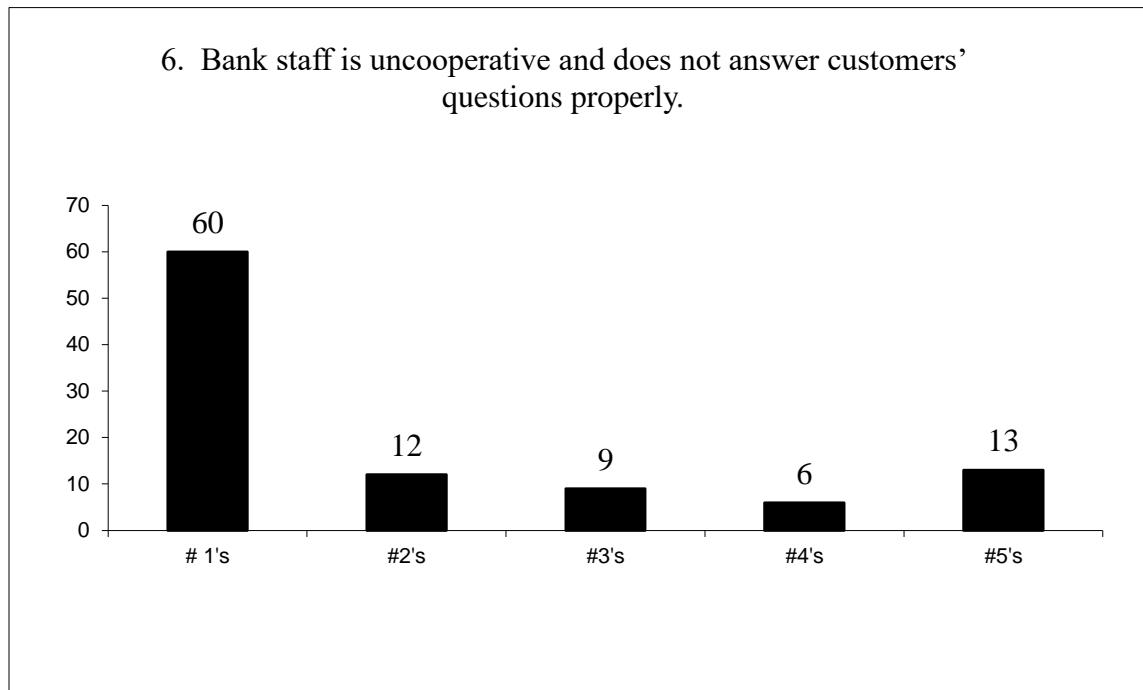


**Question 6.** Bank staff is uncooperative and does not answer customers' question properly.

Unlike the previous question here 60% of the respondents rejected this idea and they were strongly disagreeing if bank staff are uncooperative, they believe that staff are cooperative, 12% were somewhat disagree, 9% didn't have any answer, 6% were somewhat agree and 13% were strongly that they are uncooperative. Chart number 4.10 visually shows the result.

It implies that about 19% (6%+13%) believe that bank staffs are uncooperative. Thus, banks should clearly consider it and should make plans for improving it to avoid customer dissatisfaction.

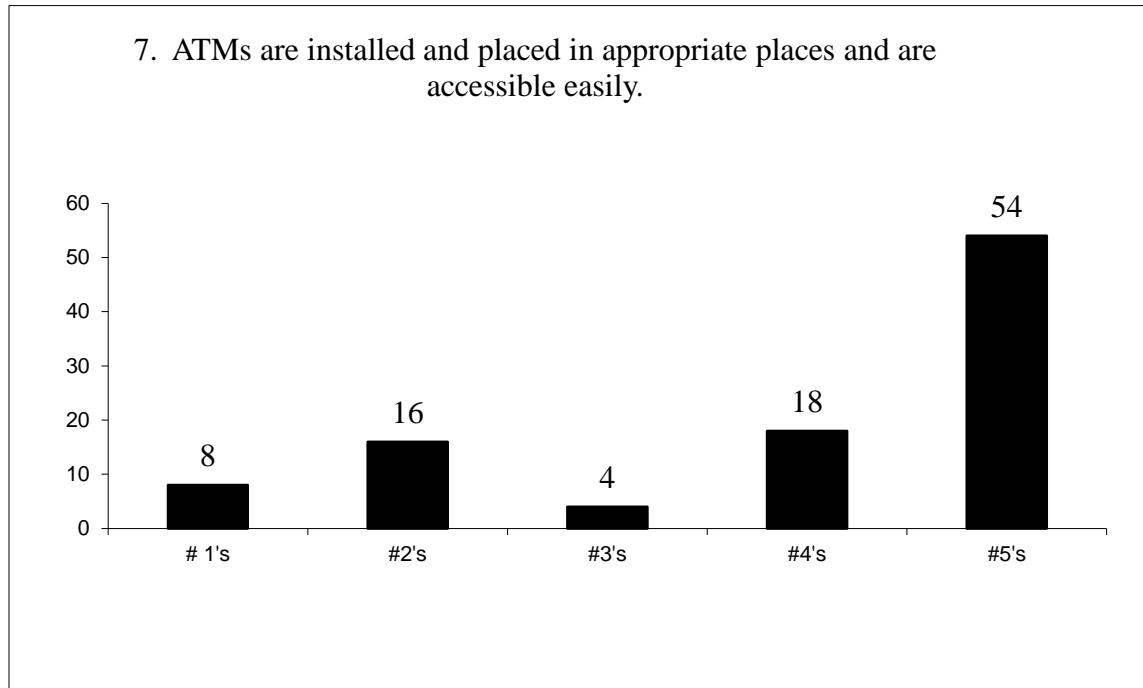
Chart 4.10: Respondents answer the second question of Responsiveness dimension.



**Question 7.** ATMs are installed and placed in appropriate places and are accessible easily.

54% of the respondents strongly believed that ATMs are installed in the right and accessible locations, 18% were somewhat agree, 4% were neutral, 16% were somewhat disagree and just 8% strongly disagree to this notion. Overall it should be mentioned that 24% of the respondents believed and were disagree if the ATMs are installed in the right places, which that might have negative impact on their staff level. And these commercial banks should consider that while decision making process.

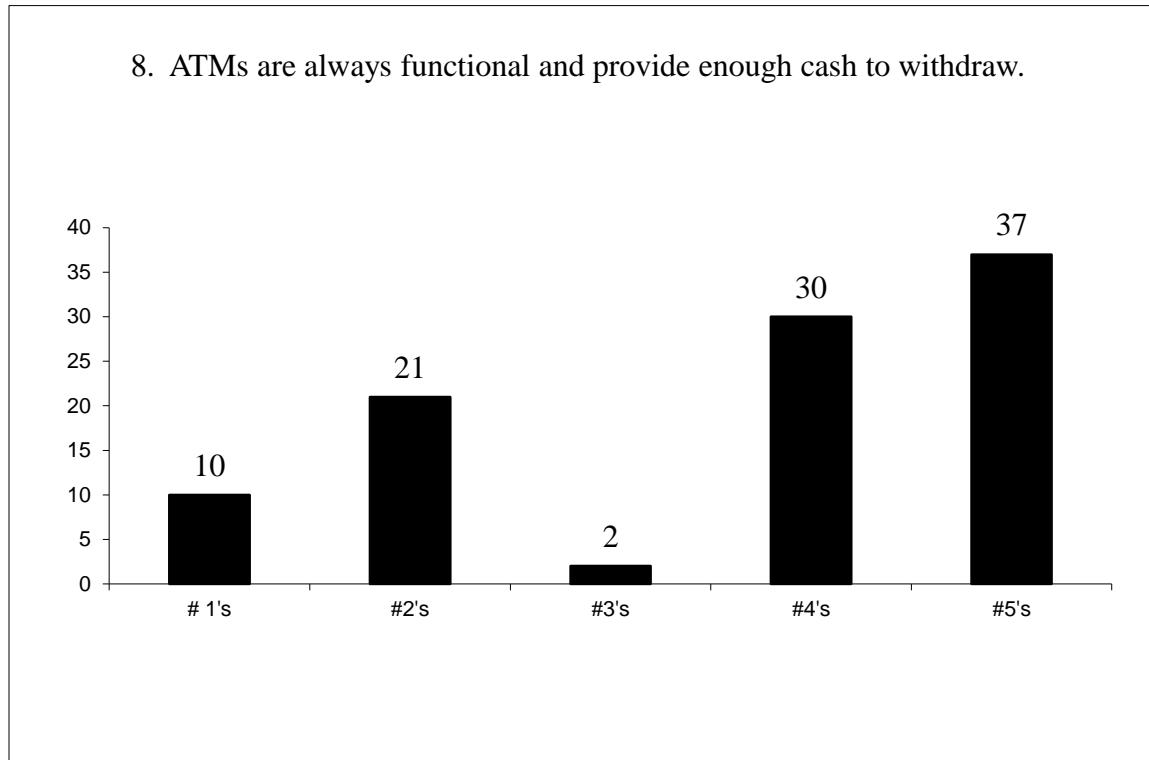
Chart 4.11: Respondents answer to the third question of Responsiveness dimension



**Question 8.** ATMs are always functional and provide enough cash to withdraw

Most of the respondents 37% strongly accepted this notion, 30% were agree, 2% were neutral, 21% were somehow disagree and the remaining 10% were disagree to mentioned notion. Overall mostly accepted this claim and were satisfied from the services banks provide to their customers in this respect. It is visually shown in chart 4.12 below.

Chart 4.12: Respondents answer to the last question of Responsiveness dimension



#### 4.2.1.3. Questions Covering Assurance Dimension

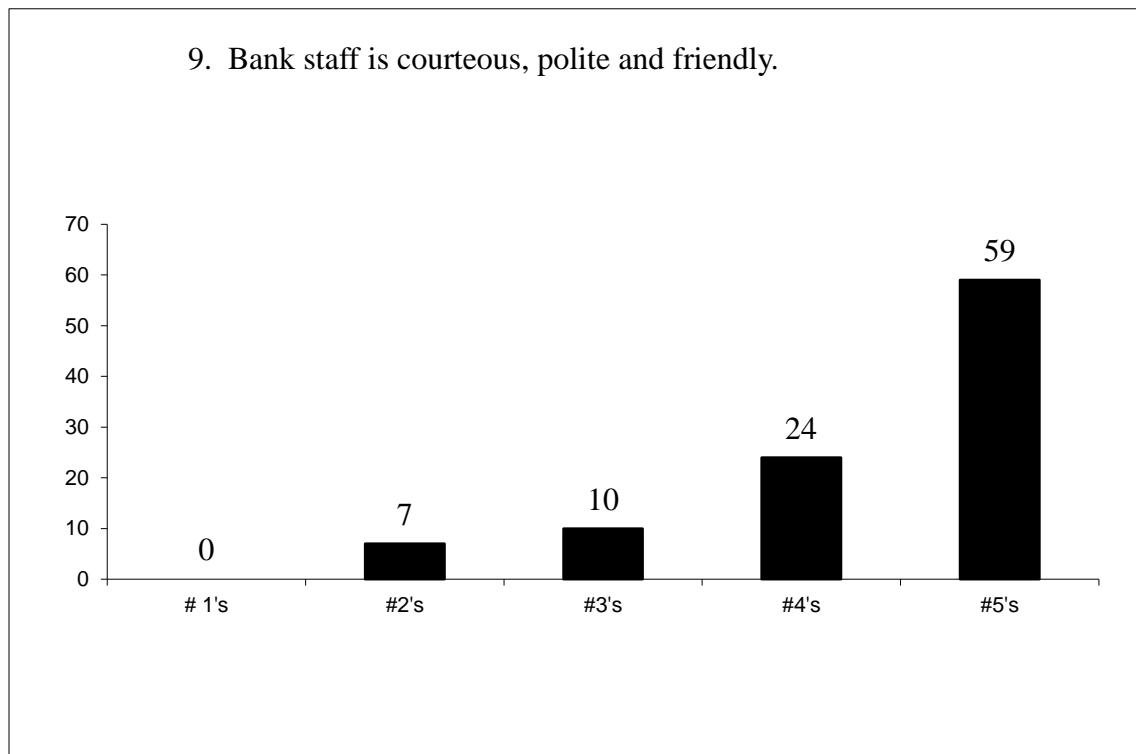
The third dimension of SERVQUAL model is the assurance, in the questionnaires which were distributed to Afghan commercial banks' customers; four of the eighteen questions were designed to assess the assurance dimension of SERVQUAL model. The results are discussed below.

##### **Question 9.** Bank staff is courteous, polite and friendly

59% of the respondents believed and confirmed this notion, 24% were agree, 10 did not have any idea, 7% were somehow disagree and no one were strongly disagreeing. This result implies that most respondents confirmed that Afghan commercial banks' staff are polite, courteous and friendly which we later see if it had any effect on the

satisfaction level of them when we get the result of the regression analysis in next section. Chart number 4.15 visually depicted all the information.

Chart 4.13: Respondents answer to the first question of Assurance dimension

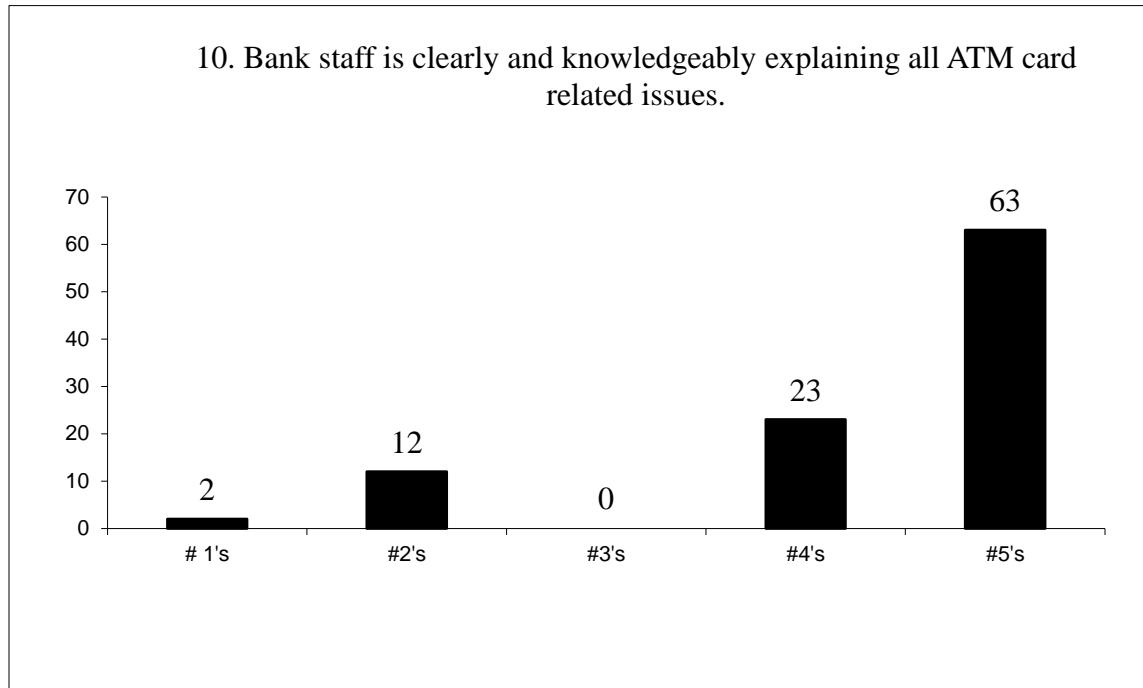


**Question10.** Bank staff is clearly and knowledgeably explaining all ATM card related issues

63% of the respondents strongly believed that bank staff explain all the term and condition of ATM card to customer clearly while just 23% were agree, no one was indifferent, 12% were agree and only 2% were disagree.

Overall it can be implied that 86% (23+63) confirmed that bank staff are clearly discussing this issue clearly with the customer which we later will see that how it affected customer satisfaction.

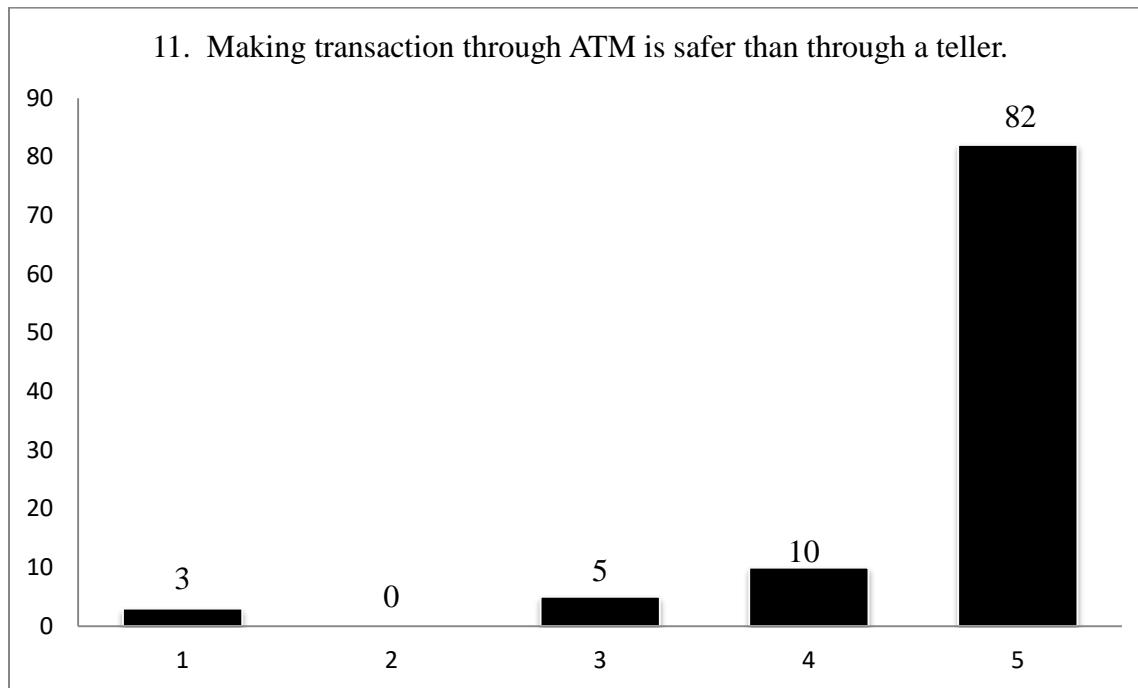
Chart 4.14: Respondents answer to the second question of Assurance dimension



**Question11.** Making transaction through ATM is safer than through a teller

A landslide of 82% of the respondents strongly agreed that transaction via ATM is safer than other means, 10% were agree this idea, 5% didn't have any idea and just 3% were strongly disagree. This shows that most customers want ATM machines to be installed in different places for making transaction and that can be a criterion for choosing their banks. It is visually shown in below chart 4.16.

Chart 4.15: Respondents answer to the third question of Assurance dimension

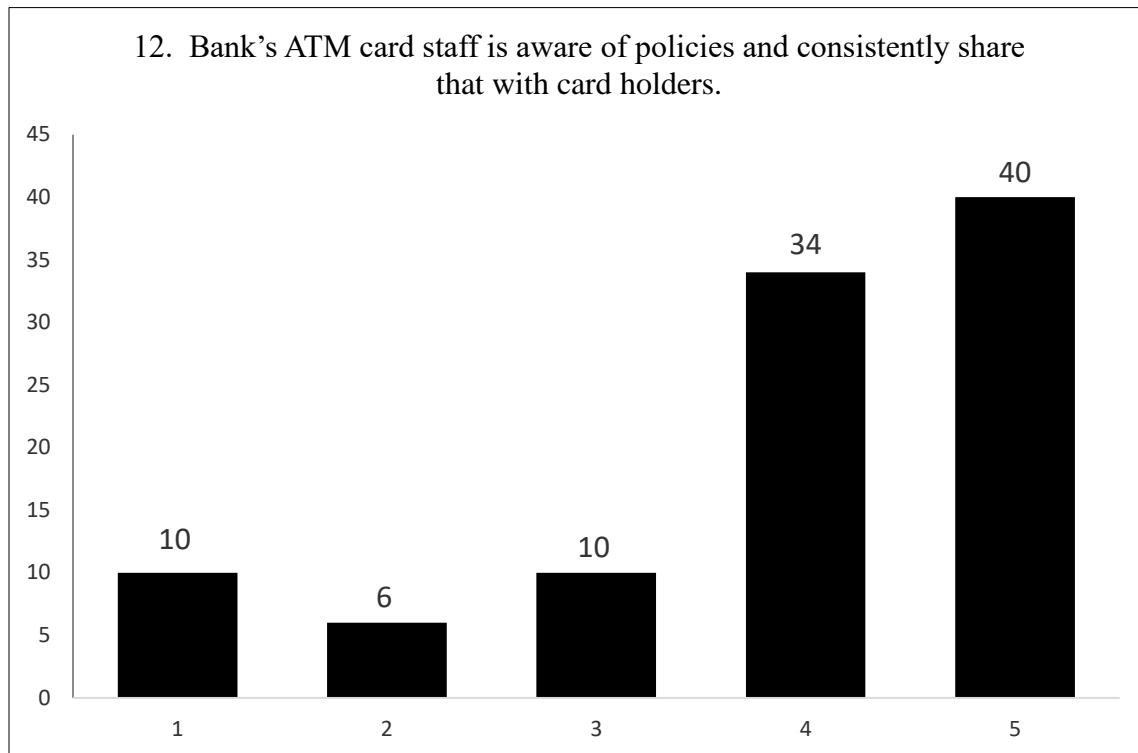


**Question12.** Bank ATM staff is aware of policies and share that with card holders

40% of the respondents strongly believed that bank ATM card concerned staff are aware from the policies related to ATM card while 34% were agree, 10% did not have any idea, 6% were somehow disagree and the remaining 10% were strongly disagree and believed that concerned staff are not aware from the policies related to ATM cards.

Overall 74% (40+34) of the respondents believed and confirmed that bank staff are aware of the policies. In the next section we will see if it has any significant relationship with customer satisfaction. In below chart (4.17) it is visually depicted.

Chart 4.16: Respondents answer to the fourth question of Assurance dimension



#### 4.2.1.4. Questions Covering Empathy Dimension

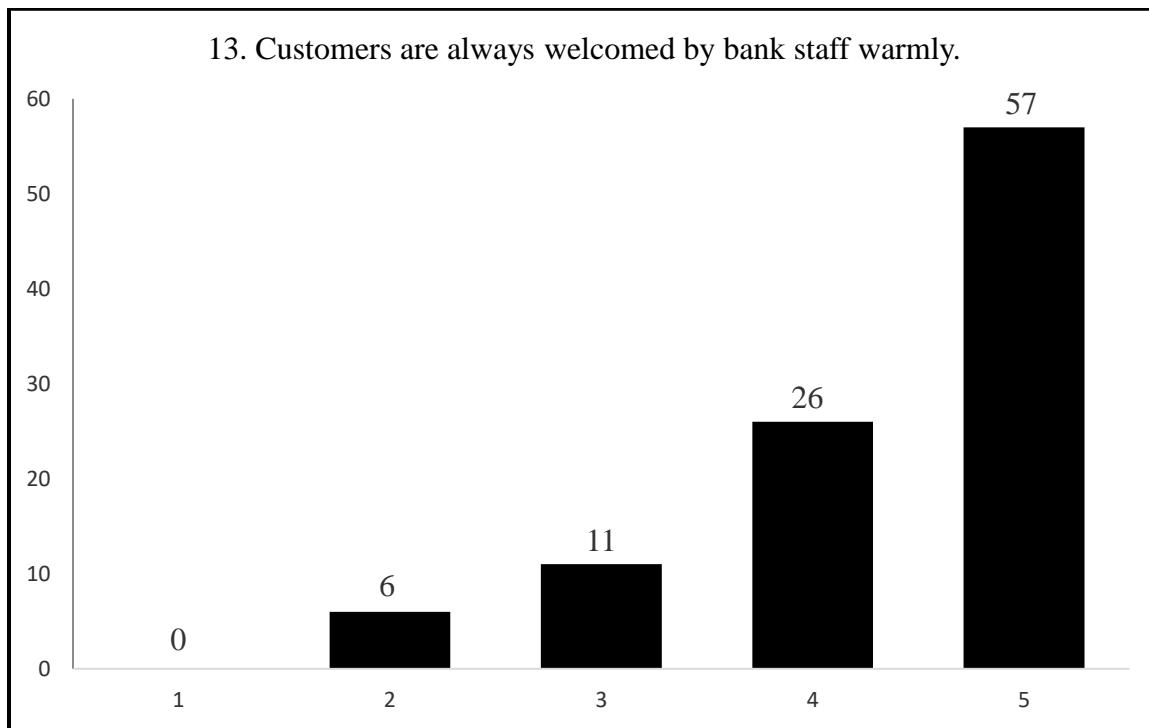
The fourth dimension of ATM service quality is the Empathy. Three questions were designed and included in the questionnaires which were asked from the respondents and the results are discussed below. The question was:

**Question13.** Customers are always welcomed by bank staff warmly

57% of the respondents strongly believed that they are welcomed by bank staff warmly, 26% were moderately agree, 11% didn't have any idea and just 6% were disagree. It implies that most of the customers believe that they are professionally welcomed by bank staff and are satisfied from the service they provide from them.

In the next section we will find out if it positively or negatively affected customer satisfaction level.

Chart 4.18: Respondents answer to the first question of Empathy dimension

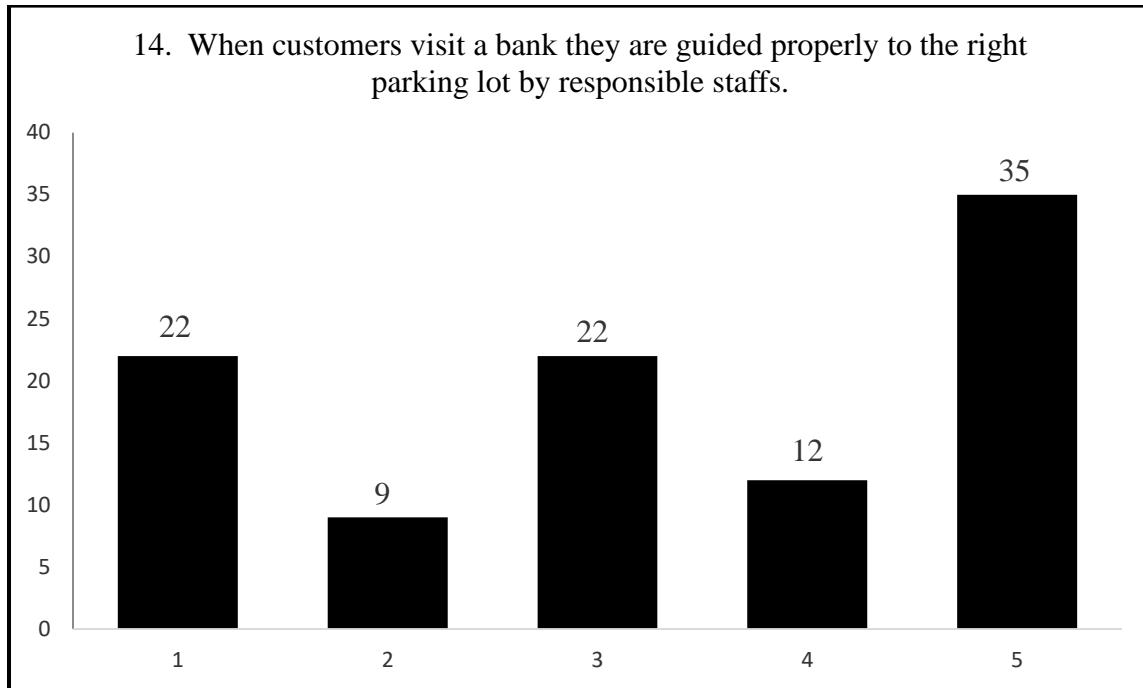


**Question14.** Customers visiting a bank are guided properly to the right parking lot

35% of the respondents believed that they were served better, 22 were agree to this notion, 3% did not have any idea because they might not experience such cases or did not have any car, 9% were disagree and 22% were strongly disagree.

It implies that most of the respondents somehow disagree as they are not guided to the right parking lot when going to a bank for conducted any transaction. Therefore, it should be assessed that how it affected their satisfaction in the next section after running the regression

Figure 4.19: Respondents answer to the second question of Empathy dimension

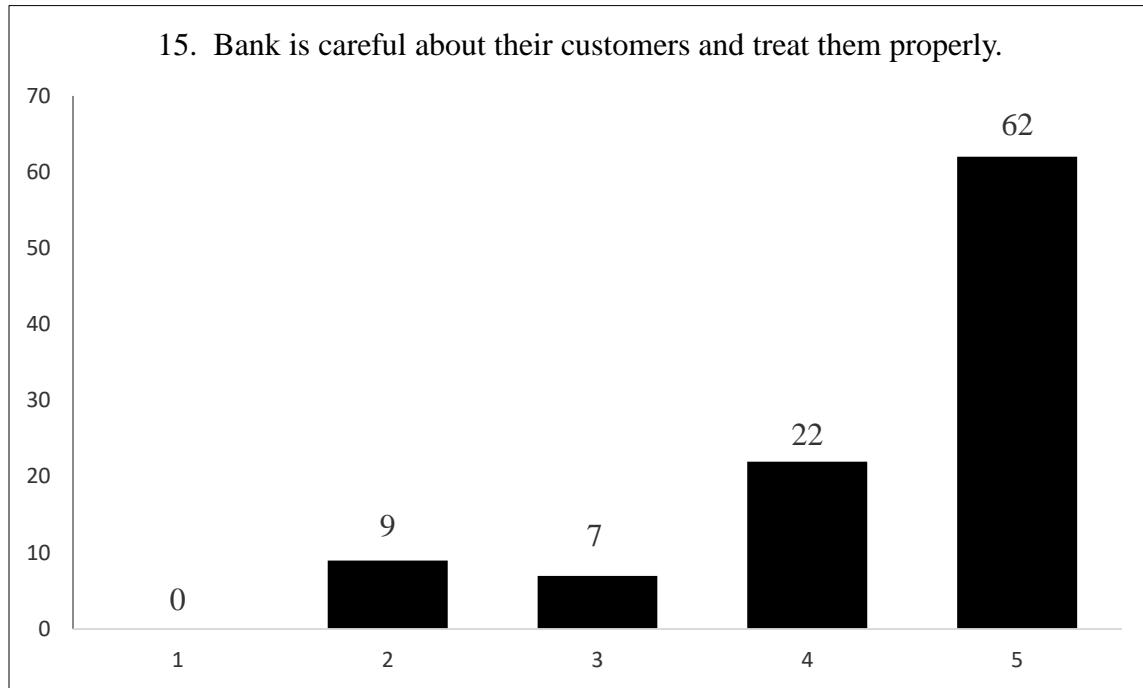


**Question15.** Bank is careful about their customer and treats them properly

Of the total respondents 62% strongly believed that banks are careful about their customer and treat their customers properly, 22% were agree, 7% did not have any idea, while 9% were disagree and believed that banks are not treating customers properly.

The impact of this satisfaction will be discussed in the coming section after running regression. But overall they customers are satisfied and agree with this idea. Its full details are depicted in below chart 4.20.

Chart 4.20: Respondents answer to the last question of Empathy dimension



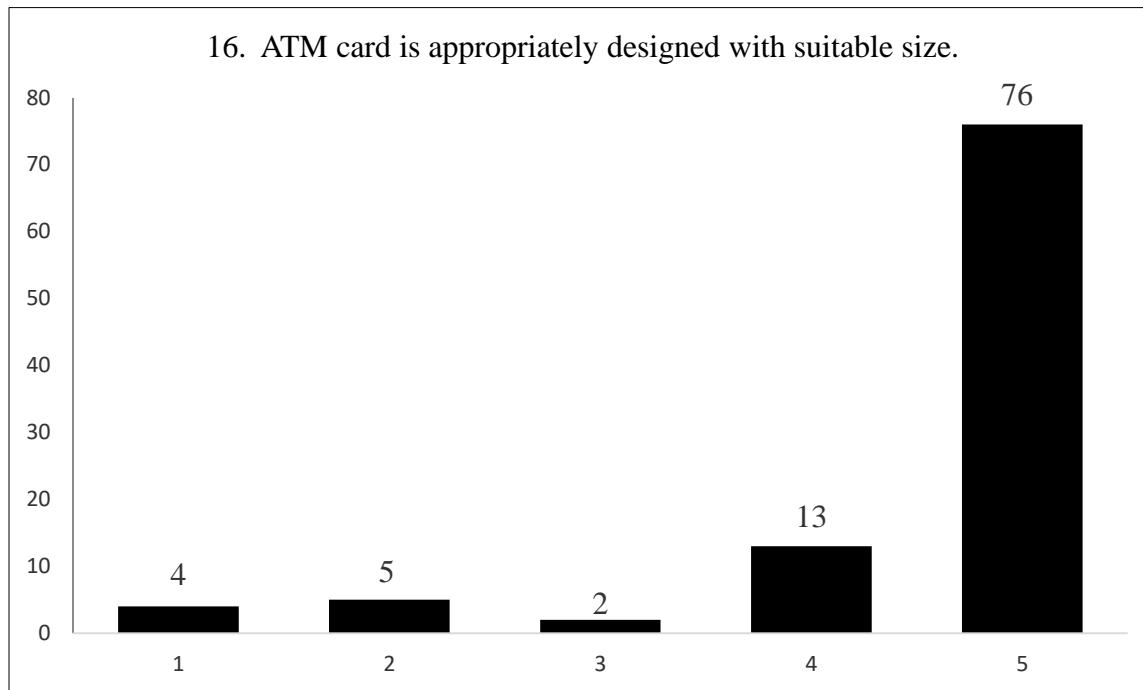
#### 4.1.1.1. Questions Covering Tangibility Dimension

The fifth and the last dimension of SERVQUAL model is the Tangibility. For this dimension also three questions were designed and asked from the respondents in order to find out that how Tangibility dimension affects customer satisfaction. Each one of these three questions results are discussed separately below:

##### **Question16.** ATM card is appropriately designed with suitable size

Almost all the respondents agreed that the ATM card are suitably designed and has the suitable size. 76% were strongly agree, 13% were moderately agree, 2% did not have any idea, 5% were disagree and 4% were strongly disagree. It generally implies that mostly customers are agreed that ATM card has suitable design and size. The full detail are shown in chart 4.21.

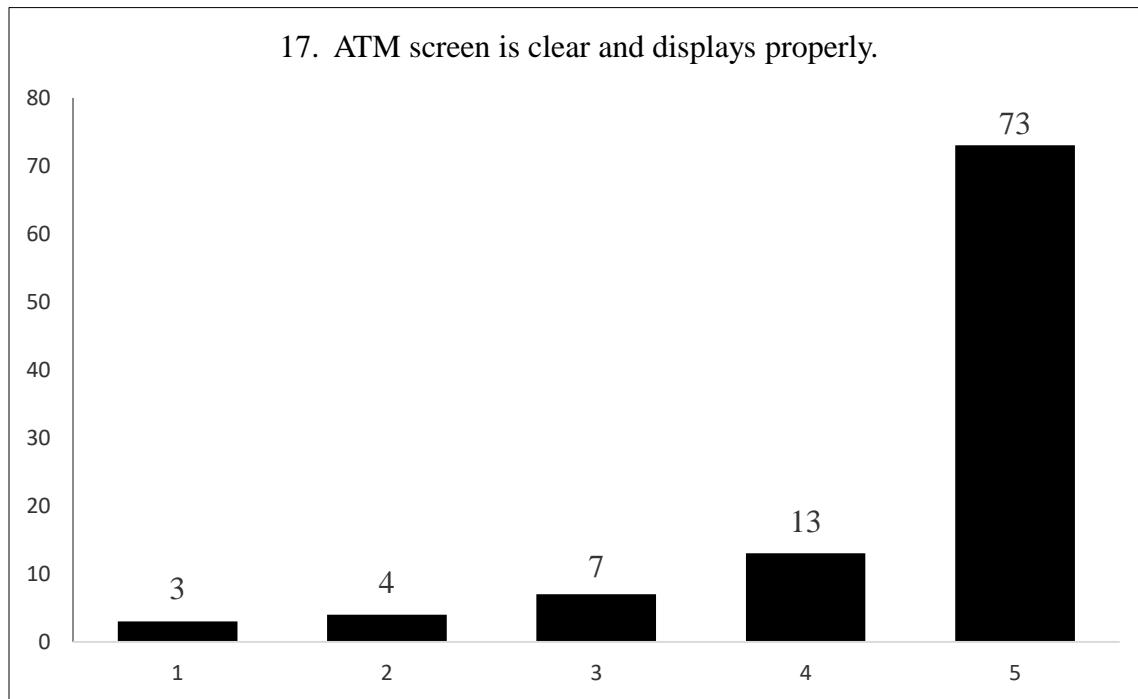
Chart 4.21: Respondents answer to the first question of Tangibility



**Question17.** ATM screen is clear and displays properly

Most of the respondents 73% agreed that ATM screens clearly display. 13% were agree to this idea, 7% did not have any idea, 4% were somewhat disagree and % were strongly disagree. From this finding we can conclude that most people are satisfied from the physical design of ATM which is one of the important dimensions of SERVQUAL model.

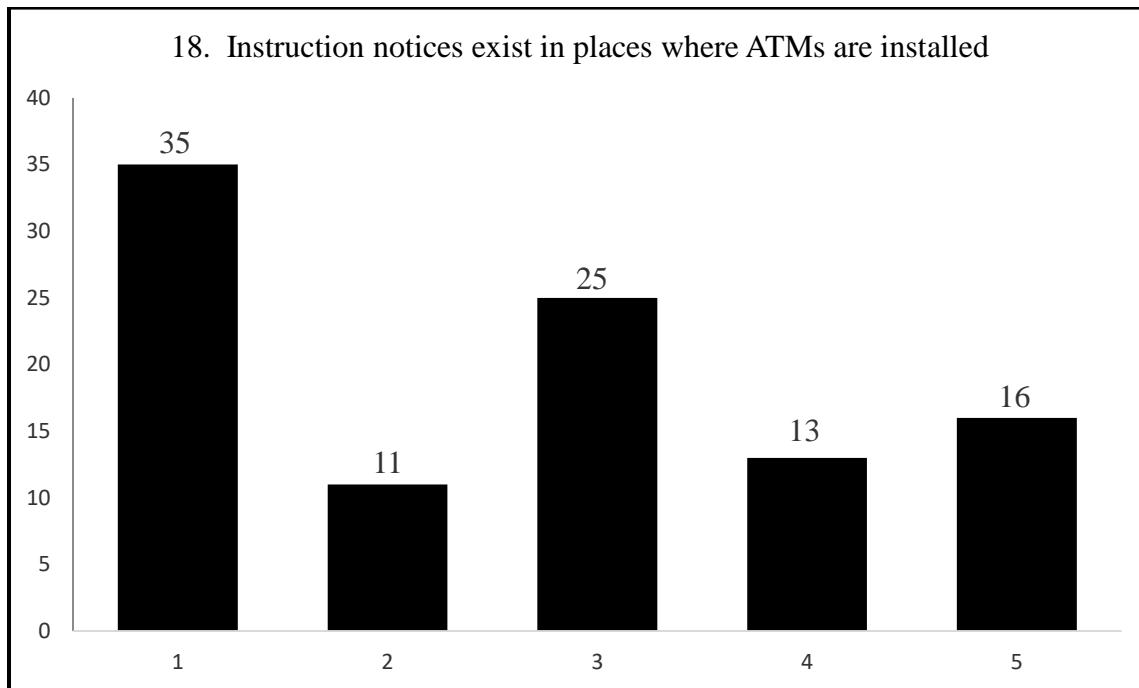
Figure 4.22: Respondents answer to the second question of Tangibility dimension.



**Question18.** Instruction notices exist in places where ATMs are installed

Overall 35% of the respondents were strongly disagree with this question, 11% were somehow disagree, 25% did not any idea, 13% were agree and 16% were strongly agree. From the result of this study we can conclude that most of the respondents were disagree as there is not any instruction, notice or guidelines about ATM usage, therefore, most of the Afghan commercial banks' customers are dissatisfied. The result of this question is shown in below chart.

Chart 4.23: Respondents answer to the third question of Tangibility dimension.

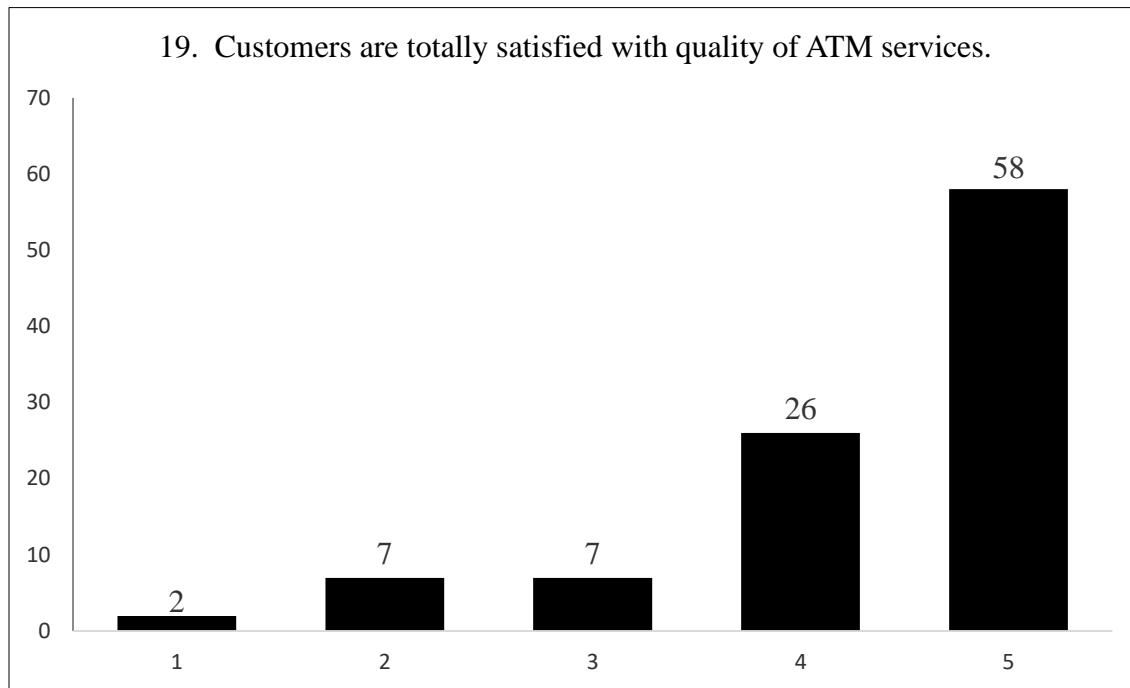


#### 4.3. Questions Covering Customer Satisfaction – Dependent Variable

Customer satisfaction was the dependent variable and below question was allocated to assess the overall satisfaction level of the customer from the ATM services Afghan commercial banks provide. The question and its result is discussed below.

**Question19.** Customers are completely satisfied with the quality of ATM services  
Based on below chart 58% of the respondents were strongly agree and satisfied of the ATM services provided by the banks they have banking relationship with, also 26% were agree, 7% did not have any idea and the remaining 9% were disagree dissatisfied.

Chart 4.24: Respondents answer to customer satisfaction question



#### 4.4. Regression Analysis

In this part we will run regression in order to find out that how each SERVQUAL dimension affect customer satisfaction, also to prove our claims, different tests will be executed such as normality test, auto correlation, multicollinearity, t-test and p-value test. In this research we have five independent variables; every variable has its own questions which are asked from the customers.

There were 18 questions about independent variables which two of them removed as it was impossible to run regression with eighteen independent variables and those questions were not considered much important. When all these questions were considered and regression being run, it was found out the most of them were not significant as on

contrary to the role of thumb that the p-value of the variable should be less than 5% with 95% confidence interval. Which the results are as follow:

Table 4.1: Regression Statistics

<i>Regression Statistics</i>	
Multiple R	0.889959094
R Square	0.792027189
Adjusted R Square	0.751936045
Standard Error	0.504036278
Observations	100

Table 4.2: ANOVA Table

ANOVA

	df	SS	MS	Significance	
				F	F
Regression	16	80.3036367	5.018977	19.75566433	8.09505E-22
Residual	83	21.0863633	0.254053		
Total	99	101.39			

Table 4.3: Regression Summary

	Coefficients	Standard Error	t Stat	P-value	Lower 95%	Upper 95%
Intercept	-0.59972	0.412265278	-1.4547	0.14952312	-1.41970240	0.22025570
Q_1	-0.0217	0.049997191	-0.43401	0.66540920	-0.12114154	0.07774325
Q_2	-0.04468	0.055088362	-0.81108	0.4196393	-0.15424962	0.06488745
Q_5	0.389728	0.071138033	5.47847	<b>4.49424E-07</b>	0.24823691	0.53121828
Q_6	0.015573	0.048065401	0.32399	0.74675758	-0.08002724	0.11117305
Q_7	0.153431	0.060658607	2.52941	<b>0.01331679</b>	0.03278303	0.27407809
Q_8	0.111465	0.043281467	2.57535	<b>0.01178650</b>	0.02538006	0.19755025
Q_9	-0.28546	0.123498693	-2.31141	<b>0.0232898</b>	-0.5310894	-0.0398216
Q_10	0.172622	0.071452007	2.41592	<b>0.0178894</b>	0.0305071	0.3147374
Q_11	0.263307	0.099881432	2.6361	<b>0.0100047</b>	0.06464682	0.46196712
Q_12	0.083514	0.052301401	1.59679	0.11411303	-0.02051101	0.18753975
Q_13	0.140075	0.11612886	1.20620	0.23116606	-0.0909006	0.37105066
Q_14	0.08794	0.040213839	2.18681	<b>0.03157059</b>	0.00795641	0.16792383
Q_15	0.132573	0.087499806	1.51511	0.13354157	-0.04146101	0.30660617
Q_16	0.004129	0.066650575	0.06195	0.95074763	-0.12843597	0.13669464
Q_17	0.015314	0.079117844	0.19356	0.84699199	-0.14204802	0.17267639
Q_18	-0.08207	0.046202621	-1.77623	0.07935950	0.17396167	0.00982863

The  $R^2$  which shows the how the model is appropriate is high (0.80) but most of the question p-value is more than 0.05 that means that there is not any significant relationship between the independent and dependent variables, therefore, that should be removed the regression should be run again. In Table (4.3) those variables which their p-value are more than 0.05 are removed from the list of the independent variables. However, those independent variable which their p-value are less than 0.05 in the next stage are considered as the independent variables and based on that the regression re-run for several times. And at the end we come up with the variables which they have significant impact on customer satisfaction. For proving our claims different tests have been conducted. The result of the regression is shown in below table which there is significant relationship between customer satisfaction and Responsiveness, Assurance and Empathy of ATM service quality of Afghanistan commercial banks.

Table 4.4: Regression Statistics

<i>Regression Statistics</i>	
Multiple R	0.805981
R Square	0.649605
Adjusted R Square	0.638655
Standard Error	0.608332
Observations	100

The Multiple R is 0.80 it shows that there is strong affiliation between customer satisfaction (dependent variable) and service quality dimensions (Responsiveness, Assurance and Empathy). So the greater the Multiple R the better the model is. Thus, based on below analysis it implies that there is close association between customer satisfaction and above mentioned ATM service quality dimensions.

R Square here shows that almost 65% of customers' satisfaction is explained by ATM service Responsiveness, Assurance and Empathy.

Table 4.5: ANOVA

ANOVA

	<i>df</i>	<i>SS</i>	<i>MS</i>	<i>F</i>	<i>Significance F</i>
Regression	3	65.86347	21.95449	59.32556	8.79E-22
Residual	96	35.52653	0.370068		
Total	99	101.39			

Table 4.6: Regression Coefficient

	<i>Coefficients</i>	<i>Standard Error</i>	<i>t Stat</i>	<i>P-value</i>	<i>Lower 95%</i>	<i>Upper 95%</i>
Intercept	0.302144349	0.3752182	-0.8052	0.422666	-1.046946722	0.442658025
Responsiveness	0.454501727	0.0689287	6.5937	2.32E-09	0.317679159	0.591324295
Assurance	0.431019948	0.0845120	5.1001	1.71E-06	0.263264871	0.598775025
Empathy	0.179519262	0.0402104	4.4644	2.19E-05	0.099702188	0.259336337

After removing the insignificant variables (P-value  $\geq 0.05$ ) which did not have any significant relationship with the dependent variable, again regression run which we get the result of Table 4.6. This table clearly answers our hypothesis question

In Chapter 3 we set below hypothesis:

**H1:** there is a positive relationship between customer satisfaction and responsiveness dimension of ATM service quality in Afghan commercial banks .

So based on the above table we reject the null hypothesis. Because the p-value is less than 0.05 and the t-statistic value is more than the absolute value of 2.

**H2:** there is a significant relationship between customer satisfaction and tangibility dimension of service quality in Afghanistan.

Again based on Table 4.6 we fail to reject the null hypothesis as the p-value was more than 0.05 and removed from the independent variable list.

**H3:** there is a significant relationship between customer satisfaction and assurance dimension of service quality in Afghanistan.

Based on Table 4.6 we reject the null hypothesis as the P-value is less than 0.05 and T-test is more than absolute value of 2.

**H4:** there is a significant relationship between customer satisfaction and Reliability dimension of ATM service quality.

We fail to reject the null hypothesis, because as its p-value was more than 0.05, therefore, it was removed from the list.

**H5:** There is a positive relationship between customer satisfaction and empathy dimension of service quality.

We reject the null hypothesis because based on Table 4.6 its p-value is less than 0.05 and its t-statistic is more than the absolute value of 2.

#### **4.4.1. Validating the Regression Analysis Result**

In this part, for validating this multiple regression model want to discuss the important and basics assumption related to multiple-linear regression model. These tests help us to firmly believe the result of the study and provide stern judgments. The Four tests which will be discussed and considered in this section are:

- Linearity
- Heteroscedasticity
- Normality
- Autocorrelation

##### **4.4.1.1. Linearity Test**

As the name indicates, it shows that the dependent and independent variable are linearly related to each other. It can be checked from the scatter plots when there is just one variable but for cases like this study with five variable it's very difficult to visually test that if there is any linear relationship between each other.

So when there is large variable we have other techniques that can help us to find out if the relationship between dependent and independent variables are linear. For this case the  $R^2$  can help us. Large  $R^2$  shows that there is a linear relation between dependent and independent variables. The  $R^2$  of this case which is 0.65 is high as well. So we can conclude that there is a linear relation between dependent and independent variables.

#### 4.4.1.2. Heteroscedasticity Test

When the error terms or residuals don't have the same standard deviation then there is the Heteroscedasticity problem. The best way to check if there is any heteroscedasticity problem is through plotting the regression residual and to visually check if there is any pattern such that the residuals get larger with larger value of independent variables ( $X$ ). For example in this study we plot the residual value of the regression to check if there is any heteroscedasticity problem. If we look at below figure (4.24) we can't see any pattern of change in residuals with big value so there is no Heteroscedasticity problem.

Figure 4.1: Heteroscedasticity test

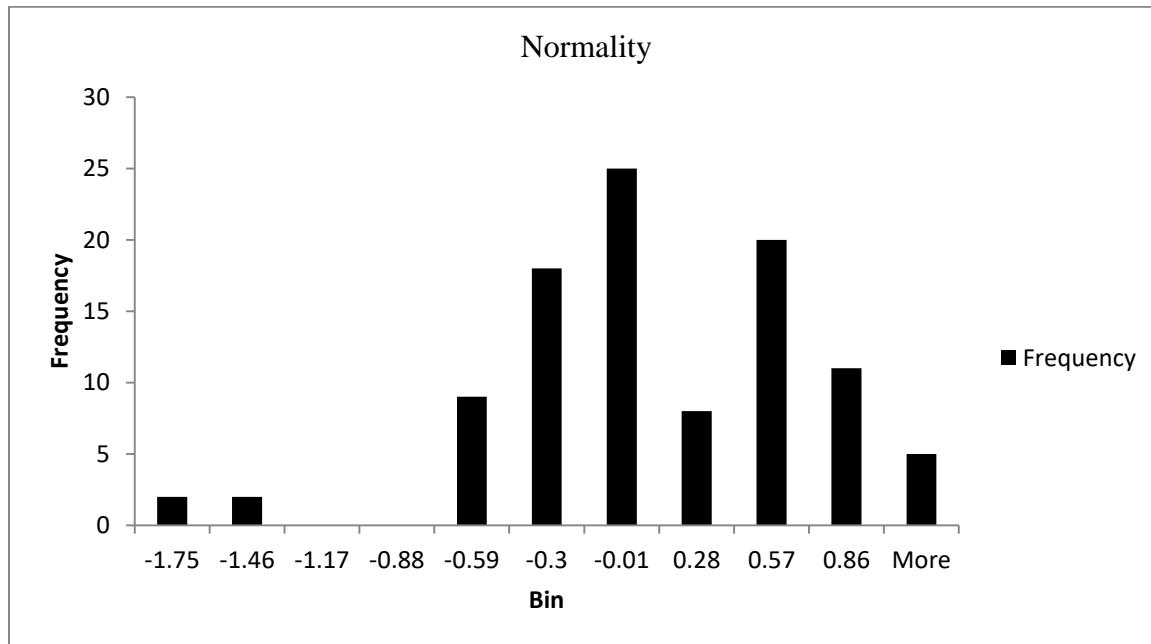


#### 4.4.1.3. Normality Test

Another assumption is the normality. If the value of residuals follow a normal distribution then the normality assumption is fulfilled which is recommended. For

checking the normality, here we plot the histogram of the residuals. If the histogram appears as bell-shaped then we can conclude that the normality assumption is satisfied.

Chart 4.2: Normality Test

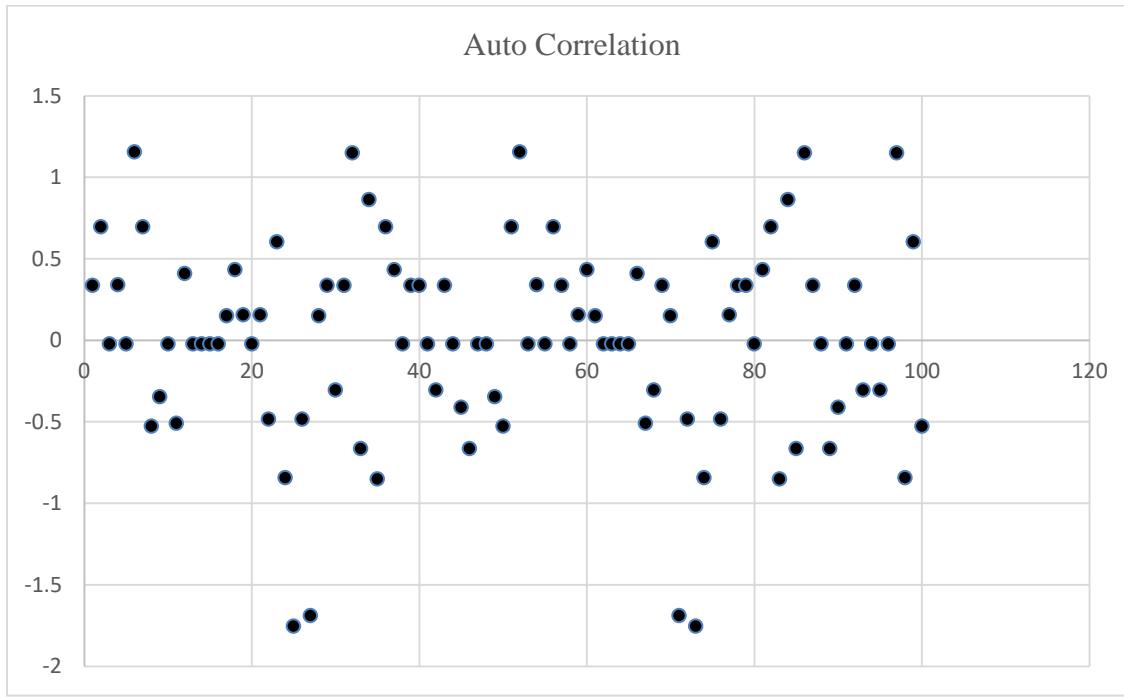


As the above figure indicates the histogram is bell-shaped so we can conclude that the normality assumption is satisfied and it does not look if the model violated the normality assumption.

#### 4.4.1.4. Auto Correlation Test

If the error terms or residuals are independent, then the auto correlation assumption is violated. Also if the residual normally distributed with the mean  $\mu= 0$  and standard deviation then auto correlation assumption is acceptable.

Figure 4.3: Auto Correlation Test



If we check above figure we cannot see any apparent pattern over time among the error terms. Thus, there is no auto correlation problem.

Finally looking at all these tests which have been conducted we can conclude that our model is credible and acceptable and just there is a significant relationship between customer satisfaction and Responsiveness, Assurance and Empathy of SERVQUAL dimensions.

## **Chapter Five**

### **Conclusion and Recommendation**

#### **5.1. Introduction**

The purpose of this study is to attain following objectives, (i) to explore and find out if there is any significant relationship between customer satisfaction and Responsiveness dimension of ATM service quality of Afghan commercial banks, (ii) to find out if there is any significant relationship between customer satisfaction and Reliability dimension of ATM service quality (iii) to discover if there is any significant relationship between Assurance dimension of ATM service quality and customer satisfaction, (iv) to explore if there is any significant relationship between customer satisfaction and Assurance dimension of ATM service quality of Afghan commercial banks, (iiv) and to explore if there is any significant relationship between customer satisfaction and Tangibility dimension of ATM service quality of Afghan commercial banks.

Which finally the study has achieved below objectives:

- ✓ Based on the regression result it was found that there is a significant relationship between customer satisfaction and the Responsiveness dimension of ATM services provided by the Afghan commercial banks. It means that when there are 0.45 % improvements in Responsiveness ATM services customer satisfaction increases 1%.
- ✓ According to the result of this study it was found that there is a significant relationship between customer satisfaction and the Assurance dimension of ATM services provided the Afghan commercial banks. The regression result indicates

that when the Assurance dimension of ATM service improves 0.43%, customer satisfaction increases 1%.

- ✓ As per finding of this study it was concluded that there is significant relationship between customer satisfaction and Empathy dimension of ATM services quality of Afghan commercial banks or an increase of 0.18% of Empathy dimension increases customer satisfaction 1%.
- ✓ According to the result of this study it was found that there is NOT significant relationship between customer satisfaction and Tangibility dimension of ATM services quality offered by Afghan commercial banks.
- ✓ Based on the finding of this study it was also found that there is NOT significant relationship between customer satisfaction and Reliability dimension of ATM service quality offered by Afghan commercial banks.

## **5.2. Implication of the Study**

The primary data results indicate a lot of variations in the responses of respondents. Henceforward, Afghan commercial banks should clearly identify and recognize those service quality dimensions which have significant effect on customer satisfaction. Hereafter, to be successful and compete vigilantly in the market, every institution including banks should provide services that could at least meet or exceeds customer expectation. This study significantly helps commercial banks' decision makers or managers to make suitable decisions in order to improve ATM service quality.

This study contributes new researchers studying customer satisfaction and service quality of Afghan commercial banks, as this can be a reference to those researches which customer satisfaction and customer satisfaction.

### **5.3. Recommendations for Future Research**

The above findings indicate that different ATM service quality dimension has their own impact on customer satisfaction. In this study, Responsiveness dimension (the ability of bank to resolve customers' inquiry, questions, and concerns about ATM cards including the four question asked in this researches questionnaire from question 5 to 8) of the ATM service quality, has the highest significant impact on customer satisfaction, followed by Assurance dimension ( politeness, friendliness and courteousness attitudes of ATM card issuing staff to customers including question 9 to 12) and Empathy dimension (Caring about customers and providing them best services including questions 13 to 15). However, according to the regression result of this study it was found that there is not significant relationship between Reliability and Tangibility dimension of ATM service quality and customer satisfaction of the Afghan commercial banks.

In Short for the future research:

- ✓ Other provinces of Afghanistan should be included in the research;
- ✓ Other banks should be analyzed;

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## Appendix

Afghanistan International Bank ATM Location		
S/N	ATM Location	Address
1	Head Office 1	Shahr-e-Naw, Kabul-Afghanistan
2	Head Office 2	Shahr-e-Naw, Kabul-Afghanistan
3	Head Office 3	Shahr-e-Naw, Haji Yaqoob Square, Shahabudin Watt, Kabul-Afghanistan
4	Head Office 4	Shahr-e-Naw, Kabul-Afghanistan
5	AIB Shahr e Naw Branch	Shahr-e-Naw, District #10, Kabul, Afghanistan
6	Asian Development Bank	Shahr-e-Naw, District #10, Kabul, Afghanistan
7	Finest Supermarket	Shahr-e-Naw, District #10, Kabul, Afghanistan
8	Istanbul Supermarket	Shahr-e-Naw, District #10, Kabul, Afghanistan
9	EU for Afghanistan	Shahr-e-Naw, District #10, Kabul, Afghanistan
10	Park Mall	Shahr-e-Naw, District #10, Kabul, Afghanistan
11	ISAF HQ1	Shshdarak, Kabul , Afghnistan
12	ISAF HQ2	Shshdarak, Kabul , Afghnistan
13	AIB Taimani Branch	Taimani, Kabul, Afghanistan
14	QKabul 777 Guest House	TaimanI, Kabul, Afghanistan
15	AIB WAK branch 1st AT	Wazir Akbar Khan, Kabul, Afghanistan
16	AIB WAK branch 2nd ATM	Wazir Akbar Khan, Kabul, Afghanistan
17	Finest Supermarket	Wazir Akbar Khan, Kabul, Afghanistan
18	Spinneys Super Market	Wazir Akbar Khan, Kabul, Afghanistan
19	SEITZ	Wazir Akbar Khan, Kabul, Afghanistan
20	World Bank	Wazir Akbar Khan, Kabul, Afghanistan
21	AIB Mirwais Maidan	Mirwais Maidan, Kabul, Afghanistan
22	Kefayat Supermarket	Qambar Squar, Kabul, Afghanistan
23	Afghan Cash & Carry Super	Macrorayan 3, Kabul, Afghansitan

	Market	
24	Modern Omid Curative Hospital	Macrorayan 3, Kabul, Afghansitan
25	US Embassy 1st ATM	Macrorayan 3, Kabul, Afghansitan
26	Macrorayan Branch	Macrorayan 3, Kabul, Afghansitan
27	Qasr E Dunya Supermarket	Macrorayan 3, Kabul, Afghansitan
28	US Embassy 3rd ATM	Macrorayan 3, Kabul, Afghansitan Macrorayan 3, Kabul, Afghansitan
29	US Embassy 2nd ATM	Macrorayan 3, Kabul, Afghansitan
30	AIB Khair Khana 1st Branch	Khair Khan, Kabul, Afghansitan
31	Kefayat Supermarket	Lab e Jar Khair Khan, Kabul, Afghanistan
32	Faisal Business Center	Khair Khan, Kabul, Afghanistan
33	Khair Khwa Medical Complex	Khair Khan, Kabul, Afghanistan
34	Finest Supermarket	Kart e Parwan, Kabul, Afghanistan
35	Finest Super Store	Kart e She, Kabul, Afghanistan
36	Kefayat Super Market	Kart e She, Kabul, Afghanistan
37	AIB Kart-e-She Branch	Kart e She, Kabul, Afghanistan
38	AIB Kart-e-Naw Branch	Kart e Naw, Kabul, Afghanistan
39	Gulbahar Center	Kabul city
40	Presidential Palace (PPS)	Kabul city
41	AIB Pol-e-Bagh-Omomi Branch	Kabul city
42	UNOCA Compound 1st ATM	Khod Khil, Kabul, Afghanistan
43	UNOCA Compound 2nd ATM	Khod Khil, Kabul, Afghanistan
44	Green Village	Khod Khil, Kabul, Afghanistan
45	Abbey Gate, Camp KAIA	Hawa Shenasi, Kabul, Afghanistan
46	KAIA Military base 1st ATM	Hawa Shenasi, Kabul, Afghanistan
47	Dreshak Hotel	Hawa Shenasi, Kabul, Afghanistan

48	KAIA Military base 2nd ATM	Hawa Shenasi, Kabul, Afghanistan
49	Hamid Karzai International Airport	Hawa Shenasi, Kabul, Afghanistan
50	Camp Alvardo	Hawa Shenasi, Kabul, Afghanistan
51	AIB Dasht e Barchi Branch	AIB Dasht e barchi Branch
51	American University of Afghnistan	Darul Aman, Kabul, Afghanistan
53	Afghanistan Holding group	Darul Aman, Kabul, Afghanistan
54	AIB Baraki Branch	AIB Baraki Branch, Kabul, Afghanistan
55	Kausar Curative Hospital	Arzan Qimat, Kabul, Afghanistan
56	Habib Shopping Mall	Arzan Qimat, Kabul, Afghanistan

Source: AIB,2017

Azizi Bank ATM Location		
S/N	Location	Address
1	Main Branch	Anqara Square, Head Office, Kabul, Afghanistan
2	MOD	Ministry of Defense of Afghanistan
3	MOFA	Ministry of Foreign Affairs of Afghansitan
4	MOE	Ministry of Economy
5	MOCIT	Ministry of Communication and information Technology
6	MRRD	Ministry of Rural and Rehabilitation and Development
7	MoEW	Ministry of Energy and Water
8	Embassy of India	Kabul Afghanistan
9	Wazir Akbar Khan Branch	Wazir Akbar Khan, Kabul, Afghansitan
10	400 Beds, Military Hospital	District number 10 Kabul, Afghanistan
11	City Center	Shahr E Naw, Kabul, Afghanistan
12	Bakhtawar Palace	Shahr e Naw Kabul, Afghanistan
13	Jam Super Market	Sher Pur, Kabul, Afghanستان
14	Gul Bahar Center	Kabul, Afghanistan

15	Afghan Market	Froshgah, Kabul, Afghanistan
16	Najib Zarab Market	Kabul, Afghanistan
17	Kart E Parwan Branch	Kabul, Afghanistan
18	Afghan German Hospital	Baraki Square Kabul, Afghanistan
19	Kot-e-Sangi Branch	Kot e Sangi Branch
20	Kart-e-Seh Branch	Kart e She Branch
21	Dasht-e-Barchi Branch	Dasht E Barchi Branch
22	Dehmazang Branch	Dehmazang, Kabul, Afghanistan
23	Kefayat Market	Darul Aman, Kabul, Afghanistan
24	Company Branch Amiri Hospital	Qamber Square, Kabul, Afghanistan Afshar, Kabul, Afghanistan
25	Paghman	Kabul, Afghansitan
26	Khair Khana Part 1 Branch	Kabul, Afghansitan
27	Khair Khana Part II Branch	Kabul, Afghansitan
28	Khair Khana Part III Branch	Kabul, Afghansitan
29	Khair Khana 315 Branch	Kabul, Afghansitan
30	500 Family Branch	Kabul, Afghansitan
31	Sar-e-Kotal Branch	Kabul, Afghansitan
32	Kolola Pushta Branch	Kabul, Afghansitan
33	Taimani Branch	Kabul, Afghansitan
34	Qala-e-Fatullah Branch	Kabul, Afghansitan
35	Sharak-e- Aria	Kabul, Afghansitan
36	1st Macrorayan Branch	Kabul, Afghansitan
37	2nd Macrorayan Branch	Kabul, Afghansitan
38	Qazi Plaza, 3rd Macrorayan	Kabul, Afghansitan
39	4th Macrorayan Branch	Kabul, Afghansitan

40	Jad-e-Maiwand Branch	Kabul, Afghansitan
41	Shah Shaheed Branch	Kabul, Afghansitan
42	Kart-e-Now Branch	Kabul, Afghansitan
43	Arzan Qimat Branch	Kabul, Afghansitan
44	Kausar Arzan Qimat Branch	Kabul, Afghansitan

Source: Azizi bank, 2017

Afghan United Bank ATMs		
No	Location	Address
1	Macroryan Branch	(2nd Macroryan infront of Kabul Matabha,Kabul-Afghanistan)
2	Faisal Business Center	Lisa Maryam , Khair Khana Kabul Afghanistan
3	Kabul Main Branch	Zarguna Maidan -Share-Now Kabul Afghanistan
4	Gul Bahar Center Branch	Charai Malik Azghar Gul bahar center ground floor , Kabul Afghanistan

Source: Afghan Banking Association, 2017

Kabul Bank ATM Locations		
S/N	Location	Address
1	Presidential Palace ATM	Presidential Palace, Kabul Afghanistan
2	Sweet Bay Store / Pule Surkh	Sweet Bay Store / Pule Surkh, Kabul Afghanistan
3	Allawoodin Branch	Allawoodin Branch, Kabul Afghanistan
4	Taimani Branch	Taimani Branch, Kabul Afghanistan
5	New Kabul Bank Head Office	Share-e-Now Tora Baz Khan New Kabul Bank Head Office, Kabul Afghanistan
6	Karte Now Branch	New Kabul Bank Karte Now Branch, Kabul Afghanistan
7	Malalai Maternal Hospital	Malalai Maternal Hospital, Kabul Afghanistan
8	Civil Service Commission And Administrative Reforms	Civil Service Commission And Administrative Reforms, Kabul Afghanistan
9	Etisalat Branch	Etisalat Branch, Kabul Afghansitan
10	Wazir Mohammad Akbar Khan Branch(link)	Wazir Mohammad Akbar Khan Branch(link), Kabul Afghansitan

11	Finest SuperStore, Karte Parwan	Finest SuperStore, Karte Parwan, Kabul Afghanistan
12	Finest Super Market, Qalai Fatullah	Finest Super Market, Qalai Fatullah, Kabul Afghanistan
13	Jadi Nader Pashtoon Branch	New Kabul Bank Jadi Nader Pashtoon Branch, Kabul Afghanistan
14	Afghan Spinneys Super Market, Wazir Akbar Khan	Afghan Spinneys Super Market, Wazir Akbar Khan, Kabul Afghanistan
15	Ministry Of Finance ATM	New Kabul Bank Ministry Of Finance, Kabul Afghanistan
16	Baraki Branch ATM	New Kabul Bank Baraki Branch, Kabul Afghanistan
17	KhairKhana Hesa Awal Branch	New Kabul Bank KhairKhana Hesa Awal Branch, Kabul Afghanistan
18	2nd Macroryan Branch ATM	New Kabul Bank 2nd Macroryan Branch, Kabul Afghanistan
19	Lysaee Maryam Branch, Khair Khana	Lysaee Maryam Branch, Khair Khana, Kabul Afghanistan
20	Dyncorpe, ATM, Qasaba	Dyncorpe, Qasaba Kabul Afghanistan
21	Ministry Of Education	Ministry Of Education, Kabul Afghanistan
22	Ministry Of Communications, Reception Area	Ministry Of Communications, Reception Area, Kabul Afghanistan
23	Kabul University	Kabul University, Kabul Afghanistan
24	Polecharkhi (Gumruk)	Polecharkhi (Gumruk), Kabul Afghanistan
25	Faisal Business Center	Faisal Business Center, Kabul Afghanistan
26	KMTC	KMTC, Kabul Afghanistan
27	Ministry Of Interior ATM	New Kabul Bank Ministry Of Interior, Kabul Afghanistan
28	Q-Kabul Hotel (Five Star Hotel Taimany Square)	Q-Kabul Hotel (Five Star Hotel Taimany Square), Kabul Afghanistan

Source: Afghanistan Banking Association, 2017

Afghan United Bank ATMs		
S/N	ATM Location	Address
1	Kabul Main Branch	Zarguna Maidan -Share-Now Kabul Afghanistan
2	Gul Bahar Center Branch	Charai Malik Azghar Gul bahar center ground floor , Kabul Afghanistan
3	Macroryan Branch	(2nd Macroryan infront of Kabul Matabha,Kabul-Afghanistan)
4	Faisal Business	Lisa Maryam , Khair Khana Kabul

	Center	Afghanistan
--	--------	-------------

Source: Afghan Banking Association, 2017

Bakhtar Bank		
S/N	ATM Location	Address
1	Main Branch , Head office	Main Branch , Head office
2	Hese Awal-e-Khairkhana , Bakhtar Bank Branch	1st Street of Afstor, 1st part of Khairkhana, Kabul, Afghanistan
3	Dasht-e-Barchi , Bakhtar Bank Branch	Dash-e-Barchi, Jade Shahid Mazari, Qamberi Brothers Plaza
4	Kart-e- Naw , Bakhtar Bank Branch	Karte Naw, 3rd Street (Feroz Kohi Palaza), Beside Cinema Iqbal
5	Kart-e-3 , Bakhtar Bank Branch	Pul-e-Surkh Square, Kart-e-Say, Kabul, Afghanistan
6	Arya City, Bakhtar Bank Counter	Arya City
7	Makroyan 2, Bakhtar Bank Branch	Second Makroyan
8	Kot-e- Sangi , Bakhtar Bank Branch	3rd floor, Abasin Zadran Market, Kote Sangi, Kabul, Afghanistan
9	Park Mall , Shahr-e-Naw	Park Mall , Shahr-e-Naw

Source: The Afghan Banking Association, 2017

Afghan United Bank ATMs		
S/N	ATM Location	Address
1	Kabul Main Branch	Zarguna Maidan -Share-Now Kabul Afghanistan
2	Gul Bahar Center Branch	Charai Malik Azghar Gul bahar center ground floor , Kabul Afghanistan
3	Macroryan Branch	(2nd Macroryan infront of Kabul Matabha,Kabul-Afghanistan)
4	Faisal Business Center	Lisa Maryam , Khair Khana Kabul Afghanistan

Source: The Afghan Banking Association, 2017

Maiwand Bank ATMs		
S/N	ATM Location	Address
1	Sherpor	Spinneys Super Store, Sherpor Square, Kabul, Afghanistan

2	Share-E-New	Maiwandbank Head Office, Torabaz Khan Square, Shahre Naw, Kabul.
3	Share-E-New 2	Majeed Mall, Share-E-New, Kabul.Afghanistan
4	Wazir Akbar Khan	Finest Super Market, Street 15th Wazir Akbar Khan,Kabul
5	Wazir Akbar Khan 2	New Maiwand Travel Agency, In front of Wazir Akbar Khan Mosque, Wazir Akbar Khan, Kabul
6	Salem Karwan	Kabul Mart, Salem Karwan Square, Kabul,Afghanistan.

Source: The Afghan Banking Association, 2017

## Questionnaire

Dear Participant,

This questionnaire is designed to assess ATM service quality's impact on customer satisfaction of the Afghan commercial banks. The purpose of this research questionnaire is to measure satisfaction level of respondents against the dimension of the ATM services quality.

This research questionnaire helps me to identify those factors which have direct impact on customer satisfaction and dissatisfaction. Additionally, the result of this research could also be used as a reference for other researchers studying such topics in the future.

Therefore, your participation and involvement in this research is highly valuable for me as your good answer would improve this research result quality.

Finally, your identity would not be disclosed to anyone and any information you provide would be kept confidential and will only be used for the academic purposes.

Best Regards,

Hamid Hamrah

Email: [Hhamrah.mba@auaf.edu.af](mailto:Hhamrah.mba@auaf.edu.af)

Email: hamid\_hamrah@hotmail.com

## **General Guidelines**

This questionnaire has two parts. Please circle the answer based on your observation from the ATM services provided by the bank, you use its ATM services. If you want to add more information, please write it at the back side of the last page of this questionnaire.

## **Section one: Background Characteristics**

## 1. Gender

a. Male

b. Female

## 2. Age

a. Below 20

b. 20 - 29

c. 30 - 39

d. 40 -55

e. over 55

### **3. Education Qualification**

a. High School    b. Diploma

c. Bachelor

d. Master

d. Phd

4. What is your occupation?

a.

b. Public

### c. Foreign

d. Business

e. Local

### Unemployed

Servant

### organization

man/woman

## organization

**Section Two: Please answer below questions which are made for assessing ATM service quality of the Afghan commercial banks. Please circle the answer you think is the best one.**

1. The bank you have account with is committed to providing all ATM services such as (Cash withdrawal, Money transfer & Cash deposit).

- a. Strongly      b. Somewhat      c. Neither      d. Somewhat      e. Strongly

disagree      disagree      agree nor      agree      agree

disagree

2. Bank resolves customers' ATM card problems and complaints suitably, timely and quickly.

- a. Strongly      b. Somewhat      c. Neither      d. Somewhat      e. Strongly

disagree      disagree      agree nor      agree      agree

disagree

3. Customer receives a text message after completion of a Debit or Credit transaction in his account.

- a. Strongly      b. Somewhat      c. Neither      d. Somewhat      e. Strongly



a. Strongly      b. Somewhat      c. Neither      d. Somewhat      e. Strongly

disagree      disagree      agree nor      agree      agree

disagree

8. ATMs are always functional and provide enough cash to withdraw.

9. Bank staff is courteous, polite and friendly.

a. Strongly      b. Somewhat      c. Neither      d. Somewhat      e. Strongly

disagree      disagree      agree nor      agree      agree

disagree

10. Bank staff is clearly and knowledgeably explaining all ATM card related issues.

a. Strongly      b. Somewhat      c. Neither      d. Somewhat      e. Strongly

disagree      disagree      agree nor      agree      agree

disagree

11. Making transaction through ATM is safer than through a teller.

- |             |             |                       |             |             |
|-------------|-------------|-----------------------|-------------|-------------|
| a. Strongly | b. Somewhat | c. Neither            | d. Somewhat | e. Strongly |
| disagree    | disagree    | agree nor<br>disagree | agree       | agree       |

12. Bank's ATM card staff is aware of policies and consistently share that with card holders.

- |             |             |                       |             |             |
|-------------|-------------|-----------------------|-------------|-------------|
| a. Strongly | b. Somewhat | c. Neither            | d. Somewhat | e. Strongly |
| disagree    | disagree    | agree nor<br>disagree | agree       | agree       |

13. Customers are always welcomed by bank staff warmly.

- |             |             |                       |             |             |
|-------------|-------------|-----------------------|-------------|-------------|
| a. Strongly | b. Somewhat | c. Neither            | d. Somewhat | e. Strongly |
| disagree    | disagree    | agree nor<br>disagree | agree       | agree       |

14. When customers visit a bank they are guided properly to the right parking lot by responsible staffs.

a. Strongly      b. Somewhat      c. Neither      d. Somewhat      e. Strongly

disagree      disagree      agree nor      agree      agree

disagree

15. Bank is careful about their customers and treat them properly.

a. Strongly      b. Somewhat      c. Neither      d. Somewhat      e. Strongly

disagree      disagree      agree nor      agree      agree

disagree

16. ATM card is appropriately designed and has the right size.

a. Strongly      b. Somewhat      c. Neither      d. Somewhat      e. Strongly

disagree      disagree      agree nor      agree      agree

disagree

17. ATM screen is clear and displays properly.

a. Strongly      b. Somewhat      c. Neither      d. Somewhat      e. Strongly

disagree      disagree      agree nor      agree      agree

disagree

18. Overall ATM service quality is good.

- |                         |                         |                                     |                      |                      |
|-------------------------|-------------------------|-------------------------------------|----------------------|----------------------|
| a. Strongly<br>disagree | b. Somewhat<br>disagree | c. Neither<br>agree nor<br>disagree | d. Somewhat<br>agree | e. Strongly<br>agree |
|-------------------------|-------------------------|-------------------------------------|----------------------|----------------------|

19. Instruction notices exist in places where ATMs are installed.

- |                         |                         |                                     |                      |                      |
|-------------------------|-------------------------|-------------------------------------|----------------------|----------------------|
| a. Strongly<br>disagree | b. Somewhat<br>disagree | c. Neither<br>agree nor<br>disagree | d. Somewhat<br>agree | e. Strongly<br>agree |
|-------------------------|-------------------------|-------------------------------------|----------------------|----------------------|

<b>ATM Service Quality Survey</b>									
Survey Scale: 1=Strongly Disagree 2=Disagree 3=Neutral 4=Agree 5=Strongly Agree									
ATM Service Quality Servay	# 1's	#2's	#3's	#4's	#5's	n	MEAN	MO DE	SE M
1. The bank you have account with is committed to provide the ATM services in accordance with the terms specified in the signed contract.	8	7	2	17	66	100	4.24	5	<b>0.2</b>
2. Bank resolves customers' ATM card problems and complaints suitably, timely and quickly.	9	17	8	25	41	100	3.60	5	<b>0.2</b>
3. Customer receives a text message after completion of a Debit or Credit transaction in his account.	21	4	4	16	55	100	3.73	5	<b>0.2</b>
4. ATM services are offered based on customer needs and expectations.	7	4	7	25	57	100	3.33	5	<b>0.2</b>
5. Bank staff is cooperative and keen full to answer customers' questions properly.	2	9	2	20	67	100	4.37	5	<u>0.1</u>
6. Bank staff is uncooperative and does not answer customers' question properly.	60	12	9	6	13	100	4.55	5	<u>0.1</u>
7. ATMs are installed and placed in appropriate places and are accessible easily.	8	16	4	18	54	100	4.47	5	<u>0.1</u>
8. ATMs are always functional and provide enough cash to withdraw.	10	21	2	30	37	100	2.61	1	<b>0.2</b>
9. Bank staff is courteous, polite and friendly.		7	10	24	59	100	4.27	5	<u>0.1</u>
10. Bank staff is clearly and knowledgeably explaining all ATM card related issues.	2	12		23	63	100	4.27	5	<u>0.1</u>
11. Making transaction through ATM is safer than through a teller.	3		5	10	82	100	4.27	5	<u>0.1</u>
12. Bank's ATM card staff is aware of policies and consistently share that with card holders.	10	6	10	34	40	100	4.27	5	<u>0.1</u>
13. Customers are always welcomed by bank staff warmly.		6	11	26	57	100	4.27	5	<u>0.1</u>
14. When customers visit a bank they are guided properly to the right parking lot by responsible staffs.	22	9	22	12	35	100	4.27	5	<u>0.1</u>

15. Bank is careful about their customers and treat them properly.		9	7	22	62	100	4.27	5	<u>0.1</u>
16. ATM card is appropriately designed with suitable size.	4	5	2	13	76	100	4.27	5	<u>0.1</u>
17. ATM screen is clear and displays properly.	3	4	7	13	73	100	4.27	5	<u>0.1</u>
18. Instruction notices exist in places where ATMs are installed	35	11	25	13	16	100	4.27	5	<u>0.1</u>
19. Customers are totally satisfied with quality of ATM services.	2	7	7	26	58	100	4.27	5	<u>0.1</u>

Source: Own survey, 2017

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#### Mean, Skewness and Kurtosis

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Mean	0.00
Standard Error	0.059904407
Median	-0.023060341
Mode	-0.023060341
Standard Deviation	0.599044073
Sample Variance	0.358853801
Kurtosis	1.191841556
Skewness	-0.651483076
Range	2.909003455
Minimum	-1.755018362
Maximum	1.153985093
Sum	4.66294E-14
Count	100

## Normality Test Data

<i>Bin</i>	<i>Frequency</i>
-1.75502	2
-1.46412	2
-1.17322	0
-0.88232	0
-0.59142	9
-0.30052	18
-0.00962	25
0.281284	8
0.572184	20
0.863085	11
More	5