INFRASTRUCTURAL CHALLENGES OF E-BANKING AS PER CUSTOMERS` PERSPECTIVE: DETAILED ANALYSIS ACROSS PARTICIPANTS` GENDER AND AGE

Mehmood Ali1, Muhammad Ahmed Kalwar2\*, Muhammad Ali Khan3,

1Post Graduate Student, Muhammad Ali Jinnah University. Karachi, Sindh, Pakistan.

2Assistant Manager, Shafi Private Limited, Lahore, Punjab, Pakistan

3Assistant Professor, Industrial Engineering & Management, Mehran UET, Jamshoro, Sindh, Pakistan.

kalwar.muhammad.ahmed@gmail.com

# ABSTRACT

Purpose: To analyze the infrastructural challenges of e-banking across gender and age in customers` perspective.

Methodology: This empirical research was conducted in the Karachi, Pakistan. Questionnaire as adopted from literature and 5 point likert scale was selected as measurement scale. Data was collected by using google form which were sent by emails to the participants. 300 valid observations were collected and put into SPSS and MS excel for the analysis. Data analysis included simple frequency distribution, mean+SD and mode of various variables. Data was presented in the form of tables.

Finding: The response from majority of young males (21-30 years) was found to be neutral (3); at the same time, frequency distribution indicated that the remaining groups (males) agreed (4) for the infrastructural entities to be convenient. Moreover, majority of the female participants from every group found the e-banking infrastructural facilities useful, convenient, easily accessible, reliable etc. The results indicated that there is the gap of awareness among the 21-30 years of male participants.

Importance: When there is the communication gap in between the consumer and also business person and also client do n`t get the preferred product/service or the client is not cognizant of the product/service; in this circumstance customer adjustment his/her choices regarding the products/services. For that reason, in the gone over scenario, manufacturer/service service provider needs to reduce the void with his client to ensure that he may have understanding regarding the customer's demand. On the exact same time, if the customer do n`t learn about the product/service as well as its features, it is considerably required to mindful him/her with the detailed understanding about. This research will certainly play the role of bridge between the consumer and also service provider in terms of client's concerns with electronic banking.

Implication:This study can be performed at the larger sample size (with varied demographics in regards to geographical areas) for even more accurate outcomes and verdict.

Originality:Beatrice in 2017 performed a research on the challenges dealt with by the internet banking in which the information was gathered from branch managers, branch supervisors, customer service officers, cashiers and credit scores policemen. Since, the data was collected from the authorities of financial institutions and also because circumstance, customers were not considered. In the gravitation of pointed out point, the author has actually left the suggestions for future that this job can be further expanded by carrying on the very same study in the customers 'point of view [1] This study is the extension of Beatrice's work.

Keywords: Keywords: online banking; internet banking; infrastructure; challenges; gender.

# INTRODUCTION

Infotech (IT) has been playing a significant function in the handling, computation and access of details [2] Establishments needs to modify their procedures and also techniques on the arrival of new innovation [3]. In the current time, the development in technological advances has actually influenced business organizations in numerous means, a lot of particularly in terms of monitoring and also control; advertising and also research; operations and decision making [4]. Monetary system plays an essential part in the economic development of the country [5]. The typical mode of delivering product or services by banks to the customers' is via a single distribution network which is physical financial institution branches [6]. In order to manage the quick changes in the business situation, financial institutions started to rely upon circulation networks as an alternative approach for distinction and getting more competitive advantage [6]. Banks increase technology financial investment investing strongly to attend to earnings, price and competitiveness worries [4]. In a world, which is ending up being significantly open as a result of the Web and also the Net (WWW), Internet banking has actually been making headway around the globe [7]. Financial solutions sector is establishing as a result of the introduction of net, rapid technical advancements, deregulation, globalization as well as the effect of changing competitive and also governing pressures [6]. Application of internet in banking system has updated the banks [5]. In financial sector, information technological advances is the significant variable for future advancement of financial solutions market. It is based on sharing of details, which primarily depends upon details and also communication technological advances for obtaining, examining as well as delivering files to all relevant users [8]. E- Banking is knowledge based as well as mostly clinical in using the electronic gadgets of the computer resolution through the extensive use IT without straight resources to the financial institution by the clients [5]. E-banking refers to financial tasks that are executed using electronic innovation [9]. E-banking indicates any individual with a desktop computer as well as an internet browser can get connected to his banks web site to execute any of the online banking functions. In E- banking system the financial institution has a central data source that is web-enabled [6]. The introduction of e-banking services is taken into consideration a development of the financial market, bringing numerous benefits to both customers and banks [10]. One of the benefits that banks experience when using e- banking is enhanced consumer satisfaction [4]. It gives huge benefits to consumers in regards to the simplicity and price of transactions [11]. Online banking has provision networks that replaces as well as replicated numerous tasks presently implementing by the bank [12]. E-banking contribute in marketing, promotion and marketing research of the items [7]. It has actually highly affected the tactical company considerations for banks by significantly reducing prices of shipment and also transactions [4]. For this reason e-banking currently plays a crucial role to carry out the individual as well as business financial activities implementation [12]. Because of the advent of infotech there is a modification in the banking field which has led way for the introduction of retail digital payment system and also has actually advanced in the current years in numerous nations [5]. It must be kept in mind, nonetheless, that while e-banking offers lots of advantages to clients and banks, it additionally aggravates conventional financial dangers [4]. In this era of modern technological advances, the implementation of e-banking solutions plays a substantial role in helping financial institutions to stay competitive as well as adjust to the recent modifications of the marketplace [10]. The monetary product or services have appeared over the Internet, which has therefore come to be a crucial distribution network for a number of banks [4]. The success of Internet banking depends upon the maturation, honesty and also commitment of the people. Internet banking system has confirmed to be much more flexible than a man [7].

The use of latest innovation causes the enhanced efficiency, expense efficiency and also boosted effectiveness [13]. E-Banking is not something brand-new to Pakistan. The first ever ATM was mounted in 1987 in Pakistan. Till late 1990s, the installment and development rate of ATM machine were continued to be low and also sluggish [12]. Queue is common occurrence in daily life [14]–[16]. The progress of financial transactions by technological advances has been driven by variations in spreading networks as demonstrated by ATM MACHINE (automated teller ma- chine), Mobile Phone-banking, Pc-banking, Telebanking as well as most recently electronic banking [12]. The use of internet banking has grown rapidly in the last decade, together with the Net [17]. In 2017, 64% of the total purchases were accomplished by ATM, 0.40% were carried out through mobile banking, and also 4% of them were carried out by means of web in Pakistan [12]. One amongst customers experienced trouble with Web as well as internet banking is personal privacy; that makes the security in purchases essential [17]. These findings indicate that what the participants have most to grumble about relating to Electronic banking is the safety [17]. Aggression is triggered by anger and also impatience [18], [19]. Research studies has shown that more youthful segments are much more going to take threats than the older sectors Pertaining to electronic banking, the older sectors are much more mindful than typical [17]. The solution stumbles upon as easy to use, quick, easily accessible and so on, yet even though the participants located the use favorable, numerous discovered the safety and security adverse [17]. Even e-banking activities based upon the net or digital private networks own by the financial institution, for that reason communication channel, distribution network as well as purchases network should be secure [12]. One of the most essential legal obstacles for the e-banking system appears to be whether the general guidelines of agreements supply sufficient assurances for the credibility and requirement of electronic contracts [9].

# LITERATURE REVIEW

There has actually been a lot of research is carried out on the online banking in regards to challenges dealt with by service providers. One of the descriptive study was conducted by Beatrice (2017) in Kenya, in which questionnaire was made use of for data collection. Research examined the obstacles encountered by the electronic banking. Obstacles were suggested by the study were i.e. bad internet rate, customer awareness, absence of signals of electronic banking, much less penetration on the market and also the reception of electronic banking services. Study additionally highlighted the purchase safety concerns in the financial institutions. It was ended that the degree of recognition among the client pertaining to internet banking is quite less; that's why it was recommended to educate the financial institutions' staff members so that they can pass on the acquired knowledge of online banking in the direction of the consumers [1]. Study was performed by Rahman et al, (2017) with the purpose to take a look at the existing situation, leads and also trouble of electronic banking (Dutch-Bangla Bank Limited) in Bangladesh. Information was gathered by performing interviews. There were 11 questions in the interview and 100 meeting were carried out from the registered clients of the bank. It was wrapped up that clients of the financial institution had inadequate expertise concerning the e-banking services [8]. Deep literary works testimonial was carried out in Iran by Alikhani and also Zare (2018) in which the problems and challenges of web banking policies are highlighted. In the study, lawful obstacles are taken a look at for the development of web banking systems to make sure that solution of those issues can be recommended. It was ended that, the guidelines for the customer protection were incomplete in terms of online banking as well as on the same time, there was no clear judicial treatment thereof [9]. Phuong Nam (2014) conducted research on the application process of web banking services in Vietnam. There were 2 goals in the research study: 1) to uncover the factors as well as stimuli for the application of electronic banking services; 2) to investigate the implementation process and highlight the challenges dealt with throughout the process. It was ended that the growth of market as well as the fulfillment of clients were the significant inspirations behind the implementation of the internet banking; and also the major difficulty was the absence of knowledge (regarding the internet banking) amongst customer and their hesitation [10].

AmeenaFarooqui and P. Rajani (2017) conducted as research with the purpose of examining progression of Indian banks in the context of internet banking. On the exact same time, difficulties faced by Indian banks were likewise highlighted. The electronic banking customers increase from 193204330 (in 2013) to 462124989 (in 2016); which indicated that there was successful implementation of electronic banking in Indian banks. Highlighted elements were; i.e. safety threat, trust element, customer awareness, personal privacy threat, reinforcing the general public assistance, accessibility of workers solutions, competition, application of worldwide technology and so on [5]. Hussain et al. (2017) indicated web ease of access in financial sector as a factor for customer unwillingness to access their bank accounts online in Pakistan. Because absence of cyber safety, customers' depend on is significantly impacted by the use of web banking. Moreover, authors highlighted the issues of online banking i.e. technical issues, ATM MACHINE link network concerns, safety and security concerns, non-technical workers [12]. Al-Weshah (2013) wrapped up that internet banking supplies several readily available opportunities to bank renovation such as very easy and quick financial solutions, cheap interaction devices with consumers, brand-new banking product or services to financial institution consumers, as well as reliable control concerning financial system errors. On the other hand, electronic banking encounters several potential difficulties in bank renovation such as absence of clients' trust fund as well as security, absence of workers' engagement in banking industry renovation, and absence of appropriate workers' skills as well as capabilities in web applications because of absence of effective training for teller [20]. Ashoka and also Vinay M.L (2016) carried out study in Mysore District disclose that the equivalent percent in regard of country customer is only 60 portion with the overall sample dimension of 179 the percentage for E- Banking in the accumulated team counts for 80 portion the primary factor for non-patronization of E-- Banking is illiteracy and also worry of shedding cash when E-Financial is exercised [21]. The organization between group qualities as well as the satisfaction of consumers for electronic banking was examined by Kumbhar, Vijay (2011); moreover, association in between service quality and consumer's contentment was also investigated he likewise check out the relationship in between service high quality and also consumers' fulfillment along with satisfaction in internet banking solution provided by the public field bank and private sector financial institutions. The study found out that overall complete satisfaction of workers, business people as well as specialists are higher in electronic banking service. Additionally it was discovered that there is substantial difference in the consumers' perception in internet banking solutions provided by the public and also economic sector financial institutions [22]. According to Nath Ravi &Schrick Paul (2001), In every company, the way the business is conducted is being transformed by e-commerce. Out-of-date business designs are replaced by the new ones. On the very same time, organization are pondering over the modification of techniques of client connection administration and also organization process layout. Banks are not jeopardizing on this improvement. In the here and now study, sights of lenders are taken a look at on the stipulation of banking solutions by means of site. Results of the research study indicated that electronic banking in its infancy age as well as its supplied by less number of banks; complete internet banking advantages are remaining to be realized by number of banks for its implementation [23]. Pooja Malhotra and Balwinder Singh (2009), briefly indicated the here and now condition of electronic banking in India. This study was carried out to seek the connection in between electronic banking fostering and efficiency of bank and also the danger. It has been indicated by the study that, electronic banking has the substantial as well as negative association with the danger; where it becomes clear that risk profile of financial institutions is not enhanced by the electronic banking adoption in banks [24].

# RESEARCH GAP

With the advent of technological enhancement, it was needed for the financial institutions therefore the consumer to relocate in the direction of the online banking [25]. E-Banking is sensation through which the services and products are immediately supplied to consumers with electronic platform [25]. Just recently, due the development in the field of infotech and the Net benefits, financial institutions have been seeking for the arrangement of number of services for their customers. Inevitable challenges are being available in the method of development and advancement of e-banking [9]. In addition to the benefits of, electronic banking; there are numerous challenges in the field of online banking; which are significant for both i.e. provider as well as completion user, who operates successfully from the banks. It is needed for them to be familiar with those difficulties so that they can be conquered effectively [26]. In the here and now situation, it is called for to acknowledge the issues of financial through internet on the side of customers to determine the challenges which are been encountered by company. By doing this, hesitation relating to the use of electronic banking amongst completion customer as it might be minimized for the good of both consumers as well as company. There has actually been a great deal of researches, who concentrate on the obstacles dealt with by the service providers i.e. banks however an extremely few of them have actually concentrated on the challenges with end user (customer) viewpoint. Beatrice in 2017 performed a research study on the obstacles encountered by the internet banking in which the information was gathered from branch supervisors, branch supervisors, customer service officers, cashiers and credit score police officers. Given that, the information was gathered from the officials of financial institutions and also because situation, customers were ruled out. In the gravity of stated factor, the writer has left the tips for future that this work can be additional prolonged by performing the exact same research study in the consumers 'point of view [1]. This research is the extension of Beatrice's function.

# RESEARCH OBJECTIVES

The aim of present research was to bridge the gap between customer and service provider and this could be achieved by following objectives:

* To identify the common infrastructural challenges of e-banking
* To analyze the infrastructural challenges of e-banking across participants gender and age

# METHODOLOGY

Research approach is the subject of approaches which have actually been used in the conducted research. In this section, research method, research design, populace, segment dimension, sampling strategy, research tool as well as measurement scale are discussed briefly.

## Philosophy

Three major viewpoints of scientific research are there i.e. empiricism, scientific realism and social constructionism [27]. This research based on the realism approach. According to McMurray AJ, Rate R. Wand Scott D (2004) as cited by [28]that in realism philosophy, fact as well as beliefs that exist in a the setting are concentrated. Yin (1989, p. 21) as pointed out by [29] suggested that realism standard intends to generalize to academic tips and also not to populaces. There are 2 branches of realism ideology i.e. critical and also straight realism. Sekaran U and Bougie R. (2013) as pointed out by [28]discussed straight realism is what a specific really feels, sees, listens to, and so on. On the other hand, in critical realism, the people review their experience in details circumstances.

## Research Approach

Category reveals three kinds of research methods i.e. qualitative, quantitative as well as the blended approach of both. Quantitative research describes the quantification and analysis of variables for obtaining results [30]. By the aid of various statistical strategies, the details (mathematical records) is assessed in order to address the questions like, just how much, who, what, how many, where and also when [1]. According to Aliaga, and also Gunderson (2002 ), as mentioned by [30] that it clarifies the quantitative research methods as defining a concern by through collection of data in numbers as well as evaluating it with the help of mathematical approaches. Statistical approach to research design comprises the quantitative research technique. It begins with the declaration of the research problem and also includes the theory development, testimonial of literary works as well as quantitative analysis of details [31]. This research method arose around the duration of 1250 A.D., it was utilized by the researchers for the metrology of details. Considering that, in this research author has actually accumulated the data as well as made use of numerous statistical techniques to analyze it; thus this research utilizes the quantitative study perspective.

## Research Design

Design of research is structure, research strategy as well as evaluation are assembled in order to examine the research issues [1]. According to Cooper & Schindler (2006) as pointed out by [1]. that detailed research is made use of for responding to the question like what, where as well as exactly how of an occurrence. Survey research is referred to as the common sort of detailed research; in study research, interrogations are asked from the segment (standing for the team (s)) of people to be studied [32]. Vital info regarding the populace is offered by the use of descriptive research design. Descriptive research assistance research to describe the things which prevail in the population [33].

## Research Instrument

Questionnaire was used the research tool in the research study. It was consisted of five areas. Initial section was based on 6 questionings regarding the information of participant i.e. age, gender, financial institution name and education, Have you done any kind of computer system courses? As well as do you have access to internet? 2nd area was contained 4 questions concerning the prospects of electronic banking as taken on from [8]. 3rd section was based on 9 questions relating to infrastructural problems which were adopted from [1].

## Measurement Scale

Given that, the thought of individuals pertaining to anything are an abstract noun; which cannot be determined by physical volumes; hence, for dimension of viewpoints and also perspectives, likert ranges are designed [34]. These scales are consisted on the various alternatives in a taken care of layout. In the here and now research, 5-point likert range ("Strongly Differ = 1" to "Highly Agree = 5") was utilized in order to determine the numerous variables.

## Data Collection

In research language, population is the complete amount of things from the details sample can be taken [35]. Research population in this study is the number of individuals who have accounts in any one of the financial institution in Karachi, Sindh, Pakistan. The consumers of a minimum of five banks (operating in Karachi) were approached for the details collection (by Google kind) and also details was gathered from 300 respondents. Convenient tasting strategy was made use of for the details collection.

## Data Analysis

Data was put into MS excel and statistical package for social sciences for analysis. Data analysis included simple frequency distribution, means, standard deviations and modes of various variables. The data was presented in the form of tables. Analysis of the each of the question was conducted separately as per the two demographic characteristics i.e. gender and age.

# RESULT

Result is based on the detailed analysis of various variables of infrastructural challenges of online banking across gender and age of the participants. The analysis includes the detailed frequency distribution along with mean and standard deviations of the variables. The results are presented in the tabular form.

## Q1. Bank’s website is very easily accessible

Under this heading, the detailed analysis (frequency distribution and mean+SD) of Q1 is presented across two demographic characteristics. A look at table 1 indicates that the mean response of male respondents from the age of 21-30 years was calculated to be 3.46+0.86 with the mode of 4; moreover, the mean responses of participants from the age groups of 31-40, 41-50 and 51 and above from the same gender were calculated to be 4.00+0.89, 3.70+0.91 and 4.00+0.91 respectively with the same mode i.e. 4.

Table 1. Frequency distribution, mean+SD and mode of the responses of the participants across gender and age

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Gender** | **Age(Years)** | **Bank’s website is very easily accessible** | **Total** | **Mean+SD, Mode** |
| **1****n(%)** | **2****n(%)** | **3****n(%)** | **4****n(%)** | **5****n(%)** |
| Male | 21-30 | 8(2.67%) | 16(5.33%) | 79(26.33%) | 46(15.33%) | 36(12%) | 185(61.67%) | 3.46+0.86, 4 |
| Male | 31-40 | - | - | - | 27(9%) | - | 27(9%) | 4.00+0.89, 4 |
| Male | 41-50 | - | - | 8(2.67%) | 19(6.33%) | - | 27(9%) | 3.70+0.91, 4 |
| Male | 51 and above | - | - | - | 19(6.33%) | - | 19(6.33%) | 4.00+0.91, 4 |
| **Total** | 8(2.67%) | 16(5.33%) | 87(29%) | 111(37%) | 36(12%) | 258(86%) |  |
| Female | 21-30 | - | - | - | 22(7.33%) | - | 22(7.33%) | 4.00+0.96, 4 |
| Female | 31-40 | - | - | - | 20(6.67%) | - | 20(6.67%) | 4.00+0.00, 4 |
| Female | 41-50 | - | - | - | - | - | - |  |
| Female | 51 and above | - | - | - | - | - | - |  |
| **Total** | - | - | - | 42(14%) | - | 42(14%) |  |

There were only two age groups of female respondents i.e. 21-30 and 31-40 and their mean response was computed to be 4.00+0.96 and 4.00+0.00 respectively with the same mode i.e. 4 which can be seen in the table 1.

## Q2. Accessing internet banking Services is very easy

Under this heading, the detailed analysis (frequency distribution and mean+SD) of Q2 is presented across two demographic characteristics. A look at table 2 indicates that the mean response of male respondents from the age of 21-30 years was calculated to be 3.50+0.90 with the mode of 4; moreover, the mean responses of participants from the age groups of 31-40, 41-50 and 51 and above from the same gender were calculated to be 4.00+0.88, 3.70+0.91 and 4.00+0.91 respectively with the same mode i.e. 4.

Table 2. Frequency distribution, mean+SD and mode of the responses of the participants across gender and age

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Gender** | **Age(Years)** | **Accessing internet banking Services is very easy** | **Total** | **Mean+SD, Mode** |
| **1****n(%)** | **2****n(%)** | **3****n(%)** | **4****n(%)** | **5****n(%)** |
| Male | 21-30 | 6(2%) | 20(6.67%) | 73(24.33%) | 48(16%) | 38(12.67%) | 185(61.67%) | 3.50+0.90, 4 |
| Male | 31-40 | - | - | - | 27(9%) | - | 27(9%) | 4.00+0.88, 4 |
| Male | 41-50 | - | - | 8(2.67%) | 19(6.33%) | - | 27(9%) | 3.70+0.91, 4 |
| Male | 51 and above | - | - | - | 19(6.33%) | - | 19(6.33%) | 4.00+0.91, 4 |
| **Total** | 6(2%) | 20(6.67%) | 81(27%) | 113(37.67%) | 38(12.67%) | 258(86%) |  |
| Female | 21-30 | 3(1%) | - | - | 19(6.33%) | - | 22(7.33%) | 3.59+1.00, 4 |
| Female | 31-40 | - | - | - | 20(6.67%) | - | 20(6.67%) | 4.00+0.62, 4 |
| Female | 41-50 | - | - | - | - | - | - |  |
| Female | 51 and above | - | - | - | - | - | - |  |
| **Total** | 3(1%) | - | - | 39(13%) | - | 42(14%) |  |

There were only two age groups of female respondents i.e. 21-30 and 31-40 and their mean response was computed to be 3.59+1.00 and 4.00+0.62 respectively with the same mode i.e. 4 which can be seen in the table 2.

## Q3. Online banking services are very user friendly

Under this heading, the detailed analysis (frequency distribution and mean+SD) of Q3 is presented across two demographic characteristics. A look at table 3 indicates that the mean response of male respondents from the age of 21-30 years was calculated to be 3.37+0.87 with the mode of 4; moreover, the mean responses of participants from the age groups of 31-40, 41-50 and 51 and above from the same gender were calculated to be 3.85+0.90, 3.70+0.91 and 3.89+0.91 respectively with the same mode i.e. 4.

Table 3. Frequency distribution, mean+SD and mode of the responses of the participants across gender and age

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Gender** | **Age(Years)** | **Online banking services are very user friendly** | **Total** | **Mean+SD, Mode** |
| **1****n(%)** | **2****n(%)** | **3****n(%)** | **4****n(%)** | **5****n(%)** |
| Male | 21-30 | 8(2.67%) | 20(6.67%) | 82(27.33%) | 45(15%) | 30(10%) | 185(61.67%) | 3.37+0.87, 4 |
| Male | 31-40 | - | - | 4(1.33%) | 23(7.67%) | - | 27(9%) | 3.85+0.90, 4 |
| Male | 41-50 | - | - | 8(2.67%) | 19(6.33%) | - | 27(9%) | 3.70+0.91, 4 |
| Male | 51 and above | - | - | 2(0.67%) | 17(5.67%) | - | 19(6.33%) | 3.89+0.91, 4 |
| **Total** | 8(2.67%) | 20(6.67%) | 96(32%) | 104(34.67%) | 30(10%) | 258(86%) |  |
| Female | 21-30 | - | - | - | 22(7.33%) | - | 22(7.33%) | 4.00+0.97, 4 |
| Female | 31-40 | 1(0.33%) | - | 1(0.33%) | 18(6%) | - | 20(6.67%) | 3.80+0.44, 4 |
| Female | 41-50 | - | - | - | - | - | - |  |
| Female | 51 and above | - | - | - | - | - | - |  |
| **Total** | 1(0.33%) | - | 1(0.33%) | 40(13.33%) | - | 42(14%) |  |

There were only two age groups of female respondents i.e. 21-30 and 31-40 and their mean response was computed to be 4.00+0.97 and 3.80+0.44 respectively with the same mode i.e. 4 which can be seen in the table 3.

## Q4. The response time of internet banking system is very reasonable

Under this heading, the detailed analysis (frequency distribution and mean+SD) of Q4 is presented across two demographic characteristics. A look at table 4 indicates that the mean response of male respondents from the age of 21-30 years was calculated to be 3.48+0.87 with the mode of 4; moreover, the mean responses of participants from the age groups of 31-40, 41-50 and 51 and above from the same gender were calculated to be 44.00+0.90, 3.70+0.93 and 4.00+0.93, 4 respectively with the same mode i.e. 4.

Table 4. Frequency distribution, mean+SD and mode of the responses of the participants across gender and age

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Gender** | **Age(Years)** | **The response time of internet banking system is very reasonable** | **Total** | **Mean+SD, Mode** |
| **1****n(%)** | **2****n(%)** | **3****n(%)** | **4****n(%)** | **5****n(%)** |
| Male | 21-30 | 8(2.67%) | 20(6.67%) | 67(22.33%) | 55(18.33%) | 35(11.67%) | 185(61.67%) | 3.48+0.87, 4 |
| Male | 31-40 | - | - | - | 27(9%) | - | 27(9%) | 4.00+0.90, 4 |
| Male | 41-50 | - | - | 8(2.67%) | 19(6.33%) | - | 27(9%) | 3.70+0.93, 4 |
| Male | 51 and above | - | - | - | 19(6.33%) | - | 19(6.33%) | 4.00+0.93, 4 |
| **Total** | 8(2.67%) | 20(6.67%) | 75(25%) | 120(40%) | 35(11.67%) | 258(86%) |  |
| Female | 21-30 | - | - | 2(0.67%) | 20(6.67%) | - | 22(7.33%) | 3.91+0.97, 4 |
| Female | 31-40 | - | - | 4(1.33%) | 16(5.33%) | - | 20(6.67%) | 3.80+0.28, 4 |
| Female | 41-50 | - | - | - | - | - | - |  |
| Female | 51 and above | - | - | - | - | - | - |  |
| **Total** | - | - | 6(2%) | 36(12%) | - | 42(14%) |  |

There were only two age groups of female respondents i.e. 21-30 and 31-40 and their mean response was computed to be 3.91+0.97 and 3.80+0.28 respectively with the same mode i.e. 4 which can be seen in the table 4.

## Q5. Internet banking system is very reliable

Under this heading, the detailed analysis (frequency distribution and mean+SD) of Q5 is presented across two demographic characteristics. A look at table 5 indicates that the mean response of male respondents from the age of 21-30 years was calculated to be 3.50+0.83 with the mode of 4; moreover, the mean responses of participants from the age groups of 31-40, 41-50 and 51 and above from the same gender were calculated to be 4.00+0.86, 3.70+0.88 and 4.00+0.88 respectively with the same mode i.e. 4.

Table 5. Frequency distribution, mean+SD and mode of the responses of the participants across gender and age

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Gender** | **Age(Years)** | **Internet banking system is very reliable.** | **Total** | **Mean+SD, Mode** |
| **1****n(%)** | **2****n(%)** | **3****n(%)** | **4****n(%)** | **5****n(%)** |
| Male | 21-30 | 6(2%) | 19(6.33%) | 69(23%) | 59(19.67%) | 32(10.67%) | 185(61.67%) | 3.50+0.83, 4 |
| Male | 31-40 | - | - | - | 27(9%) | - | 27(9%) | 4.00+0.86, 4 |
| Male | 41-50 | - | - | 8(2.67%) | 19(6.33%) | - | 27(9%) | 3.70+0.88, 4 |
| Male | 51 and above | - | - | - | 19(6.33%) | - | 19(6.33%) | 4.00+0.88, 4 |
| **Total** | 6(2%) | 19(6.33%) | 77(25.67%) | 124(41.33%) | 32(10.67%) | 258(86%) |  |
| Female | 21-30 | - | - | 2(0.67%) | 20(6.67%) | - | 22(7.33%) | 3.91+0.93, 4 |
| Female | 31-40 | - | - | 4(1.33%) | 16(5.33%) | - | 20(6.67%) | 3.80+0.28, 4 |
| Female | 41-50 | - | - | - | - | - | - |  |
| Female | 51 and above | - | - | - | - | - | - |  |
| **Total** | - | - | 6(2%) | 36(12%) | - | 42(14%) |  |

There were only two age groups of female respondents i.e. 21-30 and 31-40 and their mean response was computed to be 3.91+0.93 and 3.80+0.28 respectively with the same mode i.e. 4 which can be seen in the table 5.

## Q6. Internet is easily available across the country

Under this heading, the detailed analysis (frequency distribution and mean+SD) of Q6 is presented across two demographic characteristics. A look at table 6 indicates that the mean response of male respondents from the age of 21-30 years was calculated to be 3.35+0.96 with the mode of 4; moreover, the mean responses of participants from the age groups of 31-40, 41-50 and 51 and above from the same gender were calculated to be 4.00+0.96, 3.70+0.94 and 4.00+0.94 respectively with the same mode i.e. 4.

Table 6. Frequency distribution, mean+SD and mode of the responses of the participants across gender and age

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Gender** | **Age(Years)** | **Internet is easily available across the country.** | **Total** | **Mean+SD, Mode** |
| **1****n(%)** | **2****n(%)** | **3****n(%)** | **4****n(%)** | **5****n(%)** |
| Male | 21-30 | 6(2%) | 33(11%) | 67(22.33%) | 49(16.33%) | 30(10%) | 185(61.67%) | 3.35+0.96, 4 |
| Male | 31-40 | - | - | - | 27(9%) | - | 27(9%) | 4.00+0.96, 4 |
| Male | 41-50 | - | - | 8(2.67%) | 19(6.33%) | - | 27(9%) | 3.70+0.94, 4 |
| Male | 51 and above | - | - | - | 19(6.33%) | - | 19(6.33%) | 4.00+0.94, 4 |
| **Total** | 6(2%) | 33(11%) | 75(25%) | 114(38%) | 30(10%) | 258(86%) |  |
| Female | 21-30 | 2(0.67%) | - | 3(1%) | 17(5.67%) | - | 22(7.33%) | 3.59+1.05, 4 |
| Female | 31-40 | 4(1.33%) | - | - | 16(5.33%) | - | 20(6.67%) | 3.40+0.86, 4 |
| Female | 41-50 | - | - | - | - | - | - |  |
| Female | 51 and above | - | - | - | - | - | - |  |
| **Total** | 6(2%) | - | 3(1%) | 33(11%) | - | 42(14%) |  |

There were only two age groups of female respondents i.e. 21-30 and 31-40 and their mean response was computed to be 3.59+1.05 and 3.40+0.86 respectively with the same mode i.e. 4 which can be seen in the table 6.

## Q7. Online banking services are very cost effective

Under this heading, the detailed analysis (frequency distribution and mean+SD) of Q7 is presented across two demographic characteristics. A look at table 7 indicates that the mean response of male respondents from the age of 21-30 years was calculated to be 3.25+1.00with the mode of 4; moreover, the mean responses of participants from the age groups of 31-40, 41-50 and 51 and above from the same gender were calculated to be 4.00+0.99, 3.70+1.01 and 3.68+1.01 respectively with the same mode i.e. 4.

Table 7. Frequency distribution, mean+SD and mode of the responses of the participants across gender and age

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Gender** | **Age(Years)** | **Online banking services are very cost effective.** | **Total** | **Mean+SD, Mode** |
| **1****n(%)** | **2****n(%)** | **3****n(%)** | **4****n(%)** | **5****n(%)** |
| Male | 21-30 | 12(4%) | 31(10.33%) | 71(23.67%) | 41(13.67%) | 30(10%) | 185(61.67%) | 3.25+1.00, 4 |
| Male | 31-40 | - | - | - | 27(9%) | - | 27(9%) | 4.00+0.99, 4 |
| Male | 41-50 | - | - | 8(2.67%) | 19(6.33%) | - | 27(9%) | 3.70+1.01, 4 |
| Male | 51 and above | - | 3(1%) | - | 16(5.33%) | - | 19(6.33%) | 3.68+1.01, 4 |
| **Total** | 12(4%) | 34(11.33%) | 79(26.33%) | 103(34.33%) | 30(10%) | 258(86%) |  |
| Female | 21-30 | 3(1%) | 1(0.33%) | - | 17(5.67%) | 1(0.33%) | 22(7.33%) | 3.55+1.10, 4 |
| Female | 31-40 | - | 3(1%) | - | 17(5.67%) | - | 20(6.67%) | 3.70+0.77, 4 |
| Female | 41-50 | - | - | - | - | - | - |  |
| Female | 51 and above | - | - | - | - | - | - |  |
| **Total** | 3(1%) | 4(1.33%) | - | 34(11.33%) | 1(0.33%) | 42(14%) |  |

There were only two age groups of female respondents i.e. 21-30 and 31-40 and their mean response was computed to be 3.55+1.10 and 3.70+0.77 respectively with the same mode i.e. 4 which can be seen in the table 7.

## Q8. Online banking services are effective and efficient

Under this heading, the detailed analysis (frequency distribution and mean+SD) of Q8 is presented across two demographic characteristics. A look at table 8 indicates that the mean response of male respondents from the age of 21-30 years was calculated to be 3.50+0.87 with the mode of 4; moreover, the mean responses of participants from the age groups of 31-40, 41-50 and 51 and above from the same gender were calculated to be 4.04+0.89, 3.70+0.91 and 4.05+0.91 respectively with the same mode i.e. 4.

Table 8. Frequency distribution, mean+SD and mode of the responses of the participants across gender and age

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Gender** | **Age(Years)** | **Online banking services are effective and efficient.** | **Total** | **Mean+SD, Mode** |
| **1****n(%)** | **2****n(%)** | **3****n(%)** | **4****n(%)** | **5****n(%)** |
| Male | 21-30 | 8(2.67%) | 15(5%) | 74(24.67%) | 52(17.33%) | 36(12%) | 185(61.67%) | 3.50+0.87, 4 |
| Male | 31-40 | - | - | - | 26(8.67%) | 1(0.33%) | 27(9%) | 4.04+0.89, 4 |
| Male | 41-50 | - | - | 8(2.67%) | 19(6.33%) | - | 27(9%) | 3.70+0.91, 4 |
| Male | 51 and above | - | - | - | 18(6%) | 1(0.33%) | 19(6.33%) | 4.05+0.91, 4 |
| **Total** | 8(2.67%) | 15(5%) | 82(27.33%) | 115(38.33%) | 38(12.67%) | 258(86%) |  |
| Female | 21-30 | - | - | - | 21(7%) | 1(0.33%) | 22(7.33%) | 4.05+0.96, 4 |
| Female | 31-40 | - | - | - | 18(6%) | 2(0.67%) | 20(6.67%) | 4.10+0.24, 4 |
| Female | 41-50 | - | - | - | - | - | - |  |
| Female | 51 and above | - | - | - | - | - | - |  |
| **Total** | - | - | - | 39(13%) | 3(1%) | 42(14%) |  |

There were only two age groups of female respondents i.e. 21-30 and 31-40 and their mean response was computed to be 4.05+0.96 and 4.10+0.24 respectively with the same mode i.e. 4 which can be seen in the table 8.

## Q9. Online banking is easier than conventional banking

Under this heading, the detailed analysis (frequency distribution and mean+SD) of Q9 is presented across two demographic characteristics. A look at table 9 indicates that the mean response of male respondents from the age of 21-30 years was calculated to be 3.44+0.91 with the mode of 4; moreover, the mean responses of participants from the age groups of 31-40, 41-50 and 51 and above from the same gender were calculated to be 4.00+0.94, 3.70+0.96 and 3.84+0.96 respectively with the same mode i.e. 4.

Table 9. Frequency distribution, mean+SD and mode of the responses of the participants across gender and age

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Gender** | **Age(Years)** | **Online banking is easier than conventional banking?** | **Total** | **Mean+SD, Mode** |
| **1****n(%)** | **2****n(%)** | **3****n(%)** | **4****n(%)** | **5****n(%)** |
| Male | 21-30 | 12(4%) | 14(4.67%) | 74(24.67%) | 51(17%) | 34(11.33%) | 185(61.67%) | 3.44+0.91, 4 |
| Male | 31-40 | - | - | - | 27(9%) | - | 27(9%) | 4.00+0.94, 4 |
| Male | 41-50 | - | - | 8(2.67%) | 19(6.33%) | - | 27(9%) | 3.70+0.96, 4 |
| Male | 51 and above | 1(0.33%) | - | - | 18(6%) | - | 19(6.33%) | 3.84+0.96, 4 |
| **Total** | 13(4.33%) | 14(4.67%) | 82(27.33%) | 115(38.33%) | 34(11.33%) | 258(86%) |  |
| Female | 21-30 | - | - | 2(0.67%) | 20(6.67%) | - | 22(7.33%) | 3.91+1.00, 4 |
| Female | 31-40 | - | - | 3(1%) | 16(5.33%) | 1(0.33%) | 20(6.67%) | 3.90+0.29, 4 |
| Female | 41-50 | - | - | - | - | - | - |  |
| Female | 51 and above | - | - | - | - | - | - |  |
| **Total** | - | - | 5(1.67%) | 36(12%) | 1(0.33%) | 42(14%) |  |

There were only two age groups of female respondents i.e. 21-30 and 31-40 and their mean response was computed to be 3.91+1.00 and 3.90+0.29 respectively with the same mode i.e. 4 which can be seen in the table 9.

# DISCUSSION

The idea of banking tasks originated in 18th century BC [36]. This phenomenon has the ability to primarily transform the banks and so the financial sector. As well as speculation from the extreme sights have actually appeared that this occurrence will abolish the models as well as the way just how bank solutions were established as well as used [24]. On the top, the advantage of e-banking is the enhanced consumer complete satisfaction [4]. Esther and also Rajasekaran suggested that there were lots of people who don`t know about the e-banking and also they recommended to banks that the consumers should be assured the safety and security as well as protection of their transactions [37]. Yang et alia, 2007 concluded that there were much less number consumers of E-banking in Georgia not as a result of absence of understanding yet because absence of reliable marketing strategies [38]. PremchandNarware, 2016 indicated E-banking the suitable future banking setting and it will overcome the typical banking unquestionably [39]. The higher use net services has actually promoted the business people given that so long to offer their items anywhere by utilizing web [36]. The banks supplying the platform of on-line transfer were classified as bigger, much more rewarding and also efficient banks [24]. Ingle and Pardeshi, 2016 examined the marketing techniques for online banking; strategies consisted of competition, expense performance, geographical reach, branding, client demographics, comfort, obliquity, exchange speed, exchange speed, efficiency and efficiency [36]. Bahl, 2012 recommended policy implications for E-banking: that included licensing, verifying a person's identity, safety, ability preparation, consumer education, adaption, legalization, harmonization as well as combination [11]. Alikhani and Zare ended several difficulties in the way to execution of e-banking i.e. legal and economic regulative issues, procedure issues, organizational culture issues, system and also infrastructural concerns and most importantly the lawful obstacle was reported in Iran [9]. Gurme, 2011 conducted a review as well as wrapped up that the main obstacle for the adoption of e-banking by the consumer was the safety of financial system due to the fact that any individual can quickly operate it [40]. Kazmi and Hashim reported e-banking issues in Pakistan as; IT telecommunication infrastructural issue, ability concern, internet site design problem, security problem, depend on issue and also cash laundering concern [41]. Lakshmi Bai, 2018 reviewed the issues of e-banking as: discretion, stability, authentication, customer contentment, availability of workers services, competitors, managing technology, safety and security threat, personal privacy danger, trust fund element, client awareness and less web infiltration in Indian context [42]. Rahman et al., 2017 when asked the concerns from the participants with his already created questionnaire that "online banking is very easy to operate" then 64% of them responded yes and rest of 36% replied no [8]. Lusaya and Kalumba, 2018 asked the inquiry from his respondents regarding the E-banking usage; 42% answered no as well as remainder of 28% respondents answered of course: additionally, from that 58%, 8% of them use e-banking for funds transfer, 2% for bill repayment and remainder of 48% used it for various other cash money exchanges [25]. Yahiya conducted a research in which he provided the outcomes as: 74.4% individuals of e-banking were individuals, 11.2% were tiny and moderate enterprises and also remainder of 14.4% were corporates [35]. The response from majority of young males (21-30 years) was found to be neutral (3); at the same time, frequency distribution indicated that the remaining groups (males) agreed (4) for the infrastructural entities to be convenient. Moreover, majority of the female participants from every group found the e-banking infrastructural facilities useful, convenient, easily accessible, reliable etc. The results indicated that there is the gap of awareness among the 21-30 years of male participants.

# CONCLUSION

In typical financial, there was number of operational issues i.e. slow-moving retrieval of data, higher opportunity of fraud, greater efforts of customer for deal. Because of these concerns, electronic banking was presented into the financial industry. There are variety of advantages of online banking as well as on the same time, there are variety of issues in the means of e-banking to be completely embraced by the consumers. The clients maintain their funds and money in bank for the future requirements, organizations and also for valuables and they intend to be guaranteed in terms of safety and security of their tanks. Because, much of the scientists has reported the security concern in the way to successful fostering of e-banking by the customers [25]. Therefore, it is of highest requirement to focus the transactional safety on the e-banking sensation. There is number of consumers that are utilizing the services of electronic banking so it when there is the question of obstacles concerning e-banking; client understanding ought to not be found in the solution yet the absence of promotional occasions relating to the e-banking.

# FUTURE IMPLICATIONS

This research can be conducted at the larger sample size (with diverse demographics in terms of geographical locations) for more precise results and conclusion.

# ACKNOWLEDGEMENT

We thank the participants for their support in data collection.

# CONFLICT OF INTEREST

There was no conflict of interest among the authors of the present research paper.

# REFERENCES

[1] C. Beatrice, “CHALLENGES FACING INTERNET BANKING: A CASE STUDY OF FAMILY BANK LIMITED IN NAIROBI,” United States International University-Africa, 2017.

[2] M. A. Kalwar and M. A. Khan, “Optimization of Procurement & Purchase Order Process in Foot Wear Industry by Using VBA in Ms Excel,” *International Journal of Business Education and Management Studies*, vol. 5, no. 2, pp. 80–100, 2020, [Online]. Available: https://www.ijbems.com/doc/IJBEMS-124.pdf.

[3] M. S. Arain, M. A. Khan, and M. A. Kalwar, “Optimization of Target Calculation Method for Leather Skiving and Stamping: Case of Leather Footwear Industry,” *International Journal of Education and Management Studies*, vol. 7, no. 1, pp. 15–30, 2020.

[4] J. Chavan, “Internet Banking- Benefits and Challenges in an Emerging Economy,” *International journal of research in business management*, vol. 1, no. 1, pp. 19–26, 2013, [Online]. Available: https://www.academia.edu/13233924/INTERNET\_BANKING-BENEFITS\_AND\_CHALLENGES\_IN\_AN\_EMERGING\_ECONOMY.

[5] A. Farooqui and P. Rajani, “E-Banking Issues & Challenges,” *IOSR Journal of Business and Management*, vol. 19, no. 10, pp. 31–39, 2017, doi: 10.9790/487X-1910063139.

[6] N. M. Anand, “E-Banking Trends in India : Evolution , Challenges and Opportunities,” *Shanlax International Journal of Management*, vol. 3, no. 2, pp. 107–117, 2015.

[7] I. D. Adewuyi, “The Challenges of Internet Banking in Developing Countries,” *The Nigerian Academic Forum*, vol. 9, no. 2, pp. 2–5, 2005.

[8] M. Rahman, N. K. Saha, M. N. I. Sarker, A. Sultana, and A. S. Prodhan, “Problems and Prospects of Electronic Banking in Bangladesh: A Case Study on Dutch-Bangla Bank Limited,” *American Journal of Operations Management and Information Systems*, vol. 2, no. 1, pp. 42–53, 2017, doi: 10.11648/j.ajomis.20170201.17.

[9] M. Alikhani and A. Zare, “Reviewing the Issues and Challenges of Electronic Banking Regime in Iran,” *Economics*, vol. 7, no. 1, pp. 1–9, 2018, doi: 10.11648/j.eco.20180701.11.

[10] P. N. Dao, “Implementation of E-banking in Vietnam: Motivations and challenges – Case Company A,” 2014.

[11] S. Bahl, “E-Banking: Challenges & Policy Implications,” 2012.

[12] Z. Hussain, D. Das, Z. A. Bhutto, M. Hammad-u-Salam, F. Talpur, and G. Rai, “E-Banking Challenges in Pakistan: An Empirical Study,” *Journal of Computer and Communications*, vol. 05, no. 02, pp. 1–6, 2017, doi: 10.4236/jcc.2017.52001.

[13] M. A. Kalwar and M. A. Khan, “Increasing Performance of Footwear Stitching Line by Installation of Auto-Trim Stitching Machines,” *Journal of Applied Research in Technology & Engineering*, vol. 1, no. 1, pp. 31–36, 2020, [Online]. Available: https://riunet.upv.es/handle/10251/148631.

[14] M. A. Kalwar, S. I. Mari, M. S. Memon, A. Tanwari, and A. A. Siddiqui, “Simulation Based Approach for Improving Outpatient Clinic Operations,” *Mehran University Research Journal of Engineering and Technology*, vol. 39, no. 1, pp. 153–170, 2020, doi: 10.22581/muet1982.2001.15.

[15] M. A. Kalwar, S. A. Khaskheli, M. A. Khan, A. A. Siddiqui, and M. A. Gopang, “Comfortable Waiting Time of Patients at the OPD with Varying Demographics,” *Industrial Engineering Letters*, vol. 8, no. 2, pp. 20–27, 2018, [Online]. Available: https://core.ac.uk/download/pdf/234685697.pdf.

[16] S. A. Khaskheli, H. B. Marri, M. Nebhwani, M. A. Khan, and M. Ahmed, “Compartive Study of Queuing Systems of Medical Out Patient Departments of Two Public Hospitals,” in *Proceedings of the International Conference on Industrial Engineering and Operations Management*, 2020, vol. 1913, pp. 2702–2720, [Online]. Available: http://www.ieomsociety.org/ieom2020/papers/177.pdf.

[17] T. Josefsson, “Challenges with Internet banking,” pp. 1–11, 2017.

[18] M. A. Kalwar, M. A. Khan, S. A. Shaikh, A. Salam, M. S. Memon, and S. A. Khaskheli, “Aggressive Driving Behavior : A Case Study of Mehran UET ,” in *Proceedings of the International Conference on Industrial Engineering and Operations Management Dubai,* 2020, pp. 2350–2359, [Online]. Available: http://www.ieomsociety.org/ieom2020/papers/175.pdf.

[19] S. A. Khaskheli, M. A. Kalwar, A. A. Siddiqui, M. A. K. Nagar, and T. H. Wadho, “Impatience Among Drivers With Varying Demographics,” in *Professional Trends in Industrial and Systems Engineering*, 2018, pp. 465–469.

[20] G. A. Al-Weshah, “The role of internet banking in continuous improvement areas: Quantitative evidence from Jordanian banks,” *International Journal of Business Performance Management*, vol. 14, no. 2, pp. 181–196, 2013, doi: 10.1504/IJBPM.2013.052950.

[21] A. M L. and V. S., “Problems And Prospects Of E-banking Services - An Empirical Study in Mysore District,” *Journal of Chemical Information and Modeling*, vol. 2, no. 2, pp. 14–23, 2016, doi: 10.1017/CBO9781107415324.004.

[22] V. M. Kumbhar, “Service Quality Perception and Customers’ Satisfaction in Internet Banking Service: A Case Study of Public and Private Sector Banks,” *Cyber Literature: The International Online Journal*, vol. 4, no. 2, pp. 21–30, 2011.

[23] N. Ravi and P. Schrick, “Banker s Perspective on Internet Banking,” *E-Service Journal*, vol. 1, no. 1, pp. 21–36, 2001.

[24] P. MALHOTRA and B. SINGH, “The Impact of Internet Banking on Bank Performance and Risk: The Indian Experience,” *Eurasian Journal of Business and Economics*, vol. 2, no. 4, pp. 43–62, 2009, doi: 10.1057/palgrave.jbr.2340189.

[25] S. Lusaya and B. Kalumba, “The Challenges of Adopting the Use of E-Banking to the Customers : The Case of Kasama District Banking Customers,” *Scholar Journal of Applied Sciences and Research*, vol. 1, no. 2, pp. 26–31, 2018.

[26] P. Revathi, “Digital Banking Challenges and Opportunities in India,” *EPRA International Journal of Economic and Business Review*, vol. 7, no. 12, pp. 20–23, 2019, doi: 10.36713/epra2985.

[27] B. D. Haig, “The philosophy of quantitative methods,” in *Studies in Applied Philosophy, Epistemology and Rational Ethics*, 2012, pp. 6–30.

[28] R. Andriukaitiene, J. Vveinhardt, and P. Zukauskas, “Philosophy and Paradigm of Scientific ResearchBandas, Cornelia,” in *Web of science*, 2013, pp. 121–139.

[29] R. Sobh and C. Perry, “Research design and data analysis in realism research,” *European Journal of Marketing*, vol. 40, no. 11/12, pp. 1194–1209, 2006, doi: 10.1108/03090560610702777.

[30] O. D. Apuke, “Quantitative Research Methods: A Synopsis Approach,” *Kuwait Chapter of Arabian Journal of Business and Management Review*, vol. 6, no. 10, pp. 40–47, 2017, doi: 10.12816/0040336.

[31] C. Williams, “Research methods,” *Journal of Business & Economic Research*, vol. 5, no. 3, pp. 65–72, 2007, doi: 10.1017/9781108656184.003.

[32] E. . Koh and W. . Owen, “Descriptive Research and Qualitative Research,” in *Descriptive research and qualitative research: Introduction to Nutrition and Health Research*, 2000, pp. 219–248.

[33] K. E. SWATZELL and P. R. JENNINGS, “Descriptive research: The nuts and bolts,” *Journal of the American Academy of Physician Assistants*, vol. 20, no. 7, p. 1, 2007, doi: 10.1097/01720610-200707000-00098.

[34] L. Rensis, “A technique for the measurement of attitudes,” *Archives of Psychology*, vol. 22, no. 140, p. 55, 1932.

[35] S. Yahiya, “Prospects and Challenges of Electronic Banking in Ghana- A Case Stdy of the SG-SSB Limited,” Institute of Distance Learning, Kwame Nkrumah University of Science and Technology, 2011.

[36] A. Ingle and R. Pardeshi, “Internet Banking in India: Challenges and Opportunities,” *IBMRD’s Journal of Management & Research*, vol. 1, no. 1, pp. 13–18, 2012, doi: 10.1017/CBO9781107415324.004.

[37] M. Esther and R. Rajasekaran, “Commerce A Study on Customer Awareness Towards E-Banking Services in Coimbatore City,” *Indian Journal of Research*, vol. 4, no. 9, pp. 230–233, 2015.

[38] J. Yang, M. Whitefield, and K. Boehme, “New issues and challenges facing e-banking in rural areas : an empirical study,” *International Journal of Electronic Finance*, vol. 1, no. 3, pp. 336–354, 2007, [Online]. Available: http://inderscience.metapress.com/index/d8mt84hx6125ehw5.pdf.

[39] P. Narware, “E-BANKING – CHALLENGES & POLICY IMPLICATIONS,” *International Journal of Enterprise Computing and Business Systems*, vol. 6, no. 2, 2016.

[40] V. M. Gurme, “Issues and Challenges in Mobile Banking In India : A Customers’ Perspective,” *International Research Journal of Engineering and Technology (IRJET)*, vol. 6, no. 1, pp. 161–163, 2011.

[41] S. S. A. Kazmi and M. Hashim, “E-Banking in Pakistan: Issues and Challenges,” *International Journal of Academic Research in Business and Social Sciences*, vol. 5, no. 3, pp. 50–54, 2015, doi: 10.6007/ijarbss/v5-i3/1498.

[42] L. B. P.S, “ E-BANKING IN INDIA - PROBLEMS AND PROSPECTS,” *Technical Research Organization India*, vol. 5, no. 1, pp. 77–81, 2018.